AN INVESTIGATION INTO THE FEASIBILITY OF USING E-BUSINESS TO SELL PLANT MATERIAL TO THE SOUTH AFRICAN NURSERY INDUSTRY

by

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ABSTRACT

The South African nursery industry has faced many challenges over the last ten years.

Excess in both demand and supply occur in any given year. The cost of maintaining a plant beyond its ideal 'sell-by-date' erodes profit and after time, results in complete wastage. The seedling nursery industry cannot afford to throw away large quantities of surplus seedlings or those that have become root-bound. The size of the wastage problem was unknown. It was believed that a website for trading surplus stock of seedlings might be the answer to the oversupply experienced by individual nurseries.

The literature was consulted to establish what had made large companies successful. The advantages and disadvantages of E-business were investigated. Data was collected from South African Seedling Grower members via email. The data was used as a basis to interview a website designer and two nursery representatives that were most likely to use a website. The financial viability of a website was evaluated, using a breakeven point and a cash flow projection.

It was established that the 35 seedling growers who responded to the questionnaire produce 381 million seedlings with a value in excess of R79 million. These nurseries discard only R348 000 worth of seedlings per annum; the problem is not as large as was anticipated. There was, however, interest in a website.

A website for the sale of seedlings that otherwise would be discarded would be financially viable. Although a profit of only R1544 is predicted, the potential of a website, and the recouping of money which would otherwise be lost cannot be questioned.

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CHAPTER 1 - INTRODUCTION

1.1 Background

The South African nursery industry consists of a number of sectors. These include: floral nurseries, foliage nurseries, forest nurseries, vegetable nurseries, seedling nurseries, general nurseries, landscapers and nursery suppliers. The nurseries vary in size from a small-scale backyard table to a multi-million Rand state-of-the-art structure covering a number of hectares.

The South African seedling nursery industry has faced many challenges over the last ten years. The customer's demand for quality has ensured that seedling quality has become the norm, and other factors such as price, immediate availability, convenience and service must now also be considered as influencing buying decisions. The economic environment in which these nurseries operate has become more competitive and the set-up costs of establishing a nursery are increasing. To add to the industry's concerns is the buyer's unwillingness to commit to fixed orders. The grower, therefore, carries a large proportion of the risk while plant material is grown and readied for sales that may, or may not take place. Climatic conditions often influence both demand and supply and excess in both demand and supply occur in any given year. The cost of maintaining a plant beyond its ideal 'sell-by-date' erodes profit and, after time, results in complete wastage.

1.2 The Business problem

The South African nursery industry has developed into a professionally run industry with numerous members' organisations representing the various sectors. These organisations include the South African Nurseryman's Association (S.A.N.A.), South African Landscaper's Institute (S.A.L.A), South African Seedling Growers Association (S.A.S.G.A.) and the South African Bedding Plants Association (S.A.B.P.A). These organisations offer advice and expertise on a number of technical and production related matters, but do not assist with the marketing of the products within the industry.

It is not only the production that must be optimal, the marketing of the product is essential. The seedling nursery industry cannot afford to throw away large quantities of seedlings that are surplus to demand, or have become root bound. The size of the problem is unknown, as nothing has been done on a co-ordinated basis by the industry to address it. It may be possible that a website for trading surplus stock of seedlings will be the answer. However, the feasibility of such a website is also unknown, along with the criteria that would be required for establishing such a website.

1.3 Parameters of the Study

The purpose of this study was to evaluate the potential impact and benefits of E-business on the South African seedling nursery industry. The intention is to establish the size of the wastage problem in seedling production and to

establish whether there is a need for a website on which plants could be collectively displayed and sold within the industry. The influences that both encourage and discourage more centralised markets were determined while conducting the literature review. A number of successful E-businesses were analysed to establish their success factors in the global marketplace. Consideration was given to whether, and how, E-business has contributed to the emergence of global, or near global, portals.

An investigation into the potential that E-business would have in the South African nursery industry was launched by sending out a questionnaire to the potential users. The potential buyers were evaluated and ranked according to the likelihood of their using the Internet to conduct business. From the results, two top ranked nurseries were identified and representatives from each were interviewed to establish their website requirements. Website designers were then interviewed to determine whether the nurseries' individual requirements could be accommodated on a website.
By evaluating the use of E-business in various parts of the world from a global perspective, and establishing the requirements of local nurseries, a model was developed that could be useful to the South African nursery industry.

1.4 Problem to be Researched

The seedling nursery industry discards large quantities of surplus seedlings, and those that have become root bound. The extent of this problem is presently unknown. It would appear that a website for trading surplus stock of seedlings might be the answer. However, the feasibility of such a website is not known, nor are the criteria required for the establishment of such a website known.

1.4.1 Objectives

The objectives of this research were:

- to establish whether there is a need for E-business in the South African nursery industry
- to identify existing E-business models
- to gain an understanding of the extent to which E-business could be used to buy and sell plant material
- to identify the criteria on which a South African nursery website should be based.

1.5 Summary of Methodology

A survey relating to the use of the worldwide web (www) to actively market plants has never been carried out in South Africa. As a result, no secondary or tertiary data was available on the potential use of E-business for plant

nurseries. The data collected was specific to this study and several choices regarding its collection were considered.

According to Robson (1993:43), the nature of this study is exploratory as the research sought an understanding of "what is happening; to seek new insights; and to ask questions and to assess phenomena in a new light". A census was conducted of the South African seedling grower members in the form of a questionnaire. The questionnaire was distributed to all members who possessed email, and the data collected used in the development of a model to predict the likelihood of nurseries using a website. The two highest ranked nurseries were personally interviewed to establish what they required from a website. The information gathered during the interviews with the nursery representatives was validated as being practically possible by a website designer.

Qualitative research has no precise definition. According to Van Maanen (1979:85), it can best be described as, "an array of interpretive techniques which seek to describe, decode, translate and otherwise come to terms with the meaning, not the frequency, of certain more or less naturally occurring phenomena." When using the quantitative approach, a researcher would "concentrate on the quantitative facts or data associated with the problem and develop mathematical expressions that describe the objectives, constraints and other relationships that exist in the problem" (Anderson,

Sweeney and Williams, 1999:5). The current research is, therefore, a hybrid of quantitative and qualitative methodologies. Normally, the collection of primary data in social research includes surveys (questionnaires) and interviews (Ghauri, Gronhaug and Kristianslund, 1995).

An extensive literature review on E-business, and the feasibility thereof was conducted. The literature review was used to develop a model on which a nursery website could be based. The data collected was summarised and analysed using tables and spreadsheets.

1.6 Delimitations

Research of this nature has not been carried out in the South African nursery industry. The South African seedling growers were chosen to establish whether there was a need for such a website. Questionnaires were distributed only to South African seedling growers with email as these nurseries would have access to the Internet.

1.6.1 Assumptions

- The following assumptions were made when questionnaires were returned, that the returned questionnaires implied consent to the information being used in this study.

- Receiving the questionnaire via email, implied that the nursery has access to the Internet and, hence, could be users of a possible website.
- South African seedling grower members receive a quarterly magazine published in English, and it was assumed that all nursery representatives would have an understanding of the English language.
- Seedling growers require that stock be turned over quickly, preventing plant material from becoming root-bound. The potential for waste is assumed to be high as a result of the relatively short holding period.

1.7 Chapter outline of the Report

Chapter 2 reviews the literature on the seedling industry and the use of E-businesses. Chapter 3 explains the methodology used and Chapter 4 presents the results. Chapter 5 interprets the results presented in the previous chapter. The final chapter draws conclusions and suggests additional research requirements.

1.8 Summary

Chapter 1 outlined the business problem, research problems, methodology and the basis of this report. The next section will provide a review of relevant literature on which this study was based.

CHAPTER 2- LITERATURE REVIEW

2.1 Introduction

"The term E-business, coined in 1993 by IBM's CEO Lou Gerstner, has caused a lot of hype in the marketplace, but is really just another form of hard, real business", says Leon du Rand, group executive of information technology at ABSA. "It boils down to productivity, efficiency and adding value for the customer" (Hunt and Lascaris, 1998:209).

The focus of this literature review is on different applications of the Internet through the Worldwide Web, with attention to the advantages and potential pitfalls of conducting business on the web. The literature review will consider a number of successful E-businesses and the applications of the Internet within these businesses.

2.1.1 The South African nursery industry

The South African nursery industry can be divided into a number of different sectors, namely, landscapers, wholesale nurseries and retail nurseries. Each of these sectors may produce a number of products or specialise in one particular line. The nursery industry plays an important part in South Africa's economy contributing hundreds of millions of Rand per annum. This figure has increased with the demand for more plant material by the growing South African population and the export market (Laws, 2000). Comrade Data from the International Trade Centre indicates that trade in fresh

floriculture products exceeded R51 billion worldwide in 1998 (Laws, 2000). Of this, 49% was cut flowers, 43% live plants, and 8% foliage and other fresh vegetation (Laws, 2000). The live plant trade was therefore worth R21 billion worldwide in 1998. The largest exporter of live plant material was the Netherlands, with 41% of the market, but their share has slipped in the last five years (Laws, 2000). Although the developed countries tend to dominate the export market, developing countries also have a significant contribution to make. For example, Costa Rica was the largest developing exporter of live plant material, but had less than 2% of the market.

There has been very little investigation into the South African nursery industry or the volume of plants that are traded annually. The industry is worth hundreds of millions of Rand – according to Boshoff (in Laws, 2000), South African floriculture exports grew from R77m in 1995, to R180m in 1999, then entered a period of consolidation, with exports starting to grow again in 2002. This regrowth was attributed to new producers and exporters entering the export market. This new growth in floriculture exports from South Africa increased exports for 2002 to R250 million. This significant increase in exports looks set to continue as the growth is seen in both volume and value and particularly in bulbs, cut flowers, cut foliage and plants. For example, the forestry industry plants in the region of 84 million seedlings per annum (van der Zel, 2003). In the 2002/2003 growing season, seedlings in the forestry industry were sold for between

R280- R1000 for Eucalyptus Grandis and R850- R1000 for Eucalyptus clones. Based on these figures the value of forestry seedlings annual trade was worth at least R25 million (van der Zel, 2003). The growth in the forestry seedling industry was predominately as a result of government legislation pertaining to the planting of wetlands and sensitive areas. Nurseries supplying the seedlings and clones had to become more efficient as a result of this increased demand.

Of late, there has been greater demand from both within and outside South Africa with new opportunities for nurseries to export their produce. With increasing opportunities there are also increasing pressures on the nurseries to become more cost effective and profitable (Askew, 2003). Nurseries and landscapers are production units where turnover of plant material is key to the success of the business, the greater the turnover of crops sold for the same or similar prices, the greater the chance that the business will be able to cover fixed costs and at least break even. Many nurseries have launched their own web pages on which general information regarding the nursery is displayed in the hope that customers will email them or contact them directly. However, there is no nursery website that offers the growers a service to display their plant material and thereby increase sales.

2.2 What is E-Business?

According to the Association for Electronic Commerce, E-commerce is simply doing business electronically (Commerce.net, 1999). According to this definition, almost any business activity, from a simple fax call to a complex Electronic Data Interchange (EDI) message exchange, can be categorised as E-commerce. Commerce.net, includes in its definition of E-commerce "the use of Internet worked computers to create and transform business relationships" (Commerce.net, 1999:3). The new paradigm of E-commerce concerns, not just transactions, but building, sustaining, and improving, both existing and potential relationships (Smith, Bailey and Brynjolfsson, 2000). It is however, a misconception to use E-commerce to describe E-business: E-commerce is actually only half the business, namely the customer-facing half of the business, and does not include the supply chain or the organisation's internal E-business. E-commerce is the store window and advertising reaching the customers, but does not include the store itself, the back room, the inventory, the accounts or linkages to the supplier of goods (Loewens, 2001).

Bonnet (2000) describes E-business as encompassing all resources and services developed for customers, employees, suppliers, and any other parties. "The use of Internet technology, either to support existing business process or to create entirely new business opportunities, has become known as E-business. The most impact has been on those operations and business

processes that are concerned with the buying and selling activity, E-commerce" (Chambers, Johnston and Slack, 2001:242). E-business is far bigger than E-commerce. It is the entire chain of business activities that use the Web as a backbone. All commercial or business transactions, interactions, and trades to other businesses that take place over the Internet fall under E-business. E-business includes the subset of E-commerce, and enhances the relationship between employees and external customers or suppliers. Forrester Research, a high-tech consulting firm, predicted that business-to-business E-commerce in the United States would have reached $1.3 trillion by 2003 (Chaudhury and Kuiboer, 2001).

In summary, E-business is an enterprise that uses the Worldwide Web to:

- Combine processes, organisation structure and technology
- Communicate information
- Leverage services and trade
- Reach suppliers
- Reach networks of stakeholders
- Broadcast to customers
- Receive information on customers
- Receive revenue from Internet transactions, and/ or
- Provide services and products over the web.

(Lewis, 2000).

However, E-business is far more than just the above transactions (Lewis, 2000). E-business will change the speed and the way people do business. Technology is a tool to gather information at speed and to assist in getting the right information to the right people. Sandi Gilchrist, principal at E-business IBM South Africa, is quoted as saying, “E-business is actually all about innovation: transforming business processes across extended communities; Web-enabling those processes following open standards; running a safe, scalable infrastructure” (Loewens, 2001:13).

2.3 E-business expectations

> “The expectation is that global sourcing though the Internet will enable firms to leverage economies of scale and to greatly reduce transaction costs associated with using: conventional channels for locating trading partners and organising the relevant transactions” (Seybold, 1998:45).

The growth and potential benefits of using the web to source goods has yet to reach its full potential. Sourcing of goods using the web is not dependent on the size of the industry: as large multinationals to small one-person businesses can utilise this technology. All businesses, regardless of size, can compete on the Internet for market share by their ability to target specific markets or alternatively carry out a wide range of marketing campaigns.

