

**COULD IT HAVE BEEN A SUCCESS IF THEY
HAD BUILT IT? A REFLECTIVE ASSESSMENT
OF THE ABC FARM BUSINESS PLAN**

by

ANGELA M. BAUSCH

B. A., Loras College, 1995

A THESIS

Submitted in partial fulfillment of the requirements

for the degree

MASTER OF AGRIBUSINESS

Department of Agricultural Economics

College of Agriculture

KANSAS STATE UNIVERSITY

Manhattan, Kansas

2016

Approved by:

Major Professor
Dr. Vincent Amanor-Boadu

ABSTRACT

Business plans are a necessity for new ventures. The plan helps to set goals for the business, establishes a good product and customer base, looks at competition, provides management strategies and develops a financial plan and succession/exit strategy. This thesis assesses the business plan that was developed for a 9,300 acre farm in Southwestern Wisconsin from an ex post perspective when assumptions about the future have been realized. It assesses the strategic direction, objectives and financial projections that were made and the assumptions that underlay the projections. The research provides a discussion of a family farming operation that ultimately became a banking investment at the cost of many family members' lifestyles. The farm did continue on, but not with the same operators that had goals to build a new venture from the existing one.

This research evaluates the financial information to determine whether the farm could have been a feasible proposition under the specified conditions. Also, the business plan is evaluated using hindsight information to assess the errors in assumptions and their effects on the projected cash flows, profitability and balance sheet situations. The research assesses the role that the template approach to the business planning process played in the results, and explored if the process model or the Cascade Approach® might have produced different recommendations. The entrepreneurial behaviors under uncertainty are discussed and evaluated, with the hubris being an underlying factor in the plan. It is concluded that the assumptions entrepreneurs make are often over-optimistic. There is, therefore, a need to temper entrepreneurs' enthusiasm about their projects with reality to control their natural hubris.

TABLE OF CONTENTS

List of Figures	vi
List of Tables	vii
Acknowledgments	viii
Dedication	ix
Chapter I: Introduction	1
1.1 Background.....	1
1.2 Research Problem.....	2
1.3 Objectives	2
1.4 Methods	3
1.5 Layout of the Thesis	3
Chapter II: Planning Processes and Business Plan Framework	5
2.1 Introduction.....	5
2.2 Business Development Approaches.....	5
2.2.1 Template Approach.....	5
2.2.2 Process Approach.....	6
2.2.3 Cascade Approach®	7
2.3 Overview of ABC Farms' Plan.....	8
2.3.1 Strategic Direction: Mission	8
2.3.2 Strategic Direction: Vision	9
2.3.3 Strategic Direction: Core Values	9
2.4 Financial Tools	10
2.4.1 Pro Forma Statements	10
2.4.2 Cash Flow Projections and Amortizations	10
2.4.3 Crop Production Worksheets.....	11
2.4.4 Balance Sheet	11
2.4.5 Financial Scoreboard	12
2.5 The Plan Development Process.....	12
Chapter III: Financial Analysis of Charles and Amy's Plan	17
3.1 Structure.....	17
3.2 Background.....	17
3.3 Leadership.....	18

3.4	Competitive Advantages	20
3.4.1	Strengths	20
3.4.2	Weaknesses	21
3.4.3	Opportunities	21
3.4.4	Threats	22
3.5	Products and Services.....	22
3.6	Research and Development.....	23
3.7	Advisors	23
3.8	Marketing and risk Management	24
3.8.1	Marketplace Analysis.....	24
3.8.2	Pricing/Sales Forecast.....	25
3.8.3	External Risks	26
3.8.4	Production and Yield Risk.....	27
3.8.5	Business and Financial.....	27
3.9	Operations.....	28
3.9.1	Facility.....	28
3.9.2	Location and Transportation.....	28
3.9.3	Technology and Operations Plan.....	29
3.10	Assumptions for Charles and Amy’s Crop Production Worksheets.....	30
3.10.1	Pro Forma Budget	34
3.10.2	Cash Flow Projections	35
3.10.3	Crop Production Worksheets.....	36
3.10.4	Financing Schedule.....	36
3.10.5	Financial Analysis.....	37
3.11	Financial Analysis of Charles and Amy’s Original Plan.....	39
Chapter IV: Lessons Learned		44
4.1	The Alternative Business Plan (Plan B) Description	44
4.2	The Alternative Business Model (Plan B).....	44
V. Conclusion, Recommendations and Suggestions for Further Research.....		49
5.1	Conclusion	49
5.2	Recommendation.....	49
5.3	Suggestions for Further Research	50
5.3.1	Succession Plan.....	50
5.3.2	Farm Management Companies.....	51
5.3.3	Lease Negotiations.....	51
5.3.4	Land Study and Taxes.....	51
5.3.5	Neighboring Relationships	52

5.3.6	Added Revenue Options	52
5.4	Final Reflections.....	52

LIST OF FIGURES

Figure 2.1: AgPlan Example	13
Figure 2.2: Key Areas of Research in Charles and Amy’s Business Plan	14
Figure 4.1: Generated Net Revenues/Acre Used in Analysis	47

LIST OF TABLES

Table 2.1 Edward Rogoff’s Process Model Approach for a Business Plan Development	6
Table 3.1: Machinery Assumptions for ABC Farms Soybean and Corn Production	31
Table 3.2: Soybean Input Costs	32
Table 3.3: Corn Input Costs	32
Table 3.4: Other Crop Expenses.....	33
Table 3.5: Expenses by Major Expense Categories for Soybean and Corn Acres.....	34
Table 3.6: ABC Farms Balance Sheet December 2013	39
Table 3.7: ABC Farms Financial Scoreboard 2013 Compared to University of Illinois Benchmarks and Kohl Standards.....	42
Table 3.8: Summary of Assumptions in Charles and Amy’s Original Plan	43
Table 4.1: List of Assumptions for Alternative Model (Plan B)	45
Table 4.2: Purchased Assets for Alternative Model (Plan B) Farming Operation	46
Table 4.3: Net Income Flow under Alternative Scenarios.....	48
Period	48

ACKNOWLEDGMENTS

I would like to take this time to acknowledge and thank Dr. Vincent Amanor-Boadu. Without your encouragement and constant support, this journey would still be taking place! It has been a pleasure working with you. I also thank Dr. Allen Featherstone for his time and effort in enhancing the final product emanating from this research.

Thank you also to the Kansas State University Masters of Agribusiness (MAB) team, professors and staff. Your encouragement and devotion to this program are greatly appreciated. Thank you for your time, you loved one's time spent working on our coursework and effort to make us all a success.

And finally, to my family and friends who have encouraged me along the way. Your support will never be forgotten.

DEDICATION

This thesis is dedicated to my brother, Chris Bausch. Chris, this was, and always will be, our dream. We may have moved on to new chapters in our lives, but the farm, the memories and our accomplishments will always remain with us. Thank you for all you have done for me. I'll love you always ~ Ang

CHAPTER I: INTRODUCTION

1.1 Background

It is April 2012, and the partners of a family farm operation call an impromptu meeting, with the four partners, the two junior partners and the secretary of one of the partners present. The partners are all family: Robert (an attorney) and his wife, Kimberly, who also own the land the company farms; Jack, second cousin to Robert; and Ross, Robert's nephew. Charles and Amy, children of Jack's, became junior partners in the mid-2000s when they were allocated some of the land in a rental agreement, but still farmed all the land together with the original partners.

"I am going to sell the farms," Robert announced. It was no surprise to the people in the room, but they had no idea about the chain of events that would occur. Originally, the new owners Robert would pick to buy the property were to work with Charles and Amy as operators of the farms. A plan had been implemented to enable them to buy out the owners of the operation and the sale of the land would be to someone willing to keep them on as operators of the farms. The search for investors began, and Charles and Amy created a business plan to present to investors to allow them to become operating partners of the farms with the new land owner. Charles and Amy presented their plan in May to potential investors, which didn't give much time to put together pertinent information for their plan. In the meantime, an untimely stroke in September left Robert in the hospital and gave his youngest son the authority to do with the farms what he pleased. The son found his own investors to buy the property, but the investors could only buy if they agreed not to let Charles and Amy operate the land. The investors Charles and Amy had found were told that they could bid on the property, but the only way their bid would have a chance at being

accepted was if Charles and Amy were not allowed to operate the farms. The reason – there had been bad blood between some of Robert’s children and Charles and Amy’s family, and this animosity had never been resolved. Charles and Amy nor their investors knew of this stipulation for the purchase of the land until the final bids for the land were accepted and Charles and Amy’s investors were told of the criteria. By that time, there was nothing Charles and Amy could do to persuade Robert’s son to change his mind. His decision for the new land owner had already been made.

1.2 Research Problem

It has been three years since the sale of the farms; enough time to analyze the initial business plan. This research is the outcome of reflection of the whole venture and what transpired and an assessment of its financial viability given the conditions under which Charles and Amy would have operated it. It is work that needs to be done as one evaluates options in any investment environment ex post.

1.3 Objectives

Was the ABC Farms a financially viable investment for Charles and Amy under the conditions that had been arranged prior to Robert’s stroke? Had his son not altered the arrangements and Charles and Amy had taken over the land, could they have been successful under their plan? The overall objective of this research is to evaluate the economic and financial viability of ABC Farms under the plan presented by Charles and Amy and explore alternative solutions if the plan was to be unviable. Two specific objectives are identified:

1. Analyze the financial and operations feasibility of the plan developed and presented by Charles and Amy to potential investors to operate ABC Farms; and

2. Develop alternative scenarios under which the business could have been organized to produce a return to Charles and Amy had they thought through the plan more strategically.

1.4 Methods

The research uses financial analysis of the investment and strategic analysis of the operations to achieve its objectives. The financial analysis encompasses the evaluations of the financial statements that Amy and Charles developed in support of their business plan, evaluating them for internal consistencies. The strategic analysis covers the structure of the business that they presented in their plan and assessing it for execution difficulties and challenges. The project then develops alternative business models and assesses their potential financial viability using Net Present Value and Internal Rate of Return. The strategic analysis also identifies the resources needed under the alternative scenarios to ensure the success of the alternative business model.

1.5 Layout of the Thesis

The remainder of the thesis is presented under the following sections or chapters. Chapter 2 provides an overview of the plan that Amy and Charles developed and presented to procure financing for ABC Farms. It evaluates the plan within the context of the process that was used in its development, drawing on alternative planning models in the literature. Chapter 3 presents the original model of Charles and Amy's plan, focusing in on the financial statements presented to potential ABC Farms' investors. It identifies the specific assumptions that were made and evaluates these assumptions for validity and potential effects on operational performance. It concludes with a recognition that the assumptions

were unrealistic and the business model was structurally deficient to have succeeded had ABC Farms been built.

Given the findings in Chapter 3, Chapter 4 presents an alternative business model and the financial analysis of that model, assessing other scenarios under which the alternative business model may have been financially or economically feasible. It provides insights into how Amy and Charles could have proceeded with their planning process to ensure a higher success probability of ABC Farms. The lessons learned are summarized in Chapter 5.

CHAPTER II: PLANNING PROCESSES AND BUSINESS PLAN FRAMEWORK

2.1 Introduction

In this chapter, an overview of the business planning approach used by Charles and Amy is presented and compared with two other approaches. The traditional approaches in the literature are the template approach, the process approach and the Cascade Approach®. These different approaches are described. Next, the approach used by Charles and Amy in their development of their plan is discussed. The second part of the chapter presents an overview of the content of the plan that was presented for ABC Farms. The two sections allow for an assessment of the knowledge and mindset of the plan developers and the challenges those created.

