RIRDC

RURAL INDUSTRIES RESEARCH
& DEVELOPMENT CORPORATION

E-commerce in Rural Areas

Case studies

By Franco Papandrea and Margo Wade

Researcher Contact Details

Franco Papandrea
Communication and Media Policy Institute
University of Canberra ACT 2601

Phone: (02) 6201 5083
Fax: (02) 6201 2630
Email: franco.papandrea@canberra.edu.au

Foreword

E-commerce has been hailed as the business revolution of the information age. It has been attracting considerable interest around the world and governments are heavily promoting the adoption of practices that promise large productivity improvements and increased business opportunities. However, despite the considerable potential benefits offered by e-commerce, the rural sector has been slow to embrace the new business practices.

Business practices that facilitate new market opportunities and offer productivity improvements are particularly important for the rural sector. Because of the sector's high level of dependence on world markets, rural business cannot afford to delay introduction of e-commerce practices without risking loss of competitiveness relative to producers in other countries.

This study was commissioned by the Rural Industries Research and Development Corporation to raise awareness of the benefits of e-commerce and encourage rural enterprises to consider its adoption. The series of case studies presented in the report records the experiences of rural operators in introducing e-commerce practices in their business operations and provides practical examples of what is possible. The key message to emerge from the study is that benefits can be gained even from simple e-commerce applications and that successful applications are not dependent on the size of the business.

This report, a new addition to RIRDC's diverse range of over 600 research publications, forms part of our Human Capital, Communications and Information Systems R&D program, which aims to enhance human capital and facilitate innovation in rural industries and communities.

Most of our publications are available for viewing, downloading or purchasing online through our website:

- downloads at www.rirdc.gov.au/reports/Index.htm
- purchases at www.rirdc.gov.au/eshop

Peter Core
Managing Director
Rural Industries Research and Development Corporation

Acknowledgments

About the Authors

Franco Papandrea is Associate Professor of Communication and Director of the Communication and Media Policy Institute (CMPI) at the University of Canberra. CMPI is an applied economic research unit specialising in communication and media policy and has a special interest in regional communications issues. He has more than 25 years' experience in research and policy analysis on media and communications issues, including 11 years as a Research Leader in the former Bureau of Transport and Communications Economics. His qualifications include a Bachelor's Degree in Electrical Engineering (Telecommunications) and an MBA from the University of New South Wales, and a Graduate Diploma in Economics and a PhD in Public Policy from the Australian National University. He can be contacted on (02) 6201 5083 or by email: franco.papandrea@canberra.edu.au.

Margo Wade, FCPA, is Head of the School of Accounting, Banking and Finance at the University of Canberra, a Divisional Councillor of the Australian Society of Certified Practising Accountants, and a member of the Audit Committee of IDP Education Australia. She is also a Fellow of the Communication and Media Policy Institute. She has more than 15 years' experience in accounting education and research, as well as practical experience in both the public and private sectors. Her areas of special expertise are accounting information systems and audit, with a focus on emerging issues and technologies. One of her current projects is the development of educational programs in electronic commerce, in collaboration with colleagues in related disciplines such as information technology and law. Margo's family background gives her a strong insight into rural issues. She has a Bachelor of Arts (Accounting) from the Canberra College of Advanced Education and a Master of Economics from the University of New England. She can be contacted on (02) 6201 2697 or by email: mjw@management.canberra.edu.au.

Contents

List of Tables

List of Figures

Executive Summary

The primary objective of the research was to identify and develop a series of case studies highlighting practical and successful adoption of e-commerce practices in rural areas. The case studies were intended to form the basis of a 'case study' workshop for presentation to invited industry opinion leaders and rural industry practitioners.

For the purpose of this research e-commerce was defined broadly as any business activity or practice conducted by means of electronic communications. While the importance of e-commerce is widely recognised, interest in the business sector appears to be concentrated among larger firms and is concerned mainly with business to business e-commerce activities. Small firms including farm enterprises have been slow in adopting e-commerce.

The key feature of the project was the identification of case studies illustrating practical e-commerce practices in the rural sector. An extensive search for rural business websites identified approximately 100 such sites. After preliminary evaluation some 30 sites were selected for detailed evaluation and follow up. Of those, 22 agreed to participate in the study.

Some general results

Rural businesses use the Internet for various activities including email communication, on-line banking and bill-paying, customs clearance, market research, product promotion, document delivery, on-line sales, industry promotion and support, business-to-business trading and supply chain management.

For many, email has become an integral part of business operations, quickly supplanting traditional forms of communications and generating substantial cost-savings. This was particularly marked in businesses operating in international markets.

Some growers and producers reported the use of Internet banking and bill-paying facilities. However, a couple of businesses had found the banking system to be inflexible, especially with respect to international credit card transactions.

Other major uses of the Internet reported by the case studies include the collection of business information and market research.

For most, the website was established to complement existing business activities. Product promotion, and to a lesser extent, a desire to establish an international presence, were the primary motivations for establishing a site. Also mentioned was the ability to supply information to customers and the public at large in a cost-effective manner.

A small number of websites were purpose-built to develop new forms of business, capitalising on the opportunities generated by the Internet and the World Wide Web. These included on-line trading facilities for wool, grain and livestock and provided good examples of business-to-business e-commerce practices in the rural sector. Another example of business-to-business e-commerce activity is provided by initiatives to improve supply chain management efficiency. One of the case studies presented in the report highlights how electronic information transfer was used to significantly improve the management and operation of a major supply chain linking growers to retailers.

The case studies suggest that the way rural businesses use their websites is influenced by the nature of the products or services traded and their target markets. Those with an international market focus, along with rural service providers, appeared more likely to use their sites to provide detailed product or service information. Almost all the participating businesses that provide industry information and

support through their websites come from emerging industries (such as orchids, tea trees, olives and macadamias). Lack of confidence in electronic trading, on the part of both business and customer, also appears to be a factor in how the website is used.

Only a small number of businesses reported significant benefits directly from on-line sales (including sales generated from website enquiries but not necessarily completed online). Benefits were more likely to be expressed in terms of creating an international presence, establishing contact with prospective customers, especially wholesale customers or agents, and cost savings in document and information delivery.

Another important observation from the case studies is that the personal attributes of the business owner, including business skills and acumen, as well as attitudes to growth, are factors associated with the perceived success or otherwise of the website.

It was clear from the case studies that some rural based industries and some business activities were more conducive than others to the adoption of e-commerce practices. The analysis suggests that:

- Information based activities, including the distribution of sales and product information, were highly conducive to conversion to electronic form accessible through the Internet.

- The potential for online sales of physical products depends on the attributes of the products. Commodities and products with 'standardised' or known attributes (e.g., wine) are more amenable to online selling while products with a low value relative to transport costs are less amenable.

- The nature of the markets is also important. Products typically sold in retail quantities tend to be amenable to online sales, while bulk commodities are not. However, there is considerable scope for e-commerce to improve supply chain management of the latter.

The Workshop

The aim of the workshop was to provide participants with practical demonstrations of successful practices that have been introduced by Australian rural enterprises to take advantage of e-commerce opportunities. The choice of case studies was guided by the objective to select cases demonstrating a range of practical applications capable of being adapted widely in rural activities. The case studies were presented in a sequence illustrating increasing involvement with e-commerce practices and the benefits arising therefrom.

Workshop participants were given the opportunity to provide feedback to the organisers on priorities for desirable ongoing research in this area. The participants identified several research issues and assigned priorities to them. The development of hands-on e-commerce training, of a practical 'how-to' e-commerce guide and of a methodology for the valuation of e-commerce benefits were considered to be of high priority. Other priority topics for research included, the development of e-commerce initiatives for marketing authorities and farm organisations, development of applications suitable for different sectors, and the collection of information on issues such as Government support for e-commerce and sources of advice for those planning e-commerce initiatives.

PART I: E-COMMERCE ISSUES AND RESEARCH

1. E-COMMERCE AND RURAL SECTOR

1.1. Introduction

The growth of information technology and communications is rapidly changing the way people interact with each other. The Internet, in particular, is rapidly expanding opportunities for business growth and the development of new ventures utilising new telecommunications technologies. The Internet brings a worldwide market within reach of even the smallest of businesses. However, to benefit from the available opportunities businesses must be ready and willing to develop and adopt new electronic methods of doing business often requiring considerable change from traditional processes. The more businesses are prepared to introduce the necessary changes the more they will be able to benefit from the opportunities of doing business on the World Wide Web.

The rate and extent of adoption of electronic business practices varies from industry to industry. A variety of factors seem to be retarding applications in small and medium enterprises and in business sectors with long established traditional practices that are not conducive to rapid change. Australian farming and other rural enterprises, in particular, appear to have been slow in adopting e-commerce practices (Groves and Da Rin, 1999). There is some concern, therefore, that rural enterprises may be missing out on desirable productivity improvements that could help enhance their international competitiveness.

The desirability and importance of promoting adoption of information technology in everyday business practices has been widely recognised by governments throughout the world. In Australia, both the Commonwealth and State Governments have put in place strategies and programs to raise awareness of online business systems, to promote the diffusion of online technologies and to demonstrate the benefits likely to accrue from the adoption of e-commerce practices. To date, most of those programs have been general in approach rather than targeting specific sectors of economic activity.

The focus of this study was to demonstrate some of the benefits that may be gained from adoption of e-commerce practices by rural sector businesses. The study was commissioned by the Rural Industries Research and Development Corporation (RIRDC) as part of its role to assist the efficient development of rural industries. The primary objective of the research was to identify and develop a series of case studies highlighting practical and successful adoption of e-commerce practices in rural areas. The anticipation was that the case studies would act as catalysts for others to adopt similar practices in their business activities. In choosing the case studies, therefore, a primary concern of the researchers was to identify cases demonstrating highly practical applications capable of being adopted broadly in rural activities.

The identification of case studies was to serve a two-fold purpose. First, the case studies were to form the basis of a 'case study' workshop for invited industry opinion leaders and rural industry practitioners. The workshop was to provide a tangible opportunity for participants to interact personally with the actual e-commerce practitioners presenting their own case studies. The workshop was also intended to facilitate discussion of, and advise RIRDC on, priorities for further research in this area. Second, the case studies presented at the workshop were intended to form the basis of a

report for wider distribution to rural industry practitioners and others with an interest in promoting e-commerce in the rural sector. This is that report.

1.2. What is E-Commerce

There is no widely accepted definition of e-commerce. In some instances the term is used narrowly as a reference to buying and selling on the Internet. In other instances it is used in a more encompassing manner to include any form of business interaction conducted with the aid of an electronic communication medium. Some definitions attempt to be more specific. For example, the United States Bureau of Census (2000) makes a distinction between electronic business (e-business) and e-commerce. It defines e-business as 'any process that a business organisation conducts over a computer-mediated network' and e-commerce as 'any transaction completed over a computer-mediated network that involves the transfer of ownership or rights to use goods or services'.

For the purpose of this research e-commerce was defined broadly as any business activity or practice conducted by means of electronic communications. This is similar to the definition used by the Department of Communications Information Technology and the Arts (DCITA, 1999) in its report *Australia's e-commerce report card* namely, 'every type of business transaction in which participants (i.e. suppliers, end users etc.) prepare or transact business or conduct their trade in goods or services electronically' (p. 3).

1.3. Benefits of E-Commerce

E-commerce is widely believed to offer considerable growth and cost saving opportunities (see for example, NOIE, 1999). It attracts enormous interest worldwide from all sectors of the economy including government, legal and accounting organisations, universities and research institutes, and industry associations. The potential of e-commerce has been recognised by governments throughout the world many of which have developed strategies to facilitate and promote its adoption. In Australia, strategies for the promotion and development of information technology, including e-commerce, are being pursued by state and territories governments as well as the Commonwealth government. At the Commonwealth level, the National Office for the Information Economy (NOIE) is the primary agency promoting the adoption of e-commerce practices.

The prospects for growth in electronic commerce may be inferred from the increasing proportion of households owning computers and connecting to the Internet. According to the Australian Bureau of Statistics (ABS, 2000), in May 2000, 54 per cent of Australian households had a computer — 56 percent of households in metropolitan areas and a little more than 51 per cent in country areas. This represented a steady increase in household computer ownership since May 1998 (see Figure 1 for details)

Figure 1: Households with Computer

Figure 1: Households with Computer. Bar chart showing Per cent for Metropolitan, Other, and Total across May 1998, May 1999, and May 2000. Source: ABS
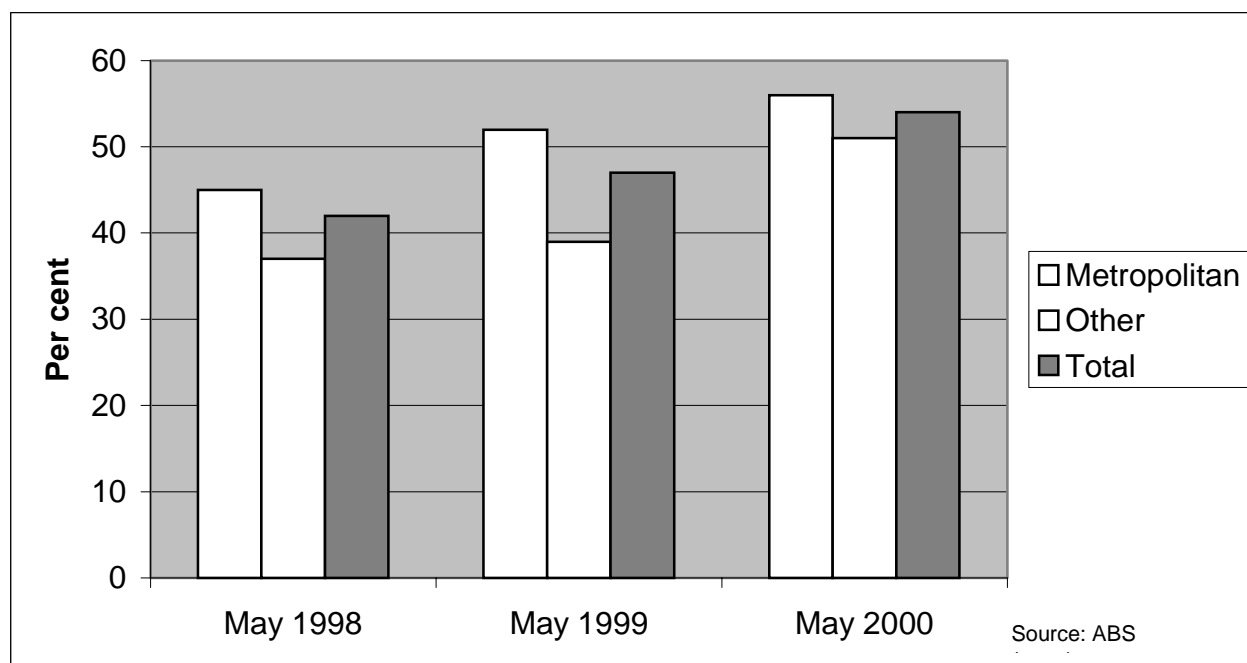
Internet access is less widespread. Only 33 per cent of households had a connection to the Internet in May 2000. The proportion of households with Internet access ranged from 37 per cent in Metropolitan areas to 26 per cent elsewhere. Household connections to the Internet have been growing at a substantial rate since May 1998. Details are provided in Figure 2.

Figure 2: Households with Internet Access

Figure 2: Households with Internet Access. Bar chart showing Per cent for Metropolitan, Other, and Total across May 1998, May 1999, and May 2000. Source: ABS (2000)
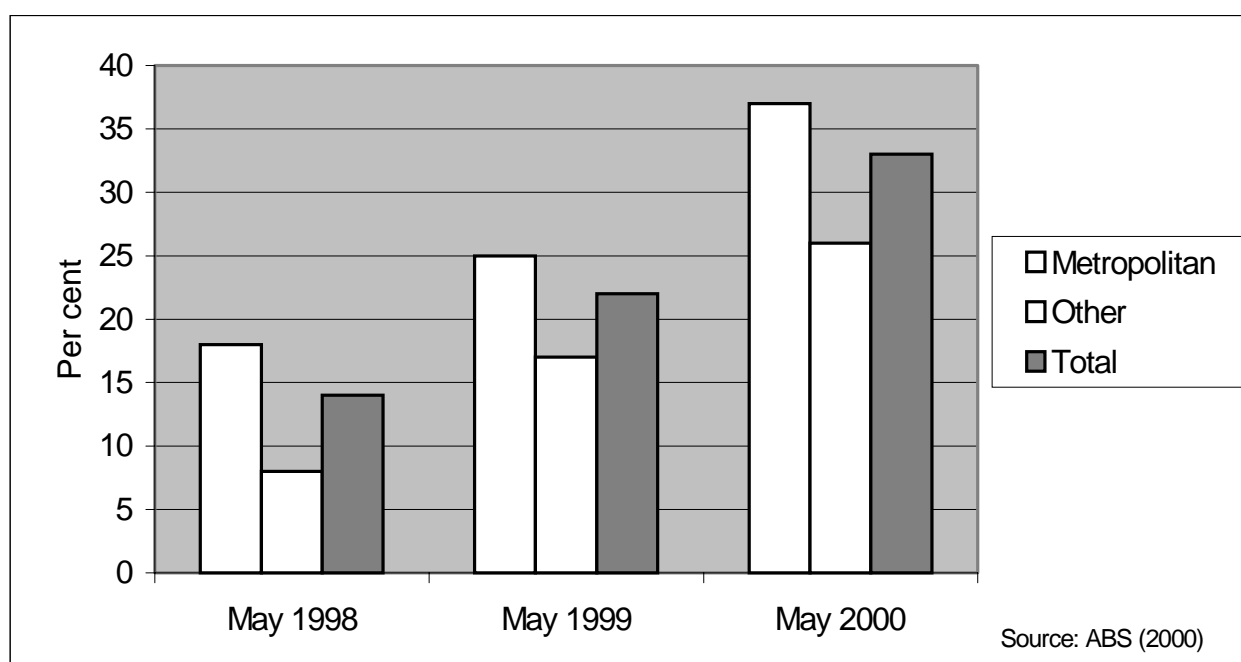
Online sales in Australia were $61 million in 1997 but the National Office for the Information Economy estimates that they will grow to $1,300m by 2001 (NOIE, 1999). This is a very high rate of

growth given the low base and suggests an enormous scope for further growth. In the twelve months to May 2000, six per cent of the Australian adult population (i.e. 802,000 adults) used the Internet to purchase or order goods and services for their own private use. In addition, eight per cent of all adults used the Internet to pay bills or transfer funds in the three months to May 2000 (ABS 2000). The rate of growth is considerable. In calendar year 1999, 650,000 adults bought goods or services over the Internet while in calendar year 1998 only 360,000 had done so (ABS, 1999a). Undoubtedly the number will continue to grow rapidly as more people gain access to the Internet and become more familiar with it and the range of goods and services offered for sale over the Internet increases.

While the importance of e-commerce to business generally is widely recognised, the Australian Electronic Business Network (AeB.N, 1998) is of the view that the importance and potential of e-commerce are not well understood, particularly among small and medium firms, including those in the rural sector. In the business sector, interest appears to be concentrated among larger firms and is concerned mainly with business to business e-commerce activities. Small firms have been slow in adopting e-commerce. In July 1998, almost 88 per cent of firms with less than 20 staff were not using e-commerce (DCITA, 1999). The situation is similar in the agricultural sector.

1.4. Farms and Computer Ownership

According to the ABS (1999b) at the end of March 1999 an estimated 49.1 per cent of farms owned a computer. This represents a substantial increase on 39.5 per cent of farms owning a computer a year earlier.

An earlier publication by the ABS (1999c) provides more details on variations in farm computer ownership. The likelihood of access to a computer increases with the size of farm operations. While 40 per cent of farms with an estimated value of agricultural operations (EVAO) of more than $5,000 owned a computer in March 1998, only 29 per cent of farms with an EVAO of $50,000 or less had one. The proportion increased to 44 per cent for those with an EVAO between $150,000 and $199,000 and to 64 per cent for those with an EVAO of $300,000 or more. Computer use by farmers is similar to that of regional households but lags behind that of regional home-based businesses (59 per cent). Within the farm sector, 'Other livestock farming' (pig, horse and deer farming) recorded the highest rate of computer ownership (52 per cent). This was followed by 'Other crops' with 43 per cent (ranging from 78 per cent for cotton to 35 per cent for sugar cane), and least for 'Grain, sheep and beef cattle farming' with 39 per cent (ranging from 52 per cent for grain to 31 per cent for beef cattle).

1.5. Farm Access to the Internet

An estimated 19.6 per cent of farms used the Internet at the end of March 1999 (ABS 1999b). The number of farms using the Internet increased considerably (84 per cent) in the preceding 12 months — at March 1998, only 10.8 per cent of farms were using the Internet. The ABS (1999c) also provides details of farm access to the Internet. At March 1998, 27 per cent of farmers owning a computer (i.e. approximately 11 per cent of farms) had access to the Internet. Internet access varied with industry group and was highest for 'Other livestock farming' (20 per cent) and lowest for 'Dairy cattle' (nine per cent). As for computer ownership access to the Internet was related to EVAO — 19 per cent of farms with an EVAO of $300,000 or more; 11-12 per cent for those with an EVAO between $200,000 and $299,000; and 8-10 per cent for those with EVAO below $200,000.

The rural sector, nonetheless, appears to be well placed to benefit from wider application of e-commerce. Agriculture and horticulture, in particular, are seen as areas with a high potential to benefit from increased adoption of e-commerce practices (AeB.N, 1998). Also, the nature of agricultural production and marketing arrangements and the need to remain internationally competitive were regarded as major potentially motivating factors for adoption of e-commerce (Groves and Da Rin, 1999).

2. THE RESEARCH

2.1. Overview

The potential benefits of e-commerce for the farm sector have been explored in detail in earlier studies funded by RIRDC such as the Groves and Da Rin (1999) reports 'Buying and Selling Online' and 'Economic & Social Impacts of Farm Internet Use'. The rapid growth of the Internet has enabled interconnection of business activities within and between enterprises, and with markets, that bypass many of the traditional information exchange and distribution processes with enormous potential for improved productivity and increased profits. The potential benefits for rural sector enterprises include better access to commercial information, improved management decision-making, buying efficiencies, lower distribution costs, improved marketing linkages and increased productivity and profits.

Although the rural sector is well placed to benefit from e-commerce, adoption of e-commerce faces some considerable barriers including:

- the natural conservatism of the sector to the introduction of new, not yet fully proven processes;
- insufficient understanding of the implications of delayed introduction;
- inadequate training to implement the process; and
- concerns about the practicality, costs and security of unfamiliar arrangements.

A principal aim of this project was to help to address some of these concerns.

The central feature of this project was the staging of a workshop based on practical case studies of e-commerce applications in the rural sector. The overall aim of the workshop was to introduce participants to key aspects of e-commerce and to highlight the practical benefits that can accrue from its introduction. The importance of demonstration projects, such as the workshop organised as part of this project, in situations where familiarity with a process is low or where the related benefits are not widely recognised, is well established. In such situations, practical demonstrations by successful adopters of a process are much more acceptable and convincing than wider promotion of generic benefits. The feedback provided by workshop participants reinforces such a conclusion.

2.2. Research Method

A key feature of the project was the preparation of suitable case studies illustrating practical e-commerce practices in the rural sector. The case studies were to be the basis of both a workshop organised as part of the project and the research report on the study. The methodology adopted for the study involved three phases.

The principal aim of the first phase of the study was the identification and selection of representative case studies. The process adopted for this purpose is described in more detail below. The first phase also involved a search of Australian and international literature on e-commerce applications in the rural sector.

The second phase involved the planning and organisation of the case study workshop. Participation in the workshop was by invitation with potential participants selected on the basis of their interest and capacity to contribute to the workshop as well as their capacity to become 'agents of change' for the wider promotion of e-commerce in the rural sector. Preference was given to respected industry operators and acknowledged opinion leaders. Selection was be guided by discussion with, and advice from, RIRDC and farm industry organisations.

The third phase of the project was the preparation of a report to RIRDC. The case studies presented at the workshop were also intended to be the core of the research report.

Overall, the study was devised around the following research questions.

