A FRAMEWORK TO DEVELOP AN E-COMMERCE STRATEGY SELLING PRODUCTS ONLINE FOR AGRICULTURE MANUFACTURERS

by

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ABSTRACT

E-commerce is changing the purchase habits of businesses, globally. The potential for agricultural input manufacturers to develop an online business-to-business (B2B) model may provide a new source of revenue by reaching an underserved market. Underserved markets are those which a company's primary brand is not reaching a certain customer base.

The following thesis was conducted for a client (Company A) to determine the feasibility of increasing one point of market share in corn seed through an online and phone based sales model. In recent years, consolidation among agricultural seed companies, along with product performance, has driven swings in market share. Gaining one point of market share in corn seed is equivalent to 376,000 units. Company A believes there is opportunity to gain one percentage point of share in the corn seed industry through online and phone-based sales. FC, an online and phone based seed company, held approximately one percentage point of share before being purchased by Company B in 2007. Company B then retired the FC brand in 2012.

FC was once successful in their e-commerce based strategy; however three dominant factors impacted the development of agriculture companies conducting business online. Those factors are: 1) industry structure, 2) product complexity, and 3) the high-touch nature of transactions in agriculture.

Research regarding e-commerce in agriculture has been limited over the past few years. With the increase in Internet access through wireless modems and mobile

broadband data plans, opportunity exists for agricultural businesses to develop e-commerce B2B marketing. Research reported here focused on exploring the feasibility of selling a corn seed brand online and by phone, only. The steps to address the feasibility were to identify the target market and market opportunities and, then, address opportunities and challenges a company could face developing such a business.

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ACKNOWLEDGMENTS

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CHAPTER I: INTRODUCTION

Regardless of industry type, the forces of competition exist far beyond well-known opponents. To properly examine business competition, we must widen our scope and consider the customers, suppliers, potential entrants and substitute products that are active in any competitive industry (Porter 1998). Porter suggests the state of competition in an industry depends on five basic forces that determine its profit potential. These forces are the bargaining power of suppliers, the threat of substitute products or services, the bargaining power of customers, and the threat of new entrants that surround companies jockeying for position in the industry. If a company can position itself to find all forces around a company's position, the greater the opportunity for superior performance.

The objective of any corporate strategy should be to find a position in the industry that defends against or influences the surrounding forces. Understanding the strengths and weaknesses of the company compared to the industry is the first step in creating a strategy. Offensive strategies can be used to alter the balance of forces through capital investments, or investments in marketing to raise brand identification. Overall, building a framework to understand your competition provides a road map for answering the most difficult question in diversification strategy: "What is the potential of this business?" (Porter 1998)

Companies are learning to become lean and flexible to achieve a higher level of productivity, quality, and speed. Failure to distinguish between operational effectiveness and strategy are leaving companies frustrated by their inability to capitalize on opportunities. A competitive strategy is about being different. It means intentionally choosing a different set of activities to deliver a unique value (Porter 1998). By choosing to deliver a unique value to customers, or create a comparable value at a lower cost, a

company can outperform its rivals and create a difference they can preserve. When choosing a different set of activities, a company must perform those activities better than their rivals. This refers to operational effectiveness, or the practice of optimizing outputs and developing better technologies to create a product or service at a given cost to maximize value. For an agricultural input firm, creating a way for customers to purchase its products online may give it a competitive advantage over its rivals.

Research regarding agricultural e-commerce has been minimal over the past 10 years. Much of the existing research took place during the period of 2001 – 2004 as significant interest rose among industry suppliers to create an e-commerce route-to-market. While the potential success of e-commerce in agriculture exits, three limiting factors have been 1) industry structure, 2) product complexity, and 3) the high-touch nature of transactions. (Leroux, Wortman Jr. and Mathias 2001) On the contrary, the benefits of e-commerce in agriculture have been identified as promoting information flow, market transparency and price discovery, facilitation of industry coordination, and reduction or elimination of transaction costs (Xiaoping, et al. 2009).

1.1 Background

In search of topics to complete my thesis, my employer gave me the opportunity to work with a team of individuals to analyze a framework to sell products online. I worked with the team, internally, to determine the feasibility of adding one percentage point of market share through a direct online route-to-market via online or phone-based sales. The framework consisted of identifying an underserved market segment, identifying how to serve that market, and revising inventory management through selling product that would otherwise be discarded late in the product advancement cycle as a product no chosen for further commercial advancement into the company's standard market channel.

The objectives of the study are as follows:

1. Identify the market segment.
2. Identify key issues and opportunities
3. Identify ways to improve efficiencies in product supply management
4. Estimate the market opportunity
5. Outline the project’s next steps and resources needed

CHAPTER II: LITERATURE REVIEW

2.1 E-Commerce

E-commerce uses web sites to transact or facilitate the sale of products and services online. Since the late 1990s, e-commerce retail sales have increased due to technology advancements that have improved access to the Internet. The e-commerce channel offers retailers the ability to provide convenient, informative, and personalized experiences for a vast array of consumers and businesses (Kotler and Keller 2012). Online retailers can sell low-volume products to niche markets, while maintaining profitability through decreasing costs in people, floor space, and inventory. In short realizing economies of scale by reaching a larger market that the bricks-and-mortar business can. For success online retailers must distinguish themselves in three aspects of a transaction: customer interaction with the web site, delivery of the product, and the ability to address problems when they occur (Collier and Bienstock 2006).

E-commerce is becoming a significant part of the U.S. economy. E-commerce volume is measured by the value of goods and services sold online, whether over open networks such as the Internet, or over proprietary networks such as electronic data interchange (EDI) (U.S. Census Bureau n.d.). In 2012, it was reported that 51.9% of business-to-business (B2B) transactions were conducted through e-commerce activity while business-to-customer (B2C) e-commerce activity accounted for 5.2% of total transactions. That compares to 18.4% B2B and 0.9% B2C in 2000, indicating e-commerce activity has significantly increased over the 12 year period, and B2B is much larger percentage than B2C (Bureau 2000, 2012).

Table 2.1 shows the value of shipments, sales, and revenues between 2000 and 2012 according to the U.S. Department of Commerce. In 2000, E-commerce was valued at

7%, or $1 billion in shipments, sales and revenues. In 2012, 20% of all shipments, sales and revenues in the United States, or $5 billion, are accounted for through e-commerce. The percent change in e-commerce between 2000-2012 has increased by 409%, showing a rapid adoption of products purchased online. B2C now accounts for 11% of all e-commerce, and B2B accounts for 89%. Increased activity in B2B provokes how sales transactions among companies will look in the future.

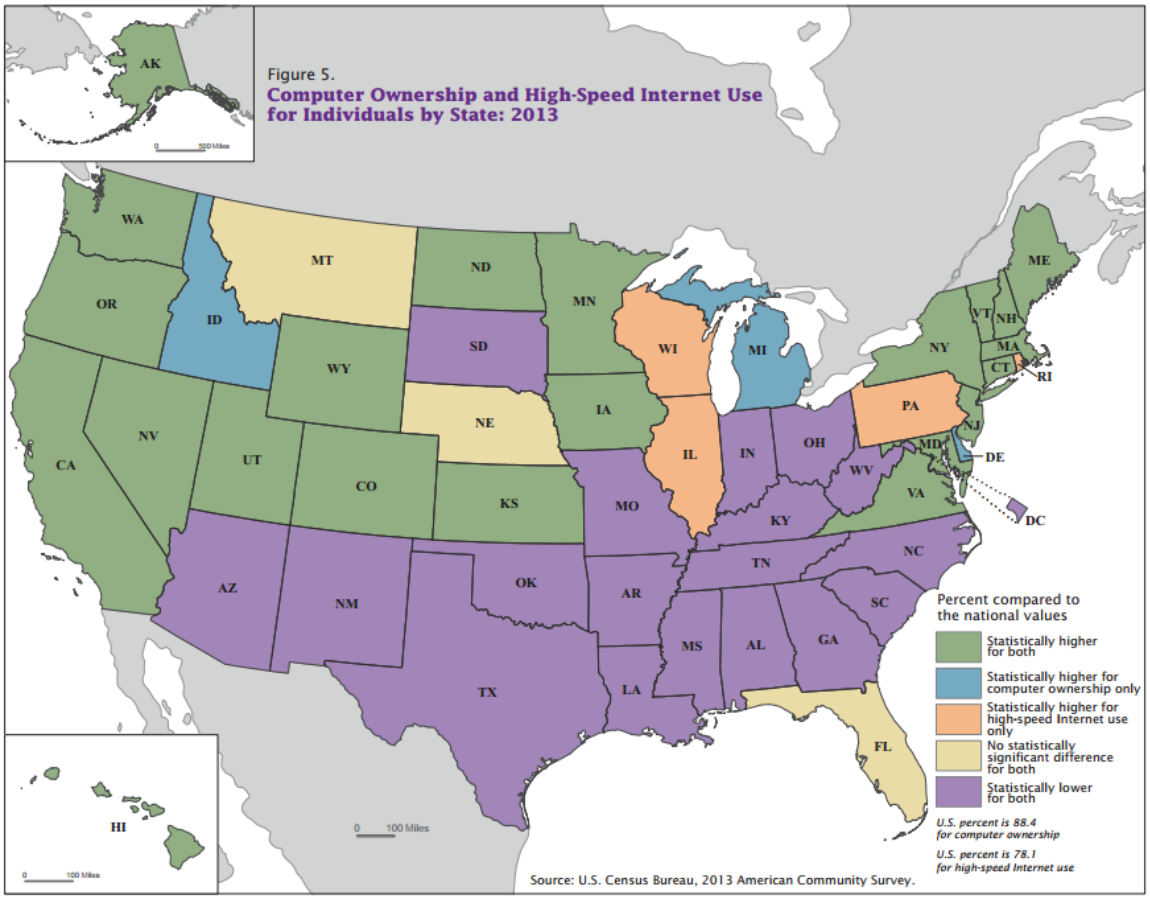
Table 2.1: United States Shipments, Sales, Revenues and E-Commerce: 2000 – 2012 (Shipments, sales and revenues in billions of dollars)

	Value of Shipments, Sales, and Revenue							
	2012		2000		Percent Change		Percent distribution of E-commerce	
Description	**Total**	**E-commerce**	**Total**	**E-commerce**	**Total**	**E-commerce**	**2012**	**2000**
Total	**28,875**	**5,371**	**14,691**	**1,056**	**97%**	**409%**	**100%**	**100%**
B-to-B	**12,527**	**4,778**	**6,968**	**990**	**80%**	**383%**	**89%**	**94%**
Manufacturing	5,756	2,989	4,217	777	36%	285%	56%	74%
Merchant Wholesale	6,771	1,789	2,751	213	146%	740%	33%	20%
B-to-C	**16,348**	**593**	**7,723**	**66**	**112%**	**798%**	**11%**	**6%**
Retail	4,344	227	3,060	29	42%	683%	4%	3%
Selected Services	12,004	366	4,663	37	157%	889%	7%	4%

(United States Census Bureau 2014)

Increased use of the internet, accessibility, ease of use, and the expansion of mobile devices are assumed to be the catalysts to e-commerce (Forrester Research 2014). The U.S. Census Bureau reports the use of internet among households has grown from 42% in 2000 to 74.4% in 2013. Figure 2.1 shows computer ownership and high speed internet use of 88.4% and 78.1% respectively as of 2013.