"The emergence and growth of global portals has potentially wide-ranging and profound implications for corporate and competitive strategies, as well as for public policy. It will also accentuate the benefits of co-coordinating competition and regulatory polices at a supa-national basis" (Globerman, 2001:78).

Notwithstanding the initial expectations regarding the revolutionary changes that global portals would bring about, the experience to date provides grounds for scepticism. Specifically, a substantial number of early E-business websites have been closed for a lack of sufficient business. These include portals designed to accommodate business-to-business (B-to-B) E-commerce, and the type of E-commerce expected to be characterised by the largest efficiency gains. B-to-B E-commerce is the relationship between two businesses using a digital network to interact. For example, Company A gives Company B the modem, software, hardware and customised web site that enables Company A to interact without having to talk to a human being. Company A can see what is available in Company B's inventory, trace processing and distribution of their orders, look at their invoices, get technological problems sorted out and buy over its direct, personalised connection. This link between the two companies is private: an outsider is unable to access the sites as these are password protected (Moodie, 2001).

A large number of businesses have been established on the Worldwide Web, but few of these companies have lasted long. This has resulted in much scepticism. In using the web, however, there is potential to reach a much wider target market and to build stronger relationships between the supplier and the customer (Seybold, 1998).

2.4 Linkages between E-business and Markets

The E-business economy has gained unstoppable momentum. Since its inception, the phenomenal growth of the Internet and the associated Worldwide Web is the latest expression of this development. Computers and the Internet now reach into all aspects of people's daily lives. "Farmers on remote islands control their cattle feed by computer, mass-tailored underwear is sold over the Web, and grandparents stay in touch with their grandchildren by e-mail" (Gloor, 2000:14). In 1990, fewer than one million users were connected to the Internet. By mid-1998 the Internet had approximately 147million users, of whom some 70million were in the United States. By 2000, the Internet had over 330million users. The Internet and the Worldwide Web promise to develop into the information backbone of tomorrow's global economy (Houlder, 1998). From virtually nothing in 1994, the value of Web-based transactions hit $7.5billion in 1997. According to a report issued by the United Stated Department of Commerce, this figure was to have reached $300 billion in the United States alone by the end of 2003 (Houlder, 1998).

Slow initial adoption is characteristic of industrial innovations (Mansfield, et al., 1997). The relatively slow acceptance of global portals, at least with respect to initial expectations, might merely reflect risk aversion and learning behaviour on the part of potential users. The virtual collapse of E-business in 2000 has resulted in businesses becoming more sceptical about the benefits and value of doing E-business (Cyberatlas, 2001).

The Internet is not only having an impact, to a greater or lesser extent, on existing business, it is also opening up whole new approaches to the way business can be conducted. These new opportunities arise from the level of global connectivity it affords and the ability to connect directly with suppliers and customers throughout this new distribution channel (Birley and Muzyka, 1997).

The Internet can be defined as a communication network through which buyers and sellers can electronically form an agreement concerning the pricing and delivery of a particular good or service. The transaction is completed through the delivery of the product or service as contracted. Within this broad definition, the communication networks can be private, quasi-private or public. In practice, the concept of E-business is inextricably linked to the Internet. There is general consensus that E-commerce will result in both the expansion of relevant geographic markets and increase competition within those markets (Malone, Yates, and Benjamin, 1987). The

changes are related, as E-commerce makes it less costly to identify beneficial transactions across a wider range of potential transactors. This should lead to an increased integration of markets that are currently segmented by high transaction costs across geographical locations. Furthermore, geographically larger markets are ordinarily more contestable than smaller markets. Contestable markets are characterised by relatively low costs of entry and exit such that, incumbent firms must charge competitive prices if there are only a small number of such firms (Baumol, Panzar and Willig, 1988). "The Internet might directly increase contestability by enabling entrants to duplicate the value-creating capabilities of dominant firms with relatively low sunk cost investments" (Kauffman, Subramani and Wood, 2000:82).

There has been large growth in the number of people using the Internet to do business and to communicate generally. The growth in the number of people a business can potentially reach means that the number of customers increases.

2.5 Potential Impact of the Internet, hype or reality?

Many traditional 'bricks and mortar' enterprises are complacent about the Internet as they have seen so-called revolutions come and go (Norris, West and Gaughan, 2000). Many believe that the Internet novelty will simply fade away. However, those who think this, only have to look at

Amazon.com and how it has grown as an Internet business. Although Amazon.com has made no profits as of yet, it has a huge market value. In contrast, Barnes and Noble, the biggest 'bricks and mortar' bookseller in the United States, have a turnover of $9 million per quarter, while Amazon has a turnover of $87 million. The number of people using the website Google, as a search engine, has grown to 50 million users per day, showing that the number of people using the Internet is growing (Loewens, 2001).

Hype has also promoted two unsustainable strategies disguised as workable business models: hype and hope. Hype has sustained a number of firms who pursued growth without profit, such as CD Now and Value America. Both these companies were in danger of running out of money (Ross, 1999).

The number of Internet users is growing, allowing people to connect to businesses that they otherwise would not have had access to. Businesses also have the opportunity to connect to more people thus increasing the potential market for their respective products. The ease with which information can be gathered on the Internet is encouraging people to use the Internet more regularly. As organisations design their businesses and their web sites towards becoming more interactive, the number of people using the web to conduct business will grow.

The crucial learning opportunity in this domain is for the company to recognise the extent of the Internet capabilities and the risks the company could face. Many companies have failed to recognise early enough the constraints they may face in relation to security, scalability, bandwidth, technical robustness, functionality, ease of use and speed. While it is necessary for firms to acquire the resources for E-business, the critical lesson is to avoid using all its resources to pursue this channel. The best preventative for reducing this risk is to concentrate on the potential business uses for the technology (Gloor and Uhlmann, 1999).

2.6 Benefits of E-business

Tapscott, Ticoll and Lowy (2000) describe E-business as a distinct system of suppliers, distributors, commerce service providers, infrastructure providers and customers that use the Internet for their primary business communications and transactions. Several E-businesses may compete with one another for market share within an industry. According to Hogue (2000), successful businesses enter E-commerce for a number of reasons. Firstly, the Internet enables businesses to interact personally and directly with customers without incurring the overhead costs of building a larger sales force, opening new retail locations, or hiring and training new customer service representatives. By utilising information in real time, enterprises can focus on building personalised, long-term relationships with each customer such as was done before the days of malls, superstores and direct-mail

catalogues (Hogue, 2000). The author further suggests that the Internet and E-enterprise forges business relationships, rather than transactions, by accessing massive banks of customer information and buying histories. Online businesses can recognise and provide custom service to each customer, the same way that local businesses did a century ago.

The customer must also realise the savings of conducting business on the Internet. If they are unable to recognise the benefits they will resort to the more traditional 'safe' way of doing business. The online business must be customer-focused, catering for the individual's needs and to personal relationship building.

2.6.1 Time Savings

The Internet enables the businesses and traders to operate seven days a week, 24 hours a day. The Internet provides busy, time-pressed people with a variety of retailers to help them manage their daily chores and home supply needs. For example, Peapod provides shoppers with a virtual supermarket on their screens, organised by any category they require. This virtual supermarket is laid out in aisles, much as in regular stores, or according to the customer arrangements to accommodate what they are interested in (Haeckel, 1998). GroceryGateway.com makes deliveries to businesses so that the customer can pick up their groceries as they leave work. It also uses the Sears model of having drop-off points, called Empori.

Customers specify which Empori they want to use and they collect their groceries from these locations (Colvin, 2001).

Katz, of Bidvest, suggests that E-business can offer the customer real time, current information, enabling the customer the ability to get up to date information from the supplier's system (Haeckel, 1998).

According to Vandermerwe (1999), E-technology enables the enterprise to take customers through a web experience from the beginning of the customer activity cycle to the end. Seybold (1998) suggests that the single most important thing that can be done for customers, is to anticipate and eliminate snags and delays in their experience of dealing with the company. By making the web page as simple and interactive as possible, the customers visit to the site becomes a pleasant experience. The customer is saved time by making the site as interactive as possible. This also builds the customer's confidence to return to the site and purchase what is needed in as short a period as possible.

A nursery website should follow a similar design, eliminating potential snags and delays ensuring that the customer's experience is a pleasant one which encourages them to return to the site.

2.6.2 Interactivity

Using E-technology to re-engineer what is already being done in a traditional 'bricks and mortar' business, or just to shave costs, is very different from bringing E-technology to individuals and interacting with them to ensure exactly what they want. Interactivity is a powerful tool for customer personalisation because it enables the entrepreneur to manage interactively, shaping the offering and learning about the customer. This means that the offerings can become more proactive and precise, thereby reinforcing the positive feedback mechanism that locks customers in (Birley and Muzyka, 1997). E-technology enables the customer to have multiple links with companies and their partners.

A nursery site could be linked to various related industry web pages such as the Seedling Grower's and Landscaper's Association. Thus customers will be given quick access to the nursery site or to other industry information sites.

2.6.3 Mobilisation of collective knowledge

Vandermerwe (1999) suggests that the Internet is not a mass medium but a one-on-one medium. The Internet is a powerful tool for customer personalisation because, paradoxically, individual customer relationships are not only possible, but also achievable, with millions of people simultaneously.

Businesses can use E-technology to interact with customers with the express purpose of learning about their needs, and then converting this knowledge into superior offerings on an on-going basis. E-Technology allows business to accomplish this by processing huge quantities of unstructured information and turning it into real time decision-making information.

Amazon.com was able to add value to customers by taking the hassle out of buying books. It provides offerings suited to the unique profile, tastes, habits and on-going needs of the customer. Amazon.com is able to leverage from its database the ability to 'remember' customers, and so treat them as individuals. Customers who enter the website are greeted by name and are offered a list of recommended titles based on books they have already purchased. Even without having to visit the site, the customers can be kept abreast of the latest publications in their preferred reading areas via email notifications. This type of technology may be utilised on a nursery website: as a customer builds a profile, they can be kept abreast of new plant postings on the website affording them the opportunity to purchase the plants before or when they become available (Loewens, 2001).

2.6.4 Production Efficiency

It is very difficult to generalise about how moving value-added activities onto the Internet will affect the basic costs of producing the product. This will depend upon the nature of the underlying production function. Moving

relevant production activities onto the Internet might have substantial cost savings. A number of dramatic examples can be cited in this regard. One company, Micron Computers, reported a productivity gain to the factor of 10 in moving its order placement and execution online. This gain was due to the fact that, by using the web, sales people spend an average of two minutes on the telephone with a customer who has looked at their website, but 20 minutes with traditional customers (Barber and Odean, 2001). Cisco Systems saved over $500 million by moving its customer support activities online. Cost-saving claims associated with the use of electronic communication networks are also dramatic. In 1999 it was estimated that the approximately 3000 people who work the floor of the New York Stock Exchange cleared an average of 674 000 trades a day. In contrast, with only 85 employees, the electronic communications network, Island, cleared an average of 321 007 trades a day in the first half of 2000, (Barber and Odean, 2001). This is evidence that the number of transactions that a business is able to conduct is increased when the Internet is utilised.

2.6.5 Economies of Scale

A strategically new concept is that small businesses can achieve very rapid growth, far beyond the physical world's normal growth rate by using the potential of the Internet. Size is strength in gaining dominant market share. The bigger a business becomes, the more market share it can take, and the more business can spread its costs across the entire business, the greater

the potential to be more profitable. Nokia, for example, has the advantage from its sheer scale. Size allows more leverage with suppliers, allowing more scope for negotiation as a result of the volumes of the product utilised (Loewens, 2001).

In utilising a website for nurseries, nurseries may be able to increase their volumes of plants sold as they link to larger markets, thereby increasing the economies of scale. As sale volumes increase, economies of scale eventually begin to play a part spreading fixed costs over a greater number of products (Salvatore, 2001).

2.6.6 Transaction Costs

The argument used to raise capital for dot-com mania, was that the Internet changed the rules for costs. It was suggested that inventory costs would be slashed, since the virtual business would order from its suppliers after receiving the cash payment from the customer. Store locations, store furnishings and large numbers of sales staff would no longer be crucial, since the online channel of sale could be located in any part of the country or world (Loewens, 2001).

The potential of the Internet as a cost saving tool cannot be questioned. E-business has the potential to reduce non-conventional costs often taken for granted. A broad category of non-conventional cost can be identified as

transaction costs. According to Globerman (2003), costs of transacting comprise the following components:

- Search costs: the cost of physically searching for market information related to potential buyers, sellers, product availability, product quality, and prices
- Contracting costs: the costs of creating and implementing contractual agreements
- Monitoring costs: the cost of ensuring that contractual commitments are satisfied
- Adaptation costs: the costs associated with negotiating and implementing changes to agreements over time. These costs can be borne directly by the consumer or by firms serving the consumer. In the latter case, if markets are competitive, transaction costs will ultimately be passed on to the final consumers in the form of higher prices.

In the nursery industry, staff spend a large proportion of their time sourcing plant material thus increasing the cost per plant sold. Having a website to access allows the nursery person to quickly find what they require and continue with day-to-day operations. The website can also potentially reduce the cost per plant, as there are fewer hours spent sourcing plants and the enterprise therefore, saves on manpower.

2.6.7 Virtual Marketplaces

E- applications that enable enterprises to sell goods and services online to other businesses on the Internet are referred to as virtual marketplaces (Hogue, 2000). Virtual marketplaces share several common components with the traditional business-to-customer environments, such as catalogues of goods, marketing promotions, payment processing facilities and post-sale customer care. Because business buying differs dramatically from consumer buying practices, B-to-B virtual marketplaces must offer services that are distinct from a traditional business. These marketplaces have a three-pronged approach to adding value to the enterprise: they aim to increase revenues and simultaneously decrease costs while they improve the customer buying experience. A well designed virtual marketplace can go even further than providing this invaluable triple leverage. Not only can it increase revenues, it can deliver multiple and completely new revenue opportunities. It can also cut numerous types of costs, including structural expenses organic to the way the business is run (Hogue, 2000).