2.2 Business Development Approaches

2.2.1 Template Approach

The template approach to a business plan is similar to an outline of a plan that the entrepreneur follows. In essence, the entrepreneur fills in the blanks of a plan, similar to the way one might write a paper. A topic, or the main idea of the model is developed through the mission, vision and values statements. Though this type of plan may be a good way to start thinking of composing a business plan, such as brainstorming the different areas of the plan that need to be addressed, it has shortcomings. Rogoff explained that the template approach often leads to frustration for the entrepreneur because many times the entrepreneur is putting the cart ahead of the horse. The topics that are followed in the plan do not always flow well in the development of the business plan, leading the entrepreneur to overwhelming frustration (Rogoff 2003).

2.2.2 *Process Approach*

The Process Model, introduced by Edward Rogoff, uses much of the same information as the Template Approach, but develops the plan in a different order. Rogoff looks at broad ideas, then moves into the details of those ideas as the plan progresses. His plan follows ten steps found in Table 2.1 (2003, 30-36). The process model tends to lead to more logical thinking of the business plan. It states the entrepreneur's definition of the company, again stating the mission, vision and values, but then flows to the next step stating the venture's needs to get started. One could liken the process model to a funnel, starting with the large picture, then slowly flowing from one step of the business plan to the next, each siphoning into the previous idea. In the end, the model discusses each detail of the plan to show the entrepreneur and the investor the possible outcomes from their efforts. Though this plan follows a more logical order for the entrepreneur, it is still missing key elements, such as looking at competition and incorporating a sound exit strategy.

Table 2.1 Edward Rogoff's Process Model Approach for a Business Plan Development

The Process Model Approach
1. Define the company and what it will accomplish
2. Identify the venture's needs to get started
3. Choosing a strategy
4. Analyze potential markets
5. Develop a marketing campaign
6. Build a sales effort and sales staff
7. Design the company
8. Target the funding sources
9. Detail and explain the financial data
10. Show the entrepreneur in the best light

2.2.3 *Cascade Approach*®

Dr. Vincent Amanor-Boadu devised the Cascade Approach® to develop a business plan (2009, 1). This approach shows how each step flows, or cascades, to the next step. Each step in the cascade approach builds upon the previous step, building information and analysis about the business to create an idea about what the business owner plans to achieve and how the owner plans to accomplish these achievements. This approach requires the entrepreneur to not only look at the different steps in the business planning process, but focus on the key strategic areas of the business plan to accentuate the strengths of the plan.

The first step of the plan becomes a foundation for the remaining five steps. In this approach, the Strategic Overview is the base, which consists of the vision, mission and values statements and also the management or leadership of the organization. These statements need to set a good foundation because they are the basis for the rest of the business.

The Value Proposition step explains why customers would choose these products over the competitors. It explains the uniqueness of the products. Market Analysis moves the entrepreneur into thinking about competition. Michael Porter's Five Forces describing competition are included in this analysis: the threat of substitute products or services, the threat of established rivals, the threat of new entries, the bargaining power of suppliers and the bargaining power of customers (Porter 1980).

The Functional Analysis is what makes the plan move; it uses SWOT analysis in such a way that opportunities can be seized, weaknesses minimized, threats challenged and strengths enhanced. All businesses have a bottom line, and the Financial Analysis section

finds that bottom line and decides whether the business should be pursued. The final step in the Cascade Approach is the Exit Strategy. All good plans should contain the ability to reap the rewards from the business.

2.3 Overview of ABC Farms' Plan

Charles and Amy used the template approach, with some excursions into the process approach. The content of the ABC plan is organized under strategic direction, encompassing the vision, mission and core values. This is followed by a description of the financial statements that were included in the plan. The final section of the presentation of the plan is the plan development process Amy and Charles used.

2.3.1 Strategic Direction: Mission

The strategic direction of ABC Farms was developed through extensive conversations between Charles and Amy. It comprises the vision, mission, core values and value proposition that underscored the business they were seeking to build. Charles and Amy conceived a mission that saw ABC Farms being an agribusiness firm focused on the profitable, progressive, sustainable production and marketing of corn, soybeans and other viable crops. The mission was anchored in ABC Farms being a respected, responsible business and an asset to its local community. They believed their company's stakeholders would find their relationship with the farm to be valuable.

While not technically part of the mission as discussed in the literature (Amanor-Boadu, 2003), the ABC Farms' plan expressed the striving of the owners to be efficient with the tools and resources available to them. They also presented pride in themselves in

a well-managed, innovative operation under their mission. Finally, they identified the opportunity for their children to continue participating in ABC Farms.

2.3.2 Strategic Direction: Vision

The plan identified the vision of ABC Farms as striving to be the most profitable farm measured on a per-acre basis in the tri-states' area. This was framed as occurring from achieving higher production levels at lower costs every year. Another statement ensured members (defined here as the principals in the business) remained united and flexible in their deliberations and operational decisions. They believed that the vision would drive them on to succeed as business.

2.3.3 Strategic Direction: Core Values

A cornerstone of ABC Farms was the multi-generational characteristic of its structure – having parents, children and grandchildren sharing the common passion of building the business. The principals saw their love of the land and the rural lifestyle as a value that would drive them to continually improve the operation for the betterment of the land and its owners, the operation owners and their local communities. They valued an open and honest relationship with their stakeholders and landowners. The owners prided themselves in a well-managed, innovative operation and look forward to new challenges the agricultural sector has in store for them.

The framing of these core values were not aligned with the literature because they did not connect to the boundaries of acceptable behavior that were expected to drive the vision and achieve the mission. So, while it was possible to accept the foregoing as core values of the principals, from a business perspective, it is anticipated that it could have had effect on the farm if it brought in significant decision-makers who were outsiders as a result of growth or an unfortunate event. The structure of the vision, mission and core values

illuminated the myopia that drove the development of the plan in terms of key-person risks that are traditionally considered in the development business plans, especially when they are conducted under the Cascade Approach.

2.4 Financial Tools

The ABC Farms' plan used a number of financial tools to build and justify its financial projections. In this section, the different tools are presented and discussed to provide a framework for understanding the financial results that are discussed later in Chapter 3.

2.4.1 Pro Forma Statements

Pro Forma financial statements refer to a set of financial statements balance sheets, income statements and cash flow statements that have been prepared to show the effects of a specific transaction on the financial statements of a business prior to the transaction actually taking place (Plan Projections n.d.). Although the business was a startup business, it was actually a spinoff from Charles and Amy's family farms, ABC Farms, of which the financial data was utilized in order to create the pro forma statements.

2.4.2 Cash Flow Projections and Amortizations

The business plan gave detailed cash flows for the years 2013, 2014 and 2015. The entrepreneurs stressed the detail that went into the cash flow numbers, but what will be evaluated in the next chapter is how the cash flows show the inability of the three year business plan to become financially feasible. They were looking at the monthly income and expense projections and how they were going to be managed (Dietmann 2014). Three different amortizations were included in the business plan. It was imperative that the notes could be paid on time and the ratios associated indicated financial feasibility.

2.4.3 Crop Production Worksheets

The crop production worksheets allow the estimation of financial break even points for production, evaluating alternative assumptions about yields and prices of both inputs and outputs. The break-even revenue per acre of the crop provided insights into the potential effects of the critical variables on the overall performance of the farm. The assumptions and their overall effect of the financial situation of the farm are presented in these worksheets.

2.4.4 Balance Sheet

The balance sheet told the owners what the farm was worth and how it was financed. Within this sheet equity is determined, which is simply Assets minus Liabilities (Dietmann 2014). ABC chose to create their balance sheet on December 31, 2013 after all crops were harvested for the year. The current assets, assets that could be quickly liquidated for cash, for ABC farms showed a small amount of cash on hand with a large amount in the harvested crop. Intermediate assets are depreciable assets with life of more than a year; here, Charles and Amy determined a large portion of their equipment as intermediate. Fixed assets are not easily liquidated. They are more permanent assets such as buildings or grain bins, in this instance. On the other side of the balance sheet, liabilities are split into current, intermediate and long-term. Depending on the length of the notes involved determined where each of Charles and Amy's liabilities fell. The equity is the difference between the assets and liabilities, so investors want to see this number grow with time. The balance sheet can be obtained at any time of the year to determine the financial position of the business. It is also helpful to compare with previous balance sheets to see how the business's financial position changed over time.

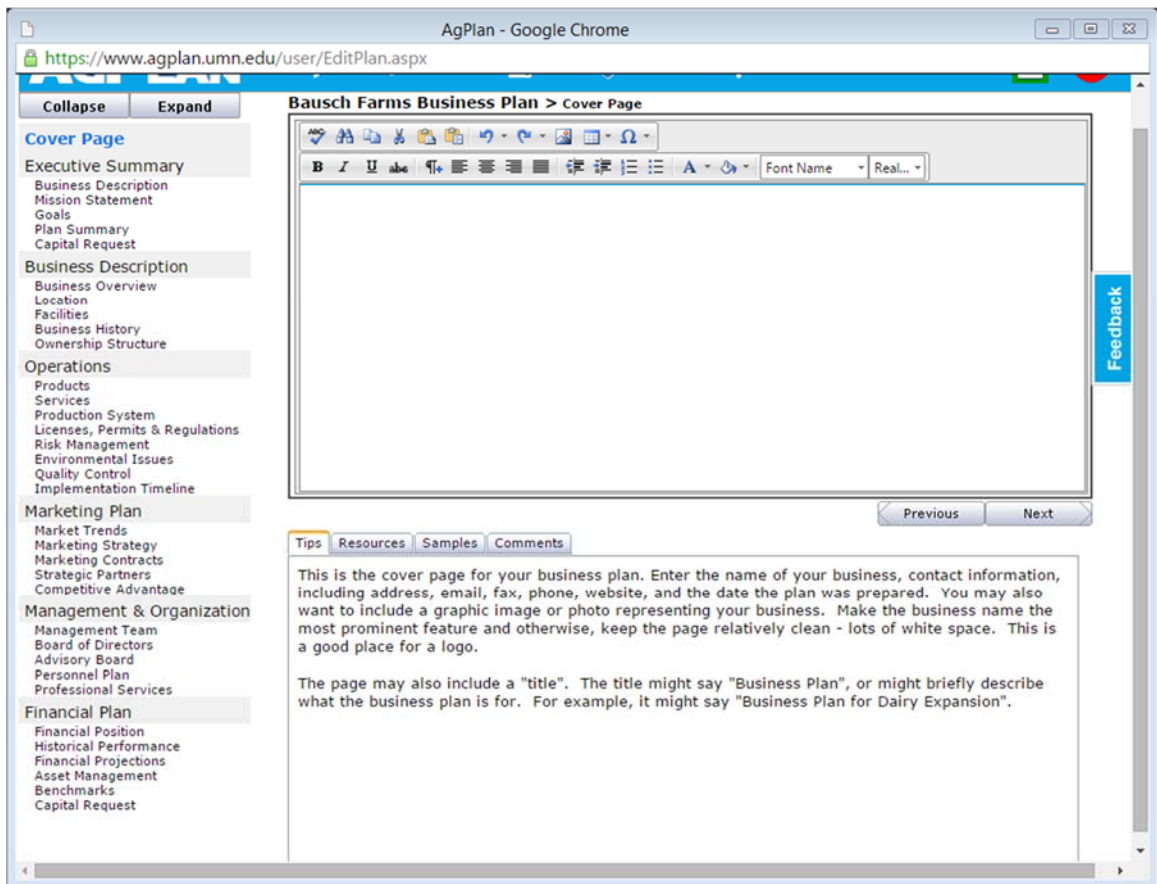
2.4.5 *Financial Scoreboard*

The ABC Farms' plan produced a financial scoreboard that was supposed to provide a single location to facilitate the evaluation of the business' financial feasibility. The scoreboard provided information about liquidity, solvency, profitability, repayment capacity and financial efficiency ratios. These indicators are useful if they have been estimated appropriately, helping decision-makers identify the potential effects of alternative assumptions on the operation's financial feasibility.

