A
Business Plan
For

Submitted To:
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1.0 EXECUTIVE SUMMARY

Results

BCB Company proposes to install two breweries in Indianapolis, Indiana in the first year and Milwaukee, Wisconsin in the fourth year of operation. The Milwaukee plant will be expanded from 6,000 barrels per year to 15,000 barrels per year in the same year it is built. Based on financial data on labor costs, equipment costs, leasing costs, cost of raw materials, and operating costs, a total revenue of $1.08 million for the first year was determined. This is based on operating on a 30 barrel system process producing four batches per week and selling the product for $180 per barrel. A net present worth was determined to be $5,413,000 for a 20 year lifetime of the project.

Description of the Business

Big Cock Brewing (BCB) Company will be incorporated as a privately held corporation managed by the president. The business of the company is the production of high-quality pale ale beer for local and regional markets. BCB Company will initially produce Rooster Brew to be distributed in bottles and kegs, depending on market demand. The company will produce beer using a 30 barrel system process producing approximately four batches per week, which corresponds to 6,000 barrels per year. The addition of more fermenters as demands increase will increase the capacity by 1.5% each year.

Management Responsibility

The president is responsible for the management and overall operation of the business. In the start-up phase, the president will choose and supervise all utility subcontractors; will approve, supervise, and assist in all construction; and will approve the design, purchase, and installation of all brewing equipment. In future operations, the president will be responsible for overseeing all aspects of daily operation. This includes brewing, bottling, distributing, marketing, sales, and customer satisfaction, and will also carry out the licensing process, secure financing of operational expenses, and direct the daily start-up operations.

Marketing and Distribution

The typical craft beer consumer is a Caucasian male between the ages of 21 and 55 years who makes $50,000 or more a year. These targeted individuals are more likely to pay the additional cost for a premium, craft brewed beer. BCB Company will compete with fellow microbrewers in the specialty division distributing in that market. Currently, the specialty brews division holds approximately 3% of the total U.S. beer market shares. In the first year, we anticipate on cornering 2% of the specialty division's market shares. This would result in 0.06% of the total market share for the targeted market.

Supporting Arguments

A mathematical model was created to simultaneously account for all possible scenarios, based upon input variables, to determine the optimal placement and conditions for a microbrewery, which is nearly impossible to do by traditional decision making processes. This powerful tool makes it possible to analyze numerous variables at the same time and calculate the optimal plant locations, market locations, and raw materials locations based on the input data. The advantage of using a mathematical model is the flexibility in updating parameters and different business strategies as new information becomes available over time. By doing this, the effect of varying parameters can be evaluated. Factors, such as demand or shipping costs, might change during the course of the study, and the mathematical model can easily be updated to ensure accurate and precise results. This capability will be instrumental in determining the reliability of the final results.

2.0 INTRODUCTION

Microbreweries are defined by the industry as small breweries that produce less than 15,000 barrels of beer per year and distribute the product for consumption off-premise. Microbreweries sell to the public by one or more of the following methods: the traditional three-tier system (brewer to wholesaler to retailer to consumer); the two-tier system (brewer acting as wholesaler to retailer to consumer); and, directly to the consumer through carry outs and/or on-site tap-room or restaurant sales.

According to the Association of Brewers, craft beer production has increased by 3.4% in 2003. The growth is measured by the number of barrels of beer U.S breweries produced in that year. The continued growth trend from year to year addresses the stability of craft beer in a variety of economic environments. As of 2003, there were 358 microbreweries in operation in the United States.

2.1 Advantage of a Microbrewery

One main advantage of a microbrewery is that they are able to supply their product to the consumer when the product is at its peak of freshness. For a microbrewery, quality is the most important concern, given their small market share and limited competitive edge compared to large national breweries. For this reason, using the highest quality ingredients (malted barley, hops, yeast, and water) is more justified, as opposed to using corn and rice which is used by large scale breweries to cut costs.

2.2 Microbrewery Markets

Beer consumption is greatly dominated by male consumers, with men accounting for over 80% of the volume consumed. A large number of these drinkers are Caucasian and favor a light beer. Of all the beer types, light beer has the strongest following among women consumers. Women beer drinkers are more strongly attracted to microbrewed beers than domestic beers. The appeal of microbrewed beers is stronger among Caucasian beer drinkers than any other ethnicity.