2.6.8 Connecting Delivery partners

To deliver an integrated experience requires connecting the various delivery partners across product, company and industry. It is considered easy to establish partners in this way in the electronic marketplace, and it can be achieved relatively inexpensively. The more the integrated community of connected providers grows, the more valuable the network, and each player

belonging to it, becomes (Kelly, 1998). Information can be integrated easily over both the Internet and Intranets, people geographically separated can work as one integrated entity, joining processes, combining expertise and sharing infrastructure and resources. Relevant information can be disseminated to partners instantaneously to facilitate both concurrent and realtime decision-making.

The Internet technology changes some of the old rules. When new technology is introduced, the initial signals can give distorted readings of the market. The connected economy introduces new dynamics that open up the window of opportunity, but also let in a whole new set of threats to the business. Companies that thought that using the Internet would make the fundamental rules of business strategy obsolete, were wrong (Pine and Gilmore, 1999).

As with most business, networking is valuable: the larger the network and the greater the quality of that network, the greater the potential for a business to develop a reputation. Although contacting people on the Internet is easy, developing a market and a reputation for good business requires the same focus as required to develop a traditional ‘brick and mortar’ business.

2.7 Building E-enterprise

In behavioural studies published in 2000, by Georgia Tech University's Graphics, Visualization and Usability Center, 86% of respondents stated that they go on the Web to find specific information or to accomplish a task. Finding something specific as opposed to 'surfing the web,' accounts for the relatively low reported weekly usage on the Internet of between 5 and 10 hours per week per person. In general, most E-business have not been able to get people to spend more than a few minutes on their website (Taylor and Terbune, 2001). The best E-business websites have created a sense of involvement on the part of their customers. Example of such sites are eBay.com, gaming websites such as Snap.com, and shopping websites such as Priceline.com. It is the opinion of Taylor and Terbune (2001) that most E-businesses are doing a poor job of involving their visitors emotionally in the shopping experience, because they are too focused on loading up their sites with as much as possible, in an effort to offer something for everyone. It is vitally important when starting up an E-business that the end customer is kept in mind. To succeed as Internet markets mature, E-business must understand how visitors experience the many possible electronic interfaces to their organisation (computers, personal digital assistants and Webphones). Differentiation via affect and emotional experience, may prove to be a major step forward in the refinement and reorganisation of E-business over the next few years (Downes and Mui, 1998).

2.8 Criteria for conducting successful E-business

Microsoft did not become a monolithic giant because it was evil and Bill Gates was smart. It did not take over the computer market because it was the best operating system. Microsoft took over the market because it gave the customers what they needed in the opinion of Loewens, (2001). Microsoft provided connectivity in a single package and at a 'good enough' standard for the customer. Another example is that of VHS who succeeded with innovative marketing and better management, yet Betamax has far superior technology. Microsoft and VHS offer the customer what they wanted establishing this by means of market research and extensive marketing (Loewens, 2001). Targeting the right market segment and knowing who the customer is, is critical to any business regardless of whether it is virtual or the traditional ‘brick and mortar’ business. The following sections will establish what has made E-business successful and what these businesses consider to be essential criteria for implementing E-business.

2.8.1 Begin with the customer

Strategy begins with people. Human beings are the marketplace and every person has personal tastes. The question any business must ask is ‘ what is our customer’s profile?’ Understanding this, allows one a competitive advantage. Companies that are Internet linked have a substantial advantage over traditional 'bricks and mortar' companies as they can use

the Internet as a strategic tool for customer relationships. Amazon.com has been able to build a deeply personal relationship that was not possible in the 'bricks only' world (Brown, 2001).

Figallo (1998) believes that the Web is a function of relationships: those between a site's users and its content, between its users and its management, and between the users themselves. Individual users decide with whom, with what and how deeply they will relate, but it is up to the site manager and the host to establish the relationships and instil a sense of ownership in the visitors to the site. It is important that the designer of the site is able to relate to the site visitors as fellow humans providing them with a helpful service (Figallo, 1998).

2.8.2 Know who your Customers and Prospects are

Bakos (1997) suggests that everything possible should be done to identify and woo the end customer and suggests that incentives be offered to encourage the customer to identify themselves. Seybold (1998) supports this and suggests that one should make sure that customers are clear about what they are going to get in return for identifying themselves and that nothing should be done to violate the customers trust. Forsyth, Lavoire and McGuire (2000) propose that customers should be segmented according to age, business type, location, technology fit, purchasing power or specific product interests. This will ensure that one identifies the right target market.

Segmentation of markets maybe useful for a nursery website, where customers may be segmented by geographical location, or simply by the type of plants they require i.e., shrubs, ground covers, trees or seedlings.

2.8.3 Deciding which Customers to attract

When Dow Jones initiated its web-based version of The Wall Street Journal, the company set its sights on a very clear target market (Seybold, 1998). Newspaper readership was dwindling because the younger generation did not have the daily newspaper habit. The Wall Street Journal wanted to find and attract people who did not want to read a daily newspaper but cared about business events. Today, more than 65% of the paying subscribers to The Wall Street Journal Interactive Edition are not subscribers to the printed newspaper but it Web based Editions (Seybold, 1998).

More than often the real customer is the person who influences key purchases such as managers, rather than the clerical staff who simply deal in the paperwork. An example of this is Community Playthings, manufacturers of day care equipment and specialists in furniture for children with special needs. Their major target is physical therapists, although the physical therapists rarely buy this equipment, they often make recommendations to their clients on what they should be purchasing. It is important to bear in mind who influences the purchasing of products and whether it is possible to establish a direct relationship with them (Smith,

Bailey and Brynjolfsson, 2000). Once the target has been established, the business will constantly need to improve on its ability to provide the service or goods as required by the target. Competitors are constantly scanning the environment in which they operate, watching any potential companies that many influence their market share. Both American Airlines and National Semiconductors continuously improve their websites based on the customer's actual behaviour on their websites. Every three months, both companies monitor customer reactions to their website compared to those of their major competitors. American Airlines and National Semiconductors have spent large sums of capital to build and maintain their sites. They have developed more effective customer service at a lower cost to the company than they would have using call centres and direct mail marketing (Urban, Fareena and William, 1998). Both companies have been able to reach and satisfy hundreds of thousands more customers with a much more efficiently delivered and targeted information. As a direct result of their website activities, both companies have reported increased sales (Urban, Fareena and William, 1998).

2.8.4 Customer loyalty

The Internet allows businesses to move beyond wondering, 'who your customers are' and onto to, 'how to keep them forever'. Loyalty is a difficult concept, in that in customer relationships there is no such thing as loyalty. Customers can easily be influenced to buy other products by variations in

price, quality, service and delivery. Something needs to be done to get the customer to come back and buy repeatedly from you, not from your known or unknown competitor. Customer loyalty can be built by using one of the following: price leadership, superior quality, depth of product range, or focus on customer's experience of using your products or service (Taylor and Terbune, 2001). Colvin (2001) suggests that a business should concentrate on only one of these to ensure sustainable success. National Semiconductors, for example, have allowed customers to download data sheets and software enabling the customer to compare its products with that of its competitors. Taylor and Terbune (2001) suggest that a website should make the target market clear to the customer. This reflects the trend towards more focused micro markets. It is also important to make it clear that for each customer there will be a guaranteed, consistent level of support, including human contact.

There are currently no websites in South Africa or worldwide that offer the service of buying and selling of plant material collectively on behalf of the nursery industry. Once such a website is launched and is successful, a number of other entrepreneurs may also become interested, competition will increase and the customer will have a number of similar websites from which to choose. Retaining the customer will be one of the keys in developing a sustainable website.

2.8.5 Building a Long-term relationship

A study conducted by Davenport and Prusak (1997) found that customers did not want corporate or marketing information. Instead, they wanted to search for the products which met specific criteria, to scan abstracts of data sheets, download the ones in which they were interested, and order samples. This must be done as quickly and easily as possible. To ensure that National Semiconductors remained competitive, they would ask the customer to compare and rate them against their competitors. All feedback received was directly from users of the website. From this study National Semiconductors totally re-constructed their website for better efficiency. Sales people who handled larger companies' accounts were able to personalise the sites to the individual customer requirements. This customised website then became the site where most of the dialogue and discussion between the account's person and the customer took place. Customers were able to review public and proprietary communications such as corporate contracts, prices and lead times. It is essential that one is aware of the customer's preferences and needs, allowing one to react pro-actively and ensure future customer satisfaction (Porter, 2001).

In the nursery industry, Email can be used to build a long-term relationship, informing customers of specific plant species in which they may be interested. It may also be used to receive feedback from the customer. Email can be a powerful tool with which to reinforce the relationship that a

business is trying to create, at the same time, it is important to recognise and acknowledge the customers' contributions, and suggestions.

Both American Airlines and National Semiconductors use Email to communicate with their customers on a regular basis. They have implemented a system that automatically filters and routes incoming mail to the correct person, capturing these Emails on a database, and tracking them to completion. In this way, they ensure the most value from these customer interactions (Urban, Fareena and William, 1998).

2.8.6 Deliver a constant, Branded service and quality

Brand names evoke a set of feelings in customers. Brand names ensure that service and quality are at least equal to competitors, but work towards exceeding competitor's products or service through environmental screening and searching. American Skiing Company uses the Internet to streamline customer experience in the physical world. Each interaction at the resort is streamlined, from renting skis and boots to finding the way from the ski slope to the car park. This is done online when applying for a skiing pass. The family profile information, including hotel room, age of children, and the size of boots, are kept up to date (Nonaka, 1998).

Most virtual companies, like Amazon.com, rely on partners to complete their offerings: Amazon.com outsourced the procurement in their operations to

Ingram Books. This is not known to the customer as their experience is that they are dealing with a single organisation (Seybold, 1998). Any problems that the customers experience are therefore, directly aimed at the virtual company. For this reason a partner for outsourcing should be carefully selected and toughly screened.

Being the first website to sell plants collectively in South Africa would have benefits to the nursery industry. These include the opportunity to build long-term relationships with customers and to capture the market completely. The careful planning of the website from the customer's point of view is that it must be as simple and interactive as possible and incorporate the aforementioned facts.

This point is of particular significance for the nursery industry, in that a website designed for the industry will rely on the accuracy of information and the level of service provided by a large number of independent nurseries, whose current level of service may vary.

2.8.7 Establish which Customers Generate Referrals

Satisfied customers are the best source of referrals. Community Playthings discovered that 60% of its customers were repeat customers, indicating a high level of satisfaction. This company spent $600 000 a year on direct marketing to generate only 12% of new business. Community Playthings

has eliminated this direct marketing from its strategy, and concentrates on identifying and delighting existing customers, who then generate repeat sales and refer new business. It is in the interest of a business to make itself as attractive as possible for current customers to recommend new customers. American Airlines will give away free air miles to existing customers who refer new customers to the airline (Norris, West and Gaughan, 2000).

A website aimed at the nursery industry would need to utilise similar tactics to that of American Airlines. Introducing the nursery representatives to the website at trade day and industry gatherings may generate interest, but to ensure sustainability the customer must to lured back to do business on the web and encourage other potential customers to do the same.

2.8.8 Focus on the Customer Experience

Amazon.com was the first virtual bookstore to emerge on the Internet. The company's immediate popularity and the fanatical loyalty of its growing customer base was attractive to many competitors (Commercenet, 1999). Some of these competitors like Barnes and Noble and Borders, were book retailers in the physical world that wanted to add the web to their business as a marketing and distribution channel. Amazon.com did what none of its competitors were able to do: to overtake and set the standard for the online

retail experience. As quickly as others imitated Amazon.com's website and business model, Amazon moved to the next level.

Jeff Bezos, Amazon.com's founder, understood that the battle between the physical and virtual bookstores would be waged, not on price, but rather on convenience. Bezos considered the entire book-buying process, breaking it down into discrete tasks. He then set-up a team to optimise each of these tasks (Birley and Muzyka, 1997). There is, theoretically, no limit to the number of books a virtual store can carry. By the end of 1997, Amazon.com had 2.5million titles listed and the company was including the thousands of smaller, independent publishers whose books never made it into the physical bookstores. By mid-1998 Amazon.com offered 3 million book titles and 1 250 000 CD titles (Birley and Muzyka, 1997).

A virtual nursery website would need to be similar to the Amazon.com site, in that it would have no restrictions on the number of plants that it is able to carry at any one time. As identified by Bezos, it is important to stay one step ahead of your competitors. This could be achieved by applying constant attention to customer feedback, and providing innovative solutions to customer needs and problems.

2.8.9 Shopping online

Amazon.com's designers realised that customers fell into two categories: browsers or particular book hunters. To satisfy the browsers, merchandisers organised an online bookstore similar to a physical bookstore. There are 'tables', at the front of the website featuring new books, specials and gift ideas. After seeing the items on display one can go to a particular subject section: cooking, architecture, computers, and so on. Browsers are able to find recommendations made by experts on each of these topics.

The hunters on the other hand, are able to find the particular book they want simply by typing in keywords about the book, or author or title details. Amazon.com's Quick Search then provides the customer with a list of books that match the information provided. Once the customer has found the book they are interested in, they are able to read a synopsis or reviews from other readers. Amazon.com was the first retailer to feature the "Readers who bought (this book) also bought…) device, listing three other titles on the same subject area or books by the same author". Each book has detailed lists of the anticipated delivery time, ranging from twenty-four hours to a month depending on availability and the customer's address. Amazon.com is also able to offer the customer the service of ordering books that are slated for publication but are not yet available in bookshops. The principle and practices of Amazon.com can be extended to a number of virtual businesses (Seybold, 1998).