RQ 1. *In what ways do rural businesses use the Internet and World Wide Web for business operations? What factors influence this use?*

RQ 2. *How do rural businesses rate the effectiveness of their websites? What factors influence the perceived value of such websites?*

RQ 3. *What impact are the Internet and World Wide Web likely to have at the industry level, for example on markets and supply chains?*

The questions were to be addressed through the identification and selection of an appropriate set of case studies representative of e-commerce practices used by businesses associated with the rural sector. The selection and subsequent analysis of the case studies progressed in three stages:

1. *Identification of the range and extent of e-commerce activity in the rural sector.* E-commerce activity in the rural sector is limited. It was necessary, therefore, to identify and gauge the range of e-commerce activities and enterprises undertaking them. This was not intended to produce a comprehensive listing of those involved, but rather to identify the range and type of activities from which a representative set of potential case studies could be selected. For this purpose it was assumed that existence of a website was as an indicator that a rural business was potentially involved in some e-commerce activity. The first stage, therefore, involved a search for rural business websites, using popular search engines like Yahoo and Looksmart Australia. The criteria used to select a website for further assessment was that the site had to provide at least some marketing or sales information as well as inform potential customers on how to proceed with purchasing enquiries. Approximately 100 websites with these attributes were identified and about 80 were chosen for preliminary evaluation. Rejection of a website was based on at least one of a variety of reasons including technical instability, lack of recent activity and over-representation in the pool of selected sites (e.g., although a substantial number of wineries were identified only a small number were selected).

2. *Identification of potential case studies.* For the purposes of the research, it was important to identify a set of quality case studies representing a cross-section of rural businesses by industry and activity, that could be subjected to detailed evaluation in the limited time available. Hence, in the second stage of this project, each of the 80 websites was put through a preliminary filtering process to select those considered to have the greatest potential for selection as case studies for the research. This was essentially an arbitrary process based on the sophistication of the website and an evaluation of the information on business activities and services available through the website. Almost 30 were selected for more detailed evaluation and follow up.

3. *Development of case studies.* In the final stage, the selected businesses were contacted via their websites and invited to participate in the research. About one third failed to respond to this initial approach and were followed up by fax, telephone or letter. In the end, 22 businesses agreed to provide detailed information on their businesses and e-commerce operations. In most cases, the information was obtained in a telephone interview lasting approximately 30-45 minutes. In some cases additional information was obtained in follow-up interviews, either by phone or in person, and in written responses to specific questions.

2.3. The Case Studies

The type of activity in which the 22 businesses that agreed to participate in the study were engaged in is summarised in Table 1. The case studies included businesses located in Queensland, New South Wales, Victoria, South Australia and Western Australia.

Table 1 shows that the participants fall into two broad categories: growers and producers of rural products, and suppliers and rural service providers.

Table 1: Participants by Type of Business Activity

Principal activity	Number of participants
Category 1: Growers and producers	
a) Major pastoral and agricultural export industries (wool, beef, wine)	5
b) Other rural growers and producers (olives, tea trees, orchids, vegetables, fruit and nuts)	7
Category 2: Rural service providers	
a) Rural suppliers (chemicals, seeds, etc)	4
b) Exporters/traders (flowers, dairy products)	2
c) Business-to-business facilitators (electronic trading rooms and supply chain managers)	4
Total	**22**

2.4. Analysis and Results

As indicated above, the primary purpose of this study was to identify and collect information on a set of case studies indicative of e-commerce practices employed by successful rural enterprises with the ultimate aim of encouraging others to adopt similar practices. The collection of detailed information from the 22 case studies, however, was also intended to provide some insight into Internet use by rural businesses and into the nature of benefits they derive from such use. Clearly, because of the nature of the study, the results are not necessarily representative of rural enterprises and no claim is made in that regard. However, given that the case studies represent a substantial proportion of the limited apparent application of e-commerce practices in the rural sector, the findings do provide a qualitative illustration of the nature of e-commerce practices currently used by rural enterprises and of the benefits likely to accrue from such usage.

2.5. Rural Businesses Use of the Internet and World Wide Web

Rural businesses use the Internet for various activities including email communication, online banking and bill-paying, customs clearance, market research, product promotion, document delivery, online sales, industry promotion and support, business-to-business trading and supply chain management.

While the researchers used the existence of a website to find rural businesses with e-commerce activity, at interview a broader range of Internet-based e-commerce activity was identified. This established quite clearly that email is perceived as integral to the e-commerce operations of each business and is quickly supplanting traditional forms of communications and generating substantial cost-savings. This was particularly marked in businesses operating in international markets. Comments included:

'an absolute necessity … for communication and document exchange';

'gives you instant communication at local call rates';

'has allowed us to do things we previously only dreamed about';

'there has been a substantial increase in the level of communication by email over the last few months';

'everyone uses email all the time - it's very cost effective'.

Some growers and producers reported the use of Internet banking and bill-paying facilities. However, a couple of businesses had found the banking system to be inflexible, especially with respect to international credit card transactions. As a result, these businesses continue to use telegraphic transfer for some banking operations. Whether or not these are isolated cases cannot be assessed from the available data. The likely existence of such inflexibility, however, may need to be considered in the development of policies and programs to facilitate and promote increased adoption of e-commerce practices.

Other major uses of the Internet reported by the case studies include the collection of business information and market research.

Of particular interest for the study was how and why rural businesses use websites to conduct electronic commerce. Table 2 shows the functions for which the participating businesses use their websites. Note that these are not mutually exclusive — a business might use its website for more than one of these functions.

Table 2: How Participants Use their Websites

Function	Number of participants
Product promotion	22
Product specifications and advice	14
On-line sales	9
Document delivery (for example catalogues)	7
Industry promotion and support	5
Business-to-business trading facility	4

For most businesses, the website was established to complement existing business activities. Product promotion, and to a lesser extent, a desire to establish an international presence, were the primary motivations for establishing a site. Also mentioned was the ability to supply information to customers and the public at large in a cost-effective manner.

On the other hand, three of the four 'business facilitators' (see Table 1) were purpose-built to take advantage of the Internet and the World Wide Web. These include *e-Wool*, which uses its website primarily to promote its online wool trading facility; *agdealer*, which provides a facility for trading in grain and rural supplies; and *Freshport*, which focuses on supply chain management in selected industries. The fourth, CALM services was primarily the extension of Internet access to an established livestock electronic auction that was previously accessible only via a dedicated computer linked to a private network. These businesses have the potential to change the way rural business is conducted.

Our analysis of the 22 case studies suggests that the way rural businesses use their websites is influenced by the nature of the products or services traded and their target markets. For example, while only 12 of the 22 businesses interviewed appeared to demonstrate a significant interest in international markets, six of the nine businesses offering online sales facilities were so focused. Those with an international market focus, along with rural service providers, appeared more likely to use their sites to provide detailed product or service information. Almost all the participating businesses that provided industry information and support through their websites were from emerging industries (orchids, tea trees, olives, and macadamias).

Lack of confidence in electronic trading, on the part of both business and customer, also appears to be a factor in how the website is used. For example, one of the exporters trades worldwide in bulk orders. In its view, it is not possible to establish the bona fide of its customers through online trading and thus it uses its website solely as a point of first contact. Other participants in the study raised concerns about customers reneging on their online credit card transactions — at least one business had some bad experiences in this regard — and others felt that their customers are reluctant to provide sensitive information online. It is interesting to note that, of the nine businesses using the Web for online sales, only five provided security certification or password protection.

2.6.   Benefits of Having a Website

As indicated above, most participants in this study identified email communication as a net benefit for the business. This was largely on the basis of cost and convenience. As regards their websites, however, the participants' responses were mixed. Examples of responses are provided in Table 3.

Only a small number of businesses reported significant benefits directly from online sales (including sales generated from website enquiries but not necessarily completed online). Benefits were more likely to be expressed in terms of creating an international presence, establishing contact with prospective customers, especially wholesale customers or agents, and cost savings in document and information delivery.

The predominant factors that appeared to constrain the capacity of websites to add value, at least according to the participants, were:

▪ access to technology and support, including communication lines, Internet service providers, trainers, and web-designers;

▪ slow adoption of the Internet by customers and suppliers and/or reluctance on their part to engage in e-commerce activity;

▪ structural disincentives such as inflexible banking arrangements and bureaucracy; and

▪ lack of resources for updating, promoting or otherwise championing the site.

Table 3: Sample of Comments About Webpages

Category of respondent	Response
Grower/producer	'We've got our biggest results through the Web pages.'
Grower/producer	'We got practically no retail sales out of [the website] at all.'
Grower/producer	'We have quite a small select group of customers that we supply to and they don't have a requirement for an e-commerce facility.'
Rural service provider	'The growth potential [from the website] is limited - essentially an increase in Internet trade would simply be a substitute for our phone and fax trade.'
Grower/producer	'My business would not warrant the extra effort of providing an electronic ordering facility - I have a system that works where people can ask questions and it becomes more personal if they phone [their orders and requests for information].'
Grower/producer	'It's a quick and effective means of getting the word out to a huge marketplace for very little money.'
Grower/producer	'The website saves us a lot of time and money when it comes to providing information.'
Grower/producer	'We found the website of very little use in Australia.'
Grower/producer	'Our website has got us a US distributor and created contacts that we wouldn't otherwise have made.'
Rural service provider	'The natural conservatism of growers means it may take time for them to shift to a new way of doing things.'
Rural service provider	A lot more people are comfortable now with using the Net.
Rural service provider	'We have more participants since we went on the Internet - a lot of customers who would have bid through the old system are moving to the Internet.'
Grower/producer	'There has been a considerable change in business since the website was introduced. Regular orders now come from around the world.'

Despite the various limitations perceived by the respondents, it was interesting that only one business considered its website as having little or no value to the business. The business in question had experienced a recent change in management and organisational structure that brought a changed perception on the value of having a website.

Previous research suggests that the value of e-commerce to the rural sector may vary by industry (Groves and Da Rin, 1999). Our analysis of the 22 case studies, and in particular their attitudes towards their websites, found some support for this view, but in addition our findings suggest that there may be variation within industries, depending on the nature of the product or target market.

For example, there were two representatives from the wool industry in our sample but both businesses focused on their value-adding operations, namely yarn and garment manufacture. Of the woolgrowers identified in our initial search for websites, stud services and hospitality operations were promoted but

not direct sales of the primary product (greasy wool). This was also largely true of the cattle industry. Of the two participants from the emerging tea tree industry, more positive feelings were expressed by the business that concentrated on the sale of seeds and plants, compared with the business that also manufactures tea tree oil which is sold in bulk to a small number of buyers.

On the other hand, the sample included two orchid growers producing basically similar products but having quite different perceptions regarding the value (one high, one low) provided by their websites. The factor most likely to account for this was their different perception of their market and the consequential focus of their marketing activities. The grower reporting considerable benefits from the website saw the market as being made up of wealthy international collectors of rare plants and its business operations, including the website, were focused on servicing such a clientele. The other grower identified with a domestic market made up predominantly of retirees unlikely to be attracted to web-based sales and consequently tended to consider the website as a minor adjunct to other marketing and sales activities.

In addition, growers directing their products at bulk markets (for example the dairy products exporter and the vegetable producer) tended to express different views about their websites than those who saw themselves primarily as retailers (for example sellers of flowers and seeds).

Finally, our analysis of the case studies suggests that the personal attributes of the business owner, including business skills and acumen, as well as attitudes to growth, are factors associated with the perceived success or otherwise of the website. For example, very positive views were expressed by both the young cattle grower currently undertaking tertiary studies in business and the astute import/export trader-cum-orchid grower, who established the latter business as a retirement hobby. The olive tree grower had very clear objectives for his site and made use of that site in a deliberative way to achieve business objectives. Conversely, the vegetable grower and producer, who revealed at interview that the website had been created with little idea as to how it might fit into the business' strategy ('it tells a nice story but it really doesn't do anything') had the most negative attitudes of all towards its website.

In other words, the relationship between industry and value is not a simple one.

2.7. Impact of Internet and World Wide Web on Rural Industries

Among the 22 case studies identified in this study, there are at least four businesses that challenge traditional perceptions of how business is done in rural industries. Three of these provide alternatives to live auctions; the fourth provides a facility for management of the supply chain that is simply unavailable through traditional mechanisms.

It was clear from our case studies that some rural based industries and some business activities were more conducive than others to the adoption of e-commerce practices. The analysis suggests some broad assessments:

- Information based activities were highly conducive to conversion to electronic form accessible through the Internet. Businesses activities, such as the distribution of a newsletter or product catalogue, are easily converted to electronic form and made accessible via a website. Electronic production and distribution can also be achieved for a very low cost compared to traditional methods. However, until Internet access becomes universal or at least widespread, business will need to continue to produce and distribute information by traditional means. An added advantage of electronic information is that it can be updated regularly at very low cost (examples include, product catalogues and wine tasting notes and awards that can be readily updated to assist sales by Australian and international distributors) and can be provided in real time (e.g., digital photographs of orchids for sale).

- The potential for online sales of physical products depends on the characteristics and attributes of the products. Commodities and products with 'standardised' or known attributes (e.g., wine) are more amenable to online sales. Transport costs is another relevant factor. Products with a low value relative to transport costs are less likely to be amenable to online sales. The nature and process of product sales are also important. Buyers are more likely to purchase some products such as seeds 'at a distance', but might be less likely to buy wool fashion garments without trying them on.

- Nature of markets is also important. Commodity markets with long-established statutory marketing authorities tend to reduce the role of growers/producers to that of suppliers to the authority which becomes the marketer and seller. Online sales by individual growers would be uncommon in such a situation. However, there would be considerable scope for the marketing authorities to promote increased supply chain efficiency through e-commerce practice in such situations.

2.8. Other Observations

The research has also highlighted some important factors that should be taken into account by those planning to adopt e-commerce practices in their operations.

- A business that is planning a website needs to have a clear objective of what it wants to achieve with it and be well aware of what is possible and realisable.

- Information on a website has to be accurate and current. Websites with out-of-date information or information that has not been updated for months can convey a negative image of the business. Like any other important business function, management needs to assign clear and unambiguous responsibility to an appropriate person for regular maintenance and update of the website.

- Arrangements have to be put in place to ensure that contacts generated via the website are processed promptly (at least once a day). A slow response can mean lost opportunities. Online sales transactions need to be backed up with appropriate arrangements to ensure timely delivery of purchases to clients. Appropriate policies and procedures to deal with customer complaints must also be established.

- The cost of establishing a website can vary considerably depending on how the site is developed. Professionally developed websites can be expensive to establish and maintain particularly if outside help is required to keep the site up to date. Many of the case studies, however, had developed their site in-house with limited assistance from outside the business. Not only did this help contain costs, but also helped develop in-house expertise for ongoing maintenance of the site.

2.9. Conclusion

The search for case studies on e-commerce in rural industries found sites in a wide range of agricultural industries such as carrot growing, macadamias, flowers, wine, wool, nurseries, seed supplies and general supplies. They were found in a range of firm sizes from small, self-employed situations to large firms. And the extent to which they were involved in e-commerce activities varied widely from simple 'electronic yellow pages' type advertisements to extensive practices such as online markets and supply chain management.

The choice of case studies was guided by the objective to select cases demonstrating a range of practical applications capable of being adapted widely in rural activities. The choice reflects both the desire to illustrate as wide a range of activities as possible and to do so with the best of what was

available. An additional aim was to illustrate that e-commerce need not be an 'all in' or 'all out' affair and that benefits can accumulate even with relatively simple applications.

Most of the participants in the research reported some level of benefit from the operation of their websites. Some achieved what would be regarded as substantial success with considerable expansion of activity and profitability. Size of business was not a factor in achieving a high level of success.

The nature of the product or service supplied by a business can be a major influence on success. Products with a relatively high dollar value relative to their mass or volume with a widely dispersed market tend to do well. On the other hand it would be unreasonable to expect products with a limited market, such as bulk commodities, to achieve similar results through a website. For them, a website can be a major factor in bringing them to the attention of buyers or customers and a major tool for building closer relationships with them. This does not mean, however, that there is little scope for e-commerce to achieve considerable improvements in the selling of bulk commodities. Traditional commodities have been a fertile ground for the development of electronic markets bringing buyers and sellers together. There is also considerable scope for improving the efficiency of agricultural product supply chains.

A benefit of having a website, common to all the cases studied, was improved communications with customers and suppliers. For many rural businesses communications with customers and suppliers can be a large component of operational costs. Traditional means of communications such as the telephone can be both expensive and time consuming. Email overcomes both the cost and time inconvenience problems. Some of the case studies described email as the greatest boon to rural business communications.

Overall, the results suggest that well planned and executed adoptions of e-commerce practices can add value to rural businesses.

The results are biased to the extent that the study population included only those businesses that had already adopted some form of e-commerce activity. More research needs to be undertaken to evaluate the attitudes of other rural businesses towards the Internet and the World Wide Web and to examine further the likely impact of the electronic trading houses and supply chain managers on the structure of rural markets.

3. THE WORKSHOP

Organisation of a case study workshop of e-commerce in rural areas was the primary aim of the research. The project was driven primarily by the identification of practical e-commerce applications illustrating a range of practices that had been successfully implemented by rural enterprises. The focus was on practicality rather than sophistication and the cases were intended to illustrate simple as well as more complex examples requiring different levels of commitment and involvement for implementation.

The aim of the workshop was to provide participants with practical demonstrations of successful practices that have been introduced by Australian rural enterprises to take advantage of e-commerce opportunities. The case studies were selected after extensive analysis of the activities of enterprises participating in the study. As a group, they represent major categories of e-commerce activities in rural areas and the practices they demonstrate are applicable to both large and small rural enterprises.

The workshop case studies ranged from relatively simple e-commerce applications introduced by small operators to major activities and innovations such as the establishment of online markets for bulk commodities and automation of supply chain management and documentation. Part of the aim was to demonstrate that firms of any size can gain significant benefits from e-commerce even from relatively simple applications. They were also intended to demonstrate that e-commerce need not be expensive and can be introduced in stages to suit the circumstances and needs of individual rural enterprises.

Potential participants for the workshop were identified with the assistance of the National Farmers' Federation, its member State Organisations, Farmwide, RIRDC, State Government Departments of Agriculture, farm commodity authorities and rural industries research bodies. All states, with the exception of Tasmania, were represented by the 48 participants at the workshop. The workshop was held in Canberra on 23 June 2000.

The workshop program comprised an introductory session setting the scene for the rest of the program and providing participants with an overview of e-commerce and its potential for productivity improvements and improved business prospects. The presentation of case studies was intended to illustrate different levels of involvement with e-commerce activities ranging from simple extensions to pre-existing business activities to fully automated business functions. Five case study sessions were presented comprising a total of eight case studies. Each case study was presented by either the owners or principal operators of the business on which the case study was based. Each case study presentation was followed by discussion and interaction between the presenters and workshop participants. The final workshop session was intended as an open forum discussion for participants to interact with each other and reach consensus on areas of e-commerce of particular importance to the rural sector and identify issues or matters to which priority research efforts should be devoted. The output of the final session was intended to guide RIRDC in determining priorities for its future research funding in this area. The workshop program is reproduced in Table 4.

Table 4: Workshop on E-Commerce in Rural Areas — Program

Canberra Botanic Gardens, Theatrette, 23 June 2000

Time	Session	Topic	Presenter
9.00 – 9.40	Opening Introduction	Welcome E-commerce Overview	Dr Roslyn Prinsley RIRDC Franco Papandrea University of Canberra
9.40-10.40	Case Study 1 (Marketing)	Promotion and Information	**Olives Australia** *(Julian Archer)* **Reynolds Winery** *(Jane Reynolds)*
10.40-11.00	Morning tea		
11.00-12.00	Case Study 2 (Marketing)	Promotion and Sales	**Easyorchids** *(Murray Shergold)* **Toorallie** *(Lisa Ward)*
12.00-12.30	Case Study 3 (Export Sales)	Merchant/Exports	**McMahon Global Foods** *(Cheryl Vaudrey)*
12.30-13.30	Lunch		
13.30-14.30	*Case Study 4* (Electronic Markets)	Auctions and Online Exchanges	**e-Wool** *(Peter Vandeleur)* **Agdealer** *(Brad Williams)*
14.30-15.10	*Case Study 5* (Supply Chain)	Supply Chain Management	**Freshport/BGF** *(Graeme Forsythe and John Loydell)*
15.10-15.30	Afternoon tea		
15.30-17.00	Open Forum and Conclusion	Emerging Issues and Future Research Directions	Chaired by Dr Roslyn Prinsley RIRDC

3.1. The Case Study Sessions

The case studies presented at the workshop were arranged and presented in a sequence illustrating increasing involvement with e-commerce practices and the benefits arising therefrom. The cases began by illustrating simple extension of traditional activities to online delivery. For example, businesses providing substantial information support to customers and potential customers found online delivery of such information a natural extension to delivery by traditional means. At the same time, their online presence extended their ability to reach a wider market previously inaccessible to them.

Similarly, some of the online sales activities were natural extensions of traditional distance selling activities such as mail-order catalogue sales. These were particularly relevant to relatively high priced products such as knitted wool garments, wines and similar products. The client base was already used to buying products at a distance and the businesses already had considerable experience in dealing with distant customers. Online catalogues and ordering were thus natural extensions to well established traditional business procedures.

More specialised involvement in e-commerce practices were a feature of more recently established businesses that did not have an extensive business history. These sought a worldwide presence as a way of doing business and expanding their enterprises. Two cases were presented in this context. The first, McMahon Global Foods is a dairy products trader operating in overseas markets. Its website is an essential element of its marketing effort. It deals in bulk commodities and while its website is not set up for online sales (difficult to undertake other than for established customers with established credentials), it is a major support for international sales and market presence. The second, Easyorchids is a microbusiness established by a principal with an international trading background. It is a niche product with a highly dispersed international market that could not be reached effectively by traditional means.

Two of the cases presented completely new ways of doing business that were not possible in a non-electronic world. *e-Wool* and a*gdealer* were both set up as electronic enterprises operating in competition with existing traditional mechanisms but offering increased flexibility and cost savings. *e-Wool* as its name implies is a wool price making system that allows buyers and sellers to come together to conclude a sale outside the traditional auction system. It operates all year round and buyers and sellers are not constrained by the timing of traditional auctions. Similarly *agdealer* provides a domestic market place for grains. It also sells a range of agricultural supplies such as chemicals.

The final case study illustrated the efficiency improvements that can be secured from electronic data transfer along agricultural supply chains. The case study illustrated how the banana supply chain was automated using an Internet platform.

Summary details of the case studies follows — the full case studies are presented in Part II of the report.

3.2. The Workshop Case Studies

Case Study 1: Olives Australia

Product or service	Olive trees and associated products
Nature of industry	Emerging rural industry
No. of employees	Less than 100
Base of operations	Grantham, Qld
Market focus	Australia
Website presence	3 years
Website role	Product promotion, grower information, catalogue and sales
Proportion of sales online	10%

Case Study 2: Reynolds Winery

Product or service	Wine
Nature of industry	Established rural industry
No. of employees	Less than 10
Base of operations	Wybong, NSW
Market focus	Australia
Website presence	3 years
Website role	Product promotion and sales
Proportion of sales online	Less than 5%

Case Study 3: Easyorchids

Product or service	Orchids and eco-tourism
Nature of industry	Emerging rural industry
No. of employees	Less than 10
Base of operations	Woodburn, NSW
Market focus	Australia and overseas
Website presence	18 months
Website role	Product promotion and catalogue
Proportion of sales online	No direct sales

Case Study 4: Toorallie

Product or service	Wool grower and knitwear manufacturer
Nature of industry	Established rural industry in an emerging market
No. of employees	Less than 100
Base of operations	Bombala, NSW and Canberra, ACT
Market focus	Australia and overseas
Website presence	5 years
Website role	Product promotion, catalogue and sales
Proportion of sales online	Less than 5%

Case Study 5: McMahon Global Foods

Product or service	Dairy products
Nature of industry	Export
No. of employees	Less than 10
Base of operations	Gordon, Vic
Market focus	Overseas
Website presence	3 years
Website role	Product promotion and catalogue
Proportion of sales online	Not relevant

Case Study 6: E-Wool

Product or service	Electronic wool market
Nature of industry	B2B (electronic market exchange)
No. of employees	Less than 10
Base of operations	Adelaide, SA
Market focus	Australia
Website presence	Less than 1 year
Website role	Service delivery
Proportion of sales online	100%

Case Study 7: Agdealer

Product or service	Electronic grain and agricultural products market
Nature of industry	B2B (electronic market exchange and product supplies)
No. of employees	Less than 10
Base of operations	Sydney, NSW
Market focus	Australia
Website presence	Less than 1 year
Website role	Service delivery
Proportion of sales online	100%

Case Study 8: Freshport/BGF

Product or service	Electronic business hub (plus user)
Nature of industry	B2B (information and supply chain management)
No. of employees	Less than 10 (BGF - 80)
Base of operations	Sydney (& Murwillumbah), NSW
Market focus	Australia
Website presence	Less than 1 year
Website role	Service delivery
Proportion of sales online	100%

3.3. Research Priorities

As indicated above, the final session of the workshop was in the form of an open forum to enable participants to interact with each other and the case study presenters. It was also intended to provide feedback to the researchers and RIRDC on e-commerce issues of particular importance to the rural sector and help identify issues or matters to which priority research efforts should be devoted.