2.5 The Plan Development Process

Much has been written on business planning and succession planning for family farms, because many farms are faced with aging owners and have the younger generation waiting to be given the opportunity to move into ownership roles. Charles and Amy reviewed different ideas for farm business plans and ultimately used the template approach. While doing a web search on farm business plans, Charles and Amy found one website continually quoted: AgPlan, shown in Figure 2.1 (University of Minnesota 2007-2010). This is a free online program where the user can develop their own business plan using templates from a website. This gave Charles and Amy someplace to start in creating their business plan.

Figure 2.1: AgPlan Example



Charles and Amy also found from the University of Missouri that a farm, like any other business needs a good written business plan. It gives the owner a “road map” for their farming business, helps set goals and objectives, and many times, can be a requirement to obtain financing (Farm Business Plans Improve Efficiency and Profitability 2013). Figure 2.2 shows the different areas of research done for Charles and Amy’s business plan. Within these key areas Charles and Amy developed subtopics and objectives to explain each topic.

Figure 2.2: Key Areas of Research in Charles and Amy’s Business Plan



Not only did Charles and Amy feel it was important to create the business plan, but it was essential for them to look at the numbers behind the plan. In 2014, Paul Dietmann, Board Chair at Wisconsin Agricultural Education and Workforce Development Council, made a presentation on Business Planning and Financial Tools at the New Farmer Summit in New Glarus, Wisconsin. He reiterated the importance of a business plan, focusing on its financial aspects. He argued that the business plan helps measure the farm’s performance, prepares for tax planning for the farm, makes better investment decisions and also helps determine needed financing.

Dietmann (2014) stressed three financial statements that are key to evaluating a business: the balance sheet, income statement and annual cash flow. The balance sheet tells the farmer what their farm is worth and how it is financed. It is sometimes described as $ASSETS - LIABILITIES = EQUITY$. The income statement describes how efficiently the farm generates profits. In this analysis of ABC Farms, the Pro Forma projections were

used as the income statement. The cash flow statement gives the farmer a month-to-month picture of each income and expense item. The flow chart can help the farmer predict when revenue shortages may be happening so that the farmer can better prepare for this event (Dietmann 2014). Charles and Amy estimated cash flows for the years 2013, 2014 and 2015 in their plan. A point to note about Dietmann's literature: he describes ratios that should be evaluated after looking at these budgeting numbers. His list of ratios are as follows:

- Current Ratio
- Working Capital
- Equity-to-Asset Ratio
- Debt-to-Equity Ratio
- Rate of Return on Assets (ROROA)
- Rate of Return on Equity (ROROE)
- Operating Profit Margin
- Capital Debt Repayment Capacity (CDRC)

Charles and Amy also included in their plan a financial scoreboard describing some of the same ratios Dietmann described.

Don Hofstrand from the Ag Marketing Resource Center at Iowa State University Extension also feels it is a necessity for a farm to have a business plan. He lists many of the same points for the plan, but he had a unique statement which was worth sharing.

“Without a plan you will spend your time going from crisis to crisis without looking at the long-run future of your business” (2009, 1). Unfortunately, this statement comes from experience. When the farms were under the original leadership, they did not construct a business plan, therefore, when the two operating partners wanted to grow one of the enterprises of the business, there was not sufficient evidence for the other silent partners to

approve the growth. Charles and Amy knew the importance of having a plan, but did they need to re-evaluate the reasons behind this plan to make it financially feasible?

It can be argued that the entrepreneurs were heading in the right direction by creating a business plan. That being said, would they have been better off researching different plans and incorporating more theories into their plan, which may have headed them in a different direction with their business? Would these other plans have forced Charles and Amy to be more systematic in their thinking and created a plan that looked at the bottom line more than the idea of holding the family farm together? And if they had done so, would they have, in the end, essentially done just that – held the family farm together?

CHAPTER III: FINANCIAL ANALYSIS OF CHARLES AND AMY'S PLAN

3.1 Structure

ABC Farms was the organization developed by Charles and Amy to manage the 9,300 acres of their family land in southwestern Wisconsin. The crops they planned to produce were 8,900 acres of corn and soybeans in rotation. The remaining 400 acres were in buffer strips and sold to local beef and dairy operators. The plan was predicated on ABC Farms buying out the original partners so Amy and Charles would have the freedom to operate the business as they had planned.

The ownership of ABC Farms was defined as a 50/50 partnership between Charles and Amy. Between them, they had more than 70 years of agricultural production experience, which included production, marketing, finance, human resource management, risk management and logistics. In addition, the two principals also respected and liked each other; two ingredients critical for the operational success of the plan's implementation.

3.2 Background

ABC Farms was the spinoff of their family farms started around 1930 by Charles and Amy's grandparents, Victor and Elizabeth, and Elizabeth's cousin, Robert, and his wife Kimberly. Robert was a local attorney and was interested in investing in farmland and his cousin Elizabeth and her husband Victor wanted to farm, thus the business venture of A & B Farms. Robert originally purchased three farms with approximately 600 acres. The foursome then combined resources and purchased beef and dairy cattle, hogs, chickens, and equipment to raise corn, hay and oats.

As the years passed, Robert purchased more farmland. Along with acres, both families also grew. Robert and Kimberly had eight children who worked summers on the

farm. Victor and Elizabeth had four children, two of whom remained on the farm, while one became an equipment dealer with whom the farm purchased equipment and the fourth child became a teacher.

By 2011, A & B Farms had grown to over 9,000 acres of owned ground and 3,000 acres of rented ground owned by local retired farmers. By the mid-2000s, all the livestock had been sold, creating a cash grain operation. The crop rotation was corn/corn/soybean at that time. Any pasture was rented out to local farmers needing pasture.

The families involved had grown also. Victor and Elizabeth both passed away, but their son Don, and Don's son Ross, were still involved with the farms full-time as past and present partners respectively. Don's son Tim helped out on a part-time basis, mainly in the spring and fall. Victor and Elizabeth's youngest son, Jack, Charles and Amy's father, had four children, three of whom stayed involved with the farm. Amy worked full-time on the farm doing financial work, negotiations, government relations, and any manual labor needed. Chet, Jack's oldest son, and Jack had started a trucking operation to handle all grain logistics. Charles handled all operations. His forte was in grain equipment engineering and employee management, and he was well-versed in seed logistics and negotiations.

3.3 Leadership

As indicated above, Charles and Amy planned a 50/50 partnership of ABC farms. Amy was to be Chief Financial Officer because of her financial background and experience from A & B Farms Partnership. Her educational background was a B.A. in English Literature and she was working on her master's degree. Charles would be the Chief Operating Officer due to his forte in grain equipment engineering, logistics and seed. Charles graduated from high school and never left the farm. He took many classes and

attended numerous seminars in grain science, grain bin construction and agronomy.

Charles could fix any piece of equipment and was an excellent grain storage manager for the farm.

Other employees slated for leadership roles were long-time employee, Kevin, who was to be the operations manager. It was Kevin's responsibility to ensure all operations were being fulfilled, including, but not limited to, inventory and maintenance. Kevin started with A & B Farms when he was 16 years old, helping in the dairy barn and eventually moving to the field work, becoming their top equipment operator very early in his career with A & B Farms. When the farms were sold he had been with them for nearly 20 years.

Royce was to be the equipment manager. Royce's responsibility was to keep all equipment in top mechanical shape and ensure the partners were aware of major repairs and/or large equipment needs and purchases. Royce was a fairly new employee to A & B Farms, starting in 2009, but his family owned a neighboring farm and he had an Associates' Degree in Ag Mechanics, so this was a perfect fit for all involved.

A final position, the grain facilities manager, needed to be filled from outside the current operation. Under A & B Farms Partnership, Charles handled this task, but with the growing responsibility of ownership, Charles would need help in this area. One permanent part-time fixture in the operation was Dave. In the late 1990's, Robert purchased Dave's farm and since that time, Dave helped with everything from cattle, to field work, to drying grain and repairing grain equipment. Dave planned to continue on with Charles and Amy also.

Spring and fall are the busiest times on a grain farm, so in order to compensate for the extra work, ABC Farms planned to hire approximately five part-time spring employees and fifteen part-time fall employees. Most of these employees returned year after year to work for A & B Farms Partnership, and Charles and Amy had discussed with the employees the changes and all were willing to continue in the newly formed operation.

3.4 Competitive Advantages

SWOT [Strengths, Weaknesses, Opportunities and Threats] analysis is a popular model used to help organizations undertake strategic planning (Goodrich 2015). The plan conducted a SWOT Analysis with the view of helping the principals assess and evaluate their farm's strengths and weaknesses, opportunities and threats, and in the process develop correct solutions to the threats and weaknesses and accession strategies for the opportunities and enhancements for the strengths. The plan's identified SWOT are presented in the next sub-sections.

3.4.1 Strengths

One of ABC Farm's greatest strengths was its economies of scale. It should be noted that the average farm size in southwestern Wisconsin in 2012 was 267 acres with an average land value of \$4,000 per acre (USDA NASS 2014). Given the size, ABC Farms could be more efficient than the average farm in the region, offering them strength in dealing with local elevators and crop procuring companies, such as Cargill and ADM. The average on-farm storage capacity in southwestern Wisconsin from the 2012 Census was 27,757 bushels (USDA NASS 2014). In comparison, ABC Farms had a capacity of 1.6 million bushels. With this storage capacity, grain sales could be made at the most financially opportune times as opposed to sales during fall harvest when CBOT (Chicago Board Of Trade) prices were typically lower and basis was widest.

Another asset ABC Farms had was their ability to attract and maintain a strong employee and business associate base. Throughout A & B Farms' history, when an employee started working for the farm, they stayed with the farm. They only left for health reasons or retirement. The same could be said for business contacts. They had loyal vendors that bought into the philosophy that if the farm succeeded they too would succeed. They stressed to their local cooperative that A & B Farms needed the cooperative as much as the cooperative needed A & B Farms, so a piece of the pie needed to be divided among all players. Equipment leases were negotiated through A & B Farms knowing that in the next three years, the cooperative would need to make a purchase and could do so from the farm operation at a much more reasonable rate.

3.4.2 Weaknesses

It is imperative to look at areas of weakness to prepare for the future. ABC Farms' main area of weakness was its lack of capital. To operate the business, they would have to rely on large operating loans. The only way to get these loans was to find an investor willing to take on that risk with them. "Financial debt is a warning sign," and before they even got out of the gate Charles and Amy had financial stress (Swanson 2015). If their numbers were not accurate, if they encountered a weather issue or if the markets declined before they were able to lock in gains, their business venture was doomed.