2.3 Microbrewery Organization

The president has overall responsibility for the start-up and daily operation of the microbrewery. In the start-up phase, the president will choose and supervise all utility subcontractors; will approve, supervise, and assist in all construction; will approve the design, purchase, and installation of all brewing equipment.

The brewmaster will be responsible for all tasks related to the production of beer in the daily operations phase of the project; will perform the regular brewing routine and all tasks associated with preparing all products for the market.

The marketer will be responsible for selling the product to as many businesses as possible in order to keep the demand and production growing at a considerable pace. He/she will be responsible for marketing ads and research to keep up with the changing times to determine who will best benefit from the product.

The components manufacturing team will be responsible for assisting the brewmaster in daily brewing tasks and keeping the operation running smoothly.

The assembly manufacturing team will be responsible for the packaging of the final product in order to get it ready for distribution. This includes bottling and kegging and all other aspects related to the process, such as capping and labeling of the bottles and kegs.

3.0 THE PRODUCT

Big Cock Brewing Company's product, Rooster Brew, an American pale ale, will be one of the most unique and distinctive products of its kind on the market. The name, Rooster Brew, is not yet trademarked and will be an appropriate name for BCB Company's product. Factors related to manufacturing, prospect knowledge, industry standards, and regulatory controls are likely to generate a few problems for BCB Company. However, these problems should only exist during the introduction period of Rooster Brew into the market, but will reduce as time goes by.

3.1 Description

Big Cock Brewing Company will produce a high-quality pale ale beer. A pale ale has been chosen for the recipe of the beer to be produced because it is lighter in taste than other microbrews, but it has more taste than the watered-down national brands. This light, yet distinct, taste of Rooster Brew should appeal to the public. Rooster Brew will be an American pale ale, which is the American adaptation of the English pale ale. American pale ale has the appearance of a pale golden to amber color. It has a moderate hop and malt flavor compared to the aggressive hop flavor and bitterness of other types of beer. To achieve this desired type and flavor of beer, specific raw materials and the type of processing must be met. This includes choosing the desired types of malted barley, hops, and yeast. In addition, the preparation of the raw materials and how the beer is made, aged, and bottled must be performed in a specific way to achieve the desired taste.

3.2 Market Status

The markets for Big Cock Brewing Company's Rooster Brew will be located in Illinois and Indiana for the first year and Wisconsin in the fourth year. It will not be marketed nationwide because of the size of the brewery, the shipping cost, and the capacity of the brewery. As Rooster Brew becomes more desirable to its patronages, more breweries may be opened in other parts of the United States. For now, only two breweries will be built.

4.0 THE MARKET

The large domestic brewers, mainly Anheuser-Busch, Miller Brewing Company, and Coors Brewing Company, dominate the beer market. These domestic brewers have cornered approximately 86% of the beer market[1]. Imported beers have about 11% of the beer market shares[1]. Lastly, specialty brews have claimed approximately 3% of beer sales in the United States[1]. Big Cock Brewing Company will compete with fellow microbrewers in the specialty division. Although BCB Company is in competition with other microbrewers, its share of the market will not come so much at their expense, as it will at the expense of imported beers and domestic industrial brewers whose customers are gradually shifting to fresher and more flavorful microbrewed products. The demand for microbrewed products is growing and at the expense of the domestic brewers. According to statistical data, the domestic brewer's market share has declined by 0.5%, while the specialty market share has increased by 0.06%[1]. This decrease in domestic consumption has been steadily increasing over the past ten years due to the growing popularity of microbreweries. This does not mean that consumption by volume has increased or decreased, it means that more beer drinkers are shifting their loyalty from the large domestic brewers to the specialty brewers. Due to the popularity and increase in market share of microbrewing, BCB Company will target the consumer that prefers a higher quality and richer taste in their beer.

4.1 Description and Demographic

The profile of the typical craft beer consumer based on gender, age, income, and ethnicity is illustrated below:

Figure 4.1 below illustrates the percentages of males and females that consume craft/microbrewed beer. This corresponds to craft beer consumption of 82% males and 18% females.