The session began with a brief presentation on perceived benefits of e-commerce (see Table 5) and perceived limitations (see Table 6) to its introduction that had been identified in the course of the research preceding the workshop.

Table 5: Perceived Benefits of E-Commerce

- Cheaper, faster communications
- Ability to cope with time differences
- Ability to overcome geographic isolation
- Market penetration and growth
- Raises international profile
- All day, every day trading
- Low set-up cost and short payback period
- Access to wider sources of information
- Quick and easy delivery of documents, such as catalogues, order forms, contracts, etc.
- Inexpensive means of providing information and support to a wide variety of users

Table 6: Perceived Limitations

- Natural caution and conservatism
- Preference for personal dealings
- Concerns about security
- Access to reliable technology and support
- Site maintenance issues
- Slow uptake by suppliers and customers
- Fitting products into an e-commerce framework
- Nature of target market
- Disincentives for pursuing global markets:
- Inflexible banking arrangements
- Freight costs
- Bureaucracy

The introduction was followed by group discussions with participants asked to focus on the consideration of two matters:

1. What needs to be done to encourage the adoption of e-commerce in rural industries?
2. What are the key issues to be addressed by research, and which one(s) should be given priority?

For this purpose, participants were assigned to three different groups and the individual group assessments were then discussed in a plenary session. The following summarises the priorities that emerged from this process:

High priority
- Development of hands-on e–commerce training courses for farmers.

- Development of practical 'how-to' e-commerce guide for farmers.

- Development of an easy to apply methodology to help farmers value benefits of e-commerce.

Medium priority
- E-commerce initiatives for marketing authorities and farm organisations.

- Development of information on applications suitable for different sectors.

Low priority
- Information on what is possible.

- Information on Government support for e-commerce

- Development of a directory of sources of advice for people planning e-commerce initiatives.

PART II: WORKSHOP PRESENTATIONS

4. OLIVES AUSTRALIA

4.1. Overview

Olives Australia is a family owned, 100% Australian business based in south-east Queensland. They are the largest specialist olive tree nursery in the world, propagating and grafting more than 60 varieties of olive trees. They also provide an information service through their Olives Australia Information Services program, sell books and videos, import tools and equipment specific to olive growing and processing, and run a consulting business.

Olives Australia has operated a website since 1997. This is designed primarily:

- to reach customers and;
- to provide information to the industry in a cost-efficient manner.

The site offers facilities for online ordering but no security certification. Most customers still prefer more traditional methods like fax and phone. However, they often use the order form that is provided through the website.

For Olives Australia, the website has:

- attracted a number of good customers generating additional ongoing sales;
- helped its international profile - hits from up to 70 countries so far, particularly countries with emerging olive industries like South Africa, Chile, Argentina, India, Pakistan and China; and
- has substantially improved communications and customer relations.

One of the difficulties with a website, according to Olives Australia, is finding the time to update it, especially:

- prices; and
- their current events page.

Website

Address: http://www.oliveaustralia.aust.com

Features:
- company details
- advice and information for olive growers
- product details
- subscription service
- details of upcoming events and tours
- online ordering

- copyright and disclaimer
- contact information

Contact

16 McGarva Rd, Grantham Qld 4347

Telephone: (07) 5466 1333

Facsimile: (07) 5466 1592

Email: oliveaus@ozemail.com.au

4.2. Background

The downturn in Australia's traditional agricultural commodity markets has led many farmers to look for alternate ways of making a living from the land. Some, like Toorallie, have sought to add value to their existing product range. Others have turned to emerging industries like tea trees, deer and ostrich farming, orchids and aquaculture. Cathy Bolt, writing in the Australian Financial Review last November, relates the story of Tony and Oriole Riggall of Mt Barker, W.A., who completely replaced their sheep and cattle with Tasmanian bluegums, grape vines, free range chickens and trout.

Olive growing is one of the top three of these emerging industries and this case study is about one of the leading players in that industry, Olives Australia.

Here are some facts, courtesy of Olives Australia.

- The world's olive industry is estimated to be worth about $20 billion a year.
- The USA imports 100 times the olive oil it can produce.
- Australian imports have risen 300% in a decade.
- Japan has had a 500% increase in per capita olive oil consumption since 1983, and indeed the overall Asian market is growing significantly.
- In 1998, the world consumed more olive oil than it produced.
- The extra-virgin olive oil market is estimated to be growing at about 15% per year.
- Crete has 27 million olive trees; Spain 200 million; Australia a mere 3 million.

Thanks to both local and international investment, the Australian olive industry has grown from a boutique business dominated by wealthy hobby farmers to an industry that will have estimated annual sales of $200 million by the end of the decade (Brad Collis, AFR, 28 April 2000). Combined with a worldwide shortage of olives and a growing respect for our country's suitability for olive cultivation, this augurs well for the young industry and places it in a good position to a gain a valuable share of both domestic and international markets.

With 25 years in the business, Olives Australia is a long-term player in this emerging industry. Olives Australia is a family owned, 100% Australian business based in south-east Queensland. They claim to be the largest specialist olive tree nursery in the world, propagating and grafting more than 60 varieties of olive trees and supplying over a million olive trees to Australian growers and a 'little bit' of export. Their output amounts to 80% of the trees planted each year in Australia.

This is clearly a sizeable operation - there are 28,000 mother trees covering some 100 hectares, 10,000m2 of hygienic propagation facilities and 20,000 m2 of tree hardening sites. The company also

runs an olive research plot — currently evaluating 70 varieties of olive trees — and is planting approximately 15,000 trees for oil production with plans to establish processing facilities to produce olive oil, table olives and other olive products when the trees reach maturity.

Overall, the company employs over 80 people with the nursery generating approximately 75 per cent of its turnover of around $6million. The company supplies over 1000 customers (olive growers and retail nurseries) per year. However, its largest ten customers account for approximately 60 per cent of the value of sales.

Olives Australia is more than a nursery, however - its founder-proprietors, Ray and Delphine Archer and their family, make a major contribution to research and development in, and promotion of, their industry. It has close links with and is a strong supporter of the Australian Olive Association and more than 40 regional industry associations. The company helped to establish the national body and regional associations and supports the latter with small financial grants to assist local research and development activities.

4.3.   Business Strategy

Olives Australia is committed to:

- providing high quality olive trees to commercial growers and nurseries;

- promoting the Australian Olive industry through professional, personal and commercial presence both in Australia and overseas;

- helping individuals, families and corporations to achieve maximum returns from their investment in the olive industry;

- conducting widespread research to benefit the total Australian olive industry; and

- supplying practical, easy to understand information to all people involved in the Australian industry.

Along with a commitment to the professional development of its staff and efficient and prudent management of resources, this provides the basis for their business strategy.

Olives Australia is, first and foremost, a supplier of olive trees - this accounts for some 75% of their turnover. In line with their business strategy, however, they also
- offer information free to growers and others interested in the industry;

- sell books, videos and other materials on olive growing and processing;

- publish a journal — *Australian Olive Grower*;

- maintain close links with agricultural research agencies;

- provide a consultancy service;

- run overseas tours for investors, as well as seminars and field days;

- manufacture olive products and process olive oil for other growers; and

- sell specialist tools and equipment for use in olive production, such as secateurs, tying kits, labelling machines, storage tanks and olive pitting machines.

For Olives Australia, maintaining a competitive edge depends on their capacity to develop strategic alliances, particularly in overseas markets.   Whether these are agricultural, government or manufacturing, Olives Australia believes in the power of alliances such as these to maximise the effectiveness of their customer service and research programs. In addition, Olives Australia maintains

close linkages with industry bodies such as the Australian Olive Association, and provides financial support in the form of grants for research and development.

Olives Australia sees information as crucial to profitable development, and for this reason, puts its clients in touch with 'the very best knowledge sources in the olive growing world', via its journal, its website, its 'OLIFAX' service, and other publications.

Like the Australian wine industry, the Australian olive industry is free from the bounds of tradition that constrain its counterparts in the Northern Hemisphere. This means it is free to innovate in cultivation and processing technology. Olives Agencies, the 'business unit' of Olives Australia, supports the development and enhancement of better practice in the industry through the supply of industry specific tools and machinery.

4.4. E-Commerce Activity

Olives Australia is a relatively new user of computer-based technology. They introduced computers into their office only in 1994. The office now runs about a dozen computers, which they use for stock tracking, production management, orders and dispatch, and the usual business operations. They also run a database to support their OLIFAX service. This comprises answers to frequently asked questions, which can be readily printed and faxed to interested users.

Olives Australia also makes good use of email for communication. Much of their dealings with the Australian Customs Service are handled via email, as is their communication with the international agencies and networks that comprise their strategic alliances.

The Olives Australia website was created in 1997. The company saw the website as an opportunity to substantially reduce its information provision costs as customers can now obtain most of the information they are seeking directly from the website without the need to make personal contact with staff. Today, the site receives some 500 hits per week from up to 70 different countries, including South Africa, Chile, Argentina, India, Pakistan and China, as well as Spain, Italy and Greece. About 80 per cent of the hits are from Australia.

In general, the website has worked very well for Olives Australia. When first established, it was intended primarily to reach customers and provide timely information to industry and it has easily fulfilled those objectives. Most of the information by customers is posted on the website and can be downloaded directly by them at virtually no cost to the company, whereas previously, considerable staff time was taken up answering queries from customers and in printing and mailing costs in providing information. For Olives Australia, the website has also:

- helped develop its international profile;

- enhanced its ability to provide information to industry;

- put the business in contact with a number of good customers; and

- reduced the time and cost involved in responding to queries.

Olives Australia estimates that its website has generated sales of almost one million dollars since 1997 and credits it as the source of about 10% of its current sales. Most of the sales through the website have been from new customers.

The Olives Australia website was designed and installed by Julian Archer, who provides consulting and marketing services for the company. Julian, who is self-taught, produced the series of pages that comprise the site largely by himself, using Claris Homepage. This is not a sophisticated site, as some sites go, but nevertheless achieves its objectives. Julian says that people tend to use the site primarily

to gain information and appreciate being able to move around the site quickly and get exactly what they want.

When you log onto this site, you cannot help but notice the emphasis placed on information and advice. It includes information about:

- Olives Australia itself, its nursery and cultivation technology
- the Olive Magazine, including access to out-of-print articles
- items and events of interest, plus an electronic version of its free OLIFAX service
- a forthcoming overseas research tour
- contact information.

The site also includes an online sales facility for tools and equipment, books and videos, but not for the olive trees themselves — the major part of the Olives Australia business. Olive trees are not amenable to sale over the web because clients usually require advice before they place their order.

To complete an order, a customer simply selects from a pick list by keying in the quantity required, completes the order and payment details in the windows provided, and posts the order electronically, directly from the site. There are some pull-down menus that assist this process. The turnaround time from placing the order to having the items sent out by mail is about 24 hours.

This online sales facility provides no security certification. Those who are concerned about forwarding their details electronically can, however, print the order form and send it by mail or fax, or simply phone it in. Olives Australia believe that most users are uncomfortable still with forwarding their details over the Web and, although they receive some online orders most days, the majority of their orders still come through by phone or fax.

For Olives Australia, the greatest difficulty they have encountered so far with their website is finding the time to maintain and up-date it. This is particularly true for product prices and the events page, the responsibility for which falls on the designer, and also company consultant and marketer, Julian Archer. This is a common problem for organisations that venture into the electronic business world of the Internet and the World Wide Web.

5. REYNOLDS WINERY

5.1. Overview

Reynolds Wine Company is located in the Upper Hunter Valley. Established in 1989, it produces a range of wines from grapes grown in both the Hunter Valley and the Orange District in the Central Highlands of New South Wales. The Reynolds brand is distributed both nationally and internationally.

Reynolds has operated a website since 1997. While this is used primarily for product awareness, particularly overseas, it also

- offers secure e-commerce facilities for the sale and delivery of wine; and
- enables distributors around the world to download tasting notes, images and general information concerning the business and its wines, which are used for promotional purposes.

Besides distributors and current customers, the website is visited by:

- tertiary students seeking information for projects;
- people seeking employment in the wine industry; and
- organisations seeking to list their wines on their own e-commerce site.

The main difficulties with the Web are:

- keeping it current and topical;
- overcoming 'technological ignorance' and obtaining professional advice; and
- finding a satisfactory and consistent Internet service provider.

For Reynolds, the real value of their web presence has been through marketing their company overseas and attracting prospective importers who best fit their requirements for representation.

Reynolds has also come to rely more and more on email, because:

- it provides considerable cost savings over alternative modes of communication;
- puts them more in touch with their customers 'at the coalface'; and
- is used by overseas importers to place orders for wine.

Reynolds expects to increase its use of the Internet, particularly in the area of business-to-business communications.

Website

Address: http://users.hunterlink.net.au/~madjr/

Features:
- background information on the company, its wines, its winemakers and its region
- online ordering
- Top 500 Club application form

- list of distributors
- contact details.

Contact

Yarraman Road, Wybong, Upper Hunter Valley NSW 2333
Telephone: (02) 6547 8127   Facsimile: (02) 6547 8013
E-mail: contact@reynoldswine.com.au

5.2.   Background

The Reynolds Wine Company was established by Jon and Jane Reynolds in 1989 when they acquired a 100 acre property in the Upper Hunter Valley wine district of New South Wales. Jon is a winemaker with 25 years experience in the industry, Australia wide.

Since the release of *Reynolds* wines ten years ago, more than 100 medals have been awarded both nationally and internationally including numerous gold medals, 5 trophies and the accreditation of wines with the Hunter Valley Benchmark. In 1996 of particular note, *Reynolds* wines were awarded the top gold medal in the varietal dry white wine class at the Sydney Wine Show, the Tyrrell Family Trophy for the Best Hunter Valley Dry White Wine & in both 1996 and 1998, the award for the Best Dry White Wine in New South Wales at the New South Wales Wine Awards.

James Halliday, in the most recent edition of his Australian and New Zealand Wine Atlas considers *Reynolds* to be one of the outstanding winemakers in New South Wales and in the 1998/9 summer edition of the wine guide published by both the Sydney Morning Herald and the Melbourne Age, *Reynolds* was ranked as one of the five top producers of wine from both the Orange and Hunter regions.

The current range of *Reynolds* wines includes a Semillon, Chardonnay, Cabernet Sauvignon, Merlot and Shiraz. In addition to its own grapes, *Reynolds* has several contracts to sources grapes from other vineyards in the Hunter Valley, Orange Districts and from a promising young vineyard in the New England region. It also has a shareholding in the grapegrower 'Regional Vintages Management Pty Ltd' which employs seven people. Approximately 15,000 cases of wine in total are produced annually all of which is released under the *Reynolds* brand and distributed both nationally and internationally.

The wines are available from the cellar door, through our mailing list and are distributed nationally by Negociants Australia, a subsidiary of Yalumba Wines. In addition, *Reynolds* exports to the U.K., Switzerland, New Zealand, Thailand, Taiwan, Singapore, Japan, China, Belgium, The Netherlands and the U.S.A.

Reynolds also produces wine under contract for other winemakers and grape growers. Not only does this contribute to cash flow but also gives us access to fruit from some of the best vineyards in New South Wales. It is planned that contract winemaking will continue to be a part of the overall business operation.

The company is a medium size wine producer with a turnover of $1.2 million annually. It employs eight full time staff and 10 part time.

Wine is sold to retail customers at the cellar door and through mail order. The bulk of the output, however, is sold to two large domestic customers and to a large and several middle-sized export customers. Its suppliers are also concentrated with approximately 85 per cent of its supplies being sourced from five large suppliers.

The company is a member of the Australian Wine and Brandy Corporation, the Winemakers' Federation of Australia, the Hunter Valley Vineyard Association, the Upper Hunter Vineyard Association, and of the Australian Wine Export Council. It also maintains semi-formal links with bodies such as Australian Business and the Australian Wine Bureau.

5.3. E-Commerce

Although they are somewhat dated, the company has both a business plan and a marketing plan. The company's website is an integral part of its formal planning processes.

The company established a website in 1997 with the aim of marketing and advertising the company's product on the Internet as a way of generating additional sales. It began using e-mail for business communications in 1998 and recently began to do its banking online.

It makes regular use of e-mail for communication. Its use of the fax has declined dramatically in the past six months in favour of e-mail. Orders for wine from overseas importers are frequently receive by e-mail. Individual case orders from private purchasers are few and infrequent. The company does not purchase online as its suppliers do not provide such facilities.

Reynolds' web page is primarily for product awareness. The site also offers secure e-commerce facilities for purchase and delivery of wine. The initial motivation for establishing a website was 'to connect to the rest of the world, primarily as a marketing tool, … to be seen as a player in the global market for wine, and to be one of the first with a wine website and thus be viewed as an industry leader'. Distributors around the world, for example, are able to download tasting notes, images and general information concerning our business and wines for promotional use.

Current users of the company's website include: distributors and current customers, tertiary students seeking information for projects, people seeking employment in the wine industry and organisations seeking to list *Reynolds* wines for sale on their e-commerce websites ('we would have at least two of these per week! Sale of wine over the net is viewed as an online gold mine'). Inquiries are usually responded to within 24 hours of receipt.

Reynolds considers individual sales as a bonus. However, they also represent considerable difficulties. 'Freight of individual cartons of wine is expensive and fraught with difficulties. Theft is a major problem as is breakage. Any loss is at our cost. Country freight services are generally poor, not always regular and are costly. In a smaller company without automation or staff for picking and packing, time spent on fulfilling orders is substantial. As we grow, some of these difficulties will be overcome and we will also have the benefit of economies of scale'.

The company considers its website as being valuable for business. 'The real value of our web presence has been through marketing our company overseas and attracting prospective importers who best fit our requirements for representation and with a view to generating volume sales through them'. On the downside, it feels its ' main difficulty is in keeping the site current and topical'.

The Australian Wine and Brandy Corporation is about to launch an online system for lodgement of export applications and documentation and the company plans to use such a system as soon as it becomes available.

The website was designed professionally, in conduction with the editor (now web master) of the South Australian based 'Winetitles', publisher of wine industry publications. *Reynolds* chose to employ the services of someone familiar with the wine industry to develop its website to ensure that it was accessible and worthwhile by establishing extensive and appropriate links to other sites. It felt that this would be best done by someone with knowledge and experience of what was required to achieve that aim. The hard copy and images used on the website were provided by *Reynolds*.

The process of setting up the website had some inherent problems. Although the website was set up at a very low cost to *Reynolds*, the quid-pro-quo was that the website was also set up as a marketing tool for services provided by the webmaster. 'He has put together what the company considers to be an excellent website and maintains it on a limited basis as part of an ongoing contract at little cost to us'.

Jane Reynolds, who is primarily responsible for the website 'finds it very onerous providing the webmaster with hard copy by mail and e-mail to update the site. It is very demanding on his time also, since he has set up such an extensive site for us. Our site should be updated on a weekly basis'.

Having limited expertise in establishing and maintaining the website, Jane recently had 'a beginners' crash course from a friend who has shown me (together with our webmaster's assistance) how to access our site. In this way, I have been able to update some of the information myself but I am having limited success at this stage'.

The Internet has had considerable impact on the way *Reynolds* conducts its business. E-mail has improved the company's responsiveness to its customers ('we are more in touch with our customers at the coalface'.) The company feels that the website has expanded its opportunities to market and thus sell its products. In terms of costs, as noted earlier, the company has reduced dramatically its communication costs (fax etc). The company expects to make greater usage of the Internet particularly in the area of business to business communication and transactions.

5.4. Communications Infrastructure

There are two Internet providers accessible to *Reynolds* that can provide a service at a local call charge. The company feels that because there is little competition, the service providers are expensive. Jane Reynolds considers the service to be of low quality:

'we find their support extremely inconsistent and unsatisfactory. I have this year discovered the name of the "chief" in their office in Newcastle. If I have a serious problem, I call him. Otherwise I can spend hours/days/weeks trying to resolve it calling them on STD rates. There is no supplier of technological advice in our area who could service our needs. We use someone in Newcastle who in my view, is also inadequate and will not travel to us. Fortunately, our recently employed accountant is reasonably adept'.

6. EASYORCHIDS

6.1. Overview

Easy Orchids is a family business that supplies quality orchids to Australia and the world.

Easy Orchids' website is a real success story. It is incomplete, with minimal content and few of the features you may find at other sites, yet it has managed to create for Easy Orchids:

- a major increase in sales volume; and
- considerable interest from overseas buyers.

In fact, coping with the volume of trade has left the proprietors little time to complete or enhance their website!

Easy Orchids uses this site primarily to:

- attract attention to the business;
- provide access to its catalogue and order form (in PDF format); and
- from time to time, promote eco-tours to places like Madagascar, which the proprietors lead for people interested in viewing orchids in the wild.

Equally important in this success story are:

- email, which Easy Orchids uses to follow up queries and orders; and
- a digital camera, which enables Easy Orchids to transmit images of individual plants to prospective buyers and overseas business partners.

Benefits include:

- for the buyer, greater confidence in what he or she is buying;
- for Easy Orchids, savings in the cost of freighting samples to overseas partners; and
- for all parties, a reduction in the time needed to complete the transaction.

The proprietors of Easy Orchids say their venture in e-Commerce has been good to them. They would like to enhance their site by providing detailed descriptions of plant species for sales, as well as growing instructions and advice.

Website

Address: http://www.easyorchids.com/

Features:
- downloadable catalogue (in PDF format and Word format).
- downloadable order form (in PDF format).
- link to the Orchid Webring.
- contact details.

Contact

Murray and Jean Shergold, 3 Sussex St, Woodburn N.S.W. 2472.

Telephone: (06) 6682 2635   Facsimile: (02) 6682 2605.

Email: sales@easyorchids.com

6.2.   Background

Easy Orchids is a small specialist nursery growing and supplying exotic 'species' orchids for the Australian and international market. It located at Woodburn, a small town near Lismore in northern NSW. It is operated as a partnership by Murray and Jean Shergold. The Shergolds have other business interests and operate *Easy Orchids* on a part-time basis with the assistance of an employee.

The Shergolds started *Easy Orchids* in 1993 in anticipation of their eventual retirement with the view of developing a hobby into an activity that would provide them with an ongoing interest and some income. The intention had been to retain the 'hobby' nature in the business activity.

With these modest objectives, the Shergolds began to supply the 'showbench' market for hybrid orchids catering for hobbyists and enthusiasts. It was not long before the Shergolds began to realise the existence of a niche market opportunity in the supply of species orchids. Demand for species orchards was fuelled by a widespread belief among hobbyists that the natural (jungle) orchid stock was rapidly depleting and desirable species would become increasingly difficult to obtain. To take advantage of this market opportunity, the business changed direction and became a specialist nursery for the raising and supply of orchid species.

The Australian species orchid industry is very small. Because some orchid species are on the endangered flora list, the industry is subject to extensive controls that regulate the sale and import and export of species orchids. According to the Shergolds, Australian laws tend to be much more restrictive than those of many other countries and can act as a major impediment to trade and international competitiveness and to business growth. Compliance with quarantine, environmental and customs regulation can also be complex and can act as a restraint on business growth.

Easy Orchids is primarily a retail operation modelled on the concept of mailorder catalogue sale business. Most sales are thus 'at a distance' rather than face-to-face. A seasonal catalogue of available orchids is sent to a mailing list of clients. Orders are accepted by mail, phone or fax. Sales are delivered to the address nominated by the customer.