3.4.3 Opportunities

Though they knew they had a major weakness in their capital account, Charles and Amy also felt they had many opportunities to make the farm a success. They were in a time of emerging markets. For example, the ethanol industry was growing and a large ethanol plant had opened within Dyersville, Iowa. This could be another sales opportunity for their operation.

Once they had a solid business base, they could begin to take advantage of branching out to other markets such as seed corn or wheat. In previous years, A & B Farms produced seed corn for a local seed company. Charles and Amy were now working closely with their Monsanto representative, so the possibility of seed corn production was a potential venture.

Technology in the agricultural sector was developing and with the investors who were looking to purchase the farms, Charles and Amy knew they would be given the opportunity to use this advancement. They had good strategic alliances started with their area cooperative, the crop procuring companies and their insurance agents. In past meetings with these groups, Charles and Amy were always brainstorming new ways to move into areas of advancement for the farm and for the companies through all the newest technological features.

3.4.4 Threats

Farming, as with any other business, has always had its own areas of threats, many of which cannot be eliminated, but need to be managed. There was always the threat of new policies coming from the USDA. The threat of a weather issue, decline in grain prices or the increased input prices all added to the stress level. These topics were by no means exclusive, but it gave Charles and Amy a good indication of items to be aware of in the operation. Charles and Amy had decided early on to go with the proactive approach and gain as much knowledge about their threats as possible. By doing so, when issues arose with those threats, they would have had background knowledge to handle these threats.

3.5 Products and Services

As noted before, ABC Farms was to produce corn, soybeans and hay, with the possibilities of adding seed corn, wheat and oats to the operation in the future. The 50/50

rotation between corn and soybeans was a necessity due to the high input costs, large capital needs and extra labor costs that come with raising corn on corn. With the 1.6 million bushel storage unit and efficient drying system, ABC Farms was also capable of becoming a drying, storage and basis trading facility for area farmers if they stayed with the 50/50 rotation. This would add a small amount of income for the operation if they desired, though it would have to be well analyzed before implemented due to risk the operation.

3.6 Research and Development

It is good business practice to continually research and develop new and innovative ideas and technology to increase assets. ABC Farms planned to do that with seed, equipment, inputs and labor. A hired agronomist would have kept the farms updated with the latest technology and inputs to move them into a top position in the agricultural field. Their crop insurance agent was to keep them abreast of changes in insurance and legislation to mitigate risks. Amy's university contacts were good resources, be it professors, classmates or business contacts associated with the university and agricultural industry.

3.7 Advisors

Quarterly meetings with key advisors were to be scheduled to keep the operation running smoothly and transitioning into the next century. This was a tradition started with A & B Farms Partnership, and one that would continue on into ABC Farms' future. Representatives from the following areas were to convene with the leadership members of ABC Farms to move their operation to the future. It should be noted that not all advisors would sit at every meeting. For example, the quarterly meetings were generally to be with seed and agronomy representatives, while grain merchandisers were to be contacted on a

regular basis by Charles and Amy for marketing ideas. Following is a list of some of these advisors:

- AgraConcepts – Agronomy Consultants
- CAMS – Cargill AgHorizons Marketing Services
- First Capital Ag – Brokerage Account
- Cargill – Grain Merchandiser
- Gavilon – Grain Merchandiser
- ADM – Grain Merchandiser
- Premier Cooperative – Agronomy, Grain, Seed, Fuel
- Ritchie Implement – Implement Dealer
- Badgerland Financial – Accounting Services
- Premier Insurance Solutions – Crop Insurance
- Potential Land Owner/Landlords

3.8 Marketing and risk Management

Grain marketing has proven to be an important activity in ensuring grain farms' success. Not only would merchandisers be called upon to assist in sales, but Charles and Amy's Cargill CAMS advisor and their brokerage accountant would also be recruited to help with marketing ABC Farms' grain. To do this effectively, the plan identified the critical undertakings that it would exploit from the identified service supplier.

3.8.1 Marketplace Analysis

ABC Farms' strategic location would be key as to where and when the grain was to be shipped. Southwestern Wisconsin was located in a river market, with the closest Mississippi River elevator located in Prairie du Chien, Wisconsin. Gavilon had a location

in Prairie du Chien and had always been very competitive in basis. Also, it was a quick turnaround for truckers, only 34 miles from the grain bins to the terminal. With this turnaround and the hours of operation at the terminal, trucks could haul four to five loads of grain per day.

Cargill in East Dubuque, Illinois was only 42 miles from the grain site. Due to the terrain, it took approximately one hour to delivery grain to the terminal. Hours of operation at Cargill allowed for an average of three loads per truck per day, possibly four depending on dump time at the terminal.

The ADM terminal in Boscobel, Wisconsin was located on the WSOR (Wisconsin & Southern Railroad). This terminal was approximately 44 miles from the farm, but the roads made it less attractive for trucking. Two to three loads per day could be hauled to ADM, but the fact that it was on the rail market and not the river market could make a huge difference in basis. At times, ADM was the most attractive market for sales due to this fact.

Premier Cooperative had a large milling facility in Mineral Point, Wisconsin. This terminal was approximately 52 miles from the grain facility, but it was in much closer proximity to some of the fields in the Lancaster and Fennimore Wisconsin areas. For this reason, A & B Farms also looked at merchandising to Premier every year for fall delivery. The key factor to look at was basis. Often, the mill could not compete with the river or rail basis, so it would have been more financially advantageous to bring those crops back to the farm and store them rather than accept an unfavorable basis.

3.8.2 Pricing/Sales Forecast

Pricing their commodities was a huge factor in the success of the business. To attain their sales goals, help would have been solicited from the CAMS advisor and their

brokerage account advisor. One thing Charles and Amy always remembered from their broker was that “markets go up, and markets go down,” but it was how you dealt with those fluctuations that could make or break your business (Babler 2004). Using various marketing tools from their broker and merchandisers would allow them to be competitive in the markets. These tools and marketing plans were to be reviewed on at least a weekly basis by the partners.

3.8.3 External Risks

A good risk management program in any company is essential, especially for a business that was highly leveraged such as this one. Risks facing the business may be categorized into two main groups: external and internal; and the internal may be subdivided into two groups: production, and business and financial risks. To put themselves and their stakeholders at ease, the plan covered the following risks management issues described in the following sub-sections.

Many factors influence a farmer’s bottom line, but many cannot be controlled by the farmer. To compensate for these outside influences, risk management tools need to be firmly put into place. Examples of these influences are as follows:

- Grain Markets
- Weather
- Input Prices
- Government Programs
- Supply and Demand

To compensate for these risks, marketing strategies, crop insurance and government contacts were all key ingredients for risk management.

3.8.4 Production and Yield Risk

Every year would bring the risk of production loss due to weather, insects, mismanaged property, etc. To combat these risks, ABC Farms would use crop insurance, FSA and NRCS programs and Agronomy programs. Checks and balances with their employees and equipment to make sure the job was done correctly is a necessity.

A strong marketing plan and various selling strategies were to be utilized in order to achieve success. Spreading the risk associated with marketing suggested the strategy of utilizing more than one merchandiser for sales. Crop insurance was an excellent tool for mitigating price risk by utilizing the RP (Revenue Protection) plan in the past with A & B Farms and would continue to be used along with hail insurance. Hedging grain through a brokerage account also helped to combat risk.

3.8.5 Business and Financial

Risk management also included re-evaluating the business plan to keep the operation on track. By looking at their cash flows, budgets, and P & L sheets on a monthly basis, they could anticipate issues and even manage cash flow challenges that may occur. Regular quarterly meetings with advisors to discuss market trends, future opportunities, commodity sales, etc. were imperative for success.

Of course, no one wants to think of the worst outcome, but being prepared for it if it does happen takes a lot of stress off the owners of the business. ABC Farms would have put in place not only crop insurance, but also business, health, life, disability and casualty insurance.

3.9 Operations

3.9.1 Facility

The main location, or the hub of the operation, was home to the office, a large machine shed, a vacant cattle feedlot that was used for equipment storage, and a 1.6 million bushel grain setup. All of the farms were located in Grant County, Wisconsin. For logistics, government reporting purposes and paperwork with insurance offices it would make Amy's life a little easier, but to mitigate risk for crop insurance would be quite a challenge.

3.9.2 Location and Transportation

Location played a key role in how ABC Farms would be operated for numerous reasons, and here is why:

1. Most of the grain produced was to be trucked back to the farm to be dried and stored for the winter. Soybeans were an exception for drying, but the markets always dictated whether the beans were to be stored or sold out of the field.
2. As stated earlier, grain elevators were located in Prairie du Chien, Wisconsin and East Dubuque, Illinois on the Mississippi River. Grain marketing was to be determined by the locks and dams and when the barges could no longer move on the upper Mississippi River due to inclement weather, though rail was a possibility in the winter.
3. Rail was located in Boscobel, Wisconsin. Basis on the rail was not always as competitive as the river. Rail was used for many other commodities, so when the oil fields needed sand or needed product shipped out and the pipeline wasn't an option, railcars were utilized. This increased ABC's rail basis for corn and soybeans.

4. A large mill was located in Mineral Point, Wisconsin. Although there were not as many cattle or hogs fed in the state anymore, this state-of-the-art mill still produced a large amount of feed for farmers. It used a lot of grain, so basis could be competitive.
5. Spring planting needed to be strategically coordinated to eliminate as much backtracking as possible with the planting equipment. This could be a difficult task when adjusting 100 to 115 day corn and different varieties of soybeans.

3.9.3 *Technology and Operations Plan*

Technology is an ever-changing occurrence on the farm. Every year new technology was planned to be incorporated to better equip the farm. Risk and reward was a constant conversation among the owners and employees at the A & B Farms operation.

Bob Hammer explained it well in one of his articles:

The astute farm manager will be highly experienced in farming, have a good understanding of government programs and the economic environment for farming, and know how to utilize computer programs for efficient farm management. This manager will have the ability to know what and when to incorporate new agricultural products and programs into the farm operations. It will involve both caution and innovation. As some old advice cautions:

*“Be not the first by whom the new are tried,
Nor yet the last to lay the old aside”* (Great Plains Farms LLC 2015, 1)

So, the partners of A & B Farms also understood that it was neither a realistic nor financially feasible to have the newest in equipment and technology always. At the time, ABC Farms planned to obtain planting and harvesting machines from the previous operation that were equipped with the latest financially feasible technology that would enable the farm to gather critical production data to better enhance crop decisions. The grain setup was as large, if not larger, than many local grain elevator companies with the recent upgrades in the dryer system and conveyors.

Recognizing that volume was a key component to the plan, a large grain facility was included in the strategy, allowing the farm to store all its production. This enabled the owners to sell only when prices were in their favor without having to pay for storage. Additionally, historical yield increases were assumed to continue in the business plan.

3.10 Assumptions for Charles and Amy's Crop Production Worksheets

To accurately analyze Charles and Amy's plan, a few items need to be explained and assumptions need to be stated. Prior to the completion of this plan, the land was already in production. As such, it was anticipated by ABC Farms' plan to initiate its soybeans-on-corn and corn-on-soybeans 50/50 strategy starting two years after the completion of the plan and securement of financing.