Figure 2.1: Computer Ownership and High-Speed Internet Use for Individuals by State in 2013



In today's competitive environment, traditional brick-and-mortar companies find it hard to compete without a web-based strategy. Increased competitive pressures, along with improved web technology, are driving multi-channel approaches that include a brick-and-click channel strategy (Otero, Munoz Gallego and Pratt 2014). Brick-and-click companies are existing companies that have added an online site for information or e-commerce (Kotler and Keller 2012). Success factors for brick-and-click companies revolve around customer service and a pleasurable experience online, creating a more efficient way to gather a large amount of information. Merrilees and Fenech point out eight success factors that explain the willingness of consumers to migrate from a traditional purchasing

experience to using a website for purchasing online. These eight factors are listed in order of importance:

1) Web purchasing experience in general
2) Speed or ease of use
3) Trust
4) Accuracy of orders
5) Frequency of searching the web for product information
6) Speed, staff contact or security
7) Perception of staff services received in the traditional channel and
8) General perception of any e-supplier

(Merrilees and Fenech 2007)

2.2 B2B and B2C Customers

With the highest percentage of e-commerce activity in the U.S. being B2B transactions, opportunity exists for agribusinesses to invest in e-commerce. There are crucial differences between business-to-business (B2B) and business-to-consumer (B2C) strategies that encompass one thing: the customer. Businesses and consumers (individuals) purchase for different reasons and it is important to understand the goals of each regarding the online buying experience. Business customers make decisions on logical information that seems to fit each need based on which provider offers the most flexible, accommodative, and trustworthy experience (iwdagency n.d.). Emotion seems to play into the decision of a business, however, fear surfaces at the top to satisfy their internal hierarchy. Because more than one person involved in the purchase transaction, B2B customers seldom if ever engage in impulse buying.

B2C customers tend to purchase with emotion that are one-off buys that require less aftercare or follow-up (iwdagency n.d.). B2C customers require as much marketing as B2B to make a purchase decision, but once the conversion process begins, customer needs are straightforward and predictable (iwdagency n.d.).

B2B customers are demanding similar opportunities being experienced in B2C e-commerce transactions (Forrester Research 2014). As companies in the United States are projected to generate $1 trillion in e-commerce B2B sales in 2014 (Internet Retailer 2014), research recognizes the need for businesses to keep up with today's rapidly changing world of the buying process through technology. E-commerce introduces a dramatic shift in the initiation of the sales process. Traditionally, the discovery process began with search in the printed catalog or with interaction with a sales representative. With e-commerce discovery begins through digital searches. Just that difference is remaking the B2B buyer journey, and creates a need for the seller to have good visibility because the seller is in a more passive position . B2B buyers' prior experiences with B2C digital commerce are creating high expectations for buyers making B2B purchases. A study conducted by Forrester Research among B2B companies and B2C customers in 2014 revealed four key findings:

1) High customer expectations have led B2B firms to shift toward rich omni-channel experiences. (Omni-channel meaning how brands enable their customers to choose various options as to how they move through the buyer's journey with the brand. This journey is conducted through a multi-channel approach through a customer's cell phone, desktop, or in-store visit (Newman 2014).
2) Providing comprehensive omni-channel experience helps ensure customer loyalty.
3) Merchants will fall behind if they fail to adapt their technology to buyer needs.

4) Technology investment must be aligned with organizational and process change.

Unlike B2C e-commerce that is comprised of companies selling directly to the public via a website, the B2B market is very fragmented and at various stages of evolution in different industries. Forrester Research points out that an omni-channel strategy, defined as a multichannel experience of shopping online from a desktop or mobile device, telephone, or brick and mortar store, is expected among B2B buyers. Furthermore, offering everyday low prices, delivering superior customer service, and making available a broad selection of products among all channels creates B2B buyer loyalty. Three-quarters of B2B buyers around the world reported they would buy again from the same supplier because of those suppliers' omni-channel capabilities (Forrester Research 2014).

Agribusinesses looking to expand market opportunities in e-commerce face complexity in the purchase decision of a farmer. In most markets, farmers would be classified as B2C rather than B2B (Wheatley, Buhr and DiPietre 2001). Farmers tend to be very passive in the decision making process, which is similar to B2C. Their passiveness likely places them in the "price-taking" role of traditional agricultural markets (Wheatley, Buhr and DiPietre 2001). In contrast, farmers relate more to B2B in the amount of communication and individual customization that takes place from an early stage before the conversion process begins. This may justify the success of B2B e-commerce among farmers as research points toward a higher conversion rate in B2B. According to Forrester Research, 7.3% is the average conversion rate on B2B e-commerce sites, compared with only 3% for retail or B2C sites (The Internet Retailer 2014). Once the conversion process begins, customers generally repeat with orders and long-term relationships are important to the longevity of the B2B transaction (iwdagency n.d.).

2.3 Update: Past and Present Agribusiness-to-Grower (A2G) Sites

In 2001, Wheatley, Burhr, and DiPietre defined agriculture companies conducting e-commerce activity in their publication of *E-commerce in Agriculture: Development, Strategy, and Market Implications*. The following provides a current update to for those listed websites:

XSAg.com – *Existing* - Provides a secure web site to buy and sell agricultural chemicals and other agricultural inputs. XSAg.com is not a seller nor takes possession of the product, rather it only facilitates the transaction process. XSAg.com employs a name your price (NYP) auction method and provides after-sale, value-added services such as product application information, shipping, billing, and bundling.

DirectAg.com – *No longer active and the domain is for sale:* DirectAg.com focused on input supply (animal health, seed, machinery parts, and crop inputs). The model was more of a catalogue service for agribusiness companies that focused on achieving scope in sales as a one-stop shop for inputs. It also provided online financing for input purchases.

e-Markets.com – *Existing* – Focuses on providing software for e-market exchanges such as seed inputs for retailers and exchange outputs for grain. e-Markets would be considered an outsourced e-commerce strategy for agribusinesses seeking external expertise and resources to create and e-market strategy.

Rooster.com – *No Longer Exists* – Rooster.com was established to allow producers to use the Internet to purchase inputs. In 2001, Rooster.com merged with Pradium, Inc., which was backed by Cenex Harvest States, Cargill, DuPont, and ADM. Later, IMC Global Inc., The Andersons Inc., and Bunge International became additional investors. In 2003, Farms Technology purchased Rooster.com, valued at more than $70 million in bankruptcy court. Farms Technology sought to reorganize Rooster.com and transformed the website into a

neutral grain trading platform called Dynamic Pricing Platform or DPP (Geaps 2003). In April 2008, DuPont Pioneer announced an equity stake in Farms Technology and began the development of MarketPointSM (Corn and Soybean Digest 2008). In May 2011, DuPont Pioneer and Farms Technology brought DPP to the mobile stage, allowing growers to market grain from their mobile device. Then in January 2013, DuPont Pioneer completed the purchase of Farms Technology (PipeLine Entrepreneurs n.d.).

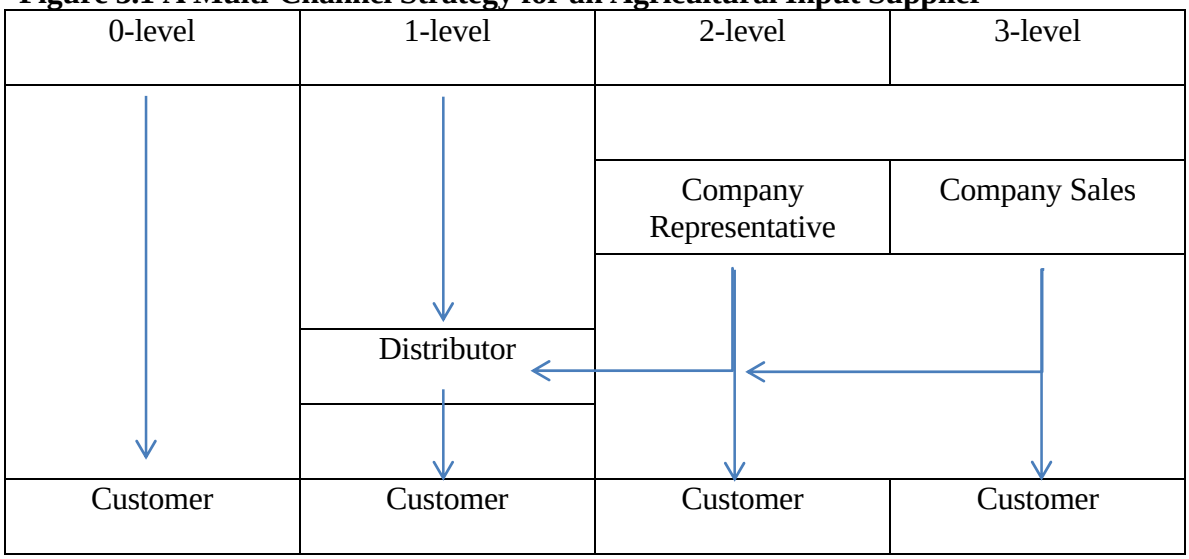
FC – *No Longer Exists* – FC was a direct online sales model for seed corn. Landec Ag owned FC and transformed itself from a discount seed option to a full service company that offered a complete line of genetics. FC offered seed through its unique direct business model with 30 professional seed consultants who were accessible 15 hours a day, six days a week (Crowley n.d.). Each professional was a certified crop advisor designed to service growers over the phone or via internet. In 2007, Company B purchased FC for $70 million, and then retired the brand in 2012. FC accounted for approximately 1% of the U.S. corn seed market.

CHAPTER III: THEORY

Many companies today are using a multi-channel approach to attack competition in a highly aggressive, sales environment. To understand a multi-channel approach, we must first define a marketing channel. Marketing channel(s) are sets of pathways a product or service follows after production. These channels represent an opportunity cost, and are designed to convert potential buyers into profitable customers (Kotler and Keller 2012). The marketing channel will affect the firms marketing decisions, pricing, sales force, and advertising. A multi-channel is designed to use two or more channels to reach a customer. Each channel targets a different segment of buyers, a desired need, and places the right product in the correct way to minimize cost. If targets are not reached this way, channel conflict is created, excessive costs are accrued, and insufficient demand results among a firm's customer base (Kotler and Keller 2012).

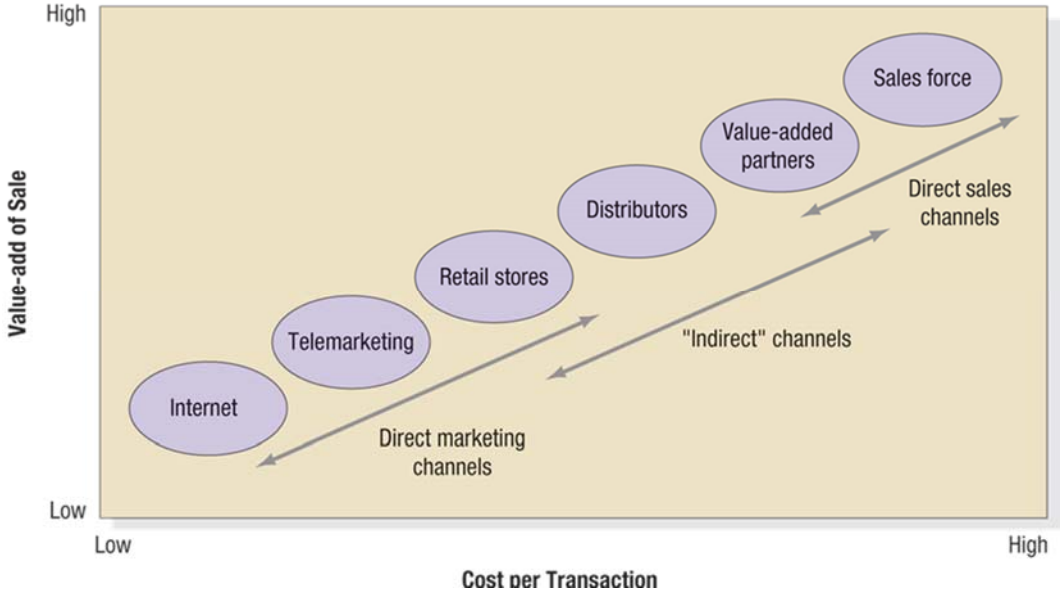
Figure 3.1 below details an agribusiness multi-channel strategy. Customers buy products for different reasons; therefore each level is designed to target the customer through multiple channels. A company focuses to reach a wide customer base through a multi-channel approach based on how business is conducted with the customer. For example, e-commerce transactions would be considered one of many channels an agricultural input supplier would use to reach a targeted segment of customers.