Currently, *Easy Orchids* has a turnover of approximately $150,000 per annum. Its clientele is widely distributed in Australia and overseas. About 40 per cent of its sales are to overseas clients. Sales typically involve one or a few plants. Purchases are usually in the range from $100 to $2,000 dollars for domestic sales and between $400 to $4,000 for overseas sales. Around 15 per cent of purchases exceed $1,000 in value.

In addition to orchid sales, the business organises and promotes overseas tours or visits to sites where orchids grow naturally. Usually two overseas tours are organised each year. The tours are very popular and the limited available places fill up very quickly. Tour participants are mainly Australians, but do include participants from other countries.

Supplies are sourced largely from commercial operators in other countries. *Easy Orchids* usually seeks to arrange exclusive supply contracts for Australia with its overseas suppliers. A small quantity of supplies is sourced from other specialist suppliers in Australia.

As a typical microbusiness, *Easy Orchids* does not have a formal business plan. The principals plan and carry out all the operations of the business on an informal basis. Growth is pursued at a proactive, but managed, rate that can be sustained with existing resources. The business makes use of external accounting, financial and legal advisors as required.

There are no specialist industry bodies catering to species orchid industry. As the industry is small, contact between participants tends to be relatively easy and firms operating in the industry tend to be familiar with each other's activities. Although part of the general nursery industry, raising of species orchids is a small sub-sector and does not attract much attention from general industry bodies.

6.3. Establishment of the Website

Easy Orchids first established an Internet connection in 1996. The primary use of the Internet was for email communication and access to information of use to the business including identification of potential sources of supplies. The Internet connection gradually developed into a business communication facility for the exchange of information with customers and suppliers and business transactions such as electronic banking.

A website was established in 1997 to provide a presence for the company on the World Wide Web. Initially, this was essentially akin to an advertisement in the 'yellow pages' that interested parties could follow up with enquiries via traditional communication means or by e-mail. The seasonal product catalogue was subsequently added to the website and can be downloaded by potential clients. Orders are accepted by email or traditional means. Secure online ordering is not available.

Australian customers enquiring about a plant listed on the catalogue are encouraged to contact *Easy Orchids*, by e-mail, preferably, or by fax , phone or letter to ascertain the availability of the particular plant they are seeking. Once availability is confirmed, if they are established customers with an already established credit rating, the plant is shipped out together with an invoice for payment. Alternatively, they may choose to pay with a credit card at the time they place the order. New customers are required to supply credit card details or arrange some other form of payment before shipping of the plant.

The sale of orchids to customers in other countries is substantially more complex. Different countries have different sanitary and documentation requirements and it is important to ensure that compliance with them is ascertained before the plant is shipped. Payment is usually required prior to shipping.

Overseas orders are processed for dispatch within 24 hours of confirmation. For domestic orders, the normal routine is to dispatch all orders on the Monday following confirmation of the order. This is done primarily for quality reasons. The desire is to minimise the impact of travel on the plants. By dispatching on Monday, the business avoids the risk of having plants stuck in a transport depot as over weekends.

A particular useful service for Internet customers is the ability to view digital photographs of the item they are considering for purchase. *Easy Orchids* finds a digital camera to be a very valuable selling tool. Rather than have customers face the usual mail order feeling that they are taking a risk by ordering something they have not been able to see, prospective clients are e-mailed digital photographs of the actual plants available for purchase. This allows them to make informed decision regarding purchase and greatly reduces the risk of dissatisfaction.

Although the business purchases some of its supplies via the Internet, it is often faced with a need for personal travel overseas to view products prior to selection. Such a need could be largely eliminated if suppliers had the capacity to make electronic transmission of digital photographs of actual plants on offer.

6.4. Website Development

The website was designed and established with the assistance of a professional website designer working closely with the owners of the business. In its current format the *Easy Orchids* website is quite basic. It consists of a front-page much like a colour display advertisement in a magazine displaying the business name, the front cover of the current seasonal catalogue, and address and contact details (including e-mail) for the business. The display also includes the following captions:

- Suppliers of Quality Orchids — Flasks and Plants.
- Mostly Species.
- We export to the World.

The front-page also has a 'dowload' button that takes the user to a second page from where the catalogue and an order form can be downloaded for printing.

Easy Orchids regards its site as being only 20 per cent developed. Work pressures and a desire to gain an understanding of what is possible and achievable with business use of the Internet has delayed the development of a more functional site.

In recent times, the principals of the business have spent many hours with the web site designer to try and develop a contemporary site that meets the current needs of the business. The aim is to launch a new more functional and comprehensive site in the short term. Work pressures are delaying the redevelopment, but the principals expect that 'shortly we will expand our site by perhaps 500 per cent'. There has already been a large commitment of resources to this task and redevelopment is almost complete. Many ideas for the redevelopment of the site have come from observations of functional facilities offered on other websites and adapting to the needs of potential *Easy Orchids'* customers. Given the results already achieved with a website of limited functionality, the principals anticipate a significant expansion of business with to follow the launch of the new website.

6.5. Benefits of E-Commerce

The primary motivation for the establishment of a website was twofold:

- to ensure that the business was not by-passed or disadvantaged by developments in of communications; and
- to enable the business to access a large and widespread market at a low cost.

According to the principals of *Easy Orchids* the benefits of establishing a website have more than surpassed expectations. Almost 50 per cent of orchid sales are made via the Internet. The annual overseas tours of natural orchids habitats are also promoted and sold via the website.

The website is credited as having been responsible for most of the overseas sales achieved to date. The low cost of establishing an Internet presence makes it feasible even for very small firms to reach large and dispersed markets. The otherwise high cost involved in developing an export market with traditional mechanisms would most certainly have put overseas sales beyond the reach of a small firm such as *Easy Orchids.* Similarly, without the Internet, the business would not have been able to reach as many Australian customers as it has been able to.

The principals of *Easy Orchids* are very enthusiastic about the Internet: 'We are able to communicate so much better for so little money it is amazing. Stop and think of the difference to all other forms of advertising and the cost. This is the greatest business help ever made available to us'.

The Internet has provided other benefits to the business. Because people can buy from competitors anywhere in the world, the Internet imposes a discipline on businesses to maintain the highest possible standards for customer service and quality. For example, according to *Easy Orchids*: 'we cannot send pictures of plants with even a mark on them and expect to sell them. Internet customers are generally discerning and well to do — they are just what any business wants. If they are not fully satisfied with your product, they have no hesitation to go elsewhere'.

Use of the Internet has enabled *Easy Orchids* to promote the business at very little cost. The business could not afford to spend much on advertising or marketing prior to getting Internet access. 'The Internet has allowed us to contact many more people without increasing our advertising expenditure. This in turn has increased the number that buys our product. It has also allowed us to get closer to our clients, thus giving us the opportunity to maximise our sales. This is primarily due to our ability to deal with each customer on a personal basis anywhere in the world, determine exactly what they want, and supply the product that best meets their needs'. The expectation is that relationships with clients will become increasingly personalised with the introduction of better facilities for picture transmission and improved cost effective communications such Internet telephony.

Prior to the Internet, most business communications were by means of post, fax and telephone. Being located in a regional area and dealing with customers spread throughout Australia and overseas, meant substantial communications costs at STD and international rates. With the Internet, communications costs have been greatly reduced if not virtually eliminated. Access to an Internet provider is available at local telephone call rates and e-mail messages can be sent anywhere in the world at virtually no additional cost. The capacity to communicate more effectively at a very low cost means that problems can be resolved quickly as soon as they develop. 'Travel costs too will be reduced, as our reliance on middle men will be reduced and our ability to source and sell with guarantees of quality will be enhanced'.

Easy Orchids has encountered significant reluctance by many people to supply credit card details by e-mail or over the Internet generally. This means that total reliance on the Internet for distance sales is not a realistic option for those who want to maximise sales. Most people, however, are quite happy to supply credit card details over the phone or by fax. To minimise loss of potential customers, therefore, it is important to continue providing the option for orders to be placed by telephone or fax alongside online ordering.

7. TOORALLIE

7.1. Overview

Toorallie Australia makes a range of quality knitwear products, from the sheep's back right through to the finished product. They use fine merino wool, grown on their own property near Bombala, N.S.W. They market in Australia and overseas, with about 40% of their sales made to overseas buyers.

Toorallie have operated a website for some five years. They use it primarily to:

- promote their products; and
- sell mail-order products online.

Toorallie's online store makes extensive use of images and pre-formatted order forms. Customers can purchase selected items:

- online, or
- by fax, phone or mail.

They also offer gift vouchers and a lay-by service.

In addition, Toorallie:

- have a dummy site, used to deliver comprehensive catalogues to distributors; and
- make extensive use of email, which they use for both internal and external communication.

For Toorallie, the Internet has become essential to their day-to-day business operations. They use it, among other things,

- to search for prospective customers;
- to pay their bills; and
- to bank online with the National Australia Bank.

For international activities, however, Toorallie finds the banking system too inflexible, and they still use telegraphic transfer for overseas trading.

Website

Address: http://www.toorallie.com.au

Features:
- company details
- online store, with images, product specifications and prices
- customer and ordering information
- contact details

Contact

Toorallie Australia, 114 Maybe Street, Bombala NSW 2632

Telephone: (02) 6458 3708   Facsimile: (02) 6458 3240

Email: tmill@acr.net.au

7.2. Background

Toorallie Australia draws its name from 'Toorallie', a wool-growing property near Bombala in the Monaro district of New South Wales. The proprietors, Peter and Claire Smith, decided to find a new market for their wool when the Australian wool market crashed in 1990. After months of research they came up with range of knitwear that used their own fine Merino Wool and made it into something special.

Toorallie is one of an increasing number of wool-growers who have extended their business beyond the traditional greasy wool market by adding value to their own, home-grown product. Majestic Merino, a Western Australian supplier of quality yarns, is another example. Such businesses involve themselves in all phases of the value chain, from the sheep's back to the finished product.

7.3. Business Strategy

Toorallie Australia is a family-owned business, headed by Peter and Claire Smith. As indicated in the organisation chart below, the business includes pastoral and knitwear operations, as well as Toorallie Foods, which deals mainly in meat products.

Figure 3: Toorallie Company Structure
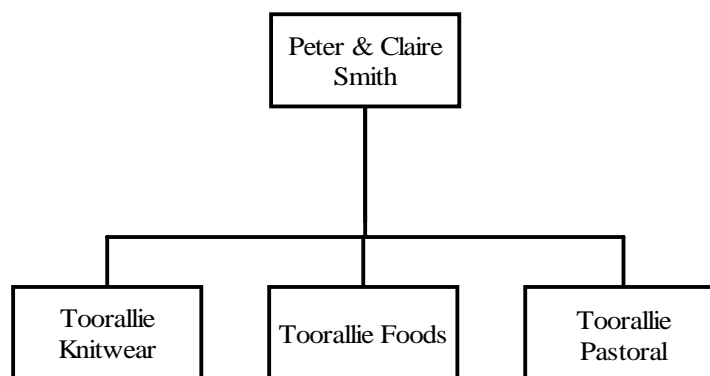
Toorallie's knitwear operation involves almost the entire family, as well as about 40 staff involved in retail, production and administrative functions. Peter and Claire Smith exercise general oversight of the business, with Peter also responsible for financial management and export development. Their sons, daughters and sons-in-law between them manage the design, manufacturing and marketing aspects of the business. The division of duties shown in the following chart represents primary responsibilities; major decisions, however, are made at the family level through consultation and discussion.

Figure 4: Toorallie Knitwear Division

```
┌─────────────────────┐         ┌─────────────────────┐
│     Financial       │         │   Production and    │
│    Management       │─────────│                     │
│   (Peter Smith)     │         │   (Claire Smith)    │
└─────────────────────┘         └─────────────────────┘

              Marketing Management

        ┌──────────────┐   ┌──────────────┐
        │  Marketing   │   │  Production  │
        └──────────────┘   └──────────────┘

   ┌──────────────┐          ┌──────────────┐
   │   Retail     │          │   Design     │
   │   (Scott     │          │  (Dannielle) │
   └──────────────┘          └──────────────┘

   ┌──────────────┐          ┌──────────────┐
   │  Wholesale   │          │  Cutting etc │
   │   (Simon)    │          │   (Simon)    │
   └──────────────┘          └──────────────┘

   ┌──────────────┐          ┌──────────────┐
   │     Web      │          │  Technical   │
   │   (Scott)    │          │  (Stewart)   │
   └──────────────┘          └──────────────┘
```
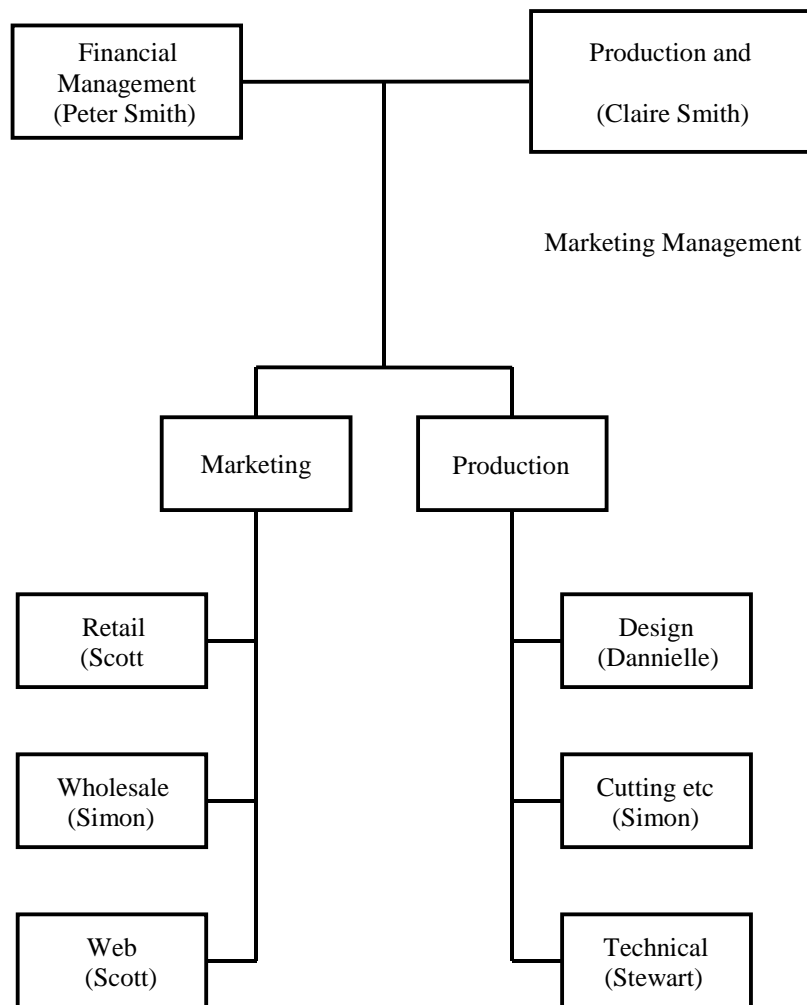
7.4. Marketing

Toorallie sells in both retail and wholesale markets. Approximately 40% of its sales are to customers in countries like the United States, Norway, New Zealand and the United Kingdom. It sells wholesale to major retail chains in Australia and overseas, and also markets through smaller retail outlets, trade shows and its own mail order and online service.

Retail operations are daughter, Lisa Ward's, responsibility. Toorallie has five retail outlets with another two expected to open soon, including one at Sydney airport. There is also a New Zealand operation. For promotional reasons, Toorallie maintains a presence at most major agricultural shows (for example Sydney, Melbourne and Adelaide) and field days (for example, Mudgee), as well as the Armidale Wool Expo.

Wholesale operations are the province of Lisa's brother, Simon. In dealing with its wholesale customers in Australia and overseas, Toorallie makes extensive use of the Web for timely, cost-effective delivery of its catalogues.

Toorallie's website plays an important role in its overall marketing strategy. Designed by a consultant, Bill Brown, it is Lisa's husband Scott who takes responsibility for updating and maintaining it.

Although its operations include both retail and wholesale operations, Toorallie sees advantages in expanding the retail side of its business at the expense of its wholesale trade. This would provide Toorallie with greater control and autonomy over production and marketing, and greater flexibility to try out new product lines and colour ranges. Toorallie also intends to establish a corporate line of products, marketed under a different brand name, made from 100% wool and blended fabrics.

7.5. Production

Production begins with the fine merino wool that is grown on the Toorallie properties. This is spun, dyed and treated, machine knitted and made up in accordance with daughter, Dannielle's, distinctive range of designs.

All of the wools used in Toorallie's product range are fine Australian merino wool. About 80% of this is sourced directly from Toorallie and treated in Australia by Australian Country Spinners (ACS) at Wangaratta in Victoria. ACS processes all of the coloured yarns that Toorallie requires in bulk quantities, such as navy, cream and black. The lead time for such orders is around 8 months.

For unusual colours, however, for which there is a need for small quantities only, Toorallie obtains its yarns from overseas sources. Toorallie has arrangements with a mill in China (the contact for which was first made via the Web) and in Italy. Economies of scale mean that these mills can supply small quantities of yarn at relatively low cost and within a short time frame. Toorallie sells its own wool to these mills but it is not necessarily their own wool that returns. The processed wool is, nevertheless, all Australian and of equivalent quality to Toorallie's own wool.

Toorallie has reached an evolutionary stage in its business where it has grown from a very small family concern to a medium sized enterprise. Small businesses can encounter difficulties in the transition stage as they adjust to increasing organisational complexity and workloads, and the need therefore for a clearer division of duties and operational responsibilities. Toorallie would appear to have reached this point in its evolution.

The effect of growth on this small, family-owned rural business is exemplified by its recent decision to move most of its garment manufacturing operation to Canberra. Toorallie's knitting and garment make-up facilities were originally located at Bombala, a small village in the Monaro district of south-east New South Wales. Its Bombala premises, however, are now extremely cramped and poorly suited for the type and scale of operations into which the business has grown. Moreover, Toorallie finds it very difficult to attract enough skilled labour to Bombala. For these reasons, Toorallie has just opened a new retail outlet and factory in Canberra, with a production facility that can viewed by the public. The larger premises means that Toorallie can expand its operations, and will soon be trading in four of its current knitting machines and installing an additional six machines, costing approximately $200,000 each.

The move to Canberra has also given Toorallie convenient access to service and material suppliers. Lack of convenient access to suppliers is one of the downsides of running a rural-based business.

7.6. E-Commerce Activity

Toorallie relies heavily on the Internet to support its business activity. It maintains a website, communicates via email, uses search engines to locate potential customers, and banks and pays its

bills online. Lisa Ward, who runs Toorallie's New Zealand operation, says that most people she deals with are now on the Internet.

Toorallie established its first website about five years ago. There are now two websites, one which is open to the public and another 'dummy' site with access restricted to wholesale clients.

The open website is used to promote the Toorallie brand and to sell products through an online store. Customers select their requirements from an electronic catalogue, which is integrated with an online ordering facility. Customers may place and pay for orders online, or print the order form and either phone, fax or mail their requirements. Toorallie also advertises a range of supplementary services, including lay-by, gift vouchers, and gift-wrapping and delivery.

From a user's perspective, this is a well-designed, attractive site. It is quick to load, easy to navigate and provides useful information on such matters as delivery arrangements and garment care in a concise, easy-to-read format. The online store, with its integrated catalogue and on-screen order form, is also easy to use. Some users, however, will be disappointed that the site has no obvious security protocol in place.

Toorallie makes only about 3 or 4% of its revenue directly from online sales. It believes, however, that having a presence on the Web is an essential element of its overall marketing strategy. Toorallie has experienced considerable growth and a change in its customer profile since its website was established. Although other factors may have contributed to this growth, it is highly likely that the relatively small investment required to establish the site has easily been recouped.

In contrast, the second, dummy site gives a clearly identifiable benefit to the company through cost-effective and timely distribution of product information to wholesale clients. At selected intervals, Toorallie loads a catalogue containing details of its full product range onto this dummy site. It then advises its wholesale clients of when and how to locate it. This has replaced the printed catalogues Toorallie once sent by mail to its Australian and international wholesalers, providing significant savings in printing and postage costs.

There are four matters that cause Toorallie some concern with its electronic commerce operation. The first, and for Lisa Ward, the main problem encountered is in keeping the website up-to-date. Lisa says that it is the technical aspects that create the difficulty; maintaining the site demands skills that she lacks, making her dependent on specialist technical help.

The second, which affects both its electronic commerce and its international operations generally, is the banking system, and in particular its lack of flexibility in dealing with international currency transactions. In fact, except for its New Zealand operation, where it maintains a New Zealand bank account, Toorallie still relies largely on telegraphic transfer for international transactions.

The third is the lack of security certification on its online store. Security issues are something Toorallie intends to look into in the very near future.

And the fourth, which Lisa believes will be only a short-term problem, relates to the quality of service available to small business from Internet Service Providers.

On the whole, however, Toorallie is pleased with the establishment of its website, from which it has already reaped the benefits in product promotion, sales and the establishment of international business relationships.

8. MCMAHON GLOBAL FOODS

8.1. Overview

McMahon Global Foods is a licensed exporter of dairy products, and markets in all regions of the world.

McMahon has operated a website since 1997 and uses it primarily to:

- promote the company and its products in a worldwide market;

- provide information on its operations and the Australian dairy industry; and

- facilitate communications with existing and potential customers and receive feedback from them.

For McMahon, the Internet has become an essential tool for business communication:

- electronic mail has largely replaced the telephone and facsimile as a means of contacting and communicating with customers;

- communications costs have been reduced substantially;

- quality and efficiency of communications with customers has been enhanced; and

- its ability to respond to inquiries particularly those requiring prompt response has been greatly improved.

McMahon is linked to the National Australia Bank on Line Marketing Services with access to the following:

- forward exchange contract information;

- international market information including money market rates, foreign exchange rates and economic data;

- international trade — a link between McMahon's office and the National's International Service Centre enables the company to manage export and import letters of credit and collection transactions;

- international funds transfer — electronic 'mailbox' and access to offshore foreign currency accounts; and

- state-of-the-art technology linked to the Australian Customs Service enables shipping documents to be produced quickly and accurately.

Other e-commerce practices in place at McMahon include:

- use of Ozdocs software to prepare export documentation with a direct link to Australian Customs;

- use of Quickbooks accounting software for business accounting and taxation; tracking balances and payments; business reporting; and market reports.

Website

Address: http://www.mcmahon.com.au

Features:
- company and industry information

- product descriptions, specifications and availability
- contact details.

Contact

J.M. McMahon Pty Ltd. P.O. Box 137 (Main Road), Gordon Vic. 3345.
Telephone: (03) 5368 9583   Facsimile: (03) 5368 9613
Email: info@mcmahon.com.au

8.2.   Background

McMahon Global Foods (J M McMahon &Co Pty Ltd) is a licensed exporter of dairy products located in Gordon, Victoria. It was established by its current managing director, John McMahon, in September 1993. It currently employs six full-time, and two part-time staff and its sales have grown from $2.7 million in 1993-94 to $24.5 million in 1998-99.

Exports are predominantly in bulk products including cheese, butter and milk powders that are sold mainly through exclusive agents in overseas markets. Its customer base is somewhat concentrated with the largest ten customers estimated to be responsible for approximately 60 per cent of sales.

The majority of McMahon's sales are made to:

- Supermarkets — requiring retail lines packed in Australia.
- Food Processors — utilising bulk cheese, butter and powders, which they convert into products that suit their requirements.
- Commodity Traders — some of which have a strong influence in their specific markets eg: Algeria, Russia.

The company's website was established in May 1997 and has become an integral part of business operations. The website is used primarily to promote the company's and provide information on the company's operations and the Australian dairy industry generally. The website also facilitates communications with existing and potential customers and is a valuable mechanism for obtaining feedback from them.

McMahon considers the Internet to be an essential tool for business communication. Electronic mail has largely replaced the telephone and facsimile as a means of contacting and communicating with customers. Its use has not only reduced communications costs substantially but has also enhanced the quality and efficiency of communications with customers has been and improved its ability to handle inquiries particularly those requiring prompt response.

8.3.   Business Strategy

McMahon was established as a specialist exporter of dairy products to take advantage of the opportunities provided by increased demand for Australian dairy products. It was located in Victoria because the dairy industry in that state accounts for a vast proportion of Australian dairy exports. According to McMahon, export markets are highly competitive and are characterised by fluctuations in supply, currency, and demand for product, all of which can have considerable impact on business opportunities. Success is often associated with an ability to respond quickly to changing market conditions. The business, therefore, devotes substantial effort to the close monitoring of changing market factors to identify opportunities for increased sales.