The production assumptions include 4,450 each of soybeans-on-corn and corn-on-soybeans, giving a total of 8,900 acres, and the remainder going into hay production. The average price for soybeans was assumed to be \$13/bu and for corn, \$6/bu, fixed over the three-year duration of the plan. The assumed yield goal for the soybeans-on-corn was 55 bu/acre while the yield for corn-on-soybeans was 215 bu/acre.

The machinery assumptions going into the estimation of soybean and corn production costs are presented in Table 3.1 using historical information from the farms Charles and Amy have operated. Equipment #1A encompasses costs for two grain carts, four tractors and a skid steer loader while Equipment #2 covers two planters, combines and bean and corn heads, respectively. Equipment #3 encompasses a drill, two seed tenders, two head carts and a seed truck for soybeans and a rotary hoe, three harrows, two seed tenders, 2-wheel drive tractor, two chisels, a dump cart, two head carts and a truck for corn. The differences in allocated amounts for the machinery relate directly to the pieces of

equipment used per crop. By multiplying the allocated acreage proportion by the total cost, the allocated cost for the equipment is presented under the appropriate total column.

Table 3.1: Machinery Assumptions for ABC Farms Soybean and Corn Production

Machinery Expense Category	Total Allocated Cost	Allocated Cost Per Acre (\$/Acre)
Soybeans		
Equipment #1A	\$123,988.00	\$13.93
Equipment #2	\$47,079.63	\$10.58
Equipment #3	\$128,732.96	\$28.93
Misc. Equipment Rental	\$27,748.00	\$3.12
Total Machinery Cost Per Acre		\$56.56
Corn		
Equipment #1A	\$123,988.00	\$13.93
Equipment #2	\$52,522.37	\$11.80
Equipment #3	\$131,933.04	\$29.65
Misc. Equipment Rental	\$27,748.00	\$3.12
Total Machinery Cost Per Acre		\$58.50

Expenses related to agrochemicals – fertilizer, herbicides and pesticides – are presented in Table 3.2 for soybeans and Table 3.3 for corn. Each table assumption is field specific, i.e., soybeans or corn, so allocated costs per crop may be different. By multiplying the allocated acreage proportion by the total cost, the allocated cost for the input costs is presented under the appropriate total column.

Expenses related to all other crop expenses are presented in Table 3.4 for soybeans and corn. The differences in allocated amounts for the other crop input costs directly relate to the price difference in diesel fuel and labor allocated to each crop. It costs more in both diesel and labor to plant corn versus soybeans. By multiplying the allocated acreage proportion by the total cost, the allocated cost for the other crop input costs is presented under the appropriate total column.

Table 3.2: Soybean Input Costs

Planting Input Products Per Acre	Total Allocated Costs	Rate	Unit	Allocated Costs/Acre
Ammonia Sulfate	\$400.00	100	Lbs.	\$21.40
Potash	\$570.00	150	Lbs.	\$42.75
Dap	\$600.00	70	Lbs.	\$21.00
Dry Application (+ Overlap of 7%)	\$6.00	1.07		\$6.42
Nitrogen/Chem Application (+ Overlap of 5%)	\$21.00	1.05		\$22.05
Extreme (Gal.)	\$24.00	3	Pts.	\$9.45
Rup (Gal.)	\$28.00	44	Oz.	\$10.11
Class Act Flex (Gal.)	\$16.25	32	Oz.	\$4.27
Endigo (Insecticide) (Gal.)	\$235.00	3.5	Oz.	\$6.75
Quadris (Fungicide) (Gal.)	\$320.00	6	Oz.	\$15.75
Select (Gal.)	\$154.00	5	Oz.	\$6.32
Optimize (50#)	\$7.75	1.25	Ac	\$9.69
Asgrow Rr2y (Bag)	\$46.00	1.25	Ac	\$57.50
Total Planting Input Expenses/Acre	\$2,428.00			\$233.44

Table 3.3: Corn Input Costs

Planting Input Products Per Acre	Total Allocated Costs	Rate	Unit	Allocated Costs/Acre
Ammonia Sulfate	\$400.00	100	Lbs.	\$21.40
32-0-0 *	\$390.00	473	Lbs.	\$96.85
9--23--30 *	\$585.00	225	Lbs.	\$70.42
Dry Application (+ Overlap of 7%)	\$6.00	1.07		\$6.42
Nitrogen/Chem Application (+ Overlap Of 5%)	\$15.00	1.05		\$15.75
Lumax (Bulk) (Gal)	\$62.00	1	Qts.	\$16.28
Rup (Gal)	\$28.00	28	Oz.	\$6.43
Class Act (Gal)	\$16.25	16	Oz.	\$2.13
Instinct (Gal)	\$40.00	1	Qt.	\$10.50
Dkc 58-81 Seed Corn (K)	\$240.00	34000	K	\$102.00
Total Planting Input Expenses/Acre	\$1,782.25			\$348.18

Table 3.4: Other Crop Expenses

Other Crop Expenses	Soybean		Corn	
	Total Allocated Costs	Allocated Costs/Acre	Total Allocated Costs	Allocated Costs/Acre
Fuel Diesel	\$29,166	\$6.55	\$87,497	\$19.66
Fuel LP			\$94,453	\$21.23
Fuel Other	\$15,600	\$1.75	\$15,600	\$1.75
Insurance Crop	\$111,250	\$25.00	\$155,750	\$35.00
Insurance Hail	\$32,040	\$7.20	\$37,380	\$8.40
Insurance Other	\$146,640	\$16.48	\$146,640	\$16.48
Labor	\$94,740	\$21.29	\$284,220	\$63.87
Interest	\$155,961	\$17.52	\$130,035	\$14.61
Marketing	\$159,088	\$35.75	\$430,538	\$96.75
Marketing CAMS	\$18,000	\$2.02	\$18,000	\$2.02
Rent	\$2,109,084	\$236.98	\$2,109,084	\$236.98
Repairs	\$125,000	\$14.04	\$125,000	\$14.04
Scouting	\$100,000	\$11.24	\$100,000	\$11.24
Supplies	\$20,000	\$2.25	\$20,000	\$2.25
Trucking Spring	\$39,083	\$8.78	\$226,688	\$50.94
Trucking Fall	\$48,713	\$10.95	\$148,513	\$33.37
Utilities	\$43,000	\$4.83	\$43,000	\$4.83
Misc.	\$9,156	\$1.03	\$9,156	\$1.03
Total Other Crop Cost/Acre	\$3,256,519	\$423.66	\$4,181,553	\$634.45

The final estimates, presented in Table 3.5, are the unit costs and net income for soybeans and corn from the foregoing assumptions. The finance section went into detail about the financial aspect of the operation, explaining how Charles and Amy chose the operation plan that they did. Charles and Amy understood the numbers needed to see for this operation to work. They went into much detail to explain the budgets, cash flows, and crop production worksheets to prove this point to the investors. For this project, instead of delving into every financial statement, the end result was the focus. Did the ratios encourage Charles and Amy to invest in this operation? As the analysis moves on to these numbers and the risks associated with the venture are considered, it is shown that the plan was not financially feasible.

Table 3.5: Expenses by Major Expense Categories for Soybean and Corn Acres

	Expenses (\$/Bu)	Expenses (\$/Acre)
Soybeans		
Total Machinery Cost	\$1.03	\$56.56
Total Other Crop Expense	\$7.70	\$66.66
Total Crop Input Cost	\$4.24	\$233.44
Grand Total Expenses	\$12.98	\$713.66
Net Income (Profit/Loss)	\$0.02	\$1.34
Corn		
Total Machinery Cost	\$0.27	\$58.50
Total Other Crop Expense	\$2.95	\$634.45
Total Crop Input Cost	\$1.62	\$348.18
Grand Total Expenses	\$4.84	\$1,041.12
Net Income (Profit/Loss)	\$1.16	\$248.88

3.10.1 Pro Forma Budget

A pro forma operating budget is prepared before a major change, anticipated project or new debt is implemented into the company and depicts the results of the change. It predicts anticipated cash flow, revenues and even taxes if so desired (Kunz n.d.). Charles and Amy’s three year projection showed the farm’s ability to continuously earn a profit (Appendix 1).

Red flags arose looking back on these projections. The first issue was the cash that Charles and Amy needed for the operation. Though they could have come up with only a small proportion of their total cash needs. This implied that the investor’s financing would have been used for startup cash. The only way they could get anyone to look at their plan was to have a very candid conversation with investors. Basically, Charles and Amy were investing their “sweat equity.” The investors understood this dilemma and the ones they found to work with were willing to take that chance because the investors were also buying a good deal of top farm ground in Wisconsin. Another flag was the small amount of

money being made by the operation in its first year. While this increased over the three years, it was not fast enough a growth rate to satisfy the investor.

Another area of concern was the large amount of rent being paid to the investor. This rental amount could be key to the farm's success. If Charles and Amy could have negotiated some sort of shared cost rental agreement to mitigate some of the risk from their operations venture, could they have made this a financially feasible operation?

3.10.2 Cash Flow Projections

Cash has a way of disappearing quite quickly. To combat this issue in business ventures, cash flow projections were created to project the cash that flows in and out of the business. Projecting cash flow allows the business owners to set a standard, or budget, where cash should flow and then compare that standard with what actually occurred. Cash flows also indicate to the owner when the business may have an influx of cash for other investments or a shortage of cash that will have to be addressed (Brealey et al. 2011).

Charles and Amy constructed detailed cash flows. Not all investors would want to see such detail, but these spreadsheets were not only for the investor's use. If Charles and Amy actually got the go-ahead from the investor, these cash flows were imperative to have for their operating budget analysis. For this reason, they went to great detail to ensure all numbers were as close to real as possible. Charles and Amy's had been assisting the operation of A & B Farms Partnership for many years and had all of A & B's financial data to compare with their projections. These statements showed a profit for all commodities, though very small profits. So, if all of the numbers stayed the same, the farm would slowly move out of debt. The key to remember here was IF the numbers stayed the same or improved.

3.10.3 Crop Production Worksheets

The crop production worksheet, otherwise known as a break-even analysis, was one of the most crucial pieces of financial analysis in the plan. The break-even analysis determined what the revenue would be for the crops holding costs constant. The spreadsheet allowed Charles and Amy to enter different scenarios to forecast what their break even cost would be. If they chose to add a certain inoculant to soybeans, their spreadsheet provided an estimate of its cost and yield effects. They could then adjust yield if they felt the inoculant would increase that number. These scenarios would allow them to make purchasing decisions and also helped them determine their budget and cash flows.

Charles and Amy decided to conduct break-even analyses to keep a very close eye on expenses. With a highly leveraged company, a small change in expenses could spell disaster for the owner. The model showed lower profit than many would be willing to accept. Charles and Amy looked at continuous corn-on-corn that would create more income, but the cost was very high. Input, labor and equipment costs were all much higher with corn-on-corn acres. Starting this venture and being highly leveraged deterred them from investing in on corn-on-corn acres. Once they were able to pay down some of the debt, the plan would look better, enabling them to reconsider a corn/corn/soybean rotation.

3.10.4 Financing Schedule

ABC farms would have had a hefty debt schedule to contend with, the main downfall of the operation. Many times with succession plans, this factor is dealt with in a way to make farming more financially feasible for family members. Charles and Amy didn't have that luxury, so they had to look at other resources to keep the family farm alive. There were three loans in the plan. This was a point of negotiation with some of the

investors. Many had their own ideas that would get Charles and Amy out of debt earlier, but some sort of plan was needed.