Figure 3.1 A Multi-Channel Strategy for an Agricultural Input Supplier



An e-commerce transaction channel would be considered a zero-level marketing channel exclusively between the manufacturer and the customer. This eliminates the need for any intermediaries, such as dealers or retailers, and will focus primarily on a web-based transaction that is direct to the customer. An e-commerce B2B channel strategy is typically lower in the cost per transaction and value-added activities among companies. Figure 3.2 shows how different alternatives compare in these two categories.

Figure 3.2: The Value-Adds versus Costs of Different Channels



Source: Oxford Associates, (Kotler and Keller 2012)

When designing a marketing channel system, companies need to analyze customer needs and wants by segmentation to evaluate major channel alternatives. Customers choose channels they prefer based on price, convenience, product assortment, and individual goals. Terms and responsibilities of channel members need to be outlined, addressing price, conditions of sale, territorial rights, and services rendered.

CHAPTER IV: METHODS

4.1 Concept

The concept of an e-commerce online seed company was tested among 289 respondents in a survey conducted in 2014. The participants were presented the following proposal: Suppose an established seed company started a secure website to sell seed corn hybrids at a lower cost with lower service than traditional marketing channels. (Lower service indicates limited local sales support).

The first objective is to determine a target market segment of growers, likely, under-served by Company A's primary brand. Underserved indicates potential customers currently buying no product under the umbrella of Company A and its substitution brand partners. Company A's substitution brands partners are listed below in figure 4.1.

Figure 4.1: Company A brands by geography and ownership

Company	Geography	Channel
Sub Brand 1	Eastern	Owned
Sub Brand 2	Mid-west	Owned
Sub Brand 3	Atlantic	Owned
Sub Brand 4	Mid-west	Owned
Sub Brand 5	Mid-west	Owned
Sub Brand 6	East	Owned
Sub Brand 7	Southern	Owned
Sub Brand 8	Mid-west / Eastern	Distributor
Sub Brand 9	Mid-west	Distributor

The concept of an online and phone-based sales model is based on FC, who at one point held one percentage point of corn seed sales. At its peak, FC sold more than 400,000 units of seed to more than 20,000 growers throughout the United States primarily through a combination of phone and online sales. In 2007, Company B acquired the FC and retired the brand in 2012 (Farm Industry News 2007) (AgWeb 2014).

Company A believes an opportunity exists to sell, online, seed products that currently are discarded just before the final product advancement stage. The company continues to test researched varieties even as those varieties are moved to commercialization stage—ramped up seed production. Near the end of product advancement, Company A chooses only a portion of the new hybrids for final commercialization under its brand or one of its secondary brand names. The discarded hybrids are still worthy seeds that failed to make the final selection. Company A sees a possible opportunity to sell those seeds to small, mid-size farming operations at a discounted price. Remember, these are good varieties that have passed a number of stages of development, but are rejected because only a portion of the varieties are selected for its current brands, by design.

The research objectives are as follows:

1. Define the target market
2. Identify issues and opportunities
3. Outline investment options
4. Outline budget requirements and management structure

4.2 Assumptions

Assumptions were developed as initial baselines of an online go-to-market strategy based on existing corn seed sales knowledge. These assumptions are:

1. Existing Company A's brand products will not be considered as potential supply to this new outlet.
2. New route to market will not be considered in company's retail market areas, only in areas with current direct route to market.
3. Product supply will be limited and variable year over year.
4. All customers will have access to purchase through this proposed model; however it is assumed low value propositions will be unattractive to many growers.
5. The company can make as good or better margins with a controlled direct route to market.
6. External options could be explored to develop website and transactional capabilities.
7. A pilot project could be ready to launch during the 2016 sales season (September 2015 – June 2016).

4.3 Implementation Considerations

Several implementation measures were established to provide a baseline to understand the expectations from an online offer to customers. Pricing, marketing, and sales support were the most important among the implementation considerations.

1. Pricing – Approximately 20% discount to similar branded products, but with much lower selling costs and overhead to deliver a comparable return to premium brand products.
2. Promotions – No frills, basic promotion that is a simple offer for Type I farmers. This will require aggressive advertising to create brand awareness.
3. Placement – Separate from the Company A brand, this will be a direct sales model with direct shipment to customers using common carriers.

4. Support – online and phone based support will be provided by experienced professionals with agronomic expertise as support team members.
5. Customer Relationship – connection with customers will be through marketing, production, supply, and logistics.

4.4 Maximizing Utilization of Products Produced During the Advancement Cycle

Internal research has shown at least 100 different products between Company A T4 discards and Substitution Brands surplus to be available for the online sales company. T4 is the advancement stage prior to commercializing a product for sale. At this point in the seed production process, products are chosen whether to be advanced to sell through either Company A or its Substitution Brands.

The advancement cycle of a product, as defined by Company A are outlined below:

1. T1 – initial experimental line and product evaluations.
2. T2 – wide area research testing.
3. T3 – expanded wide area research testing.
4. T4 – on-farm testing with key customers and wide area expanded research.
5. T5 – new commercial products.

Prior to commercialization, or T4, a product undergoes final testing in different environments, given a score, and then is decided by agronomists whether to advance the product to commercialization. The T4 advancement stage requires a volume of supply to be produced in the event the product is advanced to commercialization. If T4 products are not advanced, products are discarded and considered a loss to the company. T4 products that are not advanced to commercialization for 2015 appear to be evenly spread across maturity zones, giving capability to serve a broad geography. At this stage in development, there is agronomic yield data to support the quality of a product. The company believes it

would have access to at least 200,000 units annually to sell across multiple maturity zones with sufficient data to support quality.

Products in the T4 advancement stage may still be viable products to sell, however have not met certain criteria desired for a local market. Table 4.1 below show the current number of products ranging from 80 to 121 day comparative relative maturity (CRM). CRM means the maturity of each product grown. Products are broke out into above average, above/below average and, below or n/a. For the purpose of this research, seeking the number of above average products for use will be used to identify products sold to the customer.

Table 4.1 Potential Products of Company A T4 Discards and Substitution Brands Surplus Volume Based on Comparative Relative Maturity (CRM) in Corn Hybrids: 2013 Data

	Comparative Relative Maturity (CRM)						
Potential Products	80-98	99-105	106-110	111-115	116-121	Total	% of Total
Above Average	**10**	**10**	**10**	**10**	**10**	**50**	**50%**
Company A	5	5	5	5	5	**25**	**25%**
Substitution Brand	5	5	5	5	5	**25**	**25%**
Above/Below Average	**10**	**10**	**10**	**10**	**0**	**40**	**40%**
Company A	5	5	5	5	0	**20**	**20%**
Substitution Brand	5	5	5	5	0	**20**	**20%**
N/A	**0**	**2**	**2**	**3**	**3**	**10**	**10%**
Substitution Brand	0	2	2	3	3	**10**	**10%**
Total	**20**	**22**	**22**	**23**	**13**	**100**	
% of Total	**20%**	**22%**	**22%**	**23%**	**13%**		

There are 50 above average products representing 50% of the total potential products that could be used for an online corn seed sales model. These products may help to limit the risks involved in product performance with a low-cost, low-service model. The objective is not to supply products with uncertain performance, however there will be

trade-offs to consider as these products have not been tested over several years across different agronomic environments.

Providing a simple product line-up with easy access to a combination of high quality genetics and traits is believed by the company to bring value to customers. This value will be created by commitment to the following:

1. Customer Experience – the ability to create an easy to use online or phone based seed purchase option.
2. Customer Commitment- attractive pricing with a no-return and no-replant policy. Online product supply may be limited, but guaranteed at the time of order confirmation.
3. Product Technologies – access to quality hybrids and trait packages adapted to grower's area.
4. Simple Offers – straightforward, bottom line pricing with no complicated discount programs or payment terms.
5. Profitable business for Company A – all products will be priced and sold to reflect a margin similar to that for the primary brand.
6. Customer support – online and phone supported by professionals.

4.5 Define Targeted Segment

Identifying specific segmented target(s) is a key component to understanding the potential of an online or phone based corn seed business. Company A will use survey results to determine the appropriate targeted segment. These target segments are broke out into Type I, Type II, Type III, and Type IV. The definition of each segment is defined as follows:

Type I: This segment is very business minded with each decision focused around profitability. The Type I segment is more open to the idea of trying new concepts versus other segments, and is very self-sufficient.

Type II: This segment is traditional in selecting a particular brand and supplier. Services are important to them and they feel very secure in their decision process.

Type III: This segment makes decisions based on the best chance of success every year. They are not loyal to any particular supplier; however they are very informed decision makers.

Type IV: This segment requires their supplier to be very involved in their business. They look for trusted advisors to help them make decisions each year.

4.6: Survey

This survey was derived from the work of the internal team to develop the parameters for this concept. The collaboration of this group worked to make sure the appropriate questions were being asked. Main considerations were to identify the target market segment, understand the need for this concept, and brand awareness.

SCREENING QUESTIONS

First we have a few short questions to verify you qualify for the study.

QS1. Which of the following statements best describes your role in selecting and making seed decisions on your farming operation?

1 – Have the final say in all seed decisions
2 – Share decision-making with someone else
3 – Have some input, but ultimately leave decisions to someone else
4 – Or does someone else make all seed decisions for your operation

QS2. In what state is your operation located?

QS3. How many acres of corn did you or do you intend to plant this season, in 2014?

	2014 Acres
Corn	

QS4. Do you work for a crop protection or seed manufacturer, distributor or dealer, or for a marketing research company?

1 – Yes
2 – No

QS5. Do you actively sell seed to other growers?

1 – Yes
2 – No

QS6. In what year were you born? 19___ ?

QS7a. Which of the following brands of seed corn did you or do you intend to plant in 2014?

Please select all that apply.

QS7b. How many acres of each brand did you or do you intend to plant in 2014?

Seed Corn Brands	2014 Acres
See below list of brands	_____acres

Quota Group	Description	Quota
Geography	IA, IL	**At least 40 per state**
	NE	**At least 30 per state**
	IN, MN	**At least 25 per state**
	SD	**At least 20 per state**
	MI, MO, OH, WI	**At least 15 per state**
Operation Size	100-249 corn acres	**n=100**
	250-499 corn acres	**n=100**
	500+ corn acres	**n=100**
Grower Age	< 40 years old	**n=40**
	40 to 55 years old	**At least 100 per group**
	> 55 years old	
Customer Type	Company A customers	**n=150**
	Non-customers	**n=150**
Total	**300 completes**	

Q1. What other seed corn brands are you aware of?
Please type one per line.

1.
2.
3.
4.
5.
6.
7.

8.
9.
10.
11.

Q2a. Which of the following statements best describes your experience with each of the seed corn brands listed below?

	Never heard of seed brand	**Have heard of, but not familiar with seed brand**	**Familiar with seed brand, but never considered planting**	**Have considered planting, but never used**	**Have planted before, but did not plant in 2014**	**Planted this season, in 2014**
Brand 1	1	2	3	4	5	6
***Sub Brand 1**	1	2	3	4	5	6
Brand 3	1	2	3	4	5	6
***Sub Brand 2**	1	2	3	4	5	6
***Sub Brand 3**	1	2	3	4	5	6
Brand 9	1	2	3	4	5	6
Brand 16	1	2	3	4	5	6
***Sub Brand 4**	1	2	3	4	5	6
Brand 21	1	2	3	4	5	6
Brand 22	1	2	3	4	5	6
Brand 24	1	2	3	4	5	6
***Sub Brand 5**	1	2	3	4	5	6
***Sub Brand 6**	1	2	3	4	5	6

Q2b. What is your overall impression of each of the brands listed below? Please use a scale of -5 to +5,where -5 means you have a very unfavorable impression, a +5 means you have a very favorable impression, and a 0 means you are neutral.

Brands	Very Unfavorable										Very Favorable
a.	-5	-4	-3	-2	-1	0	+1	+2	+3	+4	+5
b.	-5	-4	-3	-2	-1	0	+1	+2	+3	+4	+5

Q2c. Why do you rate your overall impression of **[brand]** a **[Q2b rating]?**
Please be as detailed as possible when entering your answer in the space provided.

Q3. From which of the following sources did you purchase seed corn in 2014?
Please select all that apply.