McMahon seeks to service markets in non-mainstream countries where larger Australian Dairy exporters tend to be less active.   When it began trading, major Australian exporters were

predominantly operating in East Asian markets. It also seeks to develop a diverse client base in different regions of the world to limit exposure to risk of regional economic change. Another feature of McMahon's marketing strategy is not to overlook markets in countries where export business may not be easy to establish. For example, McMahon is currently undergoing the lengthy and involved process of registering its Australian dairy products in South America — Brazil and Venezuela.

According to John McMahon, the business prospers because it is prepared to tackle markets that the larger dairy co-operatives are less interested in. It has also been successful in developing sales for retail packs of dairy products. Sales of branded retail and food service packs now total nearly a million dollars annually. McMahon's core products include both commodity (bulk cheese, butter, milk powders, etc), value added retail products ready for the supermarket and specifically formulated mixtures which contain dairy products from Australia.

Rapid growth in sales bears testament to the success of this strategy (see Figure 5).

Figure 5: McMahon Global Foods — Export Sales 1993-1999

In addition to developing new markets, McMahon also seeks to expand existing markets by broadening its product lines. New dairy product lines are planned and introduced by continually increasing the number of suppliers and by entering into sole agency agreements to represent major suppliers in particular markets. For example, McMahon has a sole agency for Bega dairy products in Cyprus, Canada, Singapore, Malta, Thailand, South Africa and Indonesia. Bega is Australia's biggest name in cheese — McMahon is Bega's biggest export customer.

McMahon organises an annual seminar for staff to discuss changes to strategic and corporate plans, export objectives and improvements to the customer service policy. The purpose of this exercise is to produce an annual corporate plan with key goals of:

- Developing more business with existing customers and suppliers.

- Maintaining a high level of international credibility and recognition.

- Establishing and increasing a comprehensive overseas network of dedicated importers and distributors.

- Keeping abreast of new technology and continually improving existing systems.

- Providing development opportunities for staff.

Usually the planning process starts with a comprehensive review of international import statistics issued by ADC, Austrade, etc. to highlight markets with reduced EU supply, increased NZ supply, or general import growth. From these, 2-3 markets are targeted for vigorous development each year including a market visit. Other markets with longer-term prospects are initially developed from the office. Suppliers and existing customers are involved to ensure the forecasts are workable and staff and equipment levels are reviewed to ensure that the marketing activity can be adequately supported.

Although formulated in January each year, the corporate plan is monitored by staff on a weekly basis and is reviewed by directors on a monthly basis.

8.4. E-Commerce Activities

McMahon considers modern communication services as a major factor in its ability to conduct a multi-million dollars export business from a small country town in Victoria. Staff are networked with the latest computer technology thereby increasing productivity without increasing staff numbers. The company is keen to adopt innovative software packages to improve the efficiency of its operations. For example, the preparation of export documents is facilitated by the use of *Ozdocs* — a state of the art export documentation software, linked to Australian Customs.

Planning and development of the company's website is an important element of McMahon's business and marketing strategy. The website was launched in May 1997 and has become an integral part of business operations. In 1998, it was translated into Korean and Mandarin for distribution via the Australian Dairy Industry's CD-ROM catalogue. McMahon has also sought to maximise the web exposure of its website by registering it with all the major Internet search engines and international trade directories.

The website was developed by the company with the help of a professional website designer. The company feels that its website is now somewhat dated and needs to be redeveloped. Customers have found the current site easy to use and the company will be seeking to retain the user-friendly attributes in the redevelopment of the site. As part of the re-design, McMahon has organised a staff brainstorming session on how the site can be improved from the customers' perspective. Feedback received from customers and visitors to the website was also taken into consideration.

The company primary motivation in setting up a website was the desire to establish an international presence on the Internet. As all the company's customers are overseas, the site was seen as complement to its trading activities and a point of contact for potential new customers. The website gives the company a 'feeling of substance. A lot of people don't realise it's a small company'. McMahon also feels that projection of a solid image to potential overseas customers is very valuable in at least generating inquiries that can lead to new sales.

McMahon uses its website to promote the company's image and products. Information available through the website includes:

- Up to date product specifications on almost 500 products.

- A monthly trading page with details of current products and quantities available for export.

- A seasonal company newsletter providing up to date information on the company and the Australian dairy industry.

- A facility to obtain feedback from customers or potential customers.

Although the website provides an inquiry facility for users, there is no facility for online ordering of products. According to the company this is largely a reflection of the nature of its business. 'it is difficult to sell the type of products we are involved in online. Say someone from India says we would

like to buy 20 tonnes of butter from you, please give us a price. We have to establish a lot before we complete a sale. We actually have to establish if they are bona fide, if they have an import licence, if they can establish a letter of credit and so on. We need to do all of this before we go to a lot of trouble to find and secure supply of the product. These things are hard to do over the Internet because you don't really know whom you're dealing with'. The Internet, however, has made communication with potential clients much easier and is a definite help in establishing or developing new contacts.

The company's website: http://www.mcmahon.com.au and its e-commerce activities have been featured in Multimedia Victoria's report 'Successful E-Commerce'.

In keeping with its strong interest in innovative use of technology, McMahon is a member of a local electronic exporters network at which breakthroughs in new technology can be monitored and discussed in a forum of mutual understanding. The company has also agreed to participate in a pilot scheme to provide export documentation via the Internet.

As indicated above, the Internet has become an essential tool for business communication. Electronic mail has largely replaced the telephone and facsimile as a means of contacting and communicating with customers. Its use has not only reduced communications costs substantially but has also increased the quality and efficiency of communicating with customers and has enhanced the company's ability to respond to inquiries particularly those requiring prompt response. It has also increased customer satisfaction.

Many customers have requested that McMahon use electronic mail rather than facsimile. Apparently, many customers find that email messages and attached documents are clearer than faxed copies, particularly those in some developing countries where facsimile and photocopy machines are of poor quality or a poorly maintained.

McMahon has derived substantial benefits in both sending and accessing documents online that require immediate attention.
- E-mail has allowed staff to make direct alterations to documents and email them back, reducing order lead times, printing costs and international facsimile charges.

- By having access to scanned artwork sent by graphic designers in an electronic format, artwork can be viewed in full colour and approval given over the phone. This has reduced the need to arrange meetings and eliminated costly courier deliveries.

McMahon's link with the National Australia Bank on Line Marketing Services is another major electronic business activity in which the company is engaged. The facility provides access to the following:

- Forward Exchange Contract information.

- International Market Information including money market rates, foreign exchange rates and economic data.

- International Trade — a link between McMahon's office and the National's International Service Centre enabling the company to manage Export and Import Letters of Credit and collection transactions.

- International Funds Transfer — Electronic 'mailbox' and access to offshore foreign currency accounts.

- State-of-the-art technology linked to the Australian Customs Service enables shipping documents to be produced quickly and accurately.

Similarly, McMahon's *Quickbooks* accounting software allows easy access to:

- Account details, and calculation of tax, etc.

- Tracking of balances and payments.

- Customised reports and graphs with an up to the minute picture of finances and trends.

- Sales reports showing trends and potential for market growth.

Staff have all been formally trained in the use of the Internet and had input into the design of the website. Staff are also fully involved in process of technological change and are given an opportunity to discuss proposed changes to 'old' systems before new systems are agreed to and put in place.

McMahon customers deal in the same global market and they too have been early to recognise the advantages associated with electronic commerce. Because McMahon was among the first Australian exporters to have a website, it has been able to offer assistance and advice to customers wishing to launch their own site. In turn, McMahon will call upon its customers for input before updating to an electronic service that will best serve both needs. McMahon will continue to respond to customer requests to have export documentation generated electronically, and to stay abreast of breakthroughs in new technology.

Customer satisfaction is measured by the volume of repeat business and by ability to win an order over a competitor even though McMahon's price may be the same or higher. McMahon seeks customer feedback on its performance via an annual Customer Satisfaction Survey, personal visits to customers and suppliers and its website's 'contact' page wherein customers can provide suggestions and comments. McMahon sponsors customer visits to Australia which include visits to dairy factories where McMahon products are produced.

9. E-WOOL

9.1. Overview

e-Wool is an electronic wool trading system that complements traditional broker/auction systems:

- it provides a marketing and supply management system as a wholesale service to wool brokers; and

- uses Internet technology to enhance information flows and working relationships between buyers and sellers.

e-Wool launched its website in early 2000 and uses it primarily to:

- promote its electronic wool trading system;

- provide a facility for electronic interaction between growers and buyers; and

- provide access to instant market information.

e-Wool sees considerable advantages for woolgrowers, processors and brokers in using its Internet-based system. For example:

- it's cheaper and more efficient than traditional auction systems.

- it enables wool growers to be actively engaged in their own market; they can forward sell at any time, set prices, and build consignments to buyers' specifications;

- it provides a search engine for processors to identify desired wool types; and

- it frees brokers to sell wool any business day of the year.

Website

Address: http://www.e-wool.com.au

Features:
- separate information for growers and buyers on the advantages of the system and how it works;

- links to brokers;

- online registration for growers and buyers;

- online purchase enquiry;

- reference library;

- current market information;

- contact details.

Contact

Peter Vandeleur

Telephone: (08) 8272 8044.   Facsimile: (08) 8272 8077.

Email: peter_vandeleur@bellsline.com.au

9.2. Background

e-Wool is an electronic wool trading system. It was developed and is operated by Bell's Line Pty Ltd, an Adelaide based firm established in 1996 to develop systems for the efficient sale of wool through the creation of better information and the use of modern communications technology. It provides a marketing and supply management system as a wholesale service to wool brokers and to enhance information flow and closer working relationships between buyers and sellers through the use of e-commerce technology. The system was designed as a complement to the traditional broker/auction system and not as a replacement of existing industry players.

e-Wool facilitates selection of wools to meet specific mill requirements for wool type, consignment size, delivery times and target price. Unlike the standard auction where buyers are presented with a very large number of individual sale lots from which to choose their requirements, by using the *e-Wool* search engine buyers are presented only with wool types that are consistent with their specific order requirements. A consignment building feature of *e-Wool* allows wool to be aggregated into sale lots with particular characteristics and, by using *e-Wool*'s forward planning software, growers can plan the sale of a clip over time to manage fluctuating prices.

Wool is a farm commodity sold as a raw material input to the wool processing industry. ABARE data (Martin, 1998) show that of the 46 300 farms running sheep in these industries in 1996-97, 27 per cent (12 700 farms) received the majority of their income from sheep and wool and produced around 39 per cent of wool output. The remaining 33 600 wool industry farms received most of their income from enterprises other than sheep and wool.

Around 75 per cent of total wool production in 1996-97 was from the 37 per cent of farms that produced more than 11 000 kilograms (63 bales) of wool. Almost one third of farms ran fewer than 1000 sheep, and 95 per cent of these farms were mixed enterprise farms. These farms produced only 5.5 per cent of total wool output, in 1996-97.

According to *e-Wool* wool processors typically purchase wool in relatively large lots in the range of 180-500 bales. Each lot is usually made up of wool with particular characteristics and quality specifications. Very few farms have an output of that magnitude. Typical wool production is only a few bales per grower and hundreds of thousand individual lots are offered for sale each year (source: *e-Wool* interview). Because of the relatively low production output of typical growers, very few individual growers are able to match the requirements of processors for a particular type of wool. Therefore, individual producer lots have to be aggregated into sale lots of a size and grading specifications required by processors. The aggregation function and matching of grower output with buyers' requirements has traditionally been performed by wool brokers. *e-Wool* is designed to increase productivity and efficiency of the wool supply channel by facilitating the matching of sellers and buyers.

9.3. The *e-Wool* System

The *e-Wool* trading system seeks to promote increased efficiency in the wool supply chain by establishing an electronic trading system designed to enhance wool broker mediated links between growers and sellers. It establishes a virtual electronic auction market that operates daily with attributes similar to those of an actual auction market. It operates at two levels:

- Spot – wool which is shorn and tested and available for immediate sale; and

- Forward – wool that available for sale at a future date.

Through *e-Wool* trading system growers can forward sell their wool at any time prior to shearing or set a target price for its sale after shearing. By listing wool offered for sale, *e-Wool* establishes a national database of wool grown and stored all over Australia. It also provides the opportunity to accurately build consignments according to buyers' specifications. Processors can forward order wool by listing their requirements, specifications and offer prices or can buy directly from the lots offered for sale on the forward or spot list.

An associated information/advisory service is provided to growers through participating brokers. Services include daily wool valuations and product planning and quality systems to help growers establish production costs, estimate the final make-up of their clips and secure better prices. It also assists growers with the setting of target prices and with advice on marketing options and price risk management.

The trading system is underpinned by an '*e-Wool* supply alliance' between wool brokers and processors. Currently, the alliance includes nine wool-brokers with an established customer base of growers representing 17.5 per cent of the Australian wool clip. The brokers in the alliance are Roberts Limited, Primaries of WA, Rodwells, RTC Agribusiness, Standard Wool, Australian Wool Network, Goddard Wool Marketing, Moses & Son and Jemalong Wool. The alliance also includes some 20 leading processors and exporters, representing mills around the world.

Brokers are an essential component of the *e-Wool* trading system because they provide warehousing, sampling facilities and on-farm services. Through *e-Wool*, brokers are not tied to scheduled wool auctions to sell wool and are provided with an opportunity to sell wool any business day of the year.

Growers can access the *e-Wool* trading system through a participating wool broker. After determining what a grower wants to sell on the forward and spot markets, a broker makes the necessary arrangements for the wool to be listed on the related *e-Wool* database. A broker will also assist a grower to:

- Establish a an *e-Wool* production plan for the year; and

- Determine production costs using the V cost of production model.

All wool must be offered at a target price (asking) so that sales can take place at anytime without further consultation with the grower. The target prices can be adjusted every day to reflect current market conditions. To assist growers in setting target prices, *e-Wool* provides access to an interactive, independent daily valuation system. A comprehensive set of market information is also available to growers using the trading system. Both 'spot' and 'forward' sales are possible.

The sequential steps in the operation of the spot system are:

1. Wool is sent to the broker's store, sampled and tested in the normal way.
2. Details of fully tested lots sent by the broker to *e-Wool* where it is loaded into the *e-Wool* database.
3. Wool is valued based on latest auction sale results and values sent to the growers/brokers.
4. Growers/Brokers decide which lots to list on the *e-Wool* Spot Catalogue.
5. Target and minimum price are established and communicated to *e-Wool*.
6. Lots carrying a target price at or near current auction values are listed on the next and subsequent catalogues until sold or until target prices are no longer appropriate. Target prices can be adjusted at any time.
7. Brokers are advised of sold lots and offer prices.

8. Brokers invoice the buyer and remit funds to the grower in the normal way

All wool in the *e-Wool* database is revalued every night and values are available to both the grower and the broker.

Growers wishing to sell wool through the forward system are assisted by their *e-Wool* broker to produce a plan (forecast) of their next year's wool clip. This is done using specially developed software. The steps of the forward system are:

1. *Clip analysis*: growers provide details of last year's wool clip test results, mobs and sheep numbers. These data are loaded into a software program by the broker. A Clip Analysis report is then produced.

2. *Sheep Plan*: Next year's mobs and sheep numbers are identified and any likely changes to micron, yield, vm, strength, etc. due to climate or management decisions are inserted.

3. *Production planning*: The Clip Analysis and Sheep and Wool Plan information is then combined to create a Production Plan for the current year wool clip.

4. *Full Clip Forecast*: From the Production Plan a Full Clip Forecast report is created providing the grower with detailed information about his current wool clip.

5. *Forward catalogue*: These details are then listed on the Forward Catalogue available to buyers and processors.

6. *Forward sales*: Forward sales are adjusted in accordance with agreed premium and discount schedule.

Adjustments to the Production Plan can be made at any time.

Key grower benefits that can be gained from using the *e-Wool* system include:

- *e-Wool* can be bought and sold on any business day;

- growers become price makers no need to book wool to auction;

- growers can move quickly in and out of the market;

- wool growers have a more direct link to their customers;

- wool growers have greater control over prices;

- wool growers are better informed, knowing the current value of their clip at all times (even while on the sheep's back); and

- growers store wool and receive payment from their usual broker.

e-Wool provides buyers of wool with a single location, and an electronic wool warehouse, from which they can buy wool. Through it buyers of wool anywhere in the world can access growers' test results and target prices for the lots offered for sale. Wool buyers and processors can also use the *e-Wool* consignment building services to match lots on offer with their requirements. Additional features for buyers include:

- access to priced wool;

- access to a national data base of fully tested (spot) wool;

- a forward purchasing system; and

- a search engine to find a particular type of wool.

The steps in buying lines of wool using the *e-Wool* system are:

1. Registration with *e-Wool*;

2. Lodgement of a consignment/enquiry form.

3. *e-Wool* response to consignment request offering a listing available wool falling within the required specifications and price limits.

4. Acceptance or rejection of the offered wool.

Key buyer benefits that can be gained from using the *e-Wool* system include:

▪ Wool processors have a more direct link to their suppliers.

▪ Improved supply availability:

    a) access to wool every day of the year; and

    b) access to wool grown anywhere in Australia.

▪ Reduced exposure to market volatility — all wool offered at a nominated price.

▪ Reliability of supply:

    a) ability to plan and manage supply; and

    b) access to 'forward' wool (on the sheep's back).

▪ Improve quality:

    a) tightly specify consignments; and

    c) ability to specify clip preparation standard on forward wool.

9.4. Brokers Assessment

A major wool broker who has been involved with *e-Wool* for up to 12 months prior to its Internet release and has been using the system since is of the view that:

▪ While there have been a number of offer systems around for some time, buyers like *e-Wool* because it is the only managed system available.

▪ Unlike the AWEX system that is being developed at the moment, *e-Wool*'s search engine is 'great' as buyers can simply set their parameters and the system will quickly and efficient identify what's available, at realistic prices.

▪ More and more are becoming aware of it and usage is growing rapidly.

▪ In the past year, up to 15% of total receipts (65,000 bales) have been listed on the system.

▪ With the sales season coming to an end, a lot of wool is being sold through it.

The broker uses *e-Wool* as an adjunct to mainstream auction system to cater for:

▪ clients with wool that they don't want to sell straight away;

▪ clients who want to obtain a picture of the wool clip each week and set target prices accordingly; and

▪ wool that would not otherwise be exposed to the market.

The overall assessment by the broker is:

- The *e-Wool* system gives growers an excellent opportunity to take advantage of alternative ways of doing business, for example forward-selling, but wool-growers in particular are 'eternal optimists' - believing that the industry is bound to turn around and that the old ways of doing business will again give them good returns.

- The industry comprises 20% of producers who are very profitable, and 60% who are marginal.

- It is ideal for brokers because *e-Wool* enables sales on any business day of the week.

- Growers in Western Australia, Victoria and Tasmania are the main users of the *e-Wool* system.

- The system works extremely well for Tasmanians because it puts them continuously in the market, whereas they have access to only two traditional auctions per year.

The broker has not found any downsides with the system yet and considers that '*e-Wool* has a huge potential'. The broker has been working closely with growers to improve their production and forward selling systems and is encouraging growers to join the *e-Wool* system. *e-Wool* is considered to be an important element of improved production systems because forward selling requires very accurate information for forecasting and *e-Wool* facilitates access to such information. Unfortunately, however, adoption of the *e-Wool* system is slow primarily because of the high proportion of marginal growers in the industry and many growers, because of their age, see woolgrowing and marketing the traditional way as a lifestyle and have little interest in changing.

9.5. Some *e-Wool* Statistics

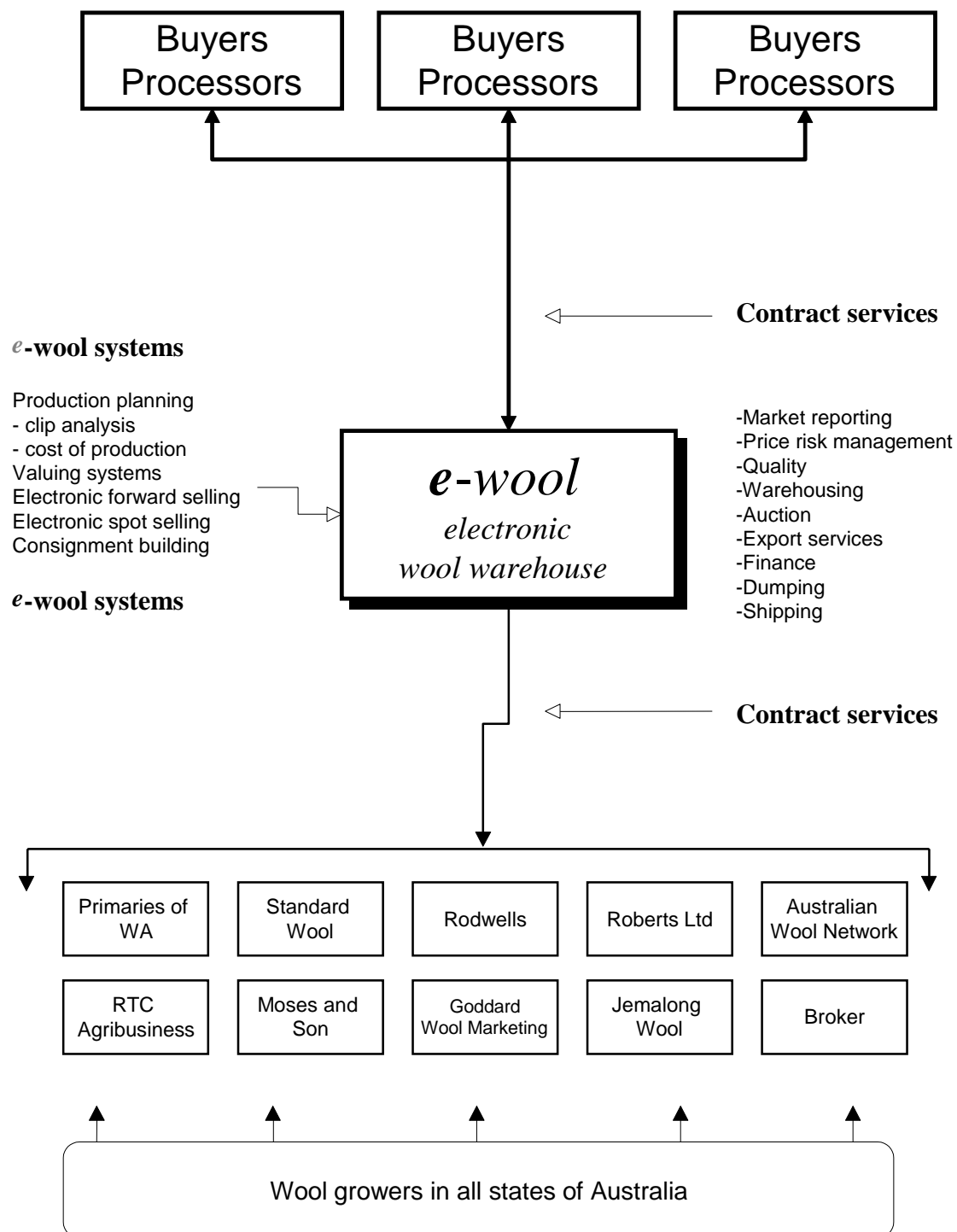|	
Customers	20 major exporters or processors
Brokers using the **e-Wool** system	9
Bales sold to date	38,000
Kgs sold to date	7 million
No. of vendor brands	1,550
Av. no. of bales in system	21,000
Lines of wool on system	3,000
Current value of wool in system	$16,000,000

Figure 6: *e-Wool* Supply System

10. AGDEALER

10.1. Overview

agdealer.com.au is a live commodity trading site. Essentially an online broker, *agdealer.com.au* provides a platform for buyers and sellers to come together in a transparent, dynamic and secure market on a daily basis.

agdealer.com.au utilises the GrainCorp warehousing system in its grain auction room to provide a unique trading platform that allows grain growers to control the entire sales process. It covers all kinds of grains/oilseeds including wheat, barley, chickpeas and canola.

It also includes a product trading facility and an excess stock room for products such as agricultural chemicals, fertilisers, drenches and dips, seed and fencing materials.