- A five year loan to start in December 2013 in the amount of \$536,802 with the first payment due December 2014 in the amount of \$123,987.73. Interest rate was 5.0%. Until that time, the leases for equipment would be paid by ABC Farms.
- An eight year loan to start in December 2012 in the amount of \$594,750 with the first payment due December 2013 in the amount of \$99,601.45. The interest rate was 7.0%.
- A 20-year loan to start in December 2012 in the amount of \$3,248,468 with the first payment due December 2013 in the amount of \$260,665.48. The interest rate was 5.0%.

This high debt schedule was not an ideal situation, but at the time, Charles and Amy needed a plan. In the next section, alternatives to this financing are discussed.

3.10.5 Financial Analysis

Much information can be acquired from the Balance Sheet. The first line item, *Cash on Hand* tells how much protection the business owner has for troubled financial times. It also shows the option for future growth. The more cash on hand, the more opportunity to use that cash for other investments. Intermediate and fixed assets are less liquid so investors are less likely to dwell on these numbers, though they do not want to see that assets are inflated (McClure, 1). ABC Farms showed a small amount of cash on hand. The crop that would have been harvested and in the bins gave the current assets a boost, but this amount came from future sales of grain and was not as liquid as cash.

Liabilities typically fall into two ranges: current or non-current, though Charles and Amy used current, intermediate and long-term to define their liabilities. These were

determined by the amount of time of each loan. Investors look to see that assets outweigh liabilities in the balance sheet (McClure n.d.). They also look at the quick ratio which is

$$\text{Quick Ratio} = \frac{\text{Current Assets} - \text{Inventory}}{\text{Current liabilities}}$$

If this ratio is 1.0 or above, typically the company has enough cash and liquid assets to cover short-term debt. ABC Farms definitely showed assets outweighing liabilities, but as was noted earlier, this was not necessarily due to the current assets, and the equipment numbers may have been skewed. The quick ratio was 1.62, which showed positively for the company.

Equity is equal to assets minus liabilities. Investors would look to see if assets were greater than liabilities, but also if this equity was retained by the owners or reinvested into the company for further growth (McClure, 1). The partner's equity showed growth in the 2013 projection. One thing to remember, though, was that this was only a projection, not an actual result. This would all depend on those risk variables that could never be foreseen. Many of the numbers in the balance sheet (Table 3.6) were used in ratios, which are seen in the Financial Scoreboard (Table 3.7). Along with these numbers, two different sources are included that show guidelines for these ratios and highlighted where ABC numbers land according to their guidelines. More detail are presented in Chapter 4 about the findings in the Financial Scoreboard.

Table 3.6: ABC Farms Balance Sheet December 2013

Current		Current	
Cash on Hand	\$18,506.50	LOC	\$5,715,000.00
Crop Harvested	\$7,165,250.00		
Total Current	\$7,183,756.50	Total Current Liabilities	\$5,715,000.00
Intermediate		Intermediate	
Equipment	\$594,750.00	Equipment	\$536,781.05
Planters/Combines	\$594,750.00	Planters/Combines	\$536,781.05
Total Intermediate	\$594,750.00	Total Intermediate Liabilities	\$536,781.05
Fixed		Long-Term	
Equipment #3		Equipment #3	\$3,150,225.92
Misc	\$248,468.00		
Grain Bins/Bldgs	\$3,000,000.00		
Total Fixed	\$3,248,468.00	Total Long-Term	\$3,150,225.92
Total Assets	\$11,026,974.50	Total Liabilities	\$9,402,006.97
		Equity	
		Partners' Equity	\$1,624,967.53
Total Assets	\$11,026,974.50	Total Liability and Equity	\$11,026,974.50

3.11 Financial Analysis of Charles and Amy's Original Plan

It is apparent that a great deal of time and energy went into the financial analysis of the farming operation business model. It is also apparent that Charles and Amy knew what it would take financially to run a large farming operation in southwestern Wisconsin. The Financial Scoreboard (Table 3.7) for the farm was a huge red flag to investors. The current ratio was above 1.0, but still much lower than what most would like to see it. Looking at where they were in the production cycle was important to this analysis. The farm would have just finished harvesting and the crops were stored in the grain bins. This fact helped

boost the ratio over 1.0, putting their operation in the yellow area on Kohls' benchmarks, but the number was still lower than other farms in the Illinois study (Morningstar 2015).

The solvency numbers showed it would be hard to get their money out of the investment if they would need quick cash. The farm debt-to-asset ratio was at 85% for ABC Farms. Comparing that figure to the Illinois numbers, it was 53% higher than the highest percentage from *farmdoc*. As this ratio increased, the management flexibility decreased because assets have to cover debt (Northwest Farm Credit Services 2004).

Although the farm was profitable, the percentage compared to the interest rate for the debt was probably not high enough to entice investors. ABC Farms' profitability was 5.0% and its interest on its loans were between 5% and 7%. Putting this into perspective, the S&P 500 three year average return on investment through September 11, 2015 was 13.39% (Morningstar 2015).

The financial efficiency of ABC Farms seemed to be its saving grace. Benchmarking it with the University of Illinois numbers, the farm was much higher at 0.79 compared to 0.46, 0.31 and 0.20 from the university study. This told Charles and Amy along with any investors that the assets that were held could efficiently generate revenue for the farm.

Investors did not give these numbers much weight because the numbers relied heavily on equipment figures and projected earnings. Had these numbers been actual reflections of years past, the ratios would have been more relevant to the study and looked at more extensively by investors.

Why would Charles and Amy still move forward and try to find an investor to work with them? The answer lies not in the mind, but in the heart. The love and passion for the

family farm tugs at many a successor's heartstrings. This farm was all they knew. Granted, Amy had gone off to college and taught for a short time, but in the end, she wound up back on the family farm and Charles never left the farm. There were emotional values tied with the family farm (Rogers 2014).

The loans described in section 3.10.4 were Charles and Amy's suggestions. The investors saw them and suggested possibly lower interest rates, lower purchase prices for the equipment and the possibility of the investors owning everything, leaving Charles and Amy just as operators, not owners of the operation. Obviously, that did not bode well with Charles and Amy.

Though they haven't been specific about numbers for commodity prices and inputs, it is important to point out an important assumption in the financial analysis of this plan. The commodity prices did not continue to hold for 2013 to 2015. Charles and Amy should have expected this threat and had a contingency plan for it (Babler 2004). A look at the grain prices showed that the predictions of \$6.00 corn and \$13.00 soybeans would have held until around July 4, 2013, but after that date, if crops were not hedged through the broker, those prices would not be attainable for the operation.

When income goes down for farmers, one of the first things they do is cut down on inputs. This strategy works for the short term, but when harvest comes around and yields are lower than normal, tension with the input suppliers increases. Then one typically see inputs start to come down.

Table 3.7: ABC Farms Financial Scoreboard 2013 Compared to University of Illinois Benchmarks and Kohl Standards

Indicator	ABC	Farmdoc			Kohl		
Liquidity	Measure	Level 1	Level 2	Level 3	Green	Yellow	Red
Current Ratio	1.26	7.2	3.08	1.62	>1.50	1.00-1.50	<1.00
Working Capital	\$1,468,757						
Solvency							
Farm debt-to-asset ratio	85%	7.70%	18.00%	31.30%	<30%	30-55%	>55.0%
Farm Equity-to-asset ratio	15%				>55%	30-55%	<30.0%
Farm debt-to-equity ratio	5.79%	8.40%	21.90%	45.60%	<42%	42-122%	>122%
Profitability							
Net Farm Income	\$725,742						
Rate of Return on Farm Assets	0.05	14.10%	8.50%	8.00%	>5.0%	1.0-5.0%	<1.0%
Rate of Return on Farm Equity	0.35	18.50%	10.30%	5.00%			
Repayment Capacity							
+	0.04						
Financial Efficiency							
Asset-Turnover Ratio	0.79	0.46	0.31	0.2			
Operating-Expense Ratio	0.83	46.90%	55.50%	64.10%	<65%	65-80%	>80%

Charles and Amy could see that as a distinct possibility because they had lived this scenario before. When commodity supply declines, prices increases and vice versa.

Adjusting for these ups and downs in farming was essential for ABC Farms, and nowhere in the plan did that issue get addressed. The price of crude oil, for example, has always been a major player in the commodity price fluctuations. Yet, they did not consider this in their plan. While they might not have had all the answers, considering them would at least have allowed them to make the necessary adjustments in their projections. Table 3.8 provides a summary of the assumptions that Charles and Amy used in their plan as presented in the foregoing discussion.

Table 3.8: Summary of Assumptions in Charles and Amy’s Original Plan

Assumptions	
Crop Plan	50/50 Corn/Soybean Rotation
ABC Farms Operation	Operator takes on all risks involved with farming, but also reaps all rewards
Year 1 Initial Investment	\$80,000 borrowed from investor
Year 2 Investment	\$5,715,000 borrowed from investor - determined by amount borrowed during 2013 season
Year 3 Investment	\$4,765,000 borrowed from investor - determined by amount borrowed during 2014 season
Discount Rate	7%
Life of Plan	3 years with possibility of continuing on afterwards if operators so chose
Cash Flows	= Total income - Total Expenses, including owners salary
Income and Expense Amounts used in Cash Flows	Determined from Production Worksheets described in Section 3.7.2

CHAPTER IV: LESSONS LEARNED

Given the knowledge that has been garnered about planning and financial analysis, how should Amy and Charles have structured the development of their business plan to ensure their success? In this section, an alternative plan for ABC Farms is presented. The process provides insights into what could have been done to enhance the probability of success by the operations.

We begin with a description of the business and the underlying revenue model. A list of the assumptions to the alternative model are described along with the assets for the model. Then, the alternative plan is described and alternative scenarios are evaluated for critical variables, such as price and inflation rate.

4.1 The Alternative Business Plan (Plan B) Description

With the price of land and the large rental rates for some farm ground, many farming operations look to becoming custom farming operators as an alternative. Custom farming allows the operator to reduce their financial risk exposure on leased ground. It also can allow the operator to use their machinery assets and labor by doing custom work for other farms. In this type of farming arrangement, the custom operator agrees to perform all tilling, planting and harvesting of crops in exchange for a set fee. The landowner assumes all input costs while keeping ownership of the crop, all crop insurance proceeds and commodity payments.

4.2 The Alternative Business Model (Plan B)

Had Charles and Amy decided to draft another plan to continue to operate the farms as custom workers, would their business plan have been more feasible? To draft this scenario, only certain line items would be needed. Table 4.1 and Table 4.2 present the

assumptions facilitating the assessment of the alternative business model and purchased equipment their prices.

In the alternative model, Charles and Amy would initially have to invest \$1,903,087 to begin their custom operation. From the assumptions, the analyses were conducted under three net revenue per acre scenarios - \$85/acre, \$130/acre and \$175/acre. These are driven by changes in grain prices and operating costs.