1 – Farmer that sells seed part time
2 – Full-service professional seed agency
3 – Co-op
4 – Retailer other than a co-op
5 – Direct from a seed company employee
6 – Internet
7 – Other: *specify*_____

Q4. For what reasons do you purchase seed corn from each of the sources listed below?
Please be as detailed as possible when entering your answer in the space provided.

	Why?

Q5. What disadvantages do you find in purchasing seed corn from each of the sources listed below?
Please be as detailed as possible when entering your answer in the space provided.

	Disadvantages?

Q6. From which of the following sources do you intend to purchase seed corn next season, in 2015?
Please select all that apply.

1 – Farmer that sells seed part time
2 – Full-service professional seed agency
3 – Co-op
4 – Retailer other than a co-op
5 – Direct from a seed company employee
6 – Internet
7 – Other: *specify*_____

Q6a. When do you typically decide which hybrids you will plant for the next growing season?

1 – Before harvest of the current growing season
2 – After harvest of the current growing season, but before year-end
3 – After January 1 of the next growing season
4 – Other: *specify*_____

Q6b. When do you typically pay for your seed purchases in a given season?

1 – At the time of purchase
2 – Before year-end, primarily for tax purposes
3 – Before year-end, primarily to take advantage of early pay discounts
4 – Before year-end, primarily for some other reason
5 – After planting (through financing)
6 – Other: *specify*_____

CONCEPT EVALUATION

Below is a description of an alternative method of purchasing seed corn. Please read through the description carefully as you'll be asked several questions about it.

Concept Description

Suppose an established seed company started selling seed corn hybrids online through a secure website with a lower cost, lower service offering. Lower cost means lower cost per unit than what you would pay to your primary dealer or retailer. Lower service means limited local sales support and service.

Q7a. What appeals to you **most** about this alternative method of purchasing seed corn?
Please be as detailed as possible when entering your answer in the space provided.

Q7b. What else do you like about this alternative method of purchasing seed corn?
Please be as detailed as possible when entering your answer in the space provided.

Q8. What do you dislike or have concerns about for this alternative method of purchasing seed corn?
Please be as detailed as possible when entering your answer in the space provided.

Q9. Based on this information, how would you characterize the need for this alternative method of purchasing seed corn for your operation? Would you say it is …

1 – Definitely needed
2 – Probably needed
3 – Probably not needed
4 – Definitely not needed

Q10. How believable is it that this alternative method of purchasing seed corn could deliver on the stated benefits? Would you say you…

1 – Believe such a purchase method is definitely possible
2 – Believe such a purchase method might be possible, but you are not sure
3 – Are doubtful that such a purchase method could be developed

4 – Are definitely sure that this purchase method could not perform as described

Q11. How likely would you be to seek more information about this alternative method of purchasing seed corn?

1 – Definitely seek more information
2 – Probably seek more information
3 – May or may not seek more information
4 – Probably not seek more information
5 – Definitely not seek more information

Q12. If your preferred brand of seed was available for purchase via this alternative method, would you say you would…

1 – Definitely use this purchase method
2 – Probably use this purchase method
3 – May or may not use this purchase method
4 – Probably not use this purchase method
5 – Definitely not use this purchase method

Q13. Why do you say you would?
Please be as detailed as possible when entering your answer in the space provided.

SEED CORN BRAND LIST			
1	Brand 1	27	Brand 22
2	Sub Brand 1	28	Brand 23
3	Brand 2	29	Brand 24
4	Sub Brand 8	30	Brand 25
5	Sub Brand 9	31	Sub Brand 5
6	Brand 3	32	Brand 26
7	Brand 4	33	Brand 27
8	Sub Brand 2	34	Brand 28
9	Brand 4	35	Brand 29
10	Brand 5	36	Brand 30
11	Sub Brand 3	37	Brand 31
12	Brand 6	38	Sub Brand 6
13	Brand 7	39	Brand 32
14	Brand 8	40	Brand 33
15	Brand 9	41	Brand 34
16	Brand 10	42	Brand 35
17	Brand 13	43	Brand 36
18	Brand 14	44	Sub Brand 7
19	Brand 15	45	Brand 37
20	Brand 16	46	Brand 38
21	Brand 17	47	Brand 39
22	Brand 18	48	Brand 40
23	Brand 19	49	Brand 41
24	Brand 20		
25	Sub Brand 4	91-94	Other: [Specify:_____]
26	Brand 21	98	Don’t know

CHAPTER V: RESULTS

5.1 Survey Response Results

A survey was conducted in 2014 to test the concept among corn growers who plant at least 250 acres annually. The key objectives to be addressed through the survey are:

1. Determine the market segment, operation size, and grower age of interest
2. Understand the important features and benefits to customers who order online
3. Understand the response to price discounts through this concept
4. Evaluate the perceived need of the concept

Two-hundred-eighty- nine online interviews were completed among growers from South Dakota (n=19), Nebraska (n=34), Minnesota (n=38), Wisconsin (n=25), Iowa (n=55), Missouri (n=24), Illinois (n=39), Indiana (n=24), Michigan (n=13), and Ohio (n=18). Growers in the survey were required to have the final say in the decision making process for seed and crop protection, plant at least 100 acres of corn in 2014 and not be employed for a seed or crop protection manufacturer, distributor or dealer. Operation size, grower age, and customer type were identified as shown in table 5.1 below.

Table 5.1: Operation size, Grower age, and Customer type as identified by the survey in 2014

Demographic	Definition	n =
Operation Size		
Small	100-249 total acres	69
Medium	250-499 total acres	103
Large	≥500 total acres	117
Grower Age		
	≤55 years of age	123
	≥56 years of age	166
Customer Type		
	Current 2014 Customer	151
	Non-customer	138

The total number of corn acres represented was 172,546 acres with a mean of 597 acres as shown by Figure 5.1. Average age of the respondents was 56 years of age with a majority of respondents ranging from 31 to 60 years of age.

Figure 5.1: Number of corn acres represented by size of operation:

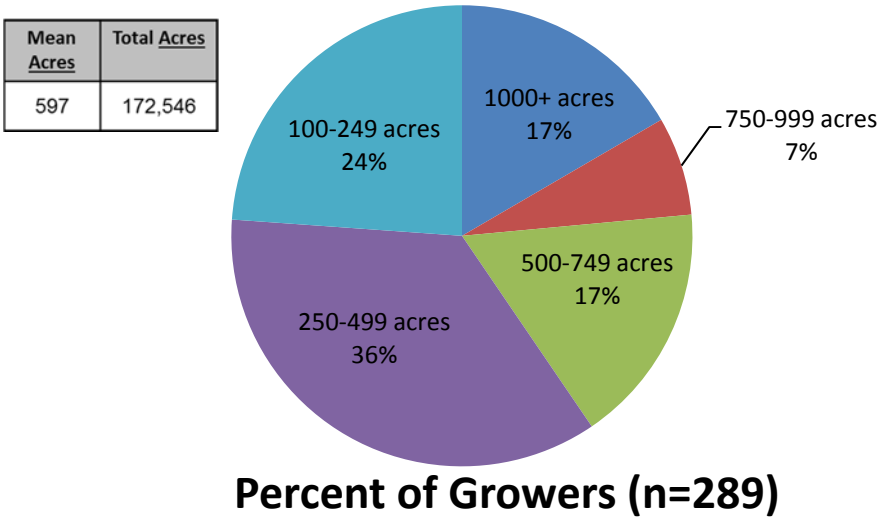
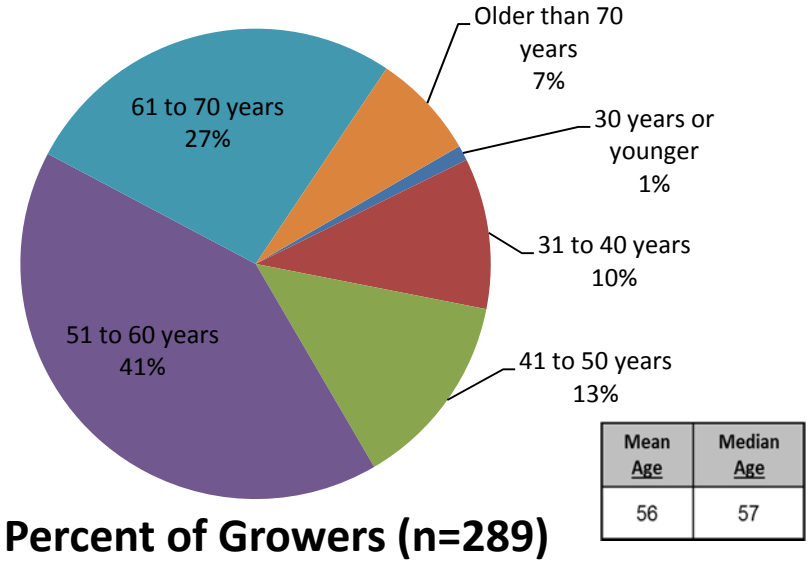


Figure 5.2: Grower Age: with age range as a percentage



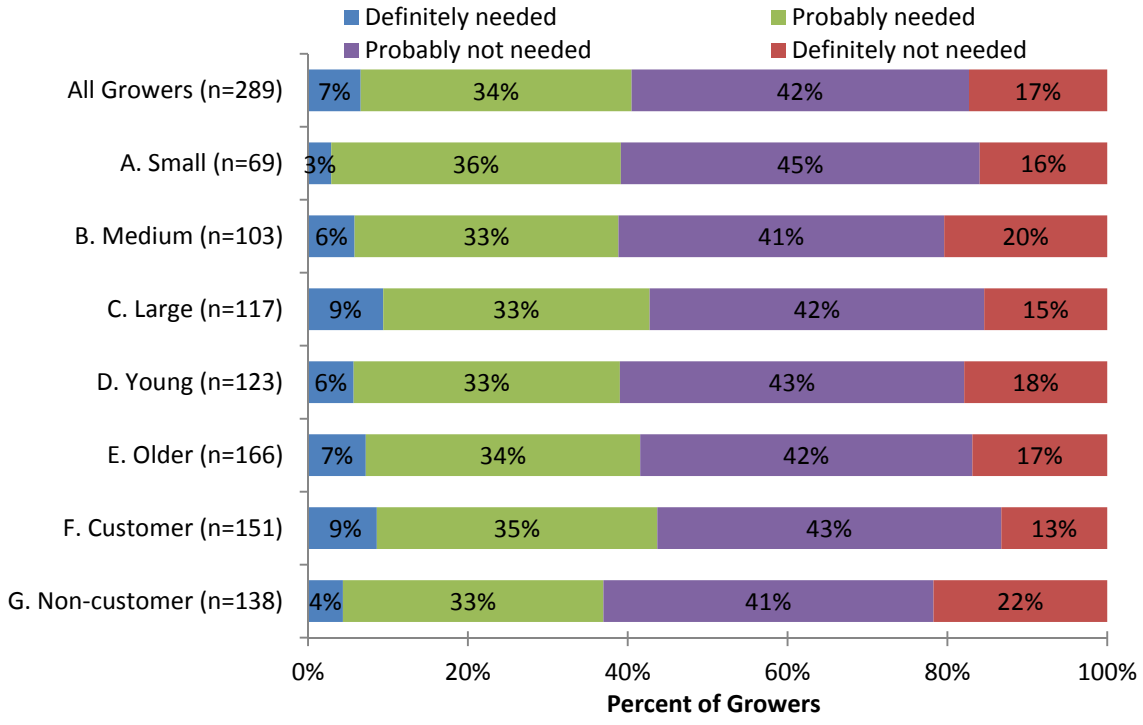
Participants were asked a series of questions to determine the target segment of each respondent. Thirty-four percent of respondents were identified as Type I decision makers who are financially conscious and most likely to use an online purchase option. These findings are based on how Type I growers are business minded decision makers who are open to trying new concepts.