A nursery website can be designed along similar lines, where a browser might wish to view all new varieties of plants. A 'hunter' with a specific need would be someone who seeks a particular plant species. The needs of both these potential customers should be considered when designing a website.

2.8.10 Purchasing Online

Once a customer has purchased from Amazon.com, they develop a customer profile. The customer profile contains all information the customer entered at the initial purchase. Provided details remain unchanged for future purchases (shipping address, credit card number) the customer should be able to move quickly through the purchasing process by verifying the information and selecting the 'purchase now' option. If a customer needs to make changes, to his/her existing profile the change is added to the existing profile. To streamline the process even further Amazon.com introduced the '1-click' option. This allows the customer to select a single credit card and a single shipping address from the ones listed on a personalised customer profile. A customer finds the books they require and selects the '1-click' key, and the purchase is complete based on the information selected from the profile (Seybold, 1998). The ease of ordering books is also attractive to the potential buyers.

This type of website in the nursery industry will allow the potential customer interested in purchasing plants the opportunity to make a purchase very

quickly and efficiently. It is critical that the customer is aware of the benefits of shopping online. If they are unaware they will simply revert back to traditional means of purchasing (Norris, West and Gaughan, 2000). Customer focus and personalisation are essential. Seybold, (2000) highlights that one should make it easy for the customer to do business with one. All the abovementioned features of Amazon.com online purchasing system should be incorporated into a nursery website.

2.8.11 Customer fulfilment

Within a few minutes of placing an order via Amazon.com, the customer receives an Email confirming that the processing has begun. As soon as one of the orders is shipped to the customer, Amazon.com sends another Email informing the customer of what it has shipped and which books are still on order.

Jeff Bezos, originally conceived that, as a virtual bookstore, he could dispense with inventory. His original plan was to use the website as a substitute for retail outlets and have the books shipped directly to the customer from the distributors. However, Amazon.com found that it needed to warehouse and ship books itself as customers were not willing to wait more than two days to receive a popular best seller that they could find on the shelf in any bookstore. Amazon.com therefore had to stock enough copies of the best sellers to fulfil those orders quickly. Amazon.com pays

only for the warehousing of these books and does not pay the supplier until such time that the books are sold (Seybold, 1998). Bezos convinced two major distributors to ship books to Amazon.com on demand. Using a 'just-in-time' inventory system he could keep inventory and storage costs down. Later, by increasing the storage area, Amazon.com was able to reduce order to mailbox time drastically.

Ideally, the nursery site will be completely virtual, carrying no stock of plants. The plants, like the books at Amazon.com, will remain the property of the supplier until the transaction is complete. Delivery time for a nursery is important, as plants are perishable. The sooner the customers receive the plants the greater the chance there is of receiving good quality plant material. Every care should be taken to ensure that delivery takes place as quickly and efficiently as possible.

2.8.12 Account Maintenance

Amazon.com allows the customers an opportunity to view their own personalised account at any time. The profile information that Amazon.com keeps on every customer allows the customer to check their billing and shipping addresses and credit card information, as well as a list of every item bought. Apart from the company, only the customer has access to the information. This information is also used by Amazon.com to make

recommendations on other books in which the customer might be interested. (Seybold, 1998).

Customers purchasing plants can begin to develop a profile. Once the profile has been developed the customer can be sent information regarding similar plant material that is posted on the website. Similarly, the customer purchasing plants should have the same facilities.

2.9 E-Business Project failings

Electronic integration promises to permeate the boundaries of functions and the organization itself, to cut out unnecessary administrative steps resulting in faster communications and time saving (Malone, Yates and Benjamin, 1987). Furthermore, information technology has enabled cross-functional teams: concurrent engineering and other parallel processes that are faster than sequential transactions. Shared information leads to tighter integration and improved coordination between departments and firms. The careful planning and management of how these departments and firms are integrated is critical for integration (Gupta and Wilemon, 1990). Similarly, a shared database based on the integration of design engineering and manufacturing is likely to result in faster, better designs (Malone, Yates and Benjamin, 1987).

IT monitors and controls production processes with automatic alerts and faster processing, as well as integrating materials, equipment, personnel,

work instructions and facilities. Although electronic links between functional groups in an organisation and between the organisation and its customers and suppliers are assumed to facilitate faster transactions, there has not been much empirical support of this (Srinivasan, Kekre and Mukhopadhyay, 1994).

A survey by Figallo (1998), including manufacturing, banking, consumer and business service organisations in the UK, Germany, France, Italy, Spain, Benelux and Scandinavia revealed that many companies are implementing E-business projects without clearly defined business cases for doing so. Of the 131 senior managers surveyed, only 14% thought that their completed E-business projects had been very successful. Results in the survey highlighted the following:

- Of the senior executives surveyed, less than one in five (18%) could confirm that they were measuring their E-business project results. The findings also indicate that almost half of those interviewed (49%) had not prepared a business case before investing in E-business projects
- While the majority of respondents had some idea of what they wanted to achieve through their E-business initiatives, 11% were not expecting any return at all. Additionally, only 8% could claim that they were ahead of target. In every measurable area, the majority of

respondents were disappointed with the success of their E-business initiatives.

- The companies that were developing a business case for E-business projects, were likely to have achieved their objectives and to be ahead of their investment targets. These companies have higher expectations of the benefits to be derived and were experiencing greater E-business success. Typically, companies with successful E-business projects have had their initiatives in place for two years or more. They regularly checked the success of projects against a number of variables including, improved cross-selling opportunities, improved supply chain efficiencies and increasing customer satisfaction and retention.

2.10 E-Business – Summary of the website model

There are no hard and fast rules to establishing a business on the Internet. Amazon.com is one of the most successful Internet businesses. The principles of Amazon.com business are based on the customer and the customer's experience on the website. Customer service and customer personalisation has made Amazon.com the undoubted leader in online book selling.

Ideally, a nursery website would be based upon similar principles to the Amazon.com website, maximising the customer's experience online. The

website would have to focus on the customer's needs. Many businesses have failed as a result of poor research into customer needs. By reviewing the literature, the characteristics that have made Amazon.com, American Airlines and National Semiconductor successful can be drawn on, while the problems that other businesses have experienced can be identified and avoided.

2.10.1 The Customer

The customer of a nursery website has been identified as any wholesaler, retail nursery or landscaper who purchases plants for commercial purposes. The nursery site must seek to establish a personal relationship with the customer. This is often not possible with the traditional 'bricks and mortar' world (Loewens, 2001). The customer should be made aware of the benefits of using a site for the purpose of buying and selling plants and this should be highlighted on the home page of the site. Customers utilising the site and disclosing information must be given a guarantee that their trust will not be violated (Seybold, 1998). The more sites the proposed nursery website can be linked to the greater the potential market exposure is for the plants on the site and the greater the chance that plants will be sold on the seller's behalf. Similarly, the increased number of links ensures that the purchaser has a greater choice.

2.10.2 Deciding on which customers to attract

Any nursery that wishes to buy or sell plant material is a potential customer for the nursery website. It is important to bear in mind who influences the purchasing of products and whether it is possible to establish a direct relationship with them. Once a relationship has been established a specific customer's profile can be built.

2.10.3 Shopping and purchasing online

Similar to the Amazon.com website that differentiates between browsers and particular hunters, the nursery site should aim to satisfy both browsers and hunters. The browser should be allowed to work their way through the website by using virtual tables offering specials, new plant species etc. After this, they should be allowed to browse specific sections of interest. The hunters, on the other hand, should have the means to type in a single word to find a specific plant of interest. If the prospective buyer wishes to proceed with the purchase they must be able to begin the purchasing process. The viewing of related purchases may, as in the case of Amazon.com, encourage additional purchases. Once the purchase has been made the customers profile should be updated to record the purchase. Once this has been done, and provided that other details remain unchanged (shipping address, contact details etc), the transaction can be processed. The buyer should be constantly updated as to the status of their shipment and the expected time of delivery.

2.11 Conclusion

The nursery industry in South Africa is not currently utilising the Internet to its full potential. By conducting a literature review, successful International businesses have been identified and analysed. The reasons for their success have been examined and should be used to develop a website for nurseries.

A large number of Internet businesses have failed as a result of poor market research. Establishing a successful website and an interactive site requires extensive planning. By examining the successful businesses, it has become apparent that customer personalisation is critical to the success of an online business. Unlike a 'brick and mortar' business, there is no face-to-face contact with the customer. The Internet-based business must use the website to build a relationship with its users and, its systems must be as interactive as possible. There must be definite added value for the users of the website, in the form of time savings, greater stock selection, faster or more convenient delivery, economies of scale, increased volumes of business, higher profits, or decreased cost. Failing this there is no real need for a website.

Amazon.com has developed a large customer base as a result of customer focus and having the first mover advantage. It has become the world leader in online book sales, and by constantly scanning the environment and reacting to the customers needs, it remains the leader whilst others follow.

The next chapter will present the methodology was used to implement this research study.

CHAPTER 3 – METHODOLOGY

3.1 Introduction

A survey relating to the use of the website, to actively market plants has never been carried out in South Africa. As a result, no secondary data pertaining to nurseries and the potential use of E-business in the industry was available. Therefore, primary research was required to address the research problem specified in Chapter 1. This chapter will discuss the methodology used in this study.

3.2 Research design

A census was selected to obtain data of a higher quality rather, than having fewer participates per sector as suggested by Welman and Kruger (1999) when conducting this type of research.

This research is a hybrid quantitative-qualitative study. The collection of primary data includes observations, surveys (questionnaires) and interviews (Ghauri, Gronhaug and Kristianslund, 1995).

3.3 Hybrid Qualitative-Quantitative Research

Qualitative research has no precise definition according to Van Maanen (1979). It can best be described as an array of interpretive techniques which seek to describe, decode, translate and otherwise come to terms with the meaning, not the frequency, of certain more or less naturally occurring phenomena. When using the quantitative approach, a researcher will "concentrate on the quantitative facts or data associated with the problem and develop mathematical expressions that describe the objectives, constraints and other relationships that exist in the problem" (Anderson, Sweeney and Williams, 1999:5). Qualitative research refers to the meaning, definition, analogy, model or metaphor characterising an occurrence. Several approaches are adaptable for exploratory investigations of management questions. These include:

- In-depth interviewing (usually conversational rather than structured)
- Document analysis (public reports, historical information and opinions) (Saunders, Lewis and Thornhill, 2000).

Cassel and Symon (1994) suggest that qualitative research focuses on the following aspects; interpretation rather than quantification, an emphasis on subjectivity rather than objectivity; flexibility in the process of conducting research; an orientation towards process rather than outcome; a concern with context regarding behaviour and situation as inextricably linked in

forming experience; and finally, an explicit recognition of the impact of the research process on the research situation.

The current study was therefore, hybrid qualitative-quantitative study, as the research required both interpretation and quantification of interviews and models developed for this report.

3.4. Selecting the respondents

The target population was the South African Seedling Growers members who were accessible via email. The seedling nurseries email addresses were obtained from the South African Seedling Grower's membership list this served as the universe (84 nurseries) from which the population as taken i.e. nurseries with email addresses. The respondents were required to have access to, and an understanding of the potential of, the Internet and the influence that it may have on their business. The results are, therefore, reflective of only the nurseries that are members of the South African Seedling Growers Association and have access to email. Thirty-seven seedling nurseries fulfilled these criteria and were included in the census from.

3.5 Data collection

A questionnaire (Appendix 1) was designed to obtain data on the potential size of the market for a website and the current number of seedlings

discarded annually. The respondents were under no obligation to complete the questionnaire and it was assumed that by completing and returning the questionnaire that the respondent had given their consent to using information for the compilation of this report. The survey was limited to the South African Seedling Growers Association(SASGA) members only.
The questionnaire was sent to 37 nurseries shortlisted from the SASGA that possessed email. Thirty-five of the 37 nurseries replied to the survey, which represented a 94% response rate. The information gleaned therefore, gave a reliable indication of the numbers of seedlings produced and discarded and the general attitude of the industry towards the development of a website.

The questionnaire was sent to a number of nurseries up to three times (Witmer, Colma and Katzamn, 1999). A covering email was attached to the questionnaire outlining the importance of the study to the industry as a whole (Appendix 2). Nurseries were allocated a time period of one month in which to complete the questionnaire before they were contacted telephonically and reminded of the questionnaire. Nurseries that responded were thanked for their time and openness.

Only 12 nurseries responded to the initial email, after which nurseries were contacted telephonically, 19 nurseries responded to this reminder. The remaining 4 nurseries later responded after a second telephone call.

3.5.1 Questionnaires

The precise wording of questions is critical in achieving maximum validity of the survey information collected (Sudman and Bradman, 1989). Questionnaires work best with standardised questions that will be interpreted the same way by all respondents to ensure that reliable data is collected (Robson, 1993). The questionnaire was designed to be self-administered. "Respondents to self-administered questionnaires are relatively unlikely to answer to please you or because they believe certain responses are more socially desirable" (Dillman, 1978:124). A self administrated questionnaire offers a truer reflection of the points surveyed; the responses are objective not subjective. The questionnaires were delivered and returned electronically using either email or the Internet (online questionnaires), rather than posted to respondents who return them by post after completion (Chambers, Johnston and Slack, 2001). Due to the time constraints and the geographical spread of nurseries throughout South Africa, email was selected as the method in which the questionnaires would be distributed to respondents. Email offers greater control because most users read and respond to their email at their personal computers (Witmer, Colma, and Katzamn, 1999).

3.5.2 Online Questionnaires

Witmer, Colma and Katzamn (1999) suggest the following procedure when using online or email questionnaires:

- The questionnaire is emailed to the respondents with a covering letter
- Email the first follow-up one week after emailing out the survey to all recipients. Early respondents are thanked, and non-respondents reminded to answer. A copy of the questionnaire is to be attached to the reminder.
- Email second follow-up to people who have not responded after two weeks. The covering letter is to be re-worded to emphasise the importance of completing the questionnaire.