Table 4.1: List of Assumptions for Alternative Model (Plan B)

Item	Assumption
Crop Plan	50/50 corn/soybean rotation o 8,900 tillable acres
Custom Operating Lease	Operator paid to till, plant and harvest
Scenario 1	Net return per acre ranges between \$80 and \$105 with an average of \$89.80/acre
Scenario 2	Net return per acre ranges between \$95 and \$115 with an average of \$104.50/acre
Scenario 3	Net return per acre ranges between \$-50 and \$100 with an average of \$19.50/acre
Discount Rate	7%
Life of Plan	10 years
Initial Assets	\$1,093,087 in assets purchased from liquidating A & B Farms Partnership (Table 4.2)

The randomly generated annual net revenue per acre for the three scenarios is presented in Figure 4.1. Without any information on prices and operating costs, including fertilizer, chemicals, seeds and fuel, it was assumed that the net revenue per acre would fluctuate under each scenario between the averages obtained from Thiessen (2013) and crop budgets from Iowa State University on corn-soybean rotation and soybean-corn rotations (<https://www.extension.iastate.edu/agdm/crops/html/a1-20.html>). We have built into our assumptions a higher variability in the net revenue per acre for Scenario 3 than for Scenarios 1 and 2 because it is expected that at higher net revenues per acre, risks also

increase. This is reflected in the standard deviations for the net revenue per acre under the three scenarios: \$2.16; \$3.01; and \$8.09 respectively.

Table 4.2: Purchased Assets for Alternative Model (Plan B) Farming Operation

Purchased Assets	Price (\$)
Combine 2011	\$300,000
Combine 2011	\$300,000
Grain Cart 2010	\$61,620
Grain Cart 2010	\$61,620
Chisel 1998	\$15,500
Planter 2001	\$45,000
Planter 2010	\$120,000
Turbo 2012	\$65,000
Harrow 2000	\$15,000
Cultivator 2005	\$25,000
Cornhead 2011	\$50,000
Cornhead 2011	\$50,000
Beanhead 2011	\$25,000
Beanhead 2011	\$25,000
600 Tractor 2010	\$207,545
350 Tractor 2010	\$132,795
350 Tractor 2010	\$132,795
350 Tractor 2010	\$132,795
290 Tractor 2010	\$130,600
Loader 2010	\$7,817
Total	\$1,903,087

Figure 4.1: Generated Net Revenues/Acre Used in Analysis

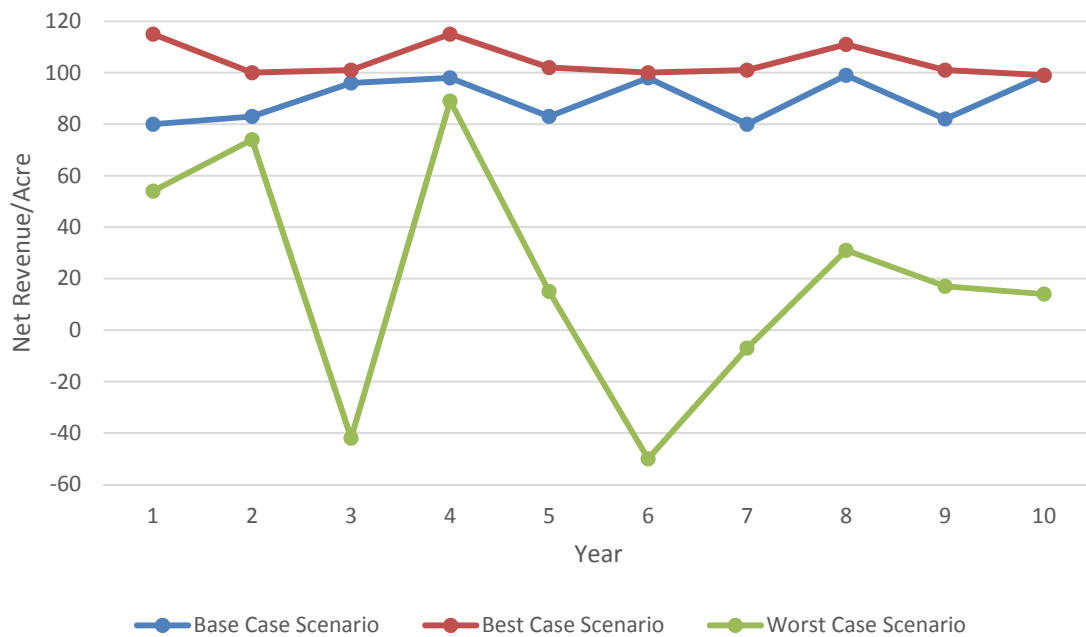


Table 4.3 shows the net income trend under the three net revenue per acre scenarios with the estimated Net Present Value (NPV) and Internal Rate of Return (IRR). The table shows that the NPV under the base case scenario is about \$3.68 million compared to the best case result of approximately \$4.66 million. The worst case presented a negative NPV of a little over \$513,446. The IRR for the base scenario was in excess of 66%, while the best case and the worst case scenarios came in at 103.35% and -3.29%. The foregoing suggests that Charles and Amy would need to reconsider their operations carefully should the worst case scenario net revenue/acre prevail over the 10 years.

What is the probability of the three scenarios manifesting? We assumed that there is a 50% chance that base scenario would occur while the best and worst scenarios are assumed to occur in 25% of the cases. Over the 10 years, the expected NPV is \$2.88 million given the foregoing assumption about probability of occurrence. The IRR of return

was estimated at about 58% for the expected outcome, indicating that the business could still produce good performance if the company was able to operate in a condition where the worst case scenario only occurred 25% of the time. Iterating the probability of occurrence till the worst case had a 60% chance of occurring and the base and best cases had 20% chance each still produced an IRR of about 35% and a NPV of about \$1.36 million.

Table 4.3: Net Income Flow under Alternative Scenarios

Period	Net Income		
	Base Case Scenario	Best Case Scenario	WorstCase Scenario
1	\$712,000	\$1,023,500	\$480,600
2	\$738,700	\$890,000	\$658,600
3	\$854,400	\$898,900	-\$373,800
4	\$872,200	\$1,023,500	\$792,100
5	\$738,700	\$907,800	\$133,500
6	\$872,200	\$890,000	-\$445,000
7	\$712,000	\$898,900	-\$62,300
8	\$881,100	\$987,900	\$275,900
9	\$729,800	\$898,900	\$151,300
10	\$881,100	\$881,100	\$124,600
NPV	\$3,679,327	\$4,657,308	(\$513,446)
IRR	66.13%	103.35%	-3.29%

V. CONCLUSION, RECOMMENDATIONS AND SUGGESTIONS FOR FURTHER RESEARCH

5.1 Conclusion

Farming families are transitioning from older to younger generations. A & B Farms Partnership was no exception. The four current partners in 2011 intended for Charles and Amy to work with new land owners and continue the farming operation. But, a chain of events neither Charles nor Amy would have ever expected occurred.

In 2012, the primary land owners of A & B Farms Partnership decided to sell the farms. Though there was originally a plan in place for the two junior partners, Charles and Amy, to succeed the four current partners, this plan changed and Charles and Amy were now faced with the task of writing a business plan and finding investors not only for the farm land but also for their business operation. Charles and Amy did find investors, though the financial analysis of their plan showed a highly leveraged firm that probably could not sustain itself under any form of adversity in the plan.

If Charles and Amy had decided instead to create a custom operating business, would they have had a financially feasible operation? By looking at their numbers and analyzing the net present value and internal rate of return, Charles and Amy would indeed have created a plan worth the time and investment, depending on the custom rate they would have charged for their services.

5.2 Recommendation

The following recommendation for future farm entrepreneurs seeking to pursue the path Charles and Amy embarked upon is made. If the entrepreneurs should be confronted with a situation similar to the one described in the first plan, it is suggested the entrepreneurs walk away from the venture Charles and Amy created. The unknowns are

just too many and the investment is just too great. In this scenario, the assumptions were unrealistic and the business model was structurally deficient to have succeeded had ABC Farms been built.

Looking at the alternative Plan B, assuming a custom farming operation, an entrepreneur could show a clear profit and feel fairly confident in the success of the custom farming business venture depending on the custom rate negotiated between the land owners and operators. The initial equipment investment would be less, the unknown variables such as the commodity price, input costs and weather would be transferred from the entrepreneur to the land owner. The NPV of the operation was positive under very stringent assumptions about net revenue per acre except under the worst case scenario. However, the expected NPV, where it was assumed that the base scenario would have a 50% chance of occurring compared to 25% each for the best and worst cases, produced a positive NPV and an IRR high enough to overcome a hurdle rate of about 20%.

This research has allowed the analyst to look at the financial feasibility of a farming operation and determine if the farm would have been a lucrative enough venture. Also, it has given the analyst the opportunity to evaluate the business plan and determine if there was another more financially feasible plan that could have been considered to allow the entrepreneurs to continue farming their family farms.

5.3 Suggestions for Further Research

5.3.1 Succession Plan

It has been stressed that a good Succession Plan is vital for farms. A & B Farms had this to an extent, but there were enough loopholes that ABC Farms could not survive. Had A & B Farms had a better succession plan, one that took into consideration the current generation's need for financial gain in transitioning to the next generation, would the

current owners have been more conducive to helping Charles and Amy with their new venture? This topic could be looked at in greater detail by breaking down just what A& B Farms had for a succession plan and refining it so that the next generation had a better opportunity to succeed and the current generation had a financial gain from all their past endeavors on the farm.

5.3.2 Farm Management Companies

Typically when an absentee investor purchases farmland, he/she hires a firm to oversee the management of the farms. This firm ensures that the land is being well-cared for and the investment does not lose worth due to land mining or abuse of the property. An analysis of these groups could be done, possibly asking questions such as: Will the investor and property manager be on the same page when it comes to decisions for the farm? Will personalities between the property manager and operator mesh? Does the manager have first-hand knowledge of the geographic area or is the manager just looking at data and analysis?

5.3.3 Lease Negotiations

The actual lease between the investor and the operator was strictly a cash lease. Had Charles and Amy looked at alternatives to the lease, would that have transferred a portion of the risk of the operation from them to the investor, making this a more financially feasible operation for Charles and Amy? Would a flex lease also work in this situation? These questions could be researched and built into the plan.

5.3.4 Land Study and Taxes

A study of the particular land could be done, with new ideas for the property to be evaluated. Will the landowner want to keep the buildings and pasture land, or remove as much as possible and row crop it all? Are there other enterprises the parties want to expand

to grow the operation? How will taxes for the property owners and the surrounding property owners change if structural changes are made to the property?

5.3.5 Neighboring Relationships

Relationships with the neighbors could also be addressed from this topic. Since the sale of A & B Farms, many negative feelings have come out among neighboring property owners. Property taxes have nearly doubled. Neighbors that used to rent to A & B Farms and had planned to rent to ABC Farms become upset with the new operators and now lease to other farmers. A study of how this venture may have positively affected the farmers who now rent to other operators could be done.

5.3.6 Added Revenue Options

Another area Charles and Amy could have studied was the opportunity to offer more services to the investors. For example, in the Plan B scenario, the investors would have been responsible for all marketing. For a fee, Charles and Amy could have added marketing into their plan. Charles was strong in the area of handling grain and keeping it in excellent quality. Again, this service could also add revenue to their plan. Charles and Amy also had good connections with grain transportation companies in the area and could have offered the service of transportation to the investors to spur more revenue.