For grain growers, the system provides a grain auction room that offers:

- greater control over their grain marketing decisions;
- greater opportunity to achieve beneficial pricing; and
- savings in time and hassle.

For major end users and grain accumulators, it gives an opportunity to access grower's warehouse holdings over a single transparent platform.

agdealer.com.au is the initiative of agribusiness group Hidupa Pty Ltd, in partnership with IAMA Agribusiness, one of the largest merchandisers and resellers of rural produce. *agdealer.com.au* is a member of the Agribusiness Association of Australia.

For *agdealer.com.au*, their first experience with e-commerce has been a significant one. They see many benefits in doing business electronically, because it:

- provides geographic freedom;
- enables *agdealer* to operate without inventory or debtors, therefore allowing the company to operate on a relatively low margin; and
- reduces the transactional costs of doing business at all points of the value chain.

Website:

Address : http://www.agdealer.com.au

Features:

Besides providing details of its core products in the grain and product trading rooms, the website features:

- market updates;
- classified advertisements;
- weather information;
- a member registration facility for producers, traders, manufacturers and suppliers;

- user login and password;
- a chat room;
- online help, demo site and FAQs; and
- company background information.

Contact

Level 14, 275 Alfred St, North Sydney N.S.W. 2060

Telephone: (02) 9492 3000   Facsimile: (02) 8920 8055

Email: help@agdealer.com.au

10.2. Background

According to Trevor Flugge, Chair of AWB Ltd, the emergence of electronic commerce is set to fuel profound change in the agribusiness industry within the next five years (AFR, 14 January 2000, p. 39). Already the industry is undergoing rationalisation among its major players, brought about by, among other things, falling commodity prices, bigger and fewer farmers and the advent of electronic commerce and supply chain reform. Pressures for reform are expected only to intensify as more and more farmers come onto the Internet and take advantage of alternative ways of doing business.

Riding on the crest of this wave is *agdealer.com.au*, a joint venture of Hidupa Pty Ltd and IAMA Agribusiness Pty Ltd. *agdealer.com.au* is an electronic trading room that brokers business-to-business deals between buyers and sellers of grain and agricultural input products. Its web site came online only in December 1999, so, like the rural electronic commerce market generally, *agdealer*'s business is still very much in its infancy, although it is one of the first fully enabled e-commerce sites devoted exclusively to the rural marketplace. It has, however, great potential because of its capacity to allow farmers to by-pass wholesalers and agents, or as *agdealer* puts it, to cut out 'the middlemen and reseller mark-ups'.

10.3. Business Strategy

agdealer.com.au operates under a non-transparent reverse tender system in the product trading room and an open bid/offer environment in the grain trading room. Like any other broker, it derives its revenue not from the sales themselves but from the commissions they generate.

There are three trading facilities:

- a virtual trading room for agricultural products like chemicals, fencing and fertilisers, which is primarily at the broad acre market;
- an excess stock room allowing retail stores, wholesalers or manufacturers to list a range of agricultural input products that are excess to their current needs (including short dated product or slow moving inventory); and
- a virtual auction room for grain held in GrainCorp storage, which is currently limited to the N.S.W. domestic market.

The product trading room operates as follows.

- Suppliers register with *agdealer.com.au* and list their products online with a reserve price. The submitted auction is approved by *agdealer.com.au* and an appropriate margin is added to the price.

- The prospective buyer selects product, brand and pack size from the listed items, and notes the location of the items and the relevant trading period. The buyer also indicates a preferred delivery option — either from the product location or a pre-selected shipping region and nearest drop-off point to their business. Freight is automatically calculated and added to the reserve price.

- The buyer then places a tender on a per-unit basis, using a volume and weight calculator to determine the optimum pack type (pallet, truck or carton) and number to bid for.

- The buyer then chooses a preferred payment option, enters a password, and lodges the bid. The success or otherwise of the tender is advised within seconds.

The excess stock room operates in a similar format to the product trading room except that prices are clearly displayed and product is only available from the nominated store or depot.

- Suppliers, resellers or wholesale businesses register with *agdealer.com.au* and list their excess stock online with a reserve price, depot/store details and an appropriate contact. The submitted auction is approved by *agdealer.com.au* and an appropriate margin is added.

- The prospective buyer selects a product and notes the collection point for that particular product.

- The price is clearly displayed and the buyer chooses the appropriate quantity and completes the transaction as for the product trading room.

- The transaction slip is printed by the buyer who then takes the document into the store/depot as proof of purchase and collects the goods.

Grain trading operates somewhat differently.

- Trading may occur in a number of different types of grains, including wheat, barley, triticale, oilseeds and sorghum. Each grain type has a separate virtual auction room.

- Users can enter each auction room as a buyer, seller or observer. Buyers and sellers must accept and acknowledge the terms and conditions of trade before they enter.

- A seller enters the GrainCorp warehouse receipt details of the grain the seller wishes to sell. Individual receipts held at the same Graincorp store are combined to create a lot. The seller then indicates the price per tonne for that lot and submits this as an offer. The lot details appear on the grain auction screen.

- The seller can then view the bids, if any, that have been made for that type of grain (including protein level etc) and initiate a sale by selecting an acceptable bid and clicking on the price. Alternatively, the seller can leave the lot on offer until it attracts a buyer's interest.

- A buyer enters the bid details of the grain the buyer wishes to purchase, together with an initial, in-site bid price. Only one bid per GrainCorp site is permitted. The buyer might also indicate if minimum parcels of grain are required.

- The buyer then enters a password and submits the bid. Like the seller, the buyer can review offers and buyer details, and can either initiate a purchase or simply leave the bid on the auction screen until it attracts a seller's interest.

- To complete a transaction, the buyer and seller's bid site must be the same, and the seller's lot size must be equal to or greater than the buyer's minimum tonnage. The transaction is completed when the buyer or seller, as the case may be, accepts the offer or bid. Turn around time is a matter of seconds, depending on Internet speed.

- It should be noted that by clicking on the buyer's price the seller can view the buyer's name and contact – the seller can reject the price if they are not comfortable with the buyers identity. Alternatively however, the buyer does not have this ability and must complete the transaction once the process has been initiated.

- Once accepted, buyers and sellers move to the documentation screen and, from then on, follow standard Graincorp procedures for transfer of title, delivery and payment.

10.4. Electronic Infrastructure

agdealer.com.au is a lean operation, relying on a very small complement of expert staff, advanced technology and proprietary software, integrated together to create a real-time business-to-business electronic facility. As Brad Williams of *agdealer.com.au* says, they don't need to get a big share of the $4.5 billion market to be successful.

The technology employed in this operation includes:

- 1024 bit RSA encryption technology, for protection of payment information and 40 bit SSL key for privacy and protection of personal information on the web site.

- AAA Investment Trading Facility, which is a deposit facility with Macquarie Bank Ltd, administered and operated by Agdealer Services Pty Ltd. This has been established to allow growers to deposit funds and earn a market rate of interest whilst trading grain and purchasing products.

- A credit card facility, which allows the standard usage of the buyer's credit card as outlined in the terms and conditions of the buyer's bank.

- *agdealer.com.au*'s own proprietary software, which is the key to maintaining leadership (through flexibility and dynamic response to the customer) in this emerging market.

Internet communications is at the heart of the business. As well as the trading rooms, *agdealer.com.au* provides a range of services through its web site, including weather and market information and product specials. The site also enables producers, grain traders, manufacturers and suppliers to register as authorised buyers and sellers.

Its well-designed screens and pro-forma documents make this an easy site to navigate and use, and provides a professional front to the company, which is important for both operational and promotional reasons. To promote its product, *agdealer.com.au* has also created a demonstration site, available on CD-ROM and through the web site, which guides prospective members through the various stages and documents of its electronic business operation.

For Brad Williams of *agdealer.com.au*, their venture into electronic commerce has been a significant one. He believes very strongly in the need to promote change within the marketplace and at the same time be flexible enough to incorporate specific customer needs.

Business-to-business communication holds great potential for improving business activity and reducing costs in rural areas, and it is business-to-business communication that *agdealer.com.au* is all about. It will be interesting to watch how *agdealer.com.au*, and its market, develops.

11. FRESHPORT/BGF

11.1. Overview

Freshport is a provider to businesses operating in the 'business to business' end of the agricultural supply chain. It offers trading communities a better way of doing business, via a range of business and resource management tools to facilitate trade among community members. It is not just a business-to-business link, however; it is also a warehouse of information and resources, such as a chemical spray diary, for trading communities.

Freshport is operated by Tradeport.com Pty Ltd, a provider of e-business services to industry. Its core services involve the automation of supply chain business processes in line with agreed business rules set by the trading community. *Freshport* uses the Tradeport e-business system, which is a secure Internet based platform for the transfer of information and documentation along the supply chain. This:

- enables members of a common trading group to link together via an electronic hub; and
- enables, via this hub, instantaneous lodgement and exchange of documents complying with pre-established standards.

Documentation relating to all aspects of a transaction may be transmitted, and records uploaded into individual members' computer systems, including:

- supply forecasting;
- delivery scheduling;
- quality management and risk reduction;
- product ordering and sales/pricing; and
- feedback on value adding processes.

The Tradeport system has a number of benefits, including:

- reduced transaction costs;
- better supply chain collaboration;
- less paperwork and fewer duplicated processes;
- increased efficiency and productivity;
- re-engineering of business processes;
- benchmarking;
- security; and
- a full audit trail.

So far, the Tradeport system has been applied and tested in a number of pilot domains, including the BGF Co-operative at Murwillumbah.

Website

Address: http://www.freshport.com.au

Features:

- company background

- feedback

- frequently asked questions

- member registration and services

- contact details

Contact

Tradeport.com Pty Ltd, Level 2, 222 Pitt St, Sydney NSW 2000

Telephone: (02) 9267 8021   Facsimile: (02) 9283 1800

Email: info@tradeport.com.au

11.2. Background

Freshport is an application service provider to businesses operating in the 'business to business' end (B2B) of agricultural supply chains. Its focus is on automation of business processes involved in supply chain transactions to improve efficiency and productivity and reduce costs. *Freshport* is operated by Tradeport.com Pty Ltd, a provider of e-business services to industry.

The Tradeport e-business system has grown from systems developed by Yameco Pty Ltd with a small grant from the Commonwealth Government's Information Technology Online Program and with support from a number of IT and Internet Service Provider companies. The grant was used to fund several limited functionality electronic business pilots. Tradeport executives describe them as being 'toe in the water' activities that allowed the participants to gain experience in new territory. 'We were keen for the participants to make suggestions for improvements and extensions to the functionality as that process delivered their extended commitment and 'ownership'. Because we were in new territory, we felt it important to take small steps at a time and progressively make an assessment of the benefits.'

The pilots were of limited duration, but nonetheless demonstrated the feasibility of electronic business applications in agricultural supply chains. With some further support, *Freshport* subsequently developed more in-depth pilot projects in banana and winegrape production industries. Currently, *Freshport* is establishing the necessary infrastructure to operate the platform commercially.
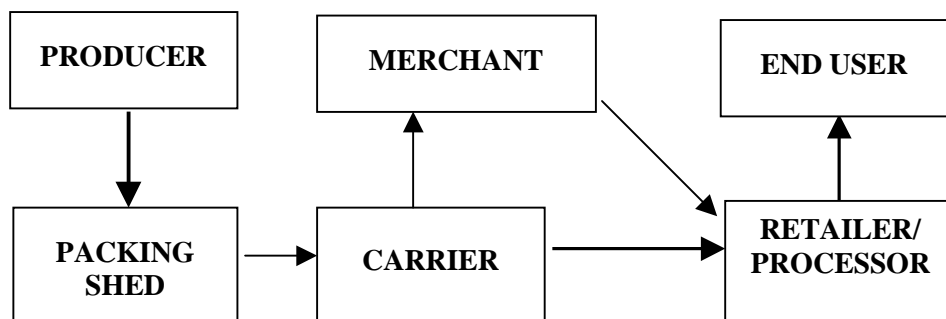

Figure 7: Typical Agricultural Supply Chain

Agricultural supply chains generally involve a large number of participants. They link many growers, often located in remote areas, with many merchants and ultimately with very large numbers of end users. They have several distinct characteristics including:

- They are typically long (or high) with many levels involved between the grower and the retailer/processor. At each level many players may be involved in supplying a commodity to the next level. For example, many growers supplying a central packing shed, a merchant or a winery.

- Often operate over a wide geographic area.

- The transactional process associated with the transfer of a commodity from grower to end user can extend over a long time period (e.g., apples harvested, bulk-stored and packed out months later).

- They are often 'driven' by a dominant organisation in one level of the chain referred to as a 'hub'. Its associated trading partners and service providers are referred to as 'spokes'.

- Communications between the different levels of the chain are often difficult because of the existence of different standards and requirements.

Increasingly agricultural transactions are organised around contracted or 'relationship based' supply arrangements – for a quantity, all for a season etc. For such arrangements, planning and process control are more important than for spot markets. Pricing may be determined in any one of a number of ways.

11.3. Information Transfer in Supply Chain

The transactional process for many agricultural products involves more than the process of transferring the title of a quantity of produce. A considerable amount of additional information, documents and records such as planting intentions, harvest schedules and risk reduction (e.g. quality management and control details) may be required to move up and down the supply chain to conclude a transaction. For example, wineries, will not accept grapes unless they have sighted and accepted a growers spray diary at two different times and supermarket chains like Coles will not accept produce from suppliers that do not have quality assurance accreditation certificates.

Information transfer between different levels in the supply chain has been a significant source of problems and costs. Many steps in the chain require the creation, transfer and handling of product or shipment information (e.g., placement and confirmation of orders, shipping instructions, consignment notes, invoices, etc.). These documents are usually faxed (or mailed) between the links in the chain. At each point in the chain, the information on the documents needs to recorded by the recipients and new documents prepared for forwarding to the next link. Re-recording and re-issuing of information involves considerable cost. Errors are also likely to be introduced further adding to cost and inefficiency. Additional problems are also likely to arise from incompatible product descriptions. For example, a wholesaler would have produce supplied by many producers using different descriptions. Similarly, different wholesalers are likely to use different stock numbers to refer to the same produce.

The typical information elements of the agricultural supply chain transaction process include:

- *Supply forecasts* provided by growers, directly or indirectly, to the dominant 'hub' in the chain (e.g. a cooperative, broker, major user, such as a winery or cannery etc). The individual grower forecasts are used by the hub to estimate a season's production and for the preparation of supply forecasts to subsequent levels in the supply chain. Supply forecasts may be need to be made several times during a growing season to account for natural or other events (e.g area of planting, weather, etc) and to refine forecasts prior to harvest (quantity, quality, maturity and timing of delivery).

- *Consignment documents* have to be prepared for each lot of produce that enters the supply chain. This lists the quantity and quantity of the produce, producer details and other necessary

information required for the transportation of the produce from point to point in the supply chain. Whenever lots are transferred from one point to another or are aggregated or subdivided along the supply chain a new consignment note is prepared. At each accounting or control point in the supply chain, records of the consignment details are made and stored in the operator's transaction records.

- *Sales and invoicing* has to be produced for each lot sold. Lots may sell at different prices, at different places and at different times. A single consignment from a producer, therefore, may result in several sales and associated invoices. Sale information has to be transferred back to along the supply chain in a reverse fashion to the consignment and aggregated or disaggregated along the chain in a similar manner. Invoices also follow a similar process.

- *Account settlement* follows invoicing. Payments need to take account of fees and other payments and costs incurred along the supply chain. The fees and other payments (e.g. transportation) may be billed for separate settlement or may simply be deducted from the invoiced payment.

- *Quality documentation* generally supports the transaction. This may include official certification (if required by regulation), information on compliance with standards and other documentation and records on matters such as the use of chemicals and pesticide in the production process. Quality may also deteriorate while the produce is in the supply chain and can lead to disputes that may be difficult to resolve without adequate records.

- *Audit trail* information is an essential element of the consignment and invoicing/account settlement processes. As consignments may be aggregated or disaggregated along the supply chain, adequate audit trail information and records are essential for management control purposes and for dispute resolution.

Automation of the supply chain has attracted some attention in the past. The traditional approach has been to develop applications of electronic data interchange (EDI) suitable for supply chain processes. EDI is a formatting protocol for the electronic transfer of common 'documents' between two or more parties. The common formatting is essential for compatibility between computers used to process the information.
The high establishment cost and complexity of EDI processing has kept it beyond the reach of other than major players in the industry. Because agricultural industries are predominantly small unit operations, EDI has had only limited applications. Major reasons preventing wide adoption of EDI in agriculture include:

- Predominance of small producers.

- Widespread use of non-standard product description systems.

- Use of proprietary EDI systems usually confined to an organisation or a 'closed' trading community (lack of compatibility between systems in different organisations).

- High cost for small operators.

- Unwillingness to provide access to internal systems or share information via an open system.

The ubiquitous nature of the Internet widely extends the opportunity for EDI between firms. Taking advantage of the wide accessibility to the Internet, the *Freshport* system was designed to facilitate information sharing between participants by providing a common, but independent, platform accessible to all the entities in a group. Essentially, *Freshport* provides a common electronic business database 'hub' through which authorised members at different levels in a supply chain can interface with each other in a secure electronic environment.

11.4. The Freshport System

The transfer of transaction documentation along agricultural supply chains usually involves several processes and many documents. Because products are typically consigned to multiple agents in

multiple markets (or directly to multiple buyers), separate consignment documentation is usually sent to each and the process may have to be repeated at each level of the supply chain. In most cases, facsimile transmissions are used to transfer documents between transacting parties.

Freshport is a secure Internet based information exchange system for the transfer of information along a supply chain. Using the Internet, members of a common trading group or 'community' are linked together via an electronic 'hub' operated by *Freshport*. The hub allows instantaneous lodgment and exchange of documents complying with a set of pre-established standards (ie the agreed business rules) including restrictions that allow access to transaction documents only to parties involved in the transaction. Documentation related to all aspects of a transaction may be transmitted through the system including that covering supply forecasting, delivery scheduling, quality management and risk reduction, product ordering and sales/pricing, and feedback on value adding processes. Records can be uploaded seamlessly into the computer systems of each member (and ultimately there can be full system integration).

The process varies greatly between trading communities and the base documentation is usually different. For example, the base document may cover deliveries to a packing shed. The packout results, consignment documentation, QM records like spray diaries and manifests, product catalogues, buyer orders, pricing, account sales and settlement all represent progressive and incremental extensions to the base document and can be added as appropriate at different stages of the process. An audit trail is provided thus making the transaction process transparent and accountable.

By operating in 'communities' of common interest, the *Freshport* hub is capable of collecting aggregate information that can be used by participants to compare their performance against group benchmarks (averages).

Freshport aims to provide a database and communication backbone catering for:

- *Automated documentation*. The system facilitates generation of supply chain documentation. The basis of communications between participants in the supply chain is a series of documents that are typically created by successive user inputs and are viewed by users in a manner specific to their requirements. The system eliminates duplicate data entry and provides data integrity. Data can include digital imagery.

- *Full connectivity* capacity with participating members using different technologies ranging from basic devices, such as telephones and Palm Pilots, to sophisticated EDI systems.

- *Audit and tracking system* to track basic units of produce along the supply chain with full audit and security. The system produces billing and statistical data and can generate benchmarking data for participants.

- *Modular development capacity* to facilitate additional functionality and applications without critical redesign of existing components.

- *Management functions* such as member registration, billing etc. are incorporated in the basic system. QA documents have virtual links to all transactions and can be produced as required.

- *Security* is inbuilt in the system and ensures privacy of a user's data. The platform uses firewalls, encryption, user name and passwords screening, secure sockets and digital certification. Individual users can control authorisation levels for access to their own data.

The anticipated benefits of the *Freshport* system include:

- Reduced transaction costs.

- Better supply chain collaboration.

- Less paperwork and fewer duplicated processes.

- Increased productivity.
- Re-engineering of business processes.
- Benchmarking.
- Security.
- Full audit trail.

11.5. Applications of the Freshport System

The *Freshport* system is now being commercially implemented in a number of agricultural supply chains, and some of the more 'generic' services (particularly in quality management) will be made available in the short term to other domains.

One of the *Freshport* projects involves the supply chain associated with the BGF Co-operative Limited (BGF), based at Murwillumbah in New South Wales, but with operations throughout the eastern states. Some key aspects of this project will be outlined below. Other projects include a regionally based wine grape supply chain and an irrigation control project (brief summaries of these projects are also provided below).

11.6. The BGF Project

The project involves the automation of transactional data and associated documentation used by operators along the supply chain (ie transport companies, market unloaders and merchants) with the primary aim to significantly reduce the paperwork and associated cost of the transaction process. A related aim is to collect industry data to facilitate improved linkages between growers and merchants and improve their management information and control systems.

BGF is a natural hub in the banana supply chain and consequently was an ideal pivot for the application of the *Freshport* system. All logistical and transactional processes in the supply chain were conducted manually. Facsimiles were generally used to transmit documents between transacting parties. Although many of the documents contained the same information, each was independently produced and transmitted. At each point in the chain, the faxed documents were recorded in the receiving party's operating system and new documents were generated for transmission to the next point in the chain with considerable risk of introducing errors.

The project involves approximately 1000 grower members of BGF and over 200 products purchased by some 250 merchants. Also involved are 13 loading depots throughout northern NSW, transport companies and market unloading services.

Participants at all levels in the supply chain will be linked together via the Internet, as illustrated in Figure 8. Each will have access to information on the *Freshport* system in accordance with an access authority protocol and BGF's business rules, and can upload or download documents as necessary. A brief description of the main elements of the system follows.
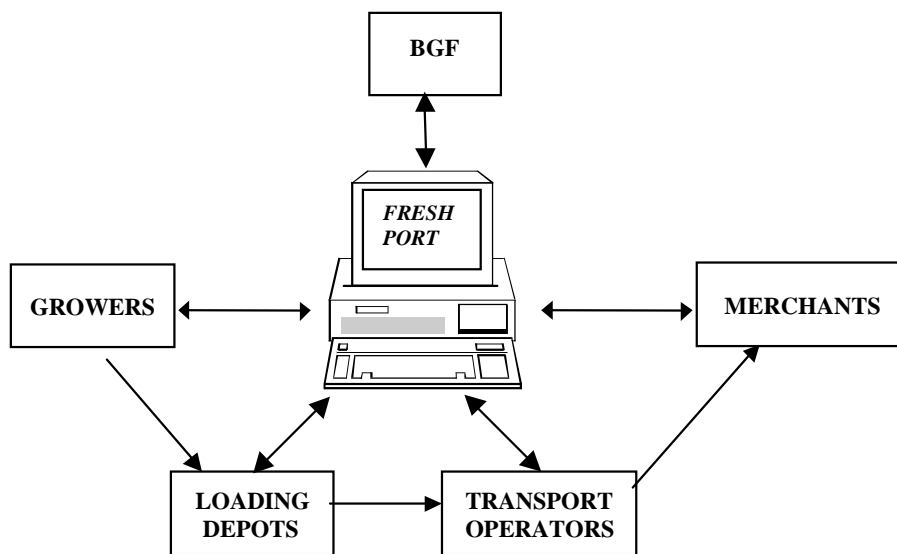
Figure 8: *Freshport* **Mediated Banana Supply Chain**

Production Forecasting

Growers have provided information to BGF on projected harvesting dates and quantity forecasts for each of their products by fax, phone or in person when they delivered their product to a depot. Or the information was simply not provided or available. With *Freshport* forecasting information will be supplied online using a simple web form and the information is stored on the *Freshport* database. Access to the information is available to BGF and to other participating organisations in the supply chain identified by the grower or on the basis of access criteria determined by the grower. Access to this information throughout the supply chain is valuable for planning, marketing and distribution purposes and assists the matching of demand and supply in different markets with benefits to both growers and consumers.

Consignment documentation

Consignment documents are crucial to the transfer of bananas, and other products handled by BGF, between points in the supply chain. Consignment Notes are produced at loading depots and sent to two central points for entry into the BGF computer system. The Consignment Note and associated Delivery Manifests physically accompany each consignment through the supply chain and a new document is produced each time the consignment parameters change. At each point in the chain where the consignment was handled, details of the consignment were entered manually into the handler's computer system.