The length of the questionnaire is important according to Ghauri, Gronhaug and Kristianslund (1995) as it directly affects the response rate. A shorter questionnaire is believed to have a higher chance of being returned fully completed. There is, however, no standard available in existing literature regarding what constitutes a 'short' or a 'long' questionnaire. For this survey, the questions were designed to be as simple and concise as possible. The survey population were assumed to be people who had a good grasp of the English language as all are members of the South African Seedling Growers Association and received publications in English once a quarter. Before sending out the questionnaire, a copy of the instrument was viewed by a member of the South African Seedling Growers Association confirming that the information required by the researcher would indeed be realised. This pilot respondent completed the questionnaire during the pilot test and was not subsequently e-mailed the questionnaire. Once this pilot test was

completed the questionnaire was sent out with a covering letter explaining the census and the purpose thereof. Nurseries that had not responded to the emailed questionnaires within one month were reminded of the questionnaire telephonically.

3.5.3 Personal Interviews

3.5.3.1 Highest Ranked Nurseries

Once the nurseries had completed the questionnaire a ranking system was developed to identify the two nurseries that would most likely use the website. This was based on the number of seedlings sold, the number of computers on site, the number of links to the Internet, number of seedlings discarded annually and the amount of time spent on selling excess seedlings. Representatives of these two nurseries were personally interviewed. The purpose of the personal interview was to establish the needs of the individual nurseries. The instrument used in this study was similar to that used in the personal interviews with the website developers (Appendix 2).

3.5.3.2 Website developer

An informal personal interview was used to interview a website designer who had launched previously successful websites. Questionnaire was designed to guide the interviewer with open ended questions to encourage the interviewee to talk freely (Appendix 2). The information gathered from the

personal interviews with the two nurseries was shared with the web designer. The website designer was asked to verify that what the nurseries required was practically feasible.

The information gathered while conducting both nursery and website developer interviews was used to either confirm the results of the literature review, or discredit the model generated by the researcher.

3.6 Data analysis

Data was analysed with the use of SPSS 10 (Windows Student version) Means, medians, standard deviations, variances, kurtosis, skewness and standard error of means were determined. Tables and spreadsheets were produced in Microsoft Excel. A model was developed which would assist in predicting the likelihood of nurseries using a website.

3.7 Validity

For the purpose of this study, the 35 nurseries that responded to the questionnaire were considered appropriate and a sufficiently large enough study sample to represent the majority of the seedling nurseries in South Africa with Internet linkage. The nurseries, therefore, form the basis for further analysis of the South African nursery industry.

The validity of these findings are supported by:

- Questionnaires to the potential website user

- Personal interviews with two nurseries most likely to use the website as identified from a model based on the questionnaire
- Personal interviews with a web designer to verify that what the customers required was practically possible and feasible
- A literature review of successful businesses that currently utilise E-business. The literature review would assist in developing a model on which a successful nursery website would be based
- Lastly, the financial feasibility of a nursery website to either support the establishment of a website or indicate that such a website would not financially be worth establishing.

Welman and Kruger (1999) suggest that validity is provided by triangulation as information is corroborated by at least three different approaches. This is achieved in this study by:

- Examining literature
- Sending out questionnaires to seedling nurseries
- Conducting personal interviews with both nurseries and a website designer
- Examining the financial viability of a website for selling seedlings on.

3.8 Ethical consideration

A number of the nurseries that completed the questionnaire have their own websites and the proposed generic website could be in direct competition to them. Nurseries were under no obligation to participate in the survey.

A covering letter was sent in conjunction with the questionnaire briefly outlining the purpose of the study. The purpose of the research being conducted was aimed at defining the amount of wastage in the seedling industry and the feasibility of establishing a website for the purposes of buying plant material. It was assumed that by completing the questionnaire the respondents consented to the researcher using the data in this study. The nurseries were specifically asked whether or not, in their opinion, there was a need for a website. The identity of the nurseries who partook in this research have been protected to retain confidentiality and privacy.

3.9 Conclusion

This chapter outlined the research methodology used during this study. This included a census to establish the need for a website and the amount of wastage in the seedling nursery industry in South Africa. Questionnaires were distributed to all members of the South African Seedling Growers Association who possessed email.

The validity of the research was achieved by consulting the literature, and conducting interviews with nursery representatives and a website designer.

Lastly, a financial feasibility study was necessary to establish whether such a venture was financially sound. Information collected was considered valid, in that more than three sources, commonly called triangulation, were consulted for gathering of the information.

The results of the study are examined in the following chapter.

CHAPTER 4 RESULTS

4.1 Introduction

This chapter will examine the results gathered from the questionnaires.

Questionnaires were sent out to 37 South African Seedlings Grower Association members, who had access to email. Upon the return of the questionnaires data was captured. This data was used to predict the likelihood of nurseries making use of a website. Representatives of the two highest ranked nurseries were personally interviewed. A website designer was then interviewed to establish whether the nurseries' requirements were practically achievable. Lastly, the financial feasibility of the proposed website was determined.

4.2 Background to results

The nurseries surveyed account for the largest proportion of seedling producers in South Africa. The 35 nurseries that responded to the survey produce 381million seedlings per annum (Appendix 5) with a monetary value in excess of R79 million. The value of these seedlings can range from an average of R110 per 1000 seedlings for cabbages to R2000 per 1000 seedlings for hybrid tomatoes or peppers. A large proportion of these seedlings are produced without firm orders and can result in high levels of wastage (Appendix 6).

In order for nurseries to benefit from a potential sales website, the participating nursery had to be connected to the Internet, with computers readily available to the nursery representatives. Two highest nursery representatives were identified for personal interviews, to establish the specific requirements of the nurseries. These requirements were presented to a website designer. The website designer indicated that careful consideration should be given to the target market of the website and how it proposes to add value to their business (Appendix 2).

Financially, a nursery website has potential, in that both the breakeven point and a positive cash flow are achievable within the first year of initiation.

4.2.1 Number of seedlings produced annually

Thirty-five nurseries responded to the questionnaire. Collectively these nurseries produce 381 million seedlings per annum (Appendix 5).

The nurseries who responded to the questionnaire are the largest of the South African Seedling Growers Association. The value of the seedlings produced per annum is in excess of R79 million. The nurseries surveyed produced a mean of 10.911 million seedlings per annum and the standard deviation is 10.1 million seedlings. There were a number of smaller nurseries included in the sample which explains the high standard deviation as the smaller nurseries produce smaller volumes. However, these nurseries produce high value plants specifically for niche markets. The larger

nurseries, producing 15 million seedlings or more, are indicated in Figure 4.1 by nurseries numbered 2, 7, 9, 10, 11, 12, 14, 17, 21, 23, and 24. Collectively these nurseries produced 259 million seedlings per annum, which is 68% of the total number of seedlings produced by South African seedling growers. The collective data of seedlings produced by the nurseries was positively skewed (0.882) indicating that there were relatively few larger observations. The distribution is therefore approaching a normal distribution.

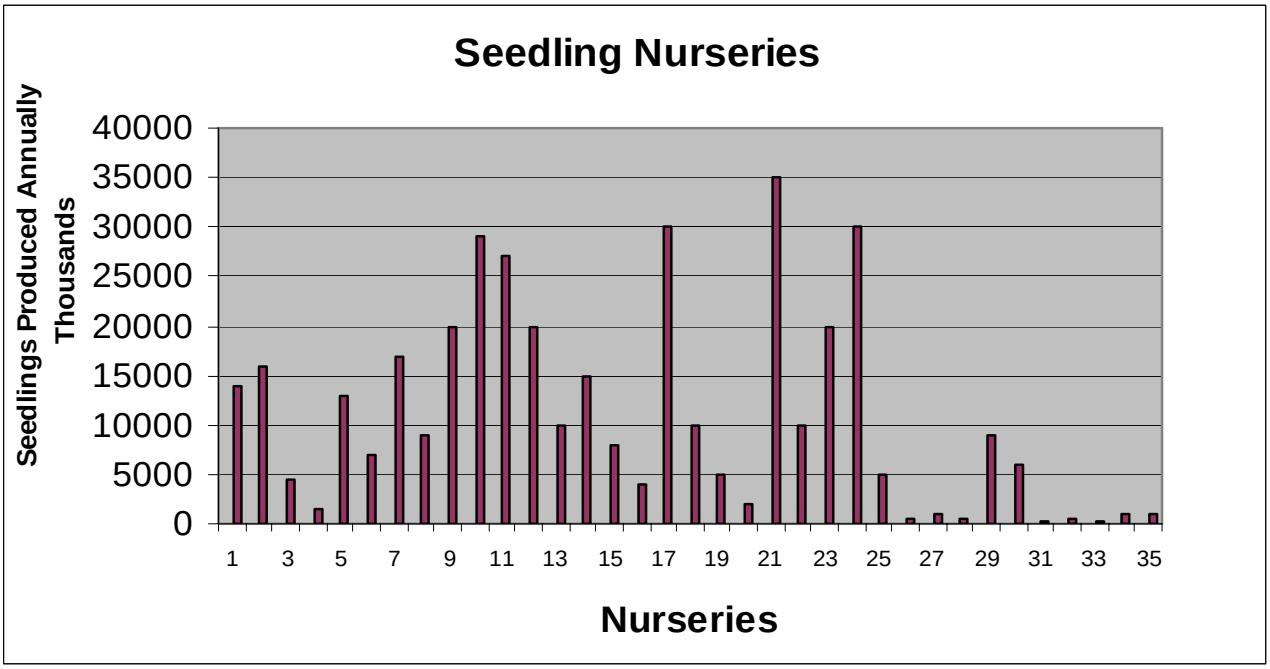

Figure 4.1 Seedlings produced by South African Seedling Growers per annum

4.2.2 Value of seedlings discarded annually

The results show that R348 000 worth of seedlings are discarded by South African seedling growers annually. On average, a nursery will discard R9 942 worth of seedlings with standard deviation of R8 312. The value seedlings discarded is positively skew (0.588) indicating that there are relatively few large observations and approaching normal distribution. Since this is representative of only a sector sample, in reality there are numerous other nurseries in South Africa producing more seedlings and plants, and discarding more plants. Figure 4.2 below reflects the number of seedlings discarded by the surveyed nurseries per annum. The nurseries represented by numbers 1, 2, 4, 6, 7, 8, 10, 11, 12, and 17 discard the most seedlings and therefore, lose the greatest amount of money due to wastage.

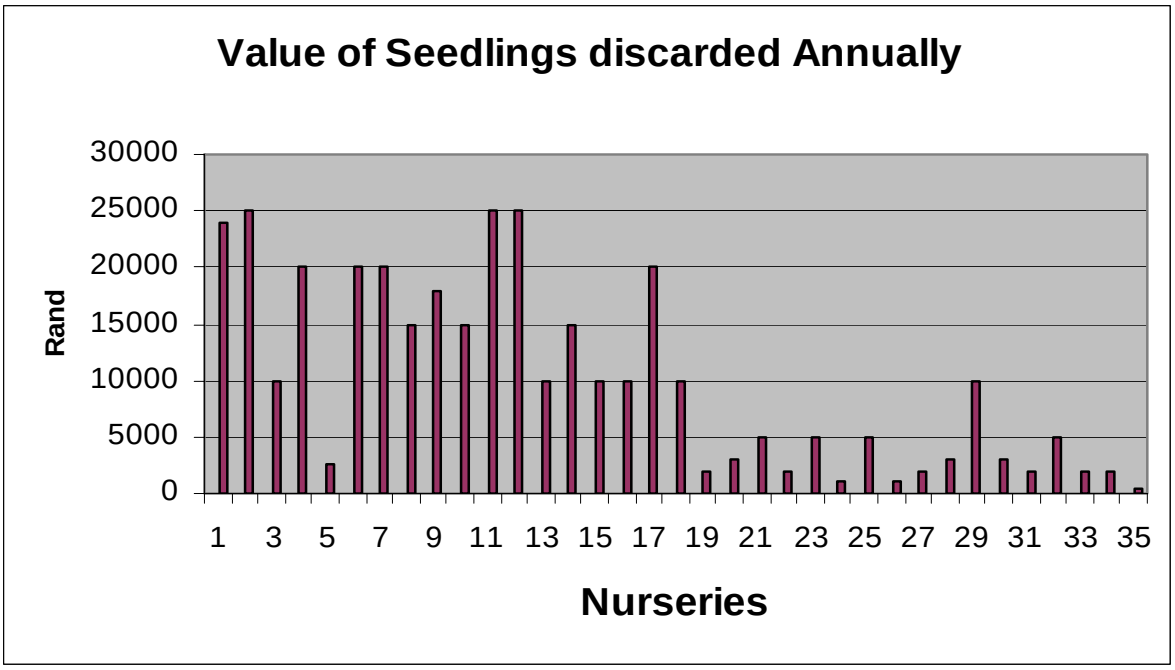

Figure 4.2 Value of seedlings discarded by seedling growers per annum

4.2.3 Time spent by the nursery personnel sourcing plant material

The amount of time spent sourcing plants by nursery personnel is dependent on the size of the production facility. The larger operations spend 10 hours or more, per week contacting other nurseries telephonically in order to establish whether or not they have excess stock for sale, or alternatively in an effort to sell their own excess stock. This is supported in Figure 4.3 by nurseries numbered 2, 10, 11, 14, 21 and 29. The results of the survey indicate that nurseries spend on average 6.67 hours per week negotiating, or coordinating the sale and delivery of plants. Skewness is 0.500 therefore approaching normal distribution, with a small number large values in the data set.