Table 5.2: Segmentation: Percent Market Differentiation with Key Value and Needs Comparison 2014 (n=289)

	Type I	Type II	Type III	Type IV
% Market	34%	21%	37%	8%
Purchase Decision	Self-Sufficient	Advisor/Self	Self-Sufficient	Trusted Advisor
Purchase Critieria	Business minded	Consistent	High Information	Trust
Key Needs	Supplier Relationship	Total package of servies	Being highly informed	High involvement from supplier
Value Focus	Business decision	Quality of life	Quality of life	Stable and consistency
Early Adopter	Yes	No	Somewhat	Yes

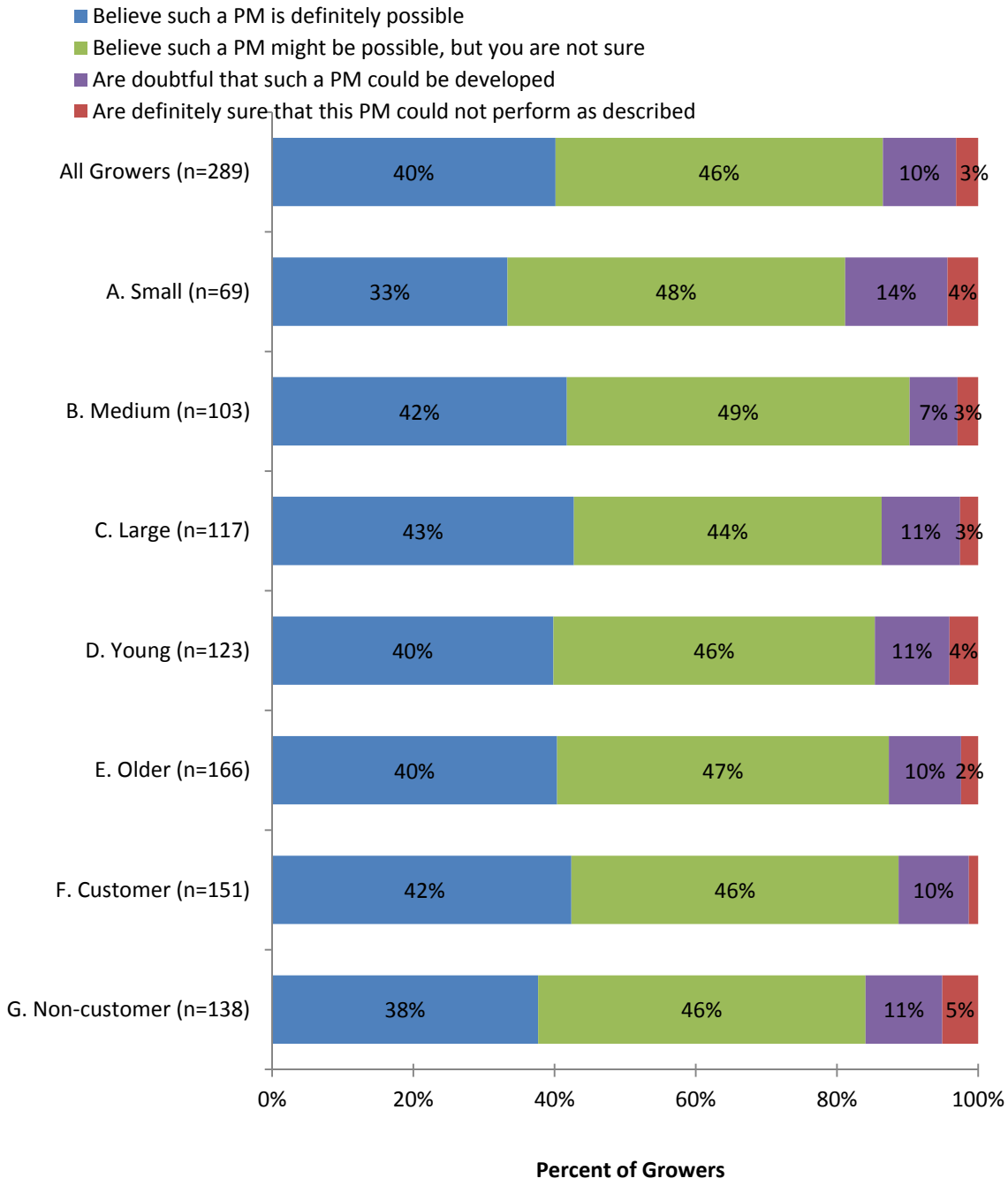
Growers were also asked about the need for this concept. Among all survey participants, 34% responded there is probably a need while 7% indicated a definite need for an e-commerce purchase model. Thirty-six percent of small acreage growers indicate a probable need for this concept and 3% definitely feel a need for an online seed sales option. Nine percent of large acreage growers indicated a definite need in this concept, raising awareness to opportunities with customer segments beyond the assumption that only small Type I customers see a need for this concept. Additionally, older customers indicated a need slightly over young customers as well as current customers versus non-customers respectively.

Figure 5.3 Need for Concept of an alternative purchase model online



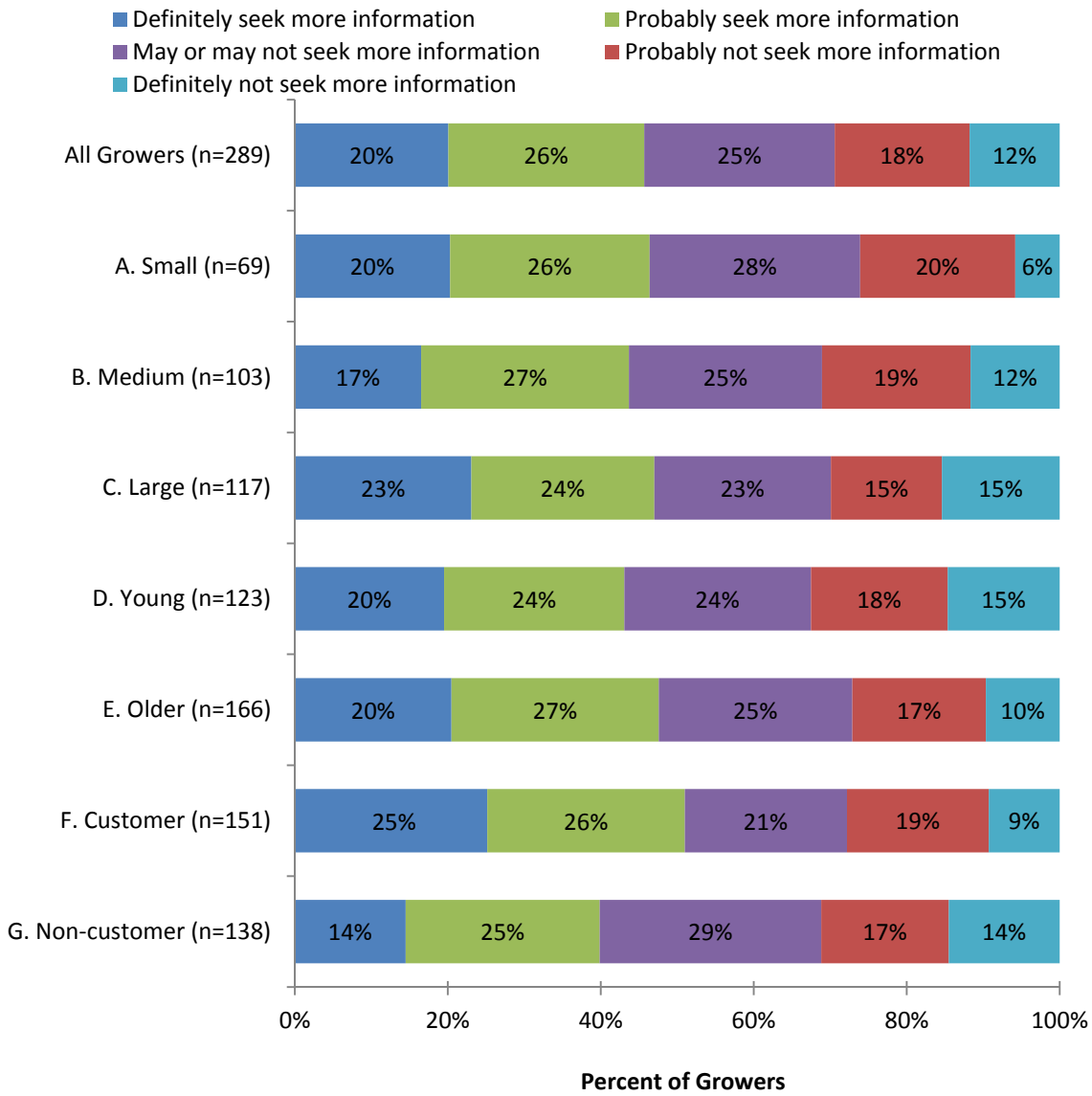
Growers were asked about the believability of the concept to purchase seed online. Even though there was not a significant difference by segment, forty percent of all growers surveyed definitely believe the concept is possible.

Figure 5.4 Believability of the concept



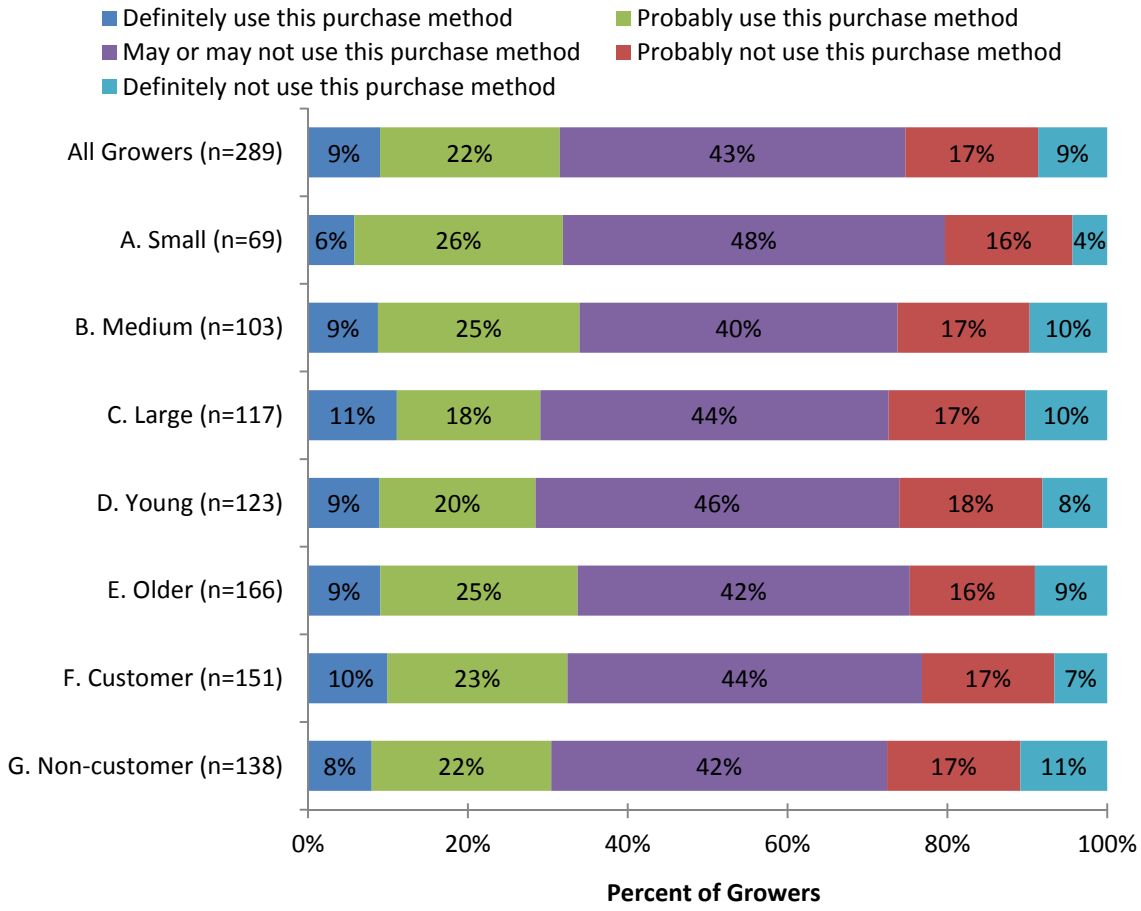
Survey participants were asked how likely they would seek more information about this alternative method of purchasing seed corn. Nearly half of all growers indicated they are likely to seek more information.