Under *Freshport,* each depot will be equipped with browser facilities for direct entry of information into the database. Growers can thus produce a consignment note directly by entering the appropriate information using a simple web form or on their own computers or at the receiving depot. Once entry of the information is completed and submitted to the database, it becomes immediately available to all nominated parties. Information can then be downloaded automatically by operators at each handling point and new documents can be generated or updated automatically from the database without the need to re-record details on computer systems avoiding the risk of errors. All changes to document details are automatically available to all participating entities in the supply chain.

Invoicing and account settlement

After the sale, BGF invoices merchants on behalf of the grower. BGF currently sends printed invoices to merchants who must re-key this data into their own business accounting systems. The invoice includes a range of charges (such as transportation fees and industry levies) that the merchant has to deduct from 'payments' to growers. The *Freshport* system generates these charges automatically when the Consignment Note is created through the web form. With the ability to download this information directly into their own systems, the merchants can eliminate at least two sessions of data entry.

After the product has been sold, the merchants enter the price into their own systems to create their account sale. It is planned that this will be available to growers through *Freshport*.

Quality documentation

Markets for agricultural products are becoming increasingly conscious of the use of pesticides and other chemicals used in cultivation and preservation of produce. Potential presence of chemical residues in products could considerably impair marketability and could conceivably lead to litigation and compensatory damages. Buyers try to avoid this risk by demanding implementation of quality management and assurance schemes and proof of quality for the products they buy. Health regulations may also prescribe inspection and certification for compliance. The *Freshport* system and associated database facilitates maintenance of web based logs detailing spray schedules and the application of other chemicals used in cultivation or in production processes. The logs can then be accessed as necessary to satisfy buyers or to produce QA statements.

Quality deterioration while produce is in the supply chain can also be a problem with agricultural products. Depending on conditions, produce may have to be shifted more rapidly to the final consumer. The actual quality of a product can only be ascertained by physical inspection at the delivery point. When product quality has deteriorated disputes may arise between the grower and merchants or other operators in the supply chain. Traditionally resolution of such disputes was done by telephone and sometimes involved taking of photographs as evidence of the quality.

Freshport is proposing to incorporate the transmission of digital pictures as part of the consignment documentation for produce. Photographs can be generated easily with a digital camera by the grower or a packing shed and can be easily uploaded into the system (and stamped against the date, time, pallet and consignment). Similarly, they can be taken when the produce arrives at a merchant. As for other information, once photographs are uploaded into the database they can be accessed anywhere along the supply chain (again in accordance with the agreed business rules for the supply chain).

Audit trail

Consignments entering a *Freshport* linked supply chain are given a unique identification code. The code is automatically recorded as the consignment moves through the supply chain. The recording of movements is retained in the database and can be accessed subsequently to provide an audit trail with little effort and cost.

Management information

Management information can be accessed from *Freshport*. Individual growers will be able to accumulate and access historical information that can be used to improve production and quality management. Production and harvesting forecasts, for example, can be compared with actual results and the results of the analysis can be used to refine and improve the accuracy of future forecasts. Aggregate industry data can be produced from the databank and can be used by individual growers to benchmark their performance against that of other growers in the group. More advanced analysis, such as comparing output, quality and yields, will also be possible.

Freshport benefits

The following benefits have been identified by BGF and Tradeport to result from the introduction of the *Freshport* hub in the BGF supply chain:

-
- Reduced data entry costs and improved efficiency at BGF.

- Substantial elimination and automation of data re-entry along the supply chain resulting in cost savings, increased efficiency and increased accuracy..

- Reduced telecommunications costs (phone and fax costs). In most cases access to *Freshport* involves only a local telephone call charge.

- Improved logistical processes. For example, unloading surcharges for mixed pallets could be largely eliminated by building pallets to minimise need for subsequent 'break up' for delivery to more than one merchant.

- Business process re-engineering — some key processes can be eliminated

- Earlier invoicing — earlier payment

11.7. Other Examples of Freshport Projects

A *winegrape project* will link growers with wineries, contract harvesters and transport companies and initially cover the communication of yield forecast, maturity test, QA and harvest schedule information. It is anticipated that over 500 growers in the Murray Valley will be online by the next harvest with further expansion in time for the following harvest.

An *irrigation project* will dynamically link weather data, soil moisture data and other benchmarks, to property and crop profile data for irrigation shifts. The system will maintain a 'readily available water account' for each shift and project forward when irrigation will be required. The grower will be able to place their water order with the supply authority and the supply authorities are expected to allow growers access to details of water availability. The system is expected to lead to more efficient water usage and significant cost savings to growers.

11.8. BGF Co-operative Ltd Perspective

BGF is a grower owned co-operative that was first established in 1933. Its primary areas of activity are in the transport and marketing of bananas and a wide range of produce. It has an annual turnover of some $30 million and employs eighty staff. It conducts market operations at the Sydney and Melbourne markets where it handles approximately 20 per cent and 12 per cent respectively of the banana throughput. Melbourne, however, is the bigger turnover base as it handles a wider range of produce.

BGF's has a strong interest in supply chain management. Its needs for accurate, comprehensive and timely information across several service areas (notably production, transport, wholesale and retail) led it to combine with Tradeport to develop an integrated supply chain management system for bananas.

Tradeport was asked to focus specifically on making BGF's transport system more efficient and profitable by improving the associated data entry and management process. This led to the concept of a modular integrated information management system using transport to collect information and establish and information bank, reaching backward to the producer and forward to the marketing operations and possibly beyond to specific customers. The aim was to develop an 'Information Pipeline' where all participants within the supply chain have access to the same information in real time in a format that each link in the chain is able to use to improve its own operations.

According to BGF, the early stages of the development are concentrating on building a system that is able to link consignment details, with manifests, with sub contractor payment advice, with 'Chep' pallet movement documentation, with loading summaries and deliver it to the relevant parties via macro generated email. This, it is hoped, will eliminate as much as 75% of the data processing currently being handled by BGF transport staff.

In the longer term the aim is to realise savings through crop and consignment forecasting details that would allow efficient and more timely allocation of transport vehicles, and allocation of pallet space. For producers there is a potential for the development of industry benchmarks that will enable measurement of performance against international standards.

With access to timely information BGF sees an opportunity for more effective allocation of cool room facilities, clearing rooms in expectation of larger quantities of fruit, and slowing sales as quantities begin to fall away. With access to timely information, BGF can predict with greater accuracy the size and timing of impending gluts and have time to find additional outlets or inform growers what grade of fruit is likely to be impossible to move. Conversely when supplies are short, prices can be raised gradually in the lead up to undersupply situations helping to reduce price volatility and buyer resistance.

The losses associated with a production driven market operating without accurate information is enormous. Recent glut conditions, for example, resulted 120 tonnes of fruit delivered to the Sydney markets being disposed of at a landfill. With better information, the cost of harvesting, packing, and transporting at least could have been avoided. Timely information is also expected to give BGF greater flexibility in staffing. For example, 'senior staff would be freed to pursue issues relating to long term profitability as opposed to attending to housekeeping – like finding a place to bury 120 tonnes of bananas'.

BGF also anticipates the possibility that with improved information carrying systems it may be able to carry the monitoring of supply and demand more completely into the retail outlet, with pricing being linked to volumes of product moving through the checkout and being monitored through the stores' inventory system.

BGF sees this concept as being 'closely linked to that operating in Japan where vending machines offer products and prices according to temperature and consumer buying patterns'.

'Ultimately the major retailers, in particular Woolworths, Coles and Franklins are moving toward e-commerce in relation to orders, supply confirmation and payment advice linked to Electronic Funds Transfer. The pace of transactions, the volume involved and the history of each consignment required for Quality Assurance standards, requires the type of system we are developing in partnership with Tradeport'.

APPENDIX: SUMMARIES OF OTHER CASE STUDIES

A.1. Argent Agribusiness Services

Background

Argent Agribusiness Services is a grower and supplier of tea tree seeds and seedlings, located near Bowraville in northern New South Wales. It also provides project management and other services to a broad range of clients, within and outside the tea tree industry, including land care organisations. A family partnership, it has been in business for some 20 years, although only 2 to 3 years under its present name, and claims to have been the first commercial tea tree plantation in the world. The business places considerable emphasis on personal service and does the majority of its business within Australia.

E-commerce activities

Argent's website is barely 12 months old and yet owner, Terry Argent, claims his best results so far have been obtained through the Internet. The Web has not changed the way the partnership does business but it has enhanced it, through a substantial increase in sales turnover. Sales of seeds have grown by 400% since the website was established.

The main purpose of the site is to take advantage of the cost-free advertising available through the Internet and its ability to tap into considerably more customers than is possible through print and other media. It is thus used primarily to induce people interested in tea trees to make contact in person with the business.

In keeping with the business' ethos of personal service, there is no online purchasing facility and no plans to introduce this. In addition, compared with other sites in emerging rural industries, the site provides little in the way of general information about tea tree growing. For frequently asked questions, the business has an information sheet which can be sent, on request, by fax.

In time, this type of information may be placed on the Web. For Terry Argent, however, personal contact and service is central to his business strategy and he sees little or no commercial benefit in making the site any more than a point of first contact. As Terry says, when prospective customers need to find out about seed quality and value, 'the best way that they can do that is to actually talk to me'. He does, however, ensure that he checks his email daily, and sometimes twice daily, to ensure a prompt response to customers and prospective customers.

The website attracts many enquiries from overseas but Argent Agribusiness does most of its business within Australia. Customs issues and a desire to protect the Australian seed stock have dissuaded the partnership from pursuing export orders.

Website development

Argent's website was built by Terry Argent himself. He found he could learn the basics for building his own website with relatively little difficulty, although his fifteen years' experience in personal computing means that he may have been less daunted by the prospect than others might be. Prior experience with personal computing, and a strong desire to master the technology to achieve business objectives, appear to be common factors that underpin successful rural web projects like the Argent Agribusiness site. This despite the initial frustrations that may occur in the familiarisation phase, and the inadequacies of the telecommunications infrastructure to be found across rural Australia.

Contact details

Website: http://www.midcoast.com.au/~argent

Email: argent@midcoast.com.au

Telephone: (02) 6564 7707

A.2. Bunny Bite Farms

Background

Bunny Bite Farms is a grower of carrots and other vegetables for processing and the wholesale market. It is located at Boonah in southern Queensland, about halfway between Brisbane and Warwick.

Four generations of the Brent family have been growing crops in the area since 1915, when a 48-acre farm was first established to grow fodder crops. Over the years, however, it has been vegetables, such as pumpkins, cauliflowers, beetroot, sweet corn, green beans and peas, turnips and carrots that have provided the main source of revenue. Today, the property covers 400 hectares and carrots comprise more than 65% of its output, in terms of both dollars and volume.

Bunny Bite Farms trades primarily in the food processing market, its vegetables sold ready prepared (cut, peeled and diced) for processing. It also sells in retail markets but this represents less than 40% of its business.

Most sales are made to a small, select group of Australian customers. It also has a major New Zealand customer and is currently exploring export opportunities in Asia. Even in Asia, however, there is only a very small market for Bunny Bite's products, comprising customers with very specific requirements.

E-commerce activities

Bunny Bite's website contains an attractively-presented set of webpages that give background information, statements of compliance with ISO and other relevant industry standards, a brief summary of its product range, a recipe, a location map and a password-protected item called 'cross-dock', apparently for dealing with its wholesale customers.

Main benefits

Bunny Bite's website has not been a success, however, and it is not viewed as being of any real value to the business. It was established in the late 1990s simply because someone at the time thought it would be a good idea to do so. There was no real attempt to consider its role within the overall business strategy or to formulate a set of expectations for it. In Bunny Bite's own view, it tells a 'nice story' but one which presents a misleading picture of the business. The limited number of enquiries Bunny Bite has received through the site have typically come from students seeking educational material, and from local and international buyers looking to buy whole carrots, which is not in fact Bunny Bites' business.

For Bunny Bite Farms, a website is unlikely to provide any more than a 'front door'. This is because it deals with a limited number of organisations, each of which has specific product requirements but no requirement for an e-commerce facility. Bunny Bite Farms sees no commercial benefit, therefore, in placing ordering and pricing information on the Web. Further, it sees the website has playing no part in the development of its relationship with prospective customers in Asia.

On the other hand, the Internet itself is seen as an absolute necessity for the business, which uses email for both communication and document exchange.   This is because email provides instant communication anywhere at local call rates - particularly important at the present time as Bunny Bite Farms seeks to develop its international customer base. It also uses online banking facilities. Its location not far from Brisbane means that Bunny Bite Farms has a reasonable telecommunications infrastructure to support these Internet-based operations.

Website development

The company hired a professional website designer to develop its website.

Contact details

Website: http://www.bunnybitefarms.com.au

Email: sales@bunnybitefarms.com.au

Address: 54 Brent Road, Boonah, Qld 4310

Telephone: (07) 5463 0288

Facsimile: (07) 5463 0299

A.3. Calm Services

Background

CALM (Computer Aided Livestock Marketing) Services was established in the mid 1980s by the Australian Meat and Livestock Corporation (AMLC) to provide electronic sale (simultaneous online live auctions) by description of a range of live animals. The system allows commodity transaction, price setting and legal change of ownership without the seller, buyer or product having to come together physically.

The system was developed as an Intranet, with dial-up access for anybody in the country, using a single telephone number. Pre-registered users can now log into CALM through their own ISP, and access sales details, including information on future sales, viewing and printing of summary, or detailed, sales catalogues, operating conditions, sales summaries, market reports and links to various industry organisations. In more recent times, customers are also able to get access to the online auction system over the Internet after username and password verification.

There are two major elements to the online sales system. The first is the simultaneous real-time auction that usually has up to 30-40 participants logged in either through the Intranet or through the Internet. Prior to the auction, the livestock is assessed by a registered assessor and the details are then catalogued and assigned a lot number for listing in a particular auction (designated by a date and time). All lots in an auction are offered simultaneously. The auction is terminated after there has been no bids on any of the lots for a period of 60 seconds.

The second element, an 'interface sale', links the electronic system to a real market sale. For this purpose an agent at the actual sale relays bids back to CALM where they are entered directly onto the auction page. Users can post their bids online and thus participate in the auction in real time.

E-commerce activities

Calm Services is essentially an electronic business operation. Most of its activities are mediated or conducted through computers.

The sales operation is dependent on the integrity of its livestock description. To list stock for sale on the system, a producer will normally contact a livestock agent who organises a stock inspection by an accredited CALM Assessor. This ensures that stock descriptions are consistent with the CALM standards for 'sale by description' listings. The description for each lot is then listed in the sale catalogue for a nominated auction.

The producer, together with the livestock agent, determines the 'reserve' price to be set on each lot. The producer will also nominate a starting price for each lot somewhat below the reserve price.

The sale catalogue is made available, on the Internet, and via direct dial-up. Prospective purchasers are also contacted directly by CALM either because the available stock matches pre-registered buying criteria or because CALM has assessed that particular purchasers are likely to be interested in the stock offered for sale.

Once a sale is concluded, the seller receives a contract stating the purchaser's details, the price paid and the delivery details. The seller's agent will then make all the necessary arrangements fro collection and transport of the stock from the place nominated by the seller. Transport costs are the responsibility of the purchaser. Payments to sellers are made through their agents in accordance with your normal terms of trade.

Reports on the results of an auction are posted on the Internet after the sale is concluded. Historical reports are also held on line providing users with a data bank on market price movements.

In the event that are lot is not sold at an auction, a producer has the option to list that lot again in the next sale without incurring a listing fee.

Main benefits

The establishment of the website and Internet link to the online auctions has had some significant benefits to both Calm Services and the users of the services.

For CALM Services the website has become a major tool for the marketing of its services and has considerably enhanced its ability to reach many more users than was possible with the previous Intranet operation. The website has recorded five to six hundred hits per week since it was established.

Previously, the cost of participating in the auction sales was a major deterrent particularly for small producers. Under the Intranet arrangement it cost approximately $17 per hour to connect. Many existing bidders are migrating to access via the Internet. Also, Internet access is much easier to use than the Intranet operation.

Website development

The website was developed professionally. It is updated regularly in-house.

Contact details

Website: http://www.calmservices.com.au

Email: gblack@calmservices.com.au

Address: 133 Castlereagh St, Sydney NSW 2000

Telephone: (02) 9267 5144   Facsimile: (02) 9261 8165

A.4. Doonkuna Winery

Background

Doonkuna Winery is a cool climate vineyard located in southern New South Wales not far from Canberra. One of the region's oldest wineries, it produces a range of quality wines including Shiraz, Cabernet Sauvignon, Pinot Noir, Chardonnay, Sauvignon Blanc, Semillon, Riesling and Sparkling Wine.

Doonkuna is a family-owned boutique winery, producing some 30 tonnes of grapes, or about 2500 bottles of wine, a year. Its revenue is derived mainly from its wholesale trade in Canberra and Melbourne but it also sells to retail customers at the cellar door and, to some extent, online. It is currently in an expansion phase, with an extra 40 acres under cultivation and enhancements planned for its cellar door facilities.

E-commerce activities

Doonkuna established its website primarily to provide a cost-effective means of information delivery and for regional promotion. Currently it provides historical information, details of employment opportunities, an online sales facility, a catalogue and a location map. As part of a deliberate marketing strategy, Doonkuna also provides links to other sites in the region. These links are intended to provide a service to customers and, hopefully, encourage other sites to return the favour, so providing greater exposure to the brand name. Another strategy, not yet in place, is to foster brand-loyalty through an online mailing list.

For Doonkuna, the Internet has a huge potential waiting to be tapped. For the present, however, three factors in particular limit Doonkuna's ability to realise this potential. First, it believes potential customers are wary about ordering online and providing credit card information, even when secure facilities are available, due in part to a lack of understanding about how encryption works. Secondly, the website generates a large number of email enquiries especially from overseas. The nature of the Doonkuna product - quality boutique wines - and the relatively high unit cost of production, however, limit its capacity to tap into export markets because, in the main, these are looking for cheap wines in large volumes. Thirdly, finding the time to update and maintain the site is a continuing problem.

For the present, however, Doonkuna says its website is 'doing O.K.'. And as the business itself grows and develops, so will its website.

Main benefits

Doonkuna believes that its website has provided it with a market exposure that would have been difficult and expensive to achieve otherwise. The website is linked to a general wine site operated by a wine magazine publisher and many of Dookuna's enquiries come via that link. Doonkuna sees email as a valuable business communication tool. It has also achieved considerable savings by posting wine information on the site and referring enquiries to it rather than having to post information to them.

Website development

The website was developed in-house by the Doonkuna's owner/manager who retains responsibility for its maintenance and update.

Contact details

Website: http://www.doonkuna.com.au

Email: wine@doonkuna.com.au

Address: Barton Highway, Murrumbateman, NSW 2582

Telephone: (02) 6227 5811

Facsimile: (02) 6227 5085

A.5. Hidden Valley Plantations

Background

Hidden Valley Plantations is a small macadamia business located at Beerwah, not far from the Sunshine Coast city of Caloundra in southern Queensland. It is a family partnership of nearly 50 years' standing and has been growing macadamias for 35 of those years. There are about 40 hectares of orchards.

Hidden Valley has seen the macadamia industry grow from a small niche market to a large and diverse industry. According to its website, the industry is now worth some $60 million per annum. Hidden Valley itself is involved in all aspects of this industry, including growing, processing, tree breeding and nursery operations. It has also designed and built much of the specialised equipment required to dry and crack the nuts.

Hidden Valley sees itself, however, as a small player in the industry, selling mainly to the local wholesale market.

E-commerce activities

Hidden Valley's website was established in about 1998 to promote the business and its products. The site provides contact details, an introduction to macadamias, some information about Hidden Valley itself and its macadamia varieties, and some useful links.

About 18 months ago it also established an 'online shop'. Because of freight costs, this is for Australian customers only. The shop provides, among other things, detailed instructions on its conditions of sale which make it clear that it can accept orders only by mail or fax.

The online shop has generated practically no retail sales at all and Hidden Valley attributes this to the fact that there is no facility for online payment. It says that at the time it set up the shop, its bank would not allow it to accept transactions without a physical signature. This was because of difficulties the bank had encountered with online credit card buyers withdrawing authority for credit card payments. In the absence of a physical signature, the bank had been unable to enforce these transactions.

Further, Hidden Valley says it has made little attempt to advertise the website, although it does have plans to re-build the site, reposition it with the more popular search engines, and possibly also to do banner advertising. Finding the time to do so, however, is continually a problem.

Main benefits

On the face of it, Hidden Valley's website appears to have made only a limited contribution to the business although it did generate a large bulk order from a New Zealand buyer. The impression obtained is that the limited wholesale market in which Hidden Valley operates is not conducive to e-commerce. Nevertheless, Hidden Valley still believes that the website has potential for business growth.

On the other hand, Hidden Valley does depend on the Internet for email communication, not so much with its wholesale customers but with the industry itself and industry researchers. Research and development is an integral part of Hidden Valley's operation and email is used extensively to discuss issues with researchers and to seek information. Its location not far from Brisbane means that Hidden Valley Plantations has a reasonable telecommunications infrastructure to support these Internet-based operations.

Website development

The website was developed in-house by the owner of the business.

Contact details

Website:	http://www.hvp-macadamias.com
Email:	henrybell@hvp-macadamias.com
Address:	P.O. Box 6, Beerwah, Qld 4519
Telephone:	(07) 5494 6179 Facsimile: (07) 5494 6876

A.6. King Island Dairy

Background

King Island Dairy is a wholly owned subsidiary of the publicly listed King Island Company Ltd, a leading manufacturer, marketer and distributor of specialty cheese products to the Australian market. The company also distributes a complementary range of specialty gourmet foods.

The company employs about 250 people and has an annual turnover of around $60 million.

King Island Dairy is the major product brand held by the company and relates to **a** range of premium quality specialty dairy products produced on King Island in the Bass Strait. The production focus is on specialty and farmhouse cheeses and output exceeds 2500 tonnes per annum.

The King Island Dairy brand products are widely distributed in Australia and in some overseas markets. About half the annual sales are accounted for by large supermarket chains.

The company also markets a range of hampers based on its cheese products but including other goods as well. These are sold directly to customers.

E-commerce activities

The company is a newcomer to the Internet. It established its website in 1999 as a way to promote the company's products and the sale of its Christmas hampers. It makes very little use of other electronic commerce practices.

Consistent with its function as a promotional tool for the company's products, the website is designed primarily as a source of information for potential consumers. The site contains some background information on the company and considerable details on each of its dairy products, including prizes won at shows.

As the company does not sell its cheeses directly to the public (other than in hampers), no prices are quoted on the site. According to the company, it is constrained from selling directly to the public in competition with retail outlets stocking its products.

The hampers are also described on the site, but again no prices are provided. Potential customers are invited to contact the company via a freecall (1800) telephone number or by fax to obtain further information or place an order. An online inquiry form is also provided for people wishing to receive a complimentary brochure or wishing to be included on the company's mailing list.

According to the company, so far e-commerce has had little impact on the way it does business with its customers or suppliers. However, it believes that the Internet will eventually change the way it does business and is considering likely changes in its forward planning.

Main benefits

The King Island Company has had only limited experience with its website ('we have only just scratched the surface. Our long term strategy is way off yet'). Consequently it was unable to point to major benefits. However, it was pleased with its website and was in the process of upgrading it at the time of the interview. Overall, it is seen as a valuable adjunct to its marketing effort in support of the company's profile locally and overseas.

Website development

The company commissioned external consultants to design and develop its website. The site is reviewed regularly by the company's marketing group, but the necessary expertise for the ongoing maintenance is also sourced externally to the company.

Contact details

Website: http://www.kidairy.com.au/

Address: PO Box 1169, Richmond North, Vic 3121

Telephone: (03) 9421 0155

Facsimile: (03) 9421 0166

A.7. Main Camp Tea Tree Oil

Background

Main Camp Tea Tree Oil is a small to medium sized rural enterprise located on the north coast of New South Wales. It supplies world markets with bulk tea tree oil and tea tree based raw materials. It employs around 25 full-time staff and a large number of seasonal workers.

Main Camp Station can trace its roots as a cattle station back more than 100 years, and its involvement in tea tree oil production for nearly 80 years. It was not until the late 1970s, however, that large-scale production of tea tree oil was attempted. First efforts were foiled because of limited understanding of tea tree agriculture but new techniques in plantation management and farming practices, and an environmental management program, have helped to overcome these difficulties. Today, Main Camp boasts 'the most technologically advanced tea tree plantation in the world' featuring '[s]tate of the art agriculture, harvesting and extracting technology'.