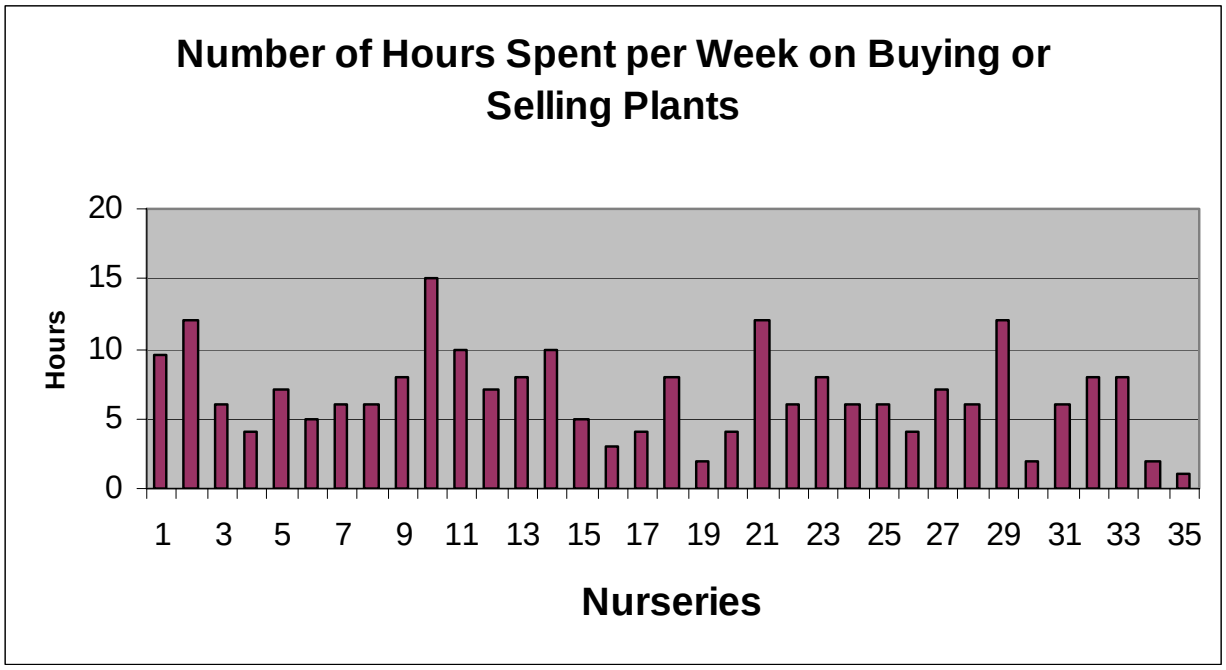

Figure 4.3 - Number of hours spent per week on buying and selling stock

4.2.4 Computers with access to the Internet

Critical to the success of a website is Internet access. Nurseries can only benefit from this website if they are linked to the Internet. From the data collected, it is apparent that all operations are able to access the Internet as this was one of the criteria in the selection of the nurseries participating in the survey.

Nurseries participating in the survey had on average 2.26 computers in their offices all of which are able to connect to the Internet. This will be of great benefit when establishing a website for nurseries to access. Furthermore, nurseries numbered 1, 2, 4, 5, 6, 11, 21, and 23 as shown in Figure 4.4 all had 2 or more computers on site that were able to connect to the Internet. This data set was relatively strongly positively skewed (1.438), indicating that there are a number of larger values.

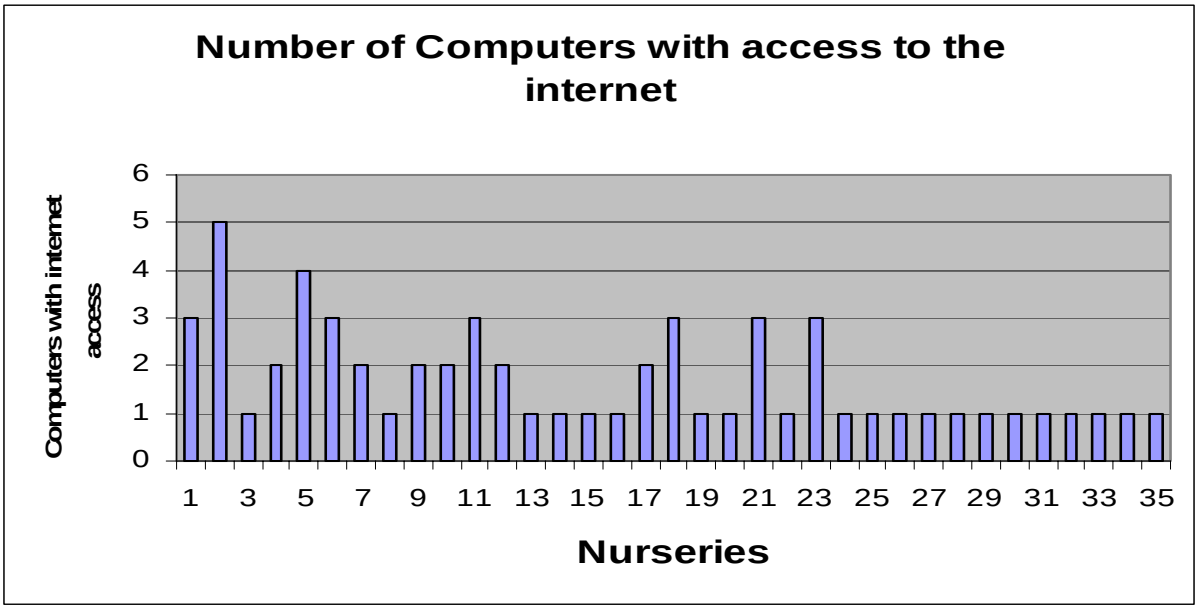

Figure 4.4 - Number of Computer with access to the Internet

4.3 Interim summary of questionnaire results

The results from the questionnaire indicate that South African Seedling Growers Association members produce a large number of seedlings annually (381 million). The value of the seedlings is variable ranging from R110 per 1000 to R2000 per 1000 seedlings based on seedling prices for the 2004 period (Appendix 6). Each nursery spends on average, 6.67 hours per week sourcing. This time could be reduced quite considerably, if the nurseries were to buy and sell plants online. All the nurseries surveyed had on average 2.26 computers with access to the Internet and thus had the potential to use a website that would sell plants on their behalf. Skewness in the case summary indicates that all categories are positively skewed, but distribution is approaching normal. There is therefore potential to use the web to increase turnover and sales volumes in the South African nursery industry.

4.4 Ranking – Likelihood of Nurseries using a website

In order to gain an understanding of the interest in a website the questionnaire used in the census was utilised to develop a rating system (Table 4.1).

Table 4.1 Criteria used for weighting the likelihood of nurseries utilising a website for sourcing plant material

		Computer on site	Internet –link	Plant discarded	Interested	Hours spent selling excess
5	Definitely	>5	=>5	>28000	5	>8
4	Highly likely	4	3-4	>21000<28000	4	6<8
3	Possible	2-3	2	>14000<21000	3	4<6
2	Unlikely	1	1	>7000<14000	2	2<4
1	Highly unlikely	0	0	<7000	1	<2

Information collected from the questionnaire was coded and tabulated according to the following five critical criteria:

- Computers on site
- Computers that are linked to the Internet
- Value of plants discarded
- Interested in using the site
- Hours spent selling excess seedlings

The first question included in the rating system was the number of computers on site. The more computers the nursery had on site the greater the possibility that a nursery would connect to a website. Nurseries with five computers or more were considered highly likely to use a website and scored five (definitely) while a nursery with one computer was considered highly unlikely and scored one.

The second question related to the number of computer with a connection to the Internet (Figure 4.4). All nurseries surveyed had at least one computer that was able to connect to the Internet. The more computers that were able to connect to the Internet the more likely it was that the nursery would to connect to a website. Nurseries that had only one Internet link were considered less likely to connect to the Internet and scored one on the rating system.

Nurseries that discarded the most seedlings per annum were considered to be potentially more likely to use a website to reduce the number of seedlings wasted. Nurseries that discarded in excess of R28 000 worth of seedlings per annum scored five as this was the upper end of the value of seedlings discarded per annum, and were considered highly likely to make use of a website. Nurseries discarding fewer plants were considered less likely to use the website and were given a lower score. Nurseries discarding less than R7 000 worth of stock per annum were considered highly unlikely to use a website (Table 4.2). Larger operations produce larger volumes of seedlings and therefore discard larger volumes of seedlings as evident from the results Appendix 5. The larger the nursery the greater the score the nursery was given to indicate that that nursery was highly likely to use a website.

The last question considered in the model was the number of hours that the nurseries spent sourcing plant material. If a nursery spent numerous hours

per week selling and marketing excess seedlings, the nursery was allocated a higher score. It was assumed that most nurseries wanted to reduce the number of hours spent on sourcing and selling plant material.

The scoring system was applied to all nurseries who responded to the questionnaire. Each row was totalled and divided by 175 (35*5); as this is the highest that could be scored for any row. The score would give an indication of the number of nurseries that would fall into each category e.g. highly likely, likely, possible, unlikely and highly unlikely to use a website.

For example a nursery that produced large quantities of seedlings, discarded large numbers of seedlings, had 5 computers on site that could all link to the Internet and lastly had nursery staff who spent a large proportion of their time on selling excess seedlings were viewed as definite users of a website.

Table 4.2 Frequencies of nurseries that would utilise a website for sourcing plant material

		Computer on site	Internet -link	Plant discarded	Interested	Hours spent selling excess		Nurseries	%
5	Definitely	4	1	4	7	16	Definitely	6.6	19
4	Highly likely	3	7	2	9	9	Highly unlikely	6.4	18
3	Possible	12	7	6	9	5	Possible	7.2	21
2	Unlikely	16	20	8	6	4	Unlikely	10.8	31
1	Definitely Not	0	0	15	4	1	Highly unlikely	4	11
		35	35	35	35	35		35	

4.5 Explanation of Results

The results from the questionnaire and model were as follows:

- 19% (6.6) of the nurseries are forecast to definitely use a website designed for buying seedlings
- 18% (6.4) of the nurseries are highly likely to use a website to conduct business
- 21% (7.2) are likely to use the website
- 31% (10.8) are unlikely to use a website
- 11% (4) Nurseries will definitely not use a website in any way.

The nurseries surveyed produce 381 million seedlings. The nurseries that were ranked as 'definite' to 'possible' produce 92.8% (353.5 million seedlings) of the seedlings produced by South African seedling growers with Internet access. This would indicate that there is potential for a website.

The results of Table 4.2 are a reflection of the possible number of users that a website might have. The nurseries that responded are responsible for the largest proportion of seedlings produced in South Africa.

4.6 Nursery interviews

The design and the level of interaction that the website allows are critical to the success of the site. Consideration should be given to how the customers are to link with the site either via search engines or via links related to the site. Representatives from the two highest ranked nurseries were personally

interviewed to establish their website requirements (Appendix 6). The following are requirements that were identified, as they were common to both interviewees:

- Quick access to a website
- Relatively simple and uncluttered web-pages
- Ability to log onto a website without having to fill in large amounts of information repeatedly
- An indexing system that will direct the user to a plant species that they require
- Ability to view information about the species, numbers available, size of trays, age, and price in table format
- Shopping basket allowing multiple products to be purchased
- Feedback on order status
- Reports on purchase – current and past purchases made by the nursery.

There must be benefits to the business. These may include increased turnover, greater customer satisfaction and/or time saving in terms of reduced sourcing periods.

The two nursery representatives interviewed showed definite interest in purchasing online. Both, however, stressed the importance of having the site as interactive and as simple but without omitting critical information.

4.7 Website designer interview

The website designer confirmed that the nursery requirements were feasible. The designer indicated that the website should be linked to the major search engines to make it easily accessible to the novice potential customer. The naming of the site was also important, in that naming of the website and the keywords selected determine how the search engine finds the site and also how 'high up' the website appears on the completed search list. The cost of establishing and designing a website can vary between R3000 – R35 000, based on the size of the website, the graphics and the level of interaction required. The cost of hosting a website can vary from R150- R350 per month.

The website designer emphasised that the website should be quite simple initially and then as it became more popular, the level of complexity could be increased.

4.8 Financial Results

The 20 nurseries who indicated they would use the website, discard 92.8% of the R348 000 worth of seedlings per annum, a figure of R322 944. The administrator of a website could charge in the region 10% commission from the nurseries website sales. There are a number of hidden savings including personnel time which would be freed up as a result of the reduced time that people would have to spend sourcing plant material or finding a market for plant material. There is also the added potential that in using a website,

turnover would be increased i.e. instead of discarding the crop which would have been grown to maturity and receiving no revenue from that crop, there would be some return therefore increasing turnover, as the website would reach a wider audience very quickly.

For the purposes of this report only real costs will be reflected in the calculation of the cash flow and breakeven point.

4.8.1 Breakeven analysis

Breakeven point is the minimum point at which a business can operate without making a profit (Salvatore, 2001). Once breakeven point has been reached, net income will increase by the unit contribution margin for each additional unit sold. The breakeven point for a nursery based website, as described in the business model was calculated as R31766 per annum or R2647 per month (Appendix 3). This figure is based on the weighted rating system, which determined that 58% of the seedling nurseries would use the website. Table 4.2 reflects that 20 nurseries indicated that they would use a website (6.6 nurseries- Definitely, 6.4 nurseries – highly likely and 7.2 nurseries likely) these nurseries collectively discarding R322 944 worth of seedlings per annum. If the administrator were to charge 10% commission for the R322 944 worth of seedlings sold on the website the website, would breakeven at R31 766.60 and make a small profit of R444.40 (Appendix 3). All cost are based on minimum levels, in order to begin a website, as the website grew the costs would escalate accordingly.

4.8.2 Cash Flow

As determined by the website designer, a website is relatively inexpensive to launch (R3000). This figure does, however, vary considerably with the amount of graphics and design of the site. There would have to be some sort of capital injection into the business from either the owner or loan from a financial institution. It can be predicated that as nurseries begin to understand the benefits the Internet, interest and transactions on the website will increase.