Figure 5.5: Likelihood to seek information



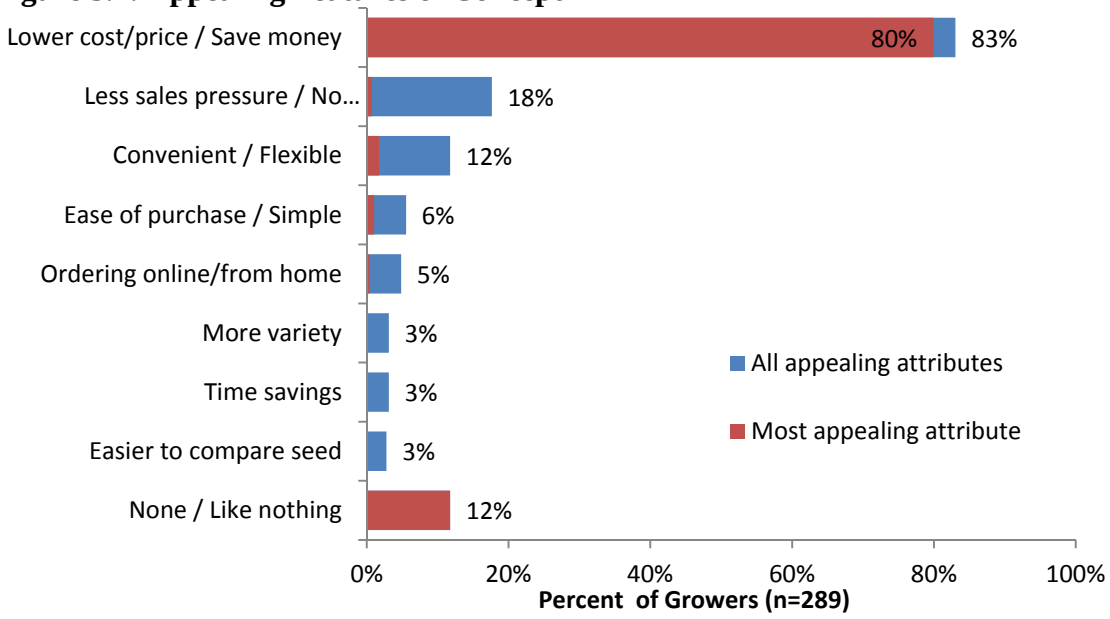
Of those likely to use this concept, 31% indicated they would purchase online if their preferred brand was available through this alternative purchase method. Channel conflict may occur and is addressed later in this research. Large customers indicate the highest likelihood to use this purchase method at 11%, indicating they would definitely purchase online. However, they also indicate among the highest not to use this method at 27%. Current year customers also indicated they would defiantly use this model over non-customers.

Figure 5.6: Likelihood to use concept



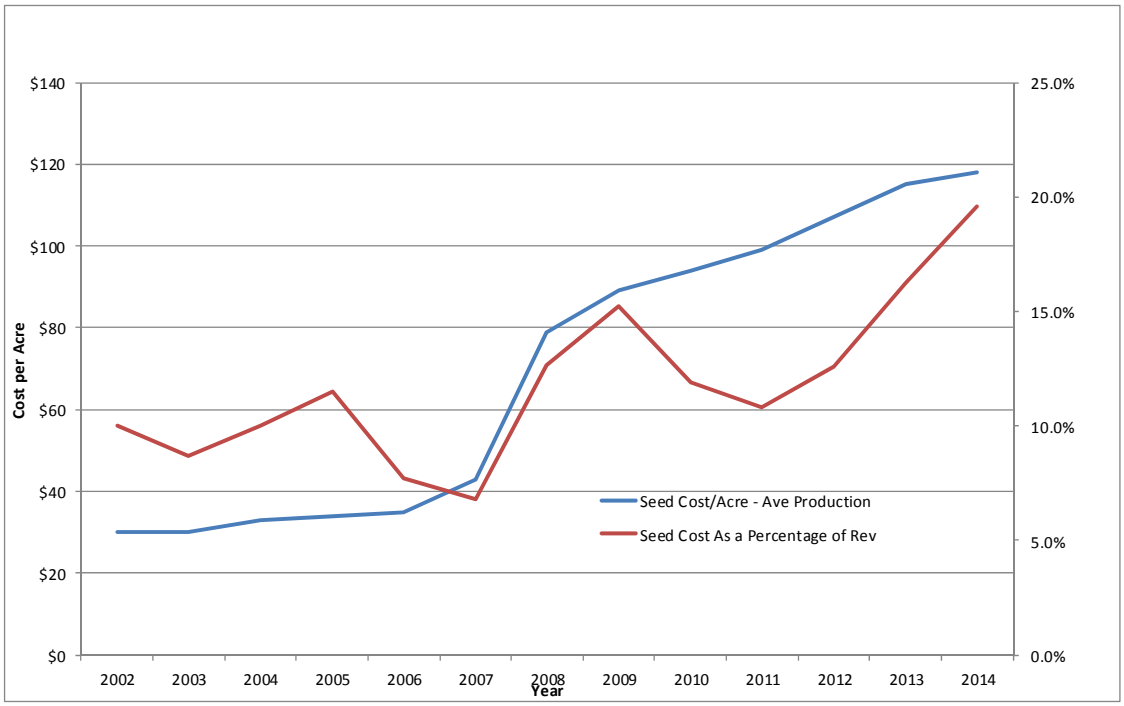
The level of discount was among the most appealing feature of this concept. Eighty percent of growers reported interest in the ability to save money through a low-cost purchase online. Significantly more growers indicate saving money is a key factor of interest with this concept. This will align with the consideration to sell products online at a discounted price versus traditional brand products. Additional features such as less sales pressure, convenience, and ease of purchase did not seem to be significant.

Figure 5.7: Appealing Features of Concept



The emphasis of a lower cost option as the most appealing concept to this model can be illustrated by the data in figure 5.8. Corn seed cost as a percent of revenue has nearly doubled over the last decade from 10% in 2002 to 19.2% in 2014. Farmers in the United States have seen corn seed costs rise from $30 per acre in 2002 to an approximate $122 per acre in 2014.

Figure 5.8: Corn seed cost as a percent of revenue compare to seed costs per acre



(United States Department of Agriculture n.d.); (Purdue University 2002-2014)

Rising input costs in today's farm economy are driving customers to alternative sources. At the time Company B retired the FC brand, the farm economy was on the upswing. In 2012, the USDA reported annual net farm at $102.5 billion compared to a forecasted $73.6 billion in 2015, a change of -28.2% in three years. Annual corn prices received have dropped from $6.89 per bushel in the 2012/2013 marketing year to an estimated $3.72 per bushel for the 2014/2015 marketing year according to the USDA.

At the time Company B retired FC, growers may have turned their focus away from a cheaper sub-product offering. Commodity prices have decrease since that time, and as a result net farm income has also decreased, thus customers may be in the market for finding a cheaper alternative to corn seed supply in the next few years.

Table 5.3: U.S. Farm Sector Financial Indicators from 2011-2015

U.S. farm sector financial indicators, 2011-2015F

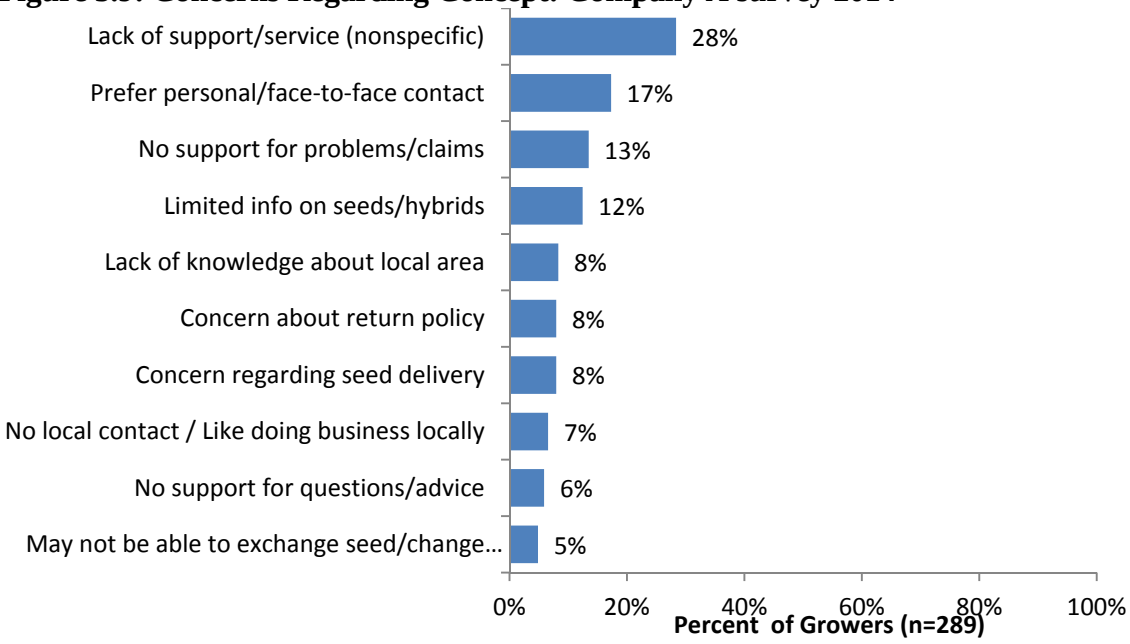
United States

	2011	2012	2013	2014F	2015F	Change 2013 - 2014F	Change 2014F - 2015F
			$ billion			*Percent*	*Percent*
Cash income statement							
a. Cash receipts	368.7	404.8	401.3	407.4	381.6	1.5	-6.3
Crops 1/	204.7	236.1	218.5	198.2	182.6	-9.3	-7.9
Livestock	163.9	168.7	182.8	209.2	199.0	14.4	-4.9
b. Direct Government payments 2/	10.4	10.6	11.0	10.8	12.4	-2.2	15.0
c. Farm-related income 3/	26.1	28.5	31.5	27.3	27.3	-13.4	0.0
d. Gross cash income (a+b+c)	405.2	443.9	443.9	445.5	421.3	0.4	-5.4
e. Cash expenses 4/, 5/	277.7	306.8	312.7	330.3	332.0	5.6	0.5
f. Net cash income (d-e)	127.5	137.1	131.1	115.1	89.4	-12.2	-22.4
Farm income statement							
g. Gross cash income (a+b+c)	405.2	443.9	443.9	445.5	421.3	0.4	-5.4
h. Nonmoney income 6/	22.8	20.2	23.4	24.0	23.8	2.6	-1.0
i. Value of inventory adjustment	-1.7	-19.1	13.7	6.4	-1.2	NA	NA
j. Total gross income (g+h+i)	426.3	445.0	481.0	475.9	444.0	-1.1	-6.7
k. Total expenses	312.5	342.4	352.0	367.9	370.4	4.5	0.7
l. Net farm income (j-k)	113.8	102.5	129.0	108.0	73.6	-16.3	-31.8

(United States Department of Agriculture Economic Research Service n.d.)

Survey respondents were asked about concerns if they were to purchase seed online. Twenty-eight percent were concerned with the lack of support and service with this concept. Seventeen percent would prefer personal or face-to-face contact. Additionally, thirteen percent were concerned with the lack of support for problems and claims with potential risks in product performance. These items need to be addressed and carefully planned at the time of implementation to design an e-commerce website to create confidence with the customer that necessary support tools will be offered.