5.4 Final Reflections

In retrospect, continuing on with the farm as ABC Farms was more for emotional reasons as opposed to financial. Farming was not just a career to Charles and Amy, but a way of life. It was, and is, what they knew. At the time, they were willing to stake their lives on this emotional investment and strive to make it lucrative also. They were willing to risk their future and their families' futures for the risky venture. It may not have been the smart decision, but it was heartfelt.

Had they moved from this business plan to a more lucrative custom operating plan, distancing themselves from the plan and looking at it only as a business venture, would that have made the difference in their lives? A custom operating venture would have given them the luxury of still working their family land with much less risk and considerably more reward financially. Now, they find ourselves moving in different directions, still in agriculture, but on a road less traveled by their family, but one many farm families are finding themselves traveling. And as Frost (1920) noted:

“I shall be telling this with a sigh
Somewhere ages and ages hence:
Two roads diverged in a wood, and I—
I took the one less traveled by,
And that has made all the difference.”

WORKS CITED

- Alvarez, Sharon. 2010. "Two Theories of Entrepreneurship: Alternative Assumptions and the Study of Entrepreneurial Action." *Foundations and Trends i Entrepreneurship*. Accessed August 27, 2015.
http://www.researchgate.net/publication/5018253_Two_Theories_of_Entrepreneurs_hip_Alternative_Assumptions_and_the_Study_of_Entrepreneurial_Action.
- Amanor-Boadu, Vincent. 2009. "Strategic Business Planning for Agricultural Value-Adding Initiatives." *Ag Marketing Resource Center*. August. Accessed September 7, 2015.
http://www.agmrc.org/business_development/starting_a_business/creating_a_business/articles/strategic_business_planning_for_agricultural_valueadding_initiatives.cfm.
- Babler, Carl. 2004. Platteville, Wisconsin.
n.d. *Barchart.com*. Accessed September 9, 2015.
[http://www.barchart.com/chart.php?sym=ZCZ15&t=BAR&size=M&v=2&g=1&p=WN&d=X&qb=1&style=technical&template=.](http://www.barchart.com/chart.php?sym=ZCZ15&t=BAR&size=M&v=2&g=1&p=WN&d=X&qb=1&style=technical&template=)
- n.d. *Barchart.com*. Accessed September 9, 2015.
[http://www.barchart.com/chart.php?sym=CLZ15&t=BAR&size=M&v=2&g=1&p=WN&d=X&qb=1&style=technical&template=.](http://www.barchart.com/chart.php?sym=CLZ15&t=BAR&size=M&v=2&g=1&p=WN&d=X&qb=1&style=technical&template=)
- Brealey, Richard A., et al. 2011. *Principals of Corporate Finance*. New York, NY: McGraw-Hill Irwin.
- Budzowski, Bonnie. n.d. "What is Credibility and Why Do You NEED to Care." *Incredible Messages*. Accessed August 30, 2015. <http://incrediblemessages.com/what-is-credibility-and-why-do-you-need-to-care/>.

n.d. *Cassville.org*. Accessed August 24, 2015.

<http://cassville.org/Cassville%20History/cassville%20story.html>.

Dietmann, Paul. 2014. "Business Planning & Financial." *New Farmer Summit*. New Glarus. Accessed August 2015.

file:///C:/Users/Angie/Downloads/Business%20Planning%20and%20Financial%20Tools_New%20Farmer%20Summit_Dietmann.pdf.

Edwards, William. 2015. "Iowa State University Extension and Outreach Ag Decision Maker." *Estimating Farm Machinery Costs*. May. Accessed September 21, 2015.

<http://www.extension.iastate.edu/agdm/crops/html/a3-29.html>.

Entrepreneur. 2015. "6 Strategies for Presenting Your Business Plan." February 3. Accessed August 30, 2015. <http://www.entrepreneur.com/article/241539>.

2014. "Farm Credit University." Accessed September 12, 2015.

<http://www.fcuniversity.com/staff.html>.

Featherstone, Allen. 2010. "Economics of the MAB program." *Economics 101* 40-72.

Fiene, Andy. 2012. "General Manager." Mt. Horeb, Wisconsin, May.

Frost, Robert. 1920. *Mountain Interval*. New York: Henry Holt and Company.

bartleby.com.

Goodrich, Ryan. 2015. *Businessdaily.com*. January 1. Accessed August 25, 2015.

<http://www.businessnewsdaily.com/4245-swot-analysis.html>.

Hammer, Bob. 2015. "Great Plains Farms LLC." May 13. Accessed August 27, 2015.

<http://www.greatplainsfarmsllc.com/technology-in-farming/>.

- Hayward, Mathew L. A. et al. 2006. "A Hubris Theory of Entrepreneurship." *Management Science* (INFORMS) 52 (2): 160-172. Accessed August 27, 2015.
<http://www.jstor.org/stable/20110496>.
2015. *Hertz Farm Management, Inc.* Accessed September 21, 2015.
<https://www.hertz.ag/farm-management/leases/>.
2015. "Historical Inflation Rates: 1914-2015." *US Inflation Calculator*. Accessed September 23, 2015. <http://www.usinflationcalculator.com/inflation/historical-inflation-rates/>.
- Hofstrand, Don. 2009. "Writing a Value-Added Business Plan." *Agricultural Marketing Resource Center*. August. Accessed August 24, 2015. <http://www.agmrc.org/>.
- n.d. *Indexmundi.com*. Accessed September 9, 2015.
<http://www.indexmundi.com/commodities/?commodity=urea&months=300>.
- Kunz, Marnie. n.d. *What is a Pro Forma Operating Budget?* Accessed September 11, 2015. <http://smallbusiness.chron.com/pro-forma-operating-budget-31120.html>.
- McClure, Ben. n.d. *Fundamental Analysis: The Balance Sheet*. Accessed September 11, 2015.
<http://www.investopedia.com/university/fundamentalanalysis/fundanalysis7.asp>.
- Morningstar. 2015. *S & P 500 Index*. Accessed September 12, 2015.
<http://quicktake.morningstar.com/index/IndexCharts.aspx?Symbol=SPX>.
- Northwest Farm Credit Services. 2004. "Understanding Key Financial Ratios and Benchmarks." *Texas Tech Department of Agricultural and Applied Economics*. Accessed September 11, 2015.

http://www.support.aaec.ttu.edu/faculty/phijohns/AAEC%204316/Lecture/FCS_FIN%20RATIOS.pdf.

Parkes, Colin Murray. 1998 . "Bereavement in Adult Life." *British Medical Journal* 316 (7134): 856-859. Accessed August 30, 2015.

<http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1112778/>.

Peregrym, Darrell and Randy Wollf. 2013. "Values-Based Leadership: The Foundation of Transformational Servant Leadership." *The Journal of Values-Based Leadership* 6 (2). Accessed August 30, 2015.

<http://scholar.valpo.edu/cgi/viewcontent.cgi?article=1084&context=jvbl>.

n.d. *Plan Projections*. Accessed August 26, 2015.

<http://www.planprojections.com/projections/budget-vs-forecast-vs-projection-vs-pro-forma/>.

Porter, Michael. 1980. *Competitive Strategy*. New York: Free Press.

Regents of the University of Minnesota. 2007-2010. "AgPlan." Center for Farm Financial Management. Accessed August 24, 2015. <https://www.agplan.umn.edu/>.

Rogers, Joshua. 2014. "<http://www.forbes.com/sites/joshuarogers/2014/09/23/dirt-cheap-investors-are-plowing-into-farmland-heres-why/>." September 23. Accessed August 29, 2015. <http://www.forbes.com/>.

Rogoff, Edward G. 2003. "A Process Model of Business Plan Development." *The Entrepreneurial Executive* 8: 23-38.

Schurle, Bryan et al. 2012. *AgManager.info*. Edited by Kansas State University. November. Accessed August 25, 2015.

<http://www.agmanager.info/farmmgt/planning/MF3074.pdf>.

- Swanson, Donald L. 2015. "Guest Article: The 1980s Farm Crisis: Some Lessons Learned." *Iowa State University CALS*. January 12. Accessed August 30, 2015.
<https://www.calt.iastate.edu/article/guest-article-1980s-farm-crisis-some-lessons-learned>.
2015. *TEPAP*. Accessed August 24, 2015. <http://tepap.tamu.edu/>.
- Thiesse, Kent. 2013. "Corn and Soybean Digest." *2013 Custom Farming Rates Up Slightly from 2012*. March 26. Accessed September 21, 2015.
<http://cornandsoybeandigest.com/blog/2013-custom-farming-rates-slightly-2012>.
2015. "U.S. No 2 Diesel Retail Prices." *U.S. Energy Information Administration*. Accessed September 21, 2015.
http://www.eia.gov/dnav/pet/hist/LeafHandler.ashx?n=pets&s=emd_epd2d_pte_nus_dpg&f=a.
- University of Illinois. 2015. *farmdoc*. Accessed September 12, 2015.
<http://www.farmdoc.illinois.edu/finance/benchmarks.asp>.
- US Fed News Service, Including US State News*. 2013. "Farm Business Plans Improve Efficiency and Profitability." August 13. Accessed August 24, 2015.
<http://search.proquest.com.er.lib.k-state.edu/docview/1419748170?accountid=11789>.
- USDA NASS. 2014. "2014 Wisconsin Agricultural Statistics." Department of Agriculture, Trade & Consumer Protection, Madison. www.nass.usda.gov/wi.
- Wyant, Robert. 2011. "Personal Communication." Minneapolis, February 12.

Appendix 1: Pro-Forma Cash Projections for 2013 through 2015

Items	2013	2014	2015
Cash on hand (beginning of month)	\$-	\$18,507	\$42,725
CASH RECEIPTS			
Bean Sales	\$1,300,000	\$3,324,750	\$3,181,750
Corn Sales	\$300,000	\$5,440,500	\$5,740,500
TOTAL CASH RECEIPTS	\$1,600,000	\$8,765,250	\$8,922,250
Total cash available			
CASH PAID OUT			
Equipment #1A	\$-	\$123,988	\$123,988
Equipment #2	\$99,602	\$99,602	\$99,602
Equipment #3	\$260,666	\$260,666	\$260,666
Equipment Rental	\$155,893	\$27,748	\$27,748
Fuel & LP	\$263,316	\$226,716	\$226,716
Insurance	\$498,180	\$483,060	\$483,060
Interest on LOC		\$155,961	\$130,035
Labor & Taxes	\$228,960	\$228,960	\$228,960
Marketing	\$105,500	\$592,275	\$607,625
Premier Fertilizer w/all application fees	\$1,598,298	\$1,443,830	\$1,443,830
Premier Chem	\$492,407	\$434,596	\$434,596
Rent	\$2,162,548	\$2,109,084	\$2,109,084
Repair	\$125,000	\$125,000	\$125,000
Scouting	\$100,000	\$100,000	\$100,000

Seed	\$789,105	\$709,775	\$709,775
Supplies	\$20,000	\$20,000	\$20,000
Trucking	\$194,863	\$447,615	\$457,145
Utilities	\$43,000	\$43,000	\$43,000
Misc. Expenses	\$9,156	\$9,156	\$9,156
Owners' withdrawal	\$150,000	\$150,000	\$150,000
TOTAL CASH PAID OUT	\$7,296,494	\$7,791,031	\$7,789,985
OTHER OPERATING DATA			
Operating LOC	5,715,000	\$4,765,000	3,650,000
CASH ON HAND (END OF YEAR)	\$18,507	\$42,725	\$59,990