Working conservatively, if the website was to sell only the seedlings that were to be discarded, the turnover would be in the region of R32 294 per annum. At the end of a twelve-month period the business would have a positive cash flow of only R1544 (Appendix 4). These figures are reflective of the worst-case scenario only.

4.9 Summary

Table 4.2 reflects that 19% of nurseries would definitely use a website, 18% of the nurseries surveyed would be highly likely to use the site. Fifty eight percent of the nurseries surveyed indicated that they were interested in using a website to conduct business. The 20 nurseries (58%) produce 354 million seedlings per annum which constitute 92.8% of the total number of seedlings produced by the nurseries surveyed. From the personal interviews with the two highest ranked nurseries and the website designer, it was determined the design of the website should be uncluttered. At any time the

customer and the administrator must be able to request and draw information and reports from the database. It is important to bear in mind that if the customer is unable to gain some sort of benefit from using the website, they will resort to more traditional and reliable forms of conducting business transactions.

Financially, a nursery website would be able to turnover R32 294 per annum, based on a 10% commission to the administrator from the plants discarded by the 20 nurseries that were forecast to use the website. The breakeven point for the website is R31 766 with a monthly breakeven point of R2647.22. The business would have a positive cash flow of R1 544 after twelve months.

4.10 Conclusion

Chapter 4 examined the results of the questionnaire and the interviews with nurseries' representatives and website designer alongside the financial results of a web-based plant selling business.

Chapter 5 will examine the results more critically and interpret their meaning for web-based business.

CHAPTER 5 INTERPRETATION OF RESULTS

5.1 Introduction

The questionnaire results presented in Chapter 4 indicate that there is a definite interest in a website for the buying and selling of excess nursery seedling stock. The trends reflected in the results will be discussed in this chapter.

Twenty of the 35 nurseries that responded to the questionnaire were identified as potential users of the website. The results also showed that it is the larger nurseries that discard more seedlings per annum, have more computers with connections to the Internet and spend a larger proportion of their time selling and marketing excess plant material.

5.2 Potential market

The completed questionnaires confirmed that there is a potential need for a nursery website that sells plants collaboratively for the South African nursery industry. Table 4.2 summarise the response showing that 20 of the nurseries would use a website.

Summary of results:

- R348 000 worth of seedlings are thrown away annually by the South African seedling growers with email (Figure 4.2)

- 58% (Table 4.2) or 20 of the 35 nurseries, that responded indicated that there was a need for a website
- Nurseries spend on average 6.67 hours per week buying and selling plant material (Figure 4.3). The number of hours that the nurseries spend buying and selling the plant material may be potentially reduced with the aid of a website
- All nurseries surveyed had at least one computer, with access to the Internet. Nurseries that possessed only one computer are less likely to use the Internet as a number of other activities may be preformed on the same computer (Figure 4.4).
- Some nurseries have their own websites. These websites allow the customer and other nurseries to email the nursery for information relating to the nursery or about products that may be on offer. A customer will have to find a nursery's website and then navigate around a website; as it is not designed specifically for buying and selling plants. If customers are unable to find a specific specie they will have to continue searching through other nurseries' website before they are able to source a plant they might require. A collaborative website could alleviate this problem.

The questionnaire was also used to define the scale of production: the larger nurseries (numbers 2, 10, 11 and 21) showed a greater potential to use a website as they produced large numbers of seedlings and invariably

discarded large quantities of seedlings. The nurseries mentioned above had three or more computers with Internet connectivity.

A connection to the Internet could allow transactions to be made online, rather than the telephonic method, now considered the traditional means of conducting business. The surveyed nurseries indicated the need for a website that would enable them to buy and sell plants collectively on one website. There is, however, careful planning required in the establishment of such a website.

Table 5.1 – Potential market for a Nursery website

Number of nurseries that would use a website	Value of seedlings produced by nurseries that would use the site (Rand)	Value of seedlings discarded by these nurseries (Rand)
20 nurseries interested	R79 million (343million *R207)	R322 944

Table 5.1 indicates the number of nurseries that responded positively to the questionnaire: 20 nurseries indicated they would consider using a website to increase turnover. These nurseries produced 92% of the seedlings in the sample and discard R322 944 worth of seedlings per annum. A website can potentially reduce the number of seedlings being discarded every year.

5.3 Nursery website opportunity

There is currently no nursery website which sells plants on behalf of nurseries. The questionnaire used in the survey asked only specific

questions to highlight the need for a nursery website. Setting up a website is relatively cheap as the software for the Internet is standard with most modern packages. An entrepreneur who is able to establish a website for the nursery industry will gain the first move advantage. The website could quickly gain momentum and a good reputation provided the website is well researched, and designed with the customer's needs and ease of use foremost.

One website designer was interviewed to establish the feasibility of the proposed website. The designer stressed the importance of having links to the website via search engines including Google, Ananzi and other local association websites such as the South African Seedling Nursery Association etc. The website should consist of a database of plant material which would allow the administrator the advantage of drawing reports, and the customer the ability to view and access large volumes of plants quickly. The website designer indicated that all the nurseries' requirements could be incorporated into the design of a basic website. As the website gains in popularity, the administrator could expand into other markets such as shrubs, trees and groundcovers.

The success of any business is measured by its ability to generate profit. A web-based business is no different to the traditional brick and mortar business in this respect and must generate a positive cash flow and generate

profit for its owners. As there are no website of this kind in South Africa, the pricing of the service is critical. The website would generate income by taking a percentage commission of the selling price of the plants sold. The breakeven point is R2467.22 based on the assumption that the website was to sell all seedlings discarded in the seedling industry. The business would require at least R6000 to start as the design of a website begins at R3500 the remaining R2500 would be utilised as the running costs. After a twelve-month period, the website is forecast to have generated a profit of R1544 before tax. Sales are forecast to increase as the website develops a reputation for increasing turnover and reducing the number of plants discarded by South African seedling nurseries.

5.4.1 Business Model for the establishment of a website

5.4.1.1 The purpose of the Website

The purpose of the proposed website is simply to link the customer and the supplier. There are R348 000 worth of seedling thrown away by South African seedling growers annually. The reduction of this wastage was one of the main aims for establishing the website. By establishing the website the customer will be able to source plants quickly without time wastage.

5.4.1.2 The Website target market

This analysis concentrated on seedling nurseries that had access to the Internet. Personal interviews were conducted with two of the nurseries that

are predicted to use a website in Chapter 4.5. These two nurseries outlined specific website requirements. Based on the identified needs and the fact that meeting the customer needs is essential for success, the researcher suggested that a website be designed with their needs and requirements in mind.

The survey concentrated only on nurseries linked to the Internet but, the remainder of the industry cannot be ignored. There is without question an interest in purchasing plants online. Of the nurseries sampled, 58% indicated that they felt that a website would be of benefit to the industry. The 58% that indicated there was a need for a website should be targeted first.

5.4.1.3 Generating Referrals

The nursery industry is no different to other industries in that existing customers are the best source of referrals. A system to identify repeat customers would give an indication of which incentives should be offered to repeat customers and or those who have referred 'new' customers.

5.4.1.4 What is the website going to offer?

Initially, the website should focus on the specific target market as described in this study and on the core areas which are identified in Chapter 4. As per the responses of the customers participating in this research, as much information as possible is required from the website but this information

must be presented in a simple and user-friendly manner. The customers experience of the website should be as effortless as possible. This will enhance the customer's ability to navigate the website and encourage them to return to the site (Seybold, 1998).

5.4.1.5 The website

The ease with which websites can be created, is sometimes the reason behind poorly thought-out enterprises and unsuccessful new ventures. The process of planning a web-based enterprise and its manifestation on the web requires as much planning as would the establishment of a business in the traditional manner.

5.4.1.6 A link to the Customer

There are thousand of sites on the Internet all offering customers the opportunity to do business. A successful online business is accessible and linked via keywords to powerful search engines like Google, or locally Aardvark and Ananzi. The speed and convenience of the Internet as well as the unlimited choice that the customer experiences when using the Internet must be stressed during the marketing of the website (Seybold, 1998). As evident from the literature review, word-of-mouth and references can help a website become established.

5.4.1.7 The Customer Experience

The website's aim is to reduce the number of plants discarded annually, and to increase turnover and business profits. Potential customers must feel that they have benefited in some way from shopping online and the experience must have added value to their business processes. As with the Amazon.com website, the nursery site should be set up in such a manner that the customer is able to log onto the site and their personal details are loaded for the potential transaction. Birley and Muzyka (1997) suggest that the website be as interactive as possible. This would be addressed by outlining details of the benefits of the website and the manner in which a business transaction takes place.

5.5 Conclusion

This chapter has shown that a nursery website is feasible as far as the nurseries' requirements are concerned. Based on the interview with a website designer the website could be designed to accommodate all the nursery requirements in a basic package. The cost would be financially affordable to a start-up business. Financially, the breakeven point and cash flow are both attainable.

The following chapter will present the conclusions and recommendations drawn from the entire study.

CHAPTER 6 CONCLUSIONS AND RECOMMENDATIONS

6.1 Introduction

This chapter will present the conclusions that can be drawn from the study and make recommendations on the basis of conclusions.

6.2 Background

The nursery industry in South Africa is not currently utilising the Internet to its full potential. By conducting an extensive literature review, successful E-business were identified and the reasons for their success critically evaluated. Selecting which customers to target is critical to the success of an E-commerce business. By building a strong brand name, a virtual company is able to generate referrals and increase its customer base, without extensive advertising at an additional cost.

A large number of businesses have failed on the Internet as a result of poor market research. Unlike a 'brick and mortar' business there is no face-to-face contact with the customer. The Internet-based business must use technology to build a relationship with its users and therefore, its systems must be as interactive as possible. There must also be definite added value for the users. This may be in the form of time savings, greater stock selection, faster or more convenient delivery, economies of scale, increased

volumes of business, higher profits or, reduced cost, otherwise there is no real need for a website or its use.

It was the intention of this report to establish whether there was a need for a nursery website and, to gain an understanding of the Internet needs of the industry. This was achieved by distributing questionnaires to South African Seedling Grower Association members and using the data received to generate a model to assist in predicting the likely success of a nursery website.

6.3 Conclusion to the Business problem

The seedling industry discards large quantities of seedlings that are surplus to demand, or have become root-bound. How big this problem is, was unknown prior to this research, and there was little concerted effort by the industry to reduce the problem.

Using a questionnaire distributed to seedling grower members, the researcher was able to establish that R348 000 worth of seedlings are thrown away annually. Although the problem is not excessively large there is potential to reduce this figure. It was believed that a website for trading surplus stock of seedlings might be the answer but the feasibility of such a website and the criteria that would be required for establishing such a website were unknown.

The literature reviewed highlighted that a number of businesses including Amazon.com, National Semi conductors, American Airlines and GroceryGateway.com have successfully launched websites. Based on these examples it was identified, that customer focus is the key to a successful E-business. This view was supported by Figallo (1998) who suggests that the website is a function of relationships; those between a site's users and its content, between its users and its management, and between the users themselves. Bakos (1997), Seybold (1998) and Forsyth, Lavoire and McGuire (2000) all support the idea that customer needs should be carefully scrutinised before considering E-Commerce.

6.4 Conclusion and Recommendations for nursery practitioners

Annually a large proportion of seedlings are discarded. However, the problem was not as big as was initially believed. Only R348 000 worth of seedlings are thrown away annually, which is less than 1% of the seedling grower's production for the year. Based on these figures and the responses to the questionnaire there is nevertheless, an interest in a website to reduce this 1% waste. The financial calculations indicate that a website would be sustainable if only to reduce the waste problem. The continued sustainability of the website is, however, dependent on developing the website further and exploring additional markets which will be discussed in Section 6.5

This research has shown the potential benefits of a nursery website. There is a definite need of a collaborative nursery website and thus the website should be designed and launched to address these needs. The website should allow nurseries to buy and sell surplus plant material, seedlings in particular at this stage. Those nurseries that participated in the survey and that indicated that they would use a website to source plant material should be approached to begin placing plant material on the website. To ensure that the website is utilised to its full potential, additional information should be gathered from users when they visit the website. This information can be based on historical sales or simply by asking the customer if they are interested in anything in particular.

Customer feedback should be encouraged and suggestions should be considered, evaluated and implemented. Once implemented this must be fed back to the customer. It is important that once a website is operational it is brought to the attention of the target market as quickly as possible. Customer satisfaction will generate referrals thereby increasing the target market. While the proposed site may be the first of its kind in South Africa, the administrators should not be lulled into a false sense of security. Once the website begins drawing attention, a number of rival sites will develop, the administrator should be constantly scanning the business environment for competition and looking for areas where they can improve.

The website should be constantly updated and modified to ensure that it meets customer needs. A visit to the website should be beneficial to the user, saving the nursery time and reducing the number of seedlings it discards. If the customer is unable to gain any added value they will soon look for a site that will provide the service they require.

They want linked benefits across product, company and industry and information that is available 24 hours a day, with data on sites being updated on a regular basis. Technology enables the enterprise to take customers through the web experience from the beginning of the customer activity cycle to the end.

It should be the purpose of the website to capture as much of the market as possible and gain the first mover advantage.

6.5 Additional Research Required

The seedling industry in particular, has shown interest in the use of a website. There are, however, a number of other plant production sectors which may also be interested in the use of a website.

Additional research in the following areas should be considered for the future to increase the website's turnover and to be more benefical to the potential customer:

- Reasons behind wastage
- Seedling nurseries that do not have Internet access
- Other sectors of the nursery industry including landscapers, wholesale nurseries and retailers
- An evaluation of the real cost savings: time savings, production efficiency improvements, economies of scale and reducing transaction costs
- Other benefits of the website should be analysed. These could include: enabling the company to have multiple links with companies, connecting to a greater number of nurseries and hence increasing market exposure
- International potential of a website for the marketing for cut flowers and other horticultural material.
- The feasibility of sustaining E-business when geographical distances between buyer and seller may not result in costs being prohibitive.