Figure 5.9: Concerns Regarding Concept: Company A survey 2014



5.2 Estimate the Market Opportunity

The estimated market opportunity for an online seed corn sales model is $25.5 million annually by the year 2020 (Table 5.2) It is estimated that 90 million acres of corn will be grown in the United States by the year 2020. It is believed that 25% of growers will be Type I decision makers, who are most likely to purchase online. Based on survey results in Figure 5.3, 36% of small Type I growers will purchase online and given a "most likely" scenario of 18% purchasing online. It is assumed that total on-line planted acres in 2020 will be 30% of total online buying interest among Type I growers. The five year market share goal is 30% of on-line planted acres, or 364,500 acres. One unit of corn seed plants 2.5 acres and the estimated units sold are 145,800. The per unit margin goal is $150 per unit.

Table 5.4 Estimated Market Opportunity by 2020 for an On-line Corn Seed Sales Option

	Est. Market Opportunity	Most Likely Opportunity	Most Likely
U.S. Corn Acres			**90,000,000**
U.S. Corn Acres - Independent Producers	25%	**25%**	**22,500,000**
On-line Buying Interest (acres)	36%	**18%**	**4,050,000**
On-line Planted (acres)	44%	**30%**	**1,215,000**
5 Yr. On-line Market Share Goal (acres)	32%	**30%**	**364,500**
Acres per Unit (1 unit plants 2.5 acres)			**2.5**
On-line Market Goal in Units			**145,800**
Per Unit Margin Goal			**$ 175**
Total Margin Opportunity			**$ 25,515,000**

5.3 Strategy: Opportunities and Challenges in Market Segmentation

Opportunities and challenges facing an on-line seed model are outlined in table 5.3.

Table 5.5: Opportunities and challenges for an online corn seed purchase option

Opportunites	Issues/Risk
Access to >100k unit supply of Company A T4 discards	Cannibalization of primary brand
Access to >100k unit supply of Sub Brand T4 discards	Managing a complex product portfolio
COGS lowered by $86/unit and can price seed units at a lower cost	Business terms and payment options
Potential to bring approximately $25.5MM additional annual revenue	Will customers adopt to an online sales model
FC once sold over 400k units of corn annually, indicating the ability to add one point of market share	Licesnsing to other brands

Most notable among opportunities is the past success of FC, which at one time sold over 400,000 units of corn seed annually online (AgWeb 2014). One point market share in the aggregate seed corn market is 376,000 units (Schafer 2014), thus if Company A attained online sales at the FC level, it would add one percentage point of market share.

Additional opportunities include lower cost of goods sold (COGS) per unit. The projected COGS for the on-line model would be $86 per unit less than seed sold through normal channels. The gross margin per unit is estimated to be the same as the traditional channel and is expected to yield similar profit per unit (Table 5.6).

Table 5.6: Average Cost Comparison; Company A 2014

COGS	Company A	e-commerce Brand
Typical Commissions	$20	$0
Non-Inventoried COGS	$1	$0
Inventory Writedowns	$7	$0
Warehousing	$5	$2
Typical Royalties	$35	$35
Distribution Expense	$7	$7
Special Treatment	$15	$15
Cost of Sales - less discard savings	$50	-$5
Total COGS	**$140**	**$54**
****estimated*		

The risks involving cannibalization (leakage of sales from premium market to the discounted, online market) are assumed to be low. It is assumed that online seed sales will lead to attaining customers that would otherwise not purchase Company A's primary or current secondary brands. Cannibalization holds equal risk for competitive brands and it is unlikely customers would largely offset purchasing products from primary brands Addressing sales transaction terms, payment options, and financing need to be explored to encompass a favorable experience to an on-line customer. Providing customers with payment options to make independent business purchases is mandatory for any company to attract business buyers (Forrester Research 2014).

Licensing restrictions may be a barrier to launching this model regarding limitations to create another brand. Traits that are licensed through Company A and Substitution Brands could not be sub-licensed to a newly created company, which leaves limited options to launch the online seed purchase platform. However, Substitution Brand 3, a Substitution Brands brand, has been assumed most likely to represent online seed sales as this brand operates in a small market with little brand awareness. Substitution Brand 3 currently provides corn seed to growers in the Eastern United States. Since the name brand is not

well known, it is assumed that the company could use this brand to launch an e-commerce corn seed sales company. Using a name brand that is unfamiliar to the market is believed by the company to reduce negative impact of its main brand image and lower the risk of cannibalization.

5.4 Channel Conflict

Channel conflict exists when one channel member's actions prevents another channel from achieving its goals (Kotler and Keller 2012). The company uses a multichannel approach, the use of multiple marketing channels to reach the customer, and conflict may exist when selling into the same market. For example, if the company were to use its primary brand to sell seed online, it would create channel conflict with its existing independent dealers by selling the same brand at a cheaper price.

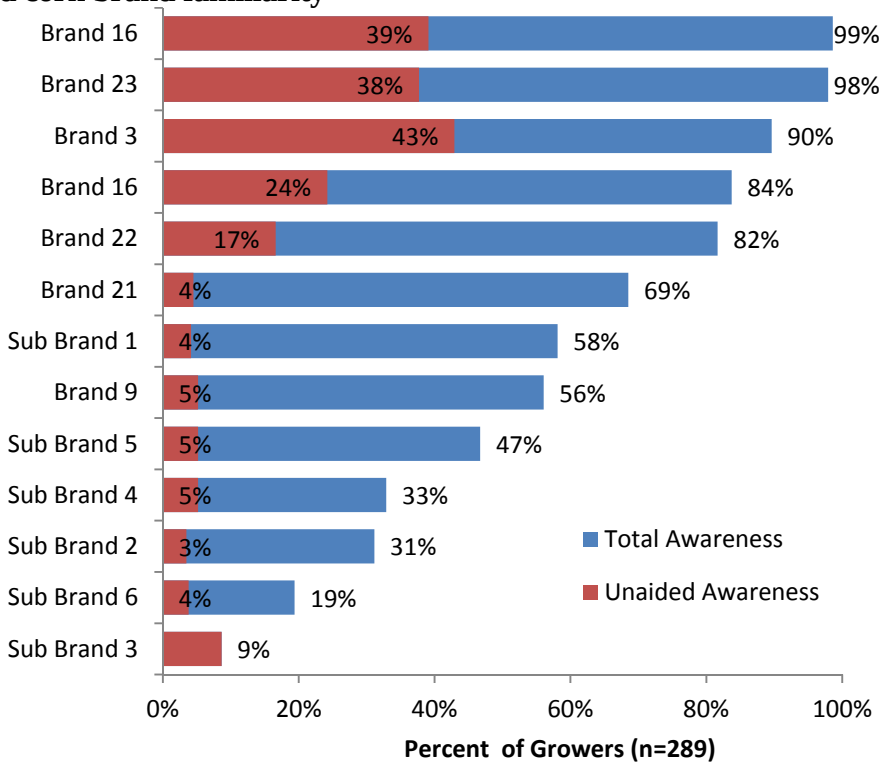
It is not possible to eliminate all conflict; however the company could look at strategies to minimize channel conflict. Kevin Webb, *Managing Channels of Distribution in the Age of Electronic Commerce*, suggests multiple ways that manufacturers can minimize channel conflict for e-commerce strategies:

1. Pricing – do not price products online below the resale price of your own channel partners.
2. Distribution – diverting the fulfillment of orders placed online to channel partners.
3. Promotion – providing product information online without taking orders. Additionally, promoting channel partners on the website and encouraging channel partners to advertise on their website.
4. Product – Limit the product offering to a subset of products, use a unique brand name for products offered on the website, and be quick to offer products on the website that are in the demand lifecycle.

5. Communication and coordination – effectively communicate and coordinate the overall distribution strategy.
6. Agreement among channel partners on the fundamental or superordinate goal to achieve market share, customer satisfaction, high quality or survival.

Of the listed ways to minimize channel conflict, using a unique brand may be one of the challenges to launching an online model in the seed industry. Licensing and government regulations pose a threat to creating a completely new and unique brand. However, through the list of Substitution Brands under Company A, Substitution Brand 3 may be the most logical choice. Growers were asked in the survey to state their awareness of the following brands, as well as to describe their experience with each of the listed corn seed brands. Unaided awareness means the recognition of a specific brand without being prompted with possible names. Total awareness means the recognition of a specific brand as a prompt. Sub Brand 3, a Substitution Brand of Company A, was among the lowest, with 9% unaided awareness by survey participants. This opens the possibility of Company A to use Sub Brand 3 as its brand for the online model.

Figure 5.10: Seed corn brand familiarity



Many companies are now introducing branded variants, which are specific brand lines used to supply a certain distribution channel. Branded variants provide distinctive offerings as a competitive advantage. In this case, providing a low volume of low cost corn seed products online, and limiting the primary brand to the existing channel of agency dealerships would be an example of using a branded variant.

Table 5.7 shows familiarity among all segments in the survey. Nine percent of all small, medium, and large growers indicate to only have 9% unaided awareness. The segment with the highest unaided awareness was among young growers at 12%. This suggests the use of the Substitution Brand 3 name, which primarily operates in the Eastern United States, could be used to launch across multiple states throughout the corn belt to offer seed online through a specific distribution channel.

Table 5.7: Total seed corn brand awareness by segment

All Growers	A. Small (n=69)	B. Medium (n=103)	C. Large (n=117)	D. Young (n=123)	E. Older (n=166)	F. Customer (n=151)	G. Non-Cust. (n=138)
Brand 16	100%	98%	98%	98%	99%	99%	99%
Brand 24	96%	98%	99%	99%	97%	99%	97%
Brand 3	70%	94%	97%	91%	89%	91%	88%
Brand 1	71%	88%	87%	79%	87%	85%	83%
Brand 22	77%	80%	86%	81%	82%	85%	78%
Brand 18	54%	64%	81%	70%	67%	70%	67%
Sub Brand 1	43%	54%	70%	60%	57%	56%	60%
Brand 9	38%	49%	74%	59%	54%	64%	47%
Sub Brand 5	39%	41%	56%	57%	39%	46%	47%
Sub Brand 4	23%	30%	41%	36%	31%	39%	26%
Sub Brand 2	16%	24%	46%	34%	29%	36%	25%
Sub Brand 6	22%	20%	17%	21%	18%	21%	18%
Sub Brand 3	**9%**	**9%**	**9%**	**12%**	**6%**	**9%**	**8%**

With low unaided awareness to the market, Substitution Brand 3may be the logical choice among Company A's Substitution Brands. The issue beyond the selection of an existing brand will be rebranding of Substitution Brand 3. Substitution Brand 3 is brick and mortar regional brand that may need to be rebranded to a different name to identify itself to an online market across the United States.

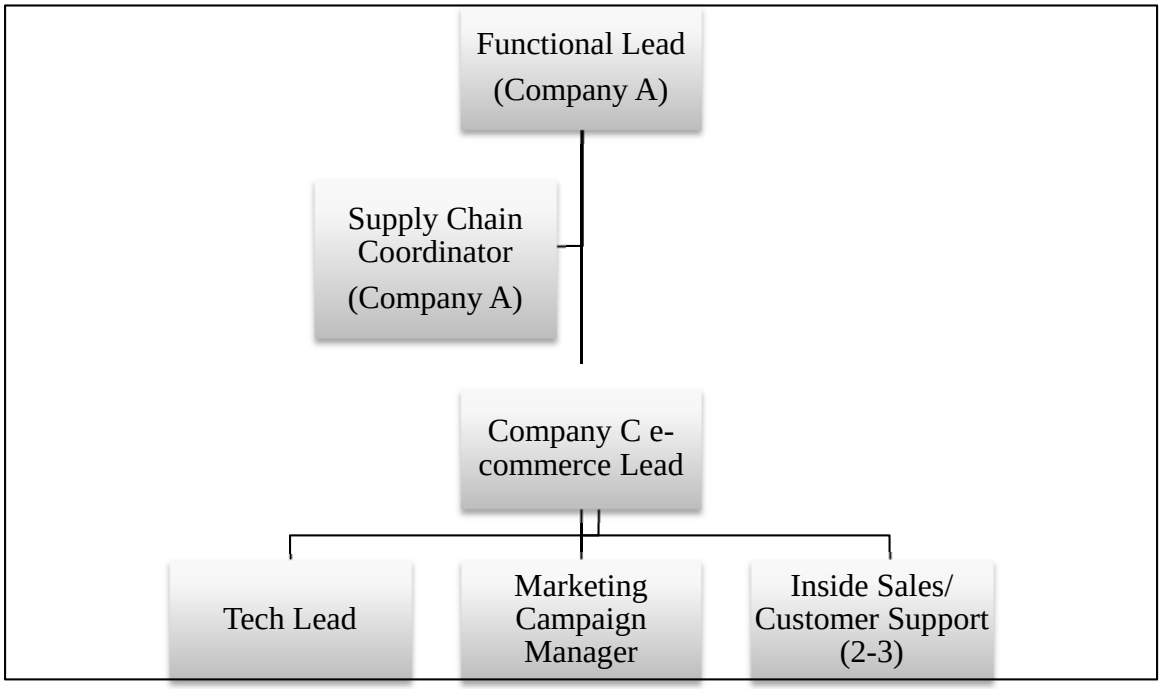
Rebranding changes the identity of an existing valuable asset. A new name would be completely new to customers that do not know what the brand stands for; therefore the values and images of the new brand must be communicated through an aggressive marketing campaign (Daly and Moloney 2005). Kapferer notes there are four possibilities to renaming a brand. They are interim/dual, fade in/fade out, prefix, and substitution. Of the four strategies, substitution may be the most logical choice related to this research as Substitution Brand 3 is relatively an unknown name. This would provide a sharp, swift and

clean strategy to move the Substitution Brand 3 name to a new brand that fits the targeted market online. However, there are consequences to hastily switching from the old brand to the new one as there may be emotional attachment by customers to the Substitution Brand 3 name. Therefore, additional research must be done before any removal of the name.