The group of companies that now comprise the Main Camp venture is a vertically integrated operation, involving the farming of a 50 million tree plantation through to the distillation, packaging and marketing of tea tree products - cosmetics and health care applications and pharmaceuticals. It has an active research and development program, with partners at the University of Tennessee (Memphis), Monash Medical Centre (Melbourne), Southern Cross University (Lismore), Royal Prince Alfred Hospital (Sydney), and John Curtin University (Perth). Capital is raised in part through tax-based investment schemes. It markets its products worldwide through an extensive international distribution network - more than 30 distributors across Europe, in North and South America, in Asia, Africa and the Middle East, as well as in Australia and New Zealand.

E-commerce activities

Main Camp has operated a website for three or four years. Compared with other rural websites, this is a sophisticated site, both in design and content, with a lot of information about the Main Camp business itself, as well as descriptive information on tea tree oil and related products, research and development notes, a list of features and events, details of its world-wide distribution network, frequently-asked questions, an enquiry page, a site index and even a couple of free screensavers. There is also information about tea tree oil supplied on streaming video. For customers, there is a password-protected product support facility.

For Main Camp, the website is basically a marketing tool as well as a cost-effective vehicle for answering enquiries about tea tree production. Main Camp says that there is a lot of demand worldwide for tea tree oil and the website helps tap that demand. Since the website was established, a number of enquiries made through the Web have developed into larger business opportunities. Almost all of its sales, however, are handled through its distribution network and so, when enquiries are made through the Web, they are directed automatically to one of the company's distributors.

Main benefits

Because the establishment of its website coincided with other international marketing operations, Maincamp finds it difficult to estimate its impact on sales growth. It regards the website, however, as an essential element in the growth and expansion of the company. One reason may be that the site is also seen as a vehicle for attracting interest from would-be investors. There is nothing on the site, however, that openly solicits such interest.

Website development

A professional website developer was commissioned by the company to establish the website.

Contact details

Website: http://www.maincamp.com.au
Email: enquiry@maincamp.com.au
Address: P O Box 407, Ballina, NSW 2478
Telephone: (02) 6686 3099
Facsimile: (02) 6686 2722

A.8. Majestic Merino

Background

Majestic merino is a long–established family partnership operating two wool-growing properties in Western Australia and an associated outlet selling a variety of wool yarns and other wool products. The wool products sale outlet was established as a side line to the farming activities almost ten years ago at a time when the greasy wool market was experiencing difficult times. The owners identified a niche market for quality wool knitting yarns and sought to supply that market with yarns produced from wool grown on their properties.

Today, the wool products sales outlet represents some 40 per cent of the total business turnover. In addition to yarns, the business sells a variety of wool products and accessories catering to craft enthusiasts, hand knitted wool garments and toys, and sheepskin products.

The farms are located in rural Western Australia. The sales outlet is co-located with one of the properties, 35 Kilometres west of Denmark and is open to the public from Wednesday to Sunday (seven days during school holiday periods).

Majestic Merino established its website four years ago with the aim of extending the market reach for its yarns and woollen products. It now has regular customers in Germany, Sweden, Israel, US and Canada. Some 10 per cent of its sales are generated through the website.

E-commerce activities

Majestic Merino uses its website to reach potential customers around the world. Its main purpose is to provide information on the products, a products price list and a point of contact for inquiries.

The owners believe that wool yarns are a 'tactile product' that is difficult to assess online and customers prefer to see and touch the yarns before deciding whether to buy. 'With the knitting yarn, we have a page on the website with a photo of the colour card, but it is very hard to get a true representation of the true colour. It is best to send customers a samples colour card from which they can make a choice and either email the sample number or preferably send back a cut-off from the sample to really make sure they get what they really want'.

Consequently, inquiries are usually followed by the sending of a sample catalogue from which customers can choose what suits their needs. The catalogue contains an order form that can be faxed back to Majestic Merino. Because this is essentially the norm for distance sales, the site does not offer a secure payment system (very few sales are actually completed online as people tend to be wary of providing credit card details) and owners do not see a need to establish a secure payment system at this stage.

In essence, therefore, the business is a typical 'mail order' operation using the Internet to promote the products in a very dispersed market (domestic and international). Orders for yarns are typically of a quantity sufficient to knit a garment (average 10 balls of wool) with a value of approximately $100.

Majestic Merino is linked to a website that has a database listing stores and outlets for knitting yarns. This has generated many inquiries from potential customers. Also, the owner regularly accesses an email list accessed by people seeking technical information on knitting and regularly responds to questions posted on the site. Often, these responses lead to further inquiries and potential sales.

Main benefits

The website has considerably expanded Majestic Merino's market reach and has become an indispensable marketing tool for the business. Through the website, the business has been able to reach many more customers in Australia and overseas. 'It has created a lot of interest overseas and it has got us an American distributor'. Also, quite often people visiting the Majestic Merino stand at craft shows say they found out about the display from the information on the website.

Email has become an essential tool for Majestic Merino's sales and marketing operation. The business often uses the Internet to search for information and research. It has also used online wool sales sites to sell its greasy wool in addition to the traditional auctions.

Website development

The website was written by a local webmaster and according to Majestic Merino it was in much need of redevelopment and updating. As the necessary expertise was not available locally, Majestic Merino had sought the assistance of an experienced website developer in Perth and expected upgrade in a 'couple of months'. Also, some in-house expertise had been developed and this facilitated and improved dealings with the website developer.

Contact details

Website: http://www.albanyis.com.au/~majestic/index.html

Email: majmer@bigpond.com

Address: RMB 1261, Kent River, Via Denmark, WA 6333

Telephone: (08) 9840 8098   Facsimile: (08) 9840 8098

A.9.   Pacific Seeds

Pacific Seeds is an Australian based seed company specialising in research, production, marketing and distribution of a diverse range of seeds. Its head office is located in Toowoomba, Queensland. It operates and distributes seeds internationally through a network of representatives and agents. It was initially established in 1962 by Pacific Oilseeds Inc, of Woodland, California. Through subsequent ownership changes and mergers, the company is now owned by the Royal Van-der-Harve group of Holland and is part of the Advanta group (a major international research organisation with extensive experience in plant breeding and genetics).

The majority of Pacific Seeds production is grown in Kununurra, situated on the Ord River in Western Australia. Additional supplies are obtained from contract growers.

Currently, the company employs over 100 people and has a turnover of over $35 million. Exports represent over 25 per cent of the company's sales.

Pacific Seeds began using email in 1994 and established a website in 1998 to enhance its international market presence and attract potential customers.

E-commerce activities

The company uses the Internet primarily for communication and to promote and support its products by providing information to prospective and established customers. It expects its business to business links to grow considerably. The company sells its products to agents who in turn sell to end-users.

The company has a substantial network of staff and representatives located overseas and uses email as a primary tool of day to day communication with them. The website is used largely as a promotional tool for the company's products and is seen as an integral part of its marketing efforts. It also assists and supports the sale efforts of representatives and agents.

The Website provides some information on the company and more detailed information on its products. A feature of the products information is that it enables a user to select a country or region from a world map highlighting the countries supplied by Pacific Seeds. By clicking on the chosen country, a user is presented with a list of products available in that country. Each of the products is linked to additional information on the available varieties, their characteristics, planting recommendations and other technical characteristics.

Each of the country pages provides a link to the relevant company contact for that country.

Main benefits

The company reports that the main benefits it derives from its website are improved communications and expanded markets for its products. The Internet has improved communications within and outside the company and reduced the associated costs considerably. The timeliness of information to both staff and customers has also improved. Customers making an inquiry through the website usually receive a response within 24 hours.

The website has enabled the company to reach much wider markets than it was able to cover by traditional means.

Website development

The company's website was developed and was subsequently updated with professional help. The day to day maintenance of the website is done in-house. This enables the company to keep costs low.

Initially, the up-keep of the website was somewhat ad-hoc but has now become an integral responsibility of the marketing group and is updated concurrently with other promotional media.

Contact details

Website**:** http://www.pacificseeds.com

Email: info@pacseeds.com.au

Address: 268 Anzac Avenue, Toowoomba, Qld 4350

Telephone: (07) 4690 2666 Facsimile: (07) 4630 2826 and (07) 4630 1063

A.10. Petals Network

Background

Petals Network started in 1992 as a trading system enabling florists to link up with each other to service customers beyond their traditional geographic market. Customers can place orders either directly to Petals or through a member florist for 'distant' delivery of flowers. In essence, Petals acts as a clearing-house for florists and is not involved in the actual growing or delivery of flowers. When first established, the business was totally dependent on telephone and facsimile communications. Indeed over 90 per cent of its current operations are still conducted via those media.

The online activity was first established in 1994 after a visit to the USA by the company's Chief Executive Officer, where he became 'quite excited' about the Internet. On his return to Australia, all the florists associated with Petals Network were gradually connected to the Internet. Florists are encouraged to join the Petals Network and pay an annual membership fee to participate. There are some 3500 florists in Australia of which more than 700 are members of Petals Network.

The company accepts orders for delivery overseas and international orders for delivery in Australia. Currently, it does not handle overseas orders for delivery to any country other than Australia. However, the company is currently developing Internet domains in other countries including the USA, the United Kingdom and South Africa. When these are fully operational, the company will be able to process orders originating in a third country for delivery within that country or other overseas location.

Petals Network is based in Armidale, NSW. It currently employs 11 people. In 1996, it was named as the National Small Business of the Year. For three years running (1997, 1998 and 1999) it has been listed in BRW's hundred fastest growing private businesses in Australia. It is also listed on the 'Australia on Display' section of Austrade's website.

E-commerce activities

As a clearing-house service operation for florists, Petals Network has always operated at 'a distance' from the participating members. The traditional mode of communications with members was by facsimile, telephone and mail. The broadening of communications facilities to include the Internet was a natural extension of the way the company conducted its business.

Potential savings in communications costs were a major incentive for developing an online presence. The main function of the company is essentially to transfer information around the world and email has many advantages over traditional methods in that regard. However, it can only work if member florists are connected to the Internet. Consequently, after going online in 1994, the company devoted considerable efforts to get member florists to go online as well.

Primarily, the E-commerce operation is B2C, but there is also some B2B activity. Customers can access the Tulip Network website and place orders for the delivery of flowers and related products directly online. Payment is by way of a credit card through a secure server set up by the company. The B2B operations primarily involve dealings with member florists placing orders for delivery by another florist in the network but is similar to the B2C process with the exception of payment. Member florists have established accounts with Petals Network and charge the order to their account for subsequent billing by the company.

At present, only about 10 per cent of the company's business is conducted online but is growing rapidly.

Main benefits

As a company highly dependent on communications, Petals Network has benefited considerably by going online. According to the chief executive:

'Not only is it cheaper to communicate over the Internet, but we couldn't possibly be able to receive orders from say England, for example, without it. The time difference between Australia and other countries is also a major difficulty. Until the Internet came along it was just not feasible for us to receive orders directly from another country.

According to the company, Internet orders are considerably cheaper than telephone or facsimile orders to process:

'It costs us about $2.20 to service a phone or fax order but it would be half that for an Internet order.'

Also, without the Internet the company feels it would not have been able to conduct its international operations.

Website development

The website was developed in-house by the company's chief executive who has both an interest and expertise in computing and web design. Following the establishment of the Petals Network online activities, the company developed and established Cowleys, an Australian email search engine for businesses, in 1995.

Contact details

Website: http://www.petals.com.au
Email: cowleys@cowleys.com.au
Address: 171 Cluny Road, Armidale, NSW 2350
Telephone: (02) 6774 9220   Facsimile: (02) 6771 2610

A.11. Tartrus Braham Stud

Background

Tartrus Braham Stud is a family-owned pastoral company located near Marlborough in northern Queensland. It runs some 1000 stud and 6000 commercial Brahman breeders.

The red and grey Brahman cattle that comprise the Tartrus herd, and which Tartrus describes as a 'breed within a breed', have been developed over a period of nearly 40 years to perform consistently at the highest level in tropical and sub-tropical environments.

Tartrus Station and its associated properties are owned and operated by Sir Graham McCamley and family. Its main source of revenue is its live cattle sales, which attract buyers from Australia and overseas. It also sells semen packages to stud and commercial herd owners.

E-commerce activities

Tartrus' website is primarily a promotional tool, developed for the growing number of Internet users interested in Brahman cattle. It caters for two kinds of visitors. First, it provides a convenient and timely source of information for visitors who are interested in cattle but not necessarily wanting to buy at the present time - Tartrus' intention is to encourage further visits and, hopefully, future sales. Second, it provides information for stud or commercial herd owners who are after genetics.

Along with promotion of its Brahman herd, Tartrus' website is aimed at introducing international markets to its products and enabling a convenient, cost-effective channel of international communication. The website is seen very much as a complement to the family's marketing efforts in Asia.

So far, the site has provided only limited information on animals for sale. This is primarily because the herd is not yet catalogued, either electronically or manually, making it difficult to identify and price individual animals. This means that private buyers of live cattle must visit the property in person to inspect the herd and make their selections, and will continue to do so at least until an effective, electronic herd management system is in place.

Main benefits

In summary, Tartrus sees its website primarily as an adjunct to its mainstream marketing operation. Even for promotion, however, Tartrus still relies primarily on word of mouth. One reason for this, according to Tartrus, is the slow adoption of the Internet by other members of the industry. There are many who are interested in the Internet yet who remain uncertain about how to utilise it to promote their studs and generally to do business. Poor communication speeds in the bush are also a problem — Tartrus operates its own website out of Brisbane rather than from its property in northern Queensland.

As for online orders and sales, Tartrus' recognises that the Internet, and technology generally, provide opportunities for alternative ways of doing business. In the short term, however, its e-commerce activity is likely to concentrate on its semen operation.

Website development

The website was developed in-house by a member of the McCamley family — the owners and operators of the business.

Contact Details

Website: http://tartrus.com/

Email: info@tartrus.com

Address: 'Tartrus Station', Marlborough, Queensland, Australia, 4705

Telephone: (07) 4938 0120, (07) 4938 0138   Facsimile: (07) 4938 0151

A.12.   Wamuran Co-operative Ltd

Background

Wamuran Co-operative Ltd traces its origins to 1932 when a small group of fruit-growers from the Wamuran District formed a loose collective to reduce their costs by purchasing supplies in bulk. The Co-operative was officially established in 1966 with the issue of shares to members.

Currently it operates a large retail store with a permanent staff of 14 and a turnover in excess of $5 million per annum. Its main product lines are:

- Produce and seed

- Chemicals and fertilisers

- Irrigation; and

- Hardware

Customers include both members and non-members of the Co-operative. Anyone can become a member by purchasing at least ten $1.00 shares in the Co-operative. Shareholders receive a discount on most of their purchases. Members with 200 or more shares are also eligible for a rebate on their total annual purchases from the Co-operative. Members may establish a credit account and a large proportion of regular customers operate an account facility.

The Co-operative's website was established in February 2000. The primary motivation for the website was to extend the Co-operative's marketing and promotion efforts.

E-commerce activities

The Co-operative produces a bi-monthly newsletter, which it mails to account customers with their monthly account. The newsletter is also distributed to customers making purchases. With the establishment of a website, the newsletter is now also posted on the website.

Being established primarily as a promotional tool, the website comprises a front page with basic contact information, including opening hours, a listing of product and services categories supplied by the Co-operative, and hot links to a more comprehensive product listing, special sales items, online ordering, the bi-monthly newsletter, and shareholders information.

Customers can choose to make online purchases through a credit card, through their credit account, pay cash on delivery or post a cheque to the store. Purchases can be picked up at the store or delivered to the purchasers within 20 Km from the store (a fee is charged for delivery).

The site does not operate a secure link for credit online orders. The Co-operative believes that this is not likely to be a problem as most of its customers live in the district and operate credit accounts with the store. It also does not expect a rapid transition to online ordering. It believes that online orders will take a long time to become a major component of sales. Most of its customers, apparently, treat a visit to the store as a social event. A visit to the store is usually part of a visit to town to conduct other business, seek information and meet socially with others in the district.

Online sales are seen as a supplement to traditional purchasing arrangements and may replace the telephone for such activity. A common practice of regular account customers is to telephone orders for minor purchases on days the store's delivery truck makes its rounds of the district. Email increases customers' flexibility in this regard as they do not have to wait until the store opens to place orders.

The Co-operative operates an Internet bank account with its bank. As a major store with thousands of product lines it runs an electronic stock control system. All its receiving and sales stations are connected via a storewide LAN. The store's accountant is also linked to the LAN.

Dealings with its suppliers are increasingly computerised. Although there is very little contact with suppliers via the Internet at present (purchase orders are faxed to suppliers), there is an increasing tendency by suppliers to provide information in electronic form and to direct clients to their websites for detailed product information and prices. This was part of the motivation for the establishment of the website.

The Co-operative believes that e-commerce will become an essential element of business operation and sees its website as the first major step in its longer-term development. However, because of the traditional conservatism of its agricultural clients and its market, the transition to e-commerce is expected to be gradual and at a pace that farmers are comfortable with.

In addition to its store trading operations, the Co-operative is a receiving depot for the Golden Circle cannery. Pineapple growers deliver their crops to the depot from where they are transhipped to the cannery. The Co-operative believes that most of the documentation used in the pineapple supply chain would be transferred via the Internet more cheaply than currently via fax and is examining the possibility.

Main benefits

The main benefits to the Co-operative are an increased marketing ability. It can distribute its promotional information more widely and can communicate with customers and suppliers more efficiently and more cheaply.

Website development

The website was developed in-house by an employee of the Co-operative with an interest in computing.

Contact details

Website: http://www.wamuranco-op.com.au

Email: shop@wamuranco-op.com.au

Address: D'Aguilar Highway, Wamuran Qld 4512

Telephone: (07) 5496 6500   Facsimile: (07) 5496 6217

A.13. Warrnambool Orchids

Background

Warrnambool Orchids is a plant nursery located on the south-west coast of Victoria, specialising in orchids. This small family partnership has been growing orchids commercially for some 10 years.

Orchid growing is a relatively small cottage industry that in Australia boasts only 25 to 30 full-time professional growers. There is no industry body representing commercial growers and very little exchange among growers. There are, however, a number of clubs and societies, such as the Australian Orchid Council, for those with a special interest in orchids and orchid growing.

E-commerce activities

Warrnambool Orchids first established its website in the late 1990s to take advantage of the relatively cheap advertising afforded by the Internet. Its intention in so doing was to increase the business' exposure to the marketplace, and particularly to overseas markets. It provides a catalogue, a statement of conditions of sale, an email and a printable order form, and photographs of selected orchid species.

The website has, however, had little impact on its Australian customer base. Owner Phillip Altmann attributes this to the average age of his Australian customers - at least 50% are over 70 years of age - and their preference for phone and personal contact. The business also generates a significant proportion of its revenue from spontaneous sales at orchid shows. Its Australian customers seem more likely to buy a plant that they have just seen in the flesh than one they have viewed at leisure on the Internet.

On the other hand, there is a growing interest from overseas buyers in the Web-based mail order catalogue. The extent to which the business is able to take advantage of this interest, however, is constrained by the cost and bureaucracy associated with CITES (the Convention in Trade In Endangered Species) certification. Small orders have proved uneconomical and the business requires a minimum order of $A250.00 for export sales. It also offers discounts on bulk orders.

Main benefits

To date only about 5% of its revenue has been generated through the Web. For Warrnambool Orchids, the value of its website is not so much in the revenue that it generates but in the cost savings that it provides.

In particular, it is much more convenient and timely, and less costly, to issue its mail order catalogue online than by mail. The website also helps establish contact between the business and prospective overseas buyers via a convenient email hotlink. For some countries, email provides the only feasible means of communication.

Website development

The website was designed and developed by the principal of the business with the assistance of a professional website designer

Contact details

Website: http://www.ssn.net.au/~altmann/index.html

Email: altmann@standard.net.au

Address: 32 Riverview Terrace, Warrnambool, Vic 3280

Telephone: (03) 5562 3753   Facsimile: (03) 5561 2433

A.14.   Wesfarmers Dalgety Online Store

Background

Wesfarmers Dalgety is a rural services company, which markets goods and services to over 100,000 clients, principally rural producers, through a network of outlets across Australia. Wesfarmers Dalgety provides wool and livestock broking, rural merchandise, fertiliser distribution, rural finance, insurance, real estate and grain prices. It is one of the largest companies operating in rural Australia. It is a publicly listed company with some 1200 employees.

The company is pursuing an active strategy of implementing e-business practices within all its business activities, including an online merchandise store operation, which is the focus of this brief case study (details of the Company's online activities are available at: http://www.wesfarmersdalgety.com.au).

E-commerce activities

Consistent with its e-business strategy, the company has implemented a wide range of e-commerce practices. These include:

- E-mail
- Market information reports and analysis
- Sales support eg real estate search, livestock sales catalogues.
- Access to personal account information (extranet)
- Intranet
- Online Store (retail online)

Email communications were introduced in 1996, electronic document exchange in 1997, and online selling and extranet began in 1999.

The initial motivation for online activities was marketing ('to build the company's brand and enhance communications with customers'). The results more than matched expectations ('the depth of information and interaction that the Internet allows is far beyond any other medium').

The online store

Wesfarmers Dalgety is one of the largest rural merchandise distributors in Australia. Its many stores across the country stock a range of animal health, cropping, fencing, fertiliser, farm hardware and clothing supplies. Customers can also access a range of specialist rural services to assist improved farm management and operations.

The online store allows customers to buy farm supplies over the Internet. When accessing the online store, established customers with a credit account can charge purchases to their account. Others can purchase goods with a credit card over a secure payment system. Customers can access the nearest store directly by entering their postcode in the appropriate window on the company's online store front page. Customers can then search for a specific product or browse through the product catalogue.

After completing their selections, customers can proceed to make an order for the goods. The facility provides for customers to check their selections before submitting the order. Orders can be changed at any time prior to completing the payment details. The customer also specifies delivery or pick-up details.

Main benefits

The Company identified the following significant benefits from going online:

- Business leads now come through the Internet.

- E-mail is the dominant method of communication internally and in some business areas.

- Very effective means for information dissemination. Some business activities solely use the Internet to disseminate client information.

- Use of online technology for communication is reducing costs.

Website development

The company commissioned strategic consultants, web designers, web developers and system integrators to develop its website. The company's internal IT department provides the ongoing management and support of the infrastructure.

Initially the company experienced some internal resistance to going online from employees who perceived the Internet as a threat to their business. This was resolved by internal consultation and marketing. There was also some initial lack of commitment from business activities in maintaining content of the site ('they needed to see the benefit to their business').

Contact details

Website: http://www.wesfarmersdalgety.com.au/

Email: webmaster@wesfarmersdalgety.com.au

Address: GPO Box 261, Sydney NSW 2001

Telephone: (02) 9335 6000   Facsimile: (02) 9335 6135

References

ABS (2000), 'Use of the Internet by Householders, Australia', Catalogue No. 8147.0, Canberra.

ABS (1999a), 'Household Use of Information Technology, Australia, 1999', Catalogue No. 8146.0, Canberra.

ABS (1999b), 'Use of Information Technology on Farms, Australia, 1998-9', Catalogue No. 8134.0, Canberra.

ABS, (1999c), 'Information Technology and its Uptake by Australian Farmers' Special article in ABS 'Agriculture, Australia, 1997-98', Catalogue No. 7113.0, pp. 25-31

Australian Electronic Business Network (1998) *Taking the Plunge: Small business attitudes to electronic commerce,* Department of Communications Information Technology and the Arts, Canberra.

Department of Communications Information Technology and the Arts (1999), *Australia's e-commerce report card,* Department of Communications Information Technology and the Arts, Canberra.

Martin, P. 1998, *Profile of Australian Wool Producers*, ABARE Research Report 98.5, Canberra.

National Office for the Information Economy (NOIE) (1999), *E-commerce beyond 2000,* Department of Communications Information Technology and the Arts, Canberra.

United States Bureau of Census (2000), 'Measuring Electronic Business: Definitions, Underlying Concepts and Measurement Plans', available at (accessed on 22 August, 2000): http://www.ecommerce.gov/ecomnews/e-def.html.