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Appendix 1

Information collected from this Questionnaire will be held in confidence. The data will form part on a MBA dissertation. The published information will not reflect individual nurseries' answers. The processed data collected from all nurseries will however reflect the industry views. The final information will establish the usage of the inter-net within the South African Nursery industry and the potential thereof. Conclusions and recommendations will then be made for the industry from the information collected in this questionnaire.

Questionnaire

Nursery Name (Optional)

Location of Nursery?

Number of plants produced on an annual basis?

Value of plants discarded on an annual basis? (Information is important for recommendations)

0 <R5000	R5000 <R10000	R10000 <R15000	R15000 <R20000	R20000 <R25000	R25000 <R30000	>R30000

Where applicable please use:

1	2	3	4	>5

How many computers are available on site?

How many of the Computers have the ability to connect to the Internet?

Please tick the appropriate box

How much time is spent buying and selling plants to other brick and mortar operations per week?

0<2 hours	2<4 hours	4<6 hours	6<8 hours	<8 hours

Please answer Yes/ No

Does your company have a web page?

Do you use your web page to actively market your plants?

Are you currently selling plants over the Internet?

If NO above,
Would you be interested in buying and selling plants over the Internet?

Comments:

Thank you for your co-operation, if you have any queries please feel free to contact me at brynp@absamail.co.za or cell 083 793 5806

Appendix 2

Personal Interview – Semi-structured

Personal Interview – Web designer and Nurseries

Explanation of the reason for the Interview, and explain the background of the project. Inform the interviewee that they are under no obligation to participate, if they do however they should answer to the best of their ability.

What is the business name and core function? Name of person interviewed Relationship to business?	
Is your business involved in E-business? In your opinion has your business involvement be a successful one? What are the key factors to e-business? – Ask related questions	
What do customers require from a website? How important is customer feedback and changing the website?	
How would a business do competitor scanning on the web? After what period is a business considered successful on the web? How do you market a business on the web? How do you measure the marketing success? How would a website be linked to ensure maximum exposure to the target market?	
What cost are involved in Website maintenance?	

Appendix 3

Breakeven point

Break-Even Analysis	
Number of Months	12
CALCULATE YOUR CONTRIBUTION MARGIN	
Projected Sales	32294.4
***Less* Variable Expenses**	
Materials	4500
Labour	500
Variable overhead	100
Other	
Contribution Margin	**27194.4**
Contribution Margin Ratio	**84%**
CALCULATE YOUR FIXED EXPENSES	
Fixed Expenses	
Salaries and wages	15000
Rent	2500
Utilities - fixed portion	300
Repairs and maintenance	1000
Insurance	300
Travel	600
Telephone	1000
Postage	250
Printing	300
Advertising	0
Marketing/promotion	3500
Professional fees	400
Training and development	1000
Bank charges	300
Depreciation	0
Miscellaneous	300
Interest income (expense)	0
Other	0
Total Fixed Expenses	**26750**
Break-Even Sales	**31766.65**
Monthly Break-Even Sales	**2647.22**
Profit During Period	**444.4**

Appendix 4

Cash Flow

Cash Flow Forecast - 12 Months														
Month:	**Pre-Start**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**Totals**
Receipts														
Cash sales														**0**
Collections from credit sales				1,000	2,000	2,000	2,000	2,500	3,294	4,000	4,500	5,000	6,000	**32,294**
New equity inflow														**0**
Loans received	6,000													**6,000**
Other														**0**
Total Receipts	**6,000**	**0**	**0**	**1,000**	**2,000**	**2,000**	**2,000**	**2,500**	**3,294**	**4,000**	**4,500**	**5,000**	**6,000**	**38,294**
Payments														
Cash purchases														**0**
Payments to creditors														**0**
Salaries and wages		1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	2,000	2,000	2,000	**15,000**
Employee benefits														**0**
Payroll taxes														**0**
Rent	150	150	200	200	200	200	200	200	200	200	200	200	200	**2,500**
Utiltities		25	25	25	25	25	25	25	25	25	25	25	25	**300**
Repairs and maintenance			200		200		150		150		150		150	**1,000**
Insurance		25	25	25	25	25	25	25	25	25	25	25	25	**300**
Travel		200	150	100	100	50								**600**
Telephone		90	90	90	90	75	60	60	75	90	90	90	100	**1,000**
Postage		100	100	50										**250**
Office supplies		100	50	50	50	50								**300**
Advertising														**0**
Marketing/promotion		1,000	750	500	500	500	250							**3,500**
Professional fees	4,000			200			200							**4,400**
Training and development		500	250	250										**1,000**
Bank charges		25	25	25	25	25	25	25	25	25	25	25	25	**300**
Miscellaneous		100		100				100						**300**
Owner's drawings													6,000	**6,000**
Loan repayments														**0**
Tax payments														**0**
Capital purchases														**0**
Other														**0**
Total Payments	**4,150**	**3,315**	**2,865**	**2,615**	**2,215**	**1,950**	**1,935**	**1,435**	**1,500**	**1,365**	**2,515**	**2,365**	**8,525**	**36,750**
Cashflow Surplus/Deficit (-)	**1,850**	**-3,315**	**-2,865**	**-1,615**	**-215**	**50**	**65**	**1,065**	**1,794**	**2,635**	**1,985**	**2,635**	**-2,525**	**1,544**
Opening Cash Balance	**0**	**1,850**	**-1,465**	**-4,330**	**-5,945**	**-6,160**	**-6,110**	**-6,045**	**-4,980**	**-3,186**	**-551**	**1,434**	**4,069**	
Closing Cash Balance	**1,850**	**-1,465**	**-4,330**	**-5,945**	**-6,160**	**-6,110**	**-6,045**	**-4,980**	**-3,186**	**-551**	**1,434**	**4,069**	**1,544**	

Appendix 5

Case Processing Summary[a]

	Cases					
	Included		Excluded		Total	
	N	Percent	N	Percent	N	Percent
millions	35	100.0%	0	.0%	35	100.0%
thousands	35	100.0%	0	.0%	35	100.0%
DISCARD	35	100.0%	0	.0%	35	100.0%
COMPUTER	35	100.0%	0	.0%	35	100.0%
INTERNET	35	100.0%	0	.0%	35	100.0%
WEBPAGE	35	100.0%	0	.0%	35	100.0%
MARKETIN	35	100.0%	0	.0%	35	100.0%
TIMESELL	35	100.0%	0	.0%	35	100.0%
NETSELL	35	100.0%	0	.0%	35	100.0%
INTEREST	35	100.0%	0	.0%	35	100.0%

a. Limited to first 35 cases.

Case summaries

Case Summaries											
		millions	thousands	DISCARD	COMPUTER	INTERNET	WEBPAGE	MARKETIN	TIMESELL	NETSELL	INTEREST
1		1	14000	24	5	3	yes	no	9.5	no	yes
2		2	16000	25	5	5	yes	no	12	no	yes
3		3	4500	10	1	1	yes	no	6	no	yes
4		4	1500	20	4	2	yes	no	4	no	yes
5		5	13000	2.5	5	4	yes	no	7	no	no
6		6	7000	20	4	3	yes	no	5	no	no
7		7	17000	20	3	2	yes	no	6	no	yes
8		8	9000	15	2	1	yes	no	6	no	yes
9		9	20000	18	2	2	no	no	8	no	yes
10		10	29000	15	3	2	no	no	15	no	yes
11		**11**	**27000**	**25**	**4**	**3**	**yes**	**no**	**10**	**no**	**yes**
12		12	20000	25	3	2	no	no	7	no	yes
13		13	10000	10	2	1	yes	no	8	no	yes
14		14	15000	15	1	1	no	no	10	no	yes
15		15	8000	10	2	1	yes	no	5	no	yes
16		16	4000	10	1	1	no	no	3	no	yes
17		17	30000	20	2	2	no	no	4	no	yes
18		18	10000	10	3	3	yes	no	8	no	yes
19		19	5000	2	1	1	no	no	2	no	no
20		20	2000	3	1	1	no	no	4	no	no
21		**21**	**35000**	**5**	**6**	**3**	**yes**	**no**	**12**	**yes**	**yes**
22		22	10000	2	1	1	no	no	6	no	no
23		23	20000	5	4	3	yes	yes	8	no	yes
24		24	30000	1	2	1	yes	no	6	no	yes
25		25	5000	5	1	1	no	no	6	no	yes
26		26	500	1	1	1	no	no	4	no	yes
27		27	1000	2	1	1	no	no	7	no	yes
28		28	500	3	1	1	no	no	6	no	yes
29		29	9000	10	2	1	no	no	12	no	yes
30		30	6000	3	1	1	no	no	2	no	no
31		31	200	2	1	1	no	no	6	no	no
32		32	500	5	1	1	no	no	8	no	yes
33		33	200	2	1	1	no	no	8	no	no
34		34	1000	2	1	1	no	no	2	no	no
35		35	1000	0.5	1	1	no	no	1	no	no
Total	N	35	35	35	35	35	35	35	35	35	35
	Mean	18	10911.429	9.943	2.257	1.714	0.429	0.029	6.671	0.029	0.71
	Median	18	9000	10	2	1	0	0	6	0	1.00
	Sum	630	381900	348	79	60	15	1	233.5	1	25.00
	Minimum	1	200	0.5	1	1	no	no	1	no	no
	Maximum	35	35000	25	6	5	yes	yes	15	yes	yes
	Std. Deviation	10.247	10102.789	8.313	1.502	1.045	0.502	0.169	3.183	0.169	0.46
	Variance	105.000	102066336.134	69.100	2.255	1.092	0.252	0.029	10.132	0.029	0.21
	Kurtosis	-1.200	-0.214	-1.098	-0.220	1.590	-2.028	35.000	0.280	35.000	-1.08
	Skewness	0.000	0.882	0.588	0.969	1.438	0.302	5.916	0.500	5.916	-0.99
	Geometric Mean	13.908	5328.096	6.183	1.844	1.481	0.000	0.000	5.814	0.000	0.00
	Std. Error of Mean	1.732	1707.683	1.405	0.254	0.177	0.085	0.029	0.538	0.029	0.08
a	Limited to first 35 cases.										

Appendix 6

Nurseries Questionnaire results

Nursery #	Involved in E-business and if so is it successful	Key factors to E-bus.	What do customers require	How NB is cust. Feedback and changing a website	How would a business do competitor scanning	How do you market a website and measure the success	How do you ensure max exposure to a target market	What are the costs involved in setting up a website
11	Have website to advertise, pricing – a number of hits	Quick access, that is easy to navigate Know who you targeting Feedback on availability and order status Updated on a regular basis	Simplicity, if plants are sold there should be a navigation system or a simple indexing system eg. Forestry, veg, or flowers etc. Order situation and updates	Without customer feedback the site cannot be tailored to their requirements, its critical that the customer is able to see development and progression in an evolving website	unsure	Emails to potential customers, publications, or trade days – number of hits on the site	Target specific nurseries, and publications that are relevant to the development of a website	+-3000 upwards
21	No site currently – would like to begin exploring the use of a website	Access to the site is important to ensure repeat customers. Links to major search engines to ensure max. exposure	Easy use, quick response to questions. Indexing system eg. Species, size of container, number available. Confirmation of orders and expected delivery dates	Similar to any business if you don't respond to customer needs there is someone else you will	unsure	Amount of business generated from the establishment thereof.	Trade days, going around and selling the concept would probably be best, a lot of nursery people are still relatively new to the internet	Unsure – but costs of setting up a site could quickly be recuperated then a nursery is throwing away cabbage at R110/1000 or toms. at up to R2000/1000. This often happens because farmers are reluctant to place firm orders

Appendix 7

Website designer Questionnaire results

Website dsigner	Involved in E-business and if so is it successful	Key factors to E-bus.	What do customers require	How NB is cust. Feedback and changing a website	How would a business do competitor scanning	How do you market a website and measure the success	How do you ensure max exposure to a target market	What are the costs involved in setting up a website
Greg Barns	Has designed a number of websites, including larger sites like the University of Natal which requires a data base and continual maint. Website are useful tools to market product relatively cheaply, if they are set up correctly. Know your target market, be as specific as possible, keep it simple, websites can be as simple or as complicated as you require, maintaining the site takes	Keep it simple Respond quickly to customer needs and feedback, a complex site is going to require a user that is quiet confident in using websites Design that site initially so that it can be added to in other words spend time designing the site	It depends on the level of confidence that the user has on the web I would assume that the people a nursery website would target are relatively computer literate, but keep the site as uncluttered as possible	Most websites have a link to an email address where they customer or user can communicate with the website owner or the administrator People can get quiet annoyed when they are on websites that are difficult to navigate, any suggestions on how the site can be better navigated can only lead to happier customers or users. The happier the user the more likely it is that they will return to the site	The administrator usually will do this for you for a minimal fee at you request, they would try various search engines using key words and phases The administrator is also able to check the number of hits to your site and where they have come from thus back tracking and checking which other sites have been accessed by a specific user	We are able to monitor who visits the website, how longer they are on the site for and what they viewed, in the case on a nursery site one may also use a shopping basket which would calculate sales, which items are sold to whom and then send emails etc. That would be the result of the marketing	Linking to other sites that are related eg. Trade sites or other nursery sites. Attend trade fairs and trade related events, publish in trade magazines etc. Then link the site to major search engines, by key words like seedling, plants, nursery, vegetables, or flowers. The name of the site it important try to use unusual names, common names will bring up thousands of sites.	The complexity or simplicity of the site will determine the cost of the site. A relatively simple site with a data base will cost R3000 and complex site can cost in excess of R35000. Then one still has to maintain the site and pay for the hosting R150-350

	longer as the site get bigger Ensure that you are linked to good search engines and with the correct key words ensuring "hits" to your site							