5.5 Outline Budget Requirements and Management Structure

Company A has collaborated with and external marketing company (Company C) to develop its B2B e-commerce business. Company C has proposed an approximate startup cost of $250,000 for development and $1,000,000 for ongoing costs to cover sales & marketing, ongoing development, and customer support. Company C provides a single point of integration for data and marketing services to drive B2B sales for agriculture, healthcare and pharmaceutical companies throughout North America. Bringing together Company A's need for an online and phone-based sales model, Company C operates under four disciplines: telemarketing, digital marketing, technology services, and data services. Company C would provide support staff to manage the aspects of the business; however Company A anticipates hiring one or two internal employees to collaborate with Company C staff on project. Company C will also provide the day-to-day functions of customer support, such as web marketing, campaign management, and inside sales. Customer support by Company C will be designed to interact with the customer through email, text, online chat, and phone support. The proposed model in figure 5.11 below shows how Company A will interact with Company C will provide customer support.

Figure 5.11 An organizational chart representing the relationship flow and management structure between Company A and Company C for an e-commerce business model



5.6 Advertising Budgets and New Media Market Strategy

Deciding on an advertising budget depends on investment decisions to build brand equity and customer loyalty (Kotler and Keller 2012). According to Kotler and Keller, there are five factors that affect advertising budget decisions.

1. **Stage in product life cycle** – new products traditionally need a large advertising budget to build awareness and gain customer trial while established brands or products are typically supported by lower budgets.
2. **Market share and consumer base** – High market share brands require less advertising while building share requires a larger budget.
3. **Competition and clutter** – A market with a large number of competitors requires higher spending. A brand must advertise more to gain attention in the market.

4. **Advertising frequency** – The number of repetitions to send the brand's message to consumers has an obvious impact, thus a higher budget will be required to increase frequency.
5. **Product substitutability** – Brands in less differentiated product classes require heavy advertising to establish a unique image.

The lifecycle of products will be 1-2 years as limited volume of T4 supply will be grown. Once the supply of a particular product is sold, the likelihood of producing additional volume of same hybrid for future sales is small. Product at the T4 stage would not be reproduced and sold for only one year, or at most a second depending on volume and storage ability. Since product lifecycle may only be 1-2 years, considerations should be made to establish an advertising budget that heavily supports building brand image and its message. The challenge will be to compete against larger, well-known brands in an established market. However, internet marketing may provide a way to build a unique brand image, and therefore it is important to understand how to advertise beyond traditional methods.

The Internet, along with mobile technology, has made a significant impact and change to traditional advertising (Kung and Zhang 2011). Traditional methods of advertising typically involve newspapers, magazines, radio and television. Ads are placed for a fee that corresponds to size and medium in which they are published (Lavinsky 2013). This also corresponds to how people traditionally receive news and information.

Today, people are turning to the Internet for sources of information. "New media", which commonly refers to information available on-demand through the Internet, enables people to create a dialogue to share, discuss, and promote topics (Wikipedia n.d.). Online

marketing produces a one-to-one market experience that by carefully selecting your target market, communication strategy and customer retention can help limit costs (Kung and Zhang 2011). Table 5.7 describes how to align these objectives through new media marketing.

Table 5.8: Advertising strategy using New Media Marketing

Objective	Marketing Strategy	Technology Capabilities
Select appropriate consumers (Targeting)	Customer segmentation	Consumer behavior: Historical click-stream analysis. Consumer interests: Profile
Establish awareness of business (Communication)	Advertising networks	Specialized marketing firms performer powerful tracking potential
	Email marketing	When users opt to receive promotional messages, businesses send targeted messages based on the users' historical purchases and interest profile
	Internet advertising	Utilize displays (banners or pop-ups), rich media ads and video ads
	Affiliate marketing	Use another website as referrals and pay a commission for new business opportunities. Small businesses associated with Amazon.com pay up to 15% to Amazon.com for sales generated by the referral
	Viral marketing	Provide rewards to customers for referral to their friends and family. Users write reviews, service feedback and product comparison to sites such as epinions.com
	Blog marketing	Google AdSense reads an individual blog to identify its subject, places ads based on the blog's contents
	Social network marketing	Consumers often trust and buy what their friends recommend
	Search engine marketing	Businesses pay a fee to be on the list under top search engines, such as Google.com. They purchase specific keywords, normally through auction. When a customer searches for the keyword, the advertisement will appear on the result page
Customer retention (Differentiation)	Website functionality	Website needs to provide quick response, ease of use, and secure payment options in order to attract users to visit again
	Personalization and one-to-one marketing	By tacking consumers' behavior online, business obtain accurate and timely information on individual unique need. Incorporate real time click stream analysis and decision support systems to provide personalized service
	Customization and customer co-production	Customization is an extension of personalization that changes product or service to match customer needs. Customer co-production allows users to be involved in the creation of new products. Establish customer relationship database management system

(Kung and Zhang 2011)

5.5 Outline Investment Options

The total estimated margin opportunity is $25.5 million by 2020. Sales are assumed to commence in 2016 with an elevated ramp-up for the first four years. The sales forecast is an assumption based on the maximum assumed margin opportunity between 2016-2025. An estimated percent of sales for each year is assumed from the perceived maximum sales opportunity. The current proposal to Company A leadership is an initial investment of $1 million for start-up with an assumed $1,000,000 in annual ongoing costs for maintenance and support by Company C'. The investment range has been estimated and may be three to five times greater than assumed in this model.

In this financial analysis, we use the net present value (NPV) rule, the payback rule, and the internal rate of return (IRR) rule for an investment. The NPV rule recognizes that a dollar today is worth more than a dollar tomorrow and is dependent on the forecasted cash flows from an investment and the opportunity cost of capital (Brealey, Myers and Allen 2011). For this calculation we assume the opportunity cost of capital is 7.5%, thus foregoing the rate of return by other investments. The NPV is calculated at approximately $36.6 million indicating what the project is worth today if the company were to invest $1 million in the project. The payback is calculated at year 2, which is the amount of years the cumulative cash flow equals the initial investment in the project. The IRR is calculated at 113%, well above the opportunity cost of capital. The financial recommendation is to accept the project as calculations show a positive NPV of $36 million, a payback of 3 years and an IRR of 113%. Further sensitivity analysis can be conducted using this model below.

Figure 5.12: Company A estimated sales forecast, Net Present Value, Payback, and Initial Rate of Return on Investment for an online seed sales model

Sales Forecast	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Estimated Opportunity	-	20,000	40,000	60,000	80,000	100,000	100,000	100,000	100,000	100,000	100,000
Percent Sold of Max		25%	30%	35%	40%	45%	50%	55%	60%	65%	70%
Estimated Margin	$175	$175	$175	$175	$175	$175	$175	$175	$175	$175	$175
Total Margin Opportunity	$0	$875,000	$2,100,000	$3,675,000	$5,600,000	$7,875,000	$8,750,000	$9,625,000	$10,500,000	$11,375,000	$12,250,000

Cash Flow	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Start-Up	-1000000										
Revenue	$0	$875,000	$2,100,000	$3,675,000	$5,600,000	$7,875,000	$8,750,000	$9,625,000	$10,500,000	$11,375,000	$12,250,000
Expenses		-$1,000,000	-$1,000,000	-$1,000,000	-$1,000,000	-$1,000,000	-$1,000,000	-$1,000,000	-$1,000,000	-$1,000,000	-$1,000,000
Net Profit	-$1,000,000	-$125,000	$1,100,000	$2,675,000	$4,600,000	$6,875,000	$7,750,000	$8,625,000	$9,500,000	$10,375,000	$11,250,000

Analysis	
Cost of Cap	7.5%
NPV	**$36,639,173.59**
Payback	3
IRR	**113%**

CHAPTER VI: CONCLUSION

As I researched topics to complete my Master Degree, my employer gave me the opportunity to work with a group of individuals within the company to explore the parameters of creating an online or phone based sales model. I have conducted this work in conjunction with a team of internal employees. Company A's interest is evaluating the potential for online sales of corn seed products to achieve additional market share and expand company profits.

Companies today are learning to become flexible to achieve a higher level of productivity, quality, and speed. However, in any industry the forces of competition exist to offset achievements to superior performance. Porter points to five basic forces of competition: 1) the bargaining power of suppliers, 2) the threat of substitute products and services, 3) the threat of new entrants that surround companies jockeying for position, 4) the bargaining power of customers, and 5) the rivalry among existing competitors.

Today, many agricultural manufactures are seeking opportunities to reach new markets. Creating a way for farmers to purchase inputs online may expose an opportunity to reach an under-served market. An e-commerce channel also offers companies the opportunity to sell low-volume products to niche markets, while maintaining profitability by decreasing costs on people, floor space, and inventory.

Literature on agribusiness B2B online marketing has been scarce in the past decade as companies quickly entered and exited this model due to lack of success. Leroux, Wortman and Mathias suggested three main limiting factors to e-commerce in agriculture: 1) industry structure, 2) product complexity, and 3) the high-touch nature of transactions. However, overcoming these limitations provides vast opportunity as e-commerce rapidly expands in other markets due to advancement in the internet and mobile technology.

The objectives of this research were answered through a survey to identify the target market, identify opportunities and challenges, and understand the need for this model. Additionally, research was conducted as to what sub-products to use, re-branding from an existing source of brands, channel conflict, estimating the market opportunity, advertising, and investment options.

Results from the survey concluded:

1. Type I customers are more likely to use this type of model
2. There is definitely a need for this concept among small Type I growers; however large growers also seemed highly interested.
3. The level of price discount was the most appealing feature of the concept.
4. Concerns were raised by survey participants regarding the lack of support and personal face-to-face contact.

Additional research in this thesis yielded the following:

1. The estimated market opportunity may bring $25.5 million in annual revenue with a payback of 3 years, 113% internal rate of return, and a $36 million net present value.
2. Channel conflict can be eliminated by considering strategies to minimize conflict. Re-branding a unfamiliar brand, such as Substitution Brand 3, may be the most feasible way to minimize conflict.
3. Limiting costs in advertising can be achieved through a well, thought out new media marketing strategy.

The results from this these can be used by companies seeking to develop an e-commerce strategy to sell the product online. It is important to point out that expanding beyond the

framework in this research is critical to the success of a company's e-commerce strategy. Further research into how customers perceive the buying process online, the conversion rate of customers who purchase online, mobile-commerce, and the onmi-channel experience should be considered for further study. Additionally, research into how traditional brick and mortar companies have entered this market should be thoroughly examined.

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