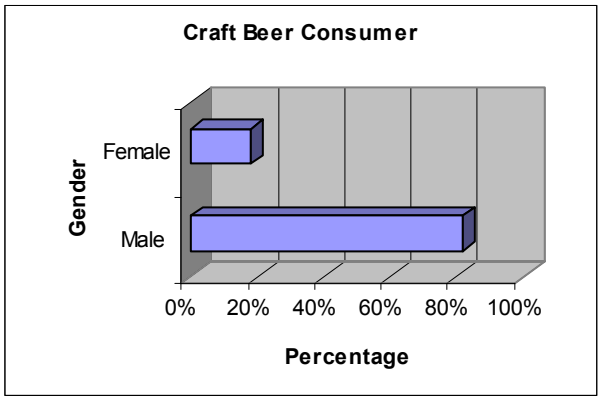


Figure 4.1: Craft Beer Consumer by Gender

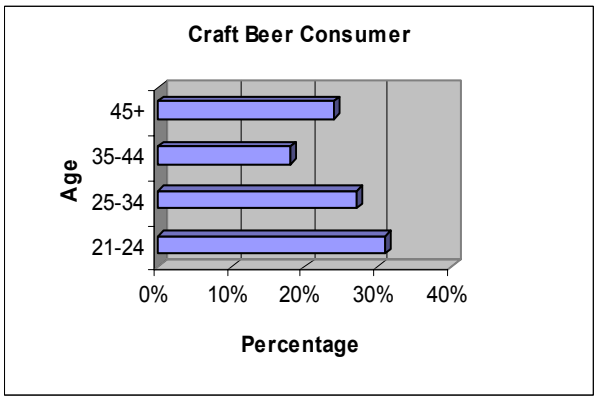
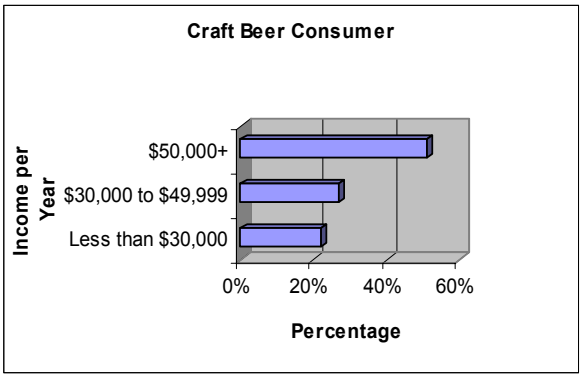


Figure 4.2: Craft Beer Consumer by Age

Figure 4.2 corresponds to the different age groups that drink craft/microbrewed beer. As reflected by the chart, the majority of craft/microbrewed beer consumers are between the ages of 21-34.

Figure 4.3 reflects the income per year of those that purchase and consume craft/microbrewed beer. From the graph, it is apparent that the majority of craft/microbrew drinkers make $50,000 or more a year.



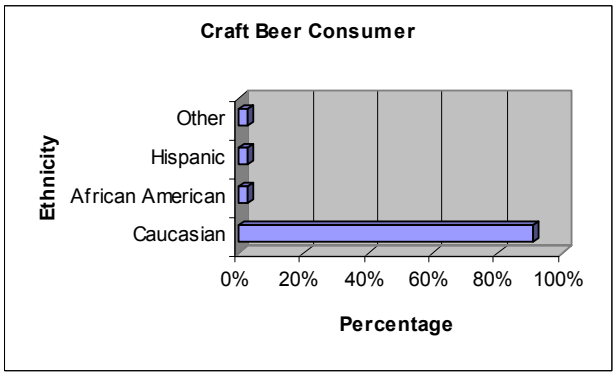


Figure 4.3: Craft Beer Consumer by Income

Figure 4.4: Craft Beer Consumer by Ethnicity

Figure 4.4 shows what ethnicity consumes the most craft/microbrewed beer. It is very obvious that Caucasians consume the most craft/microbrewed beer.

The typical craft beer consumer is a Caucasian male between the ages of 21 to 55 years who makes $50,000 or more a year[2]. BCB Company expects over 50% of sales to come from individuals fitting this profile. In the first years of business, BCB Company intends to market Rooster Brew solely to those fitting this profile because they are the ones that consume the largest amounts of craft brewed beer. It will be easier and cheaper to market Rooster Brew, in beginning years, to these individuals because most of them will be familiar with craft brewed beer and more willing to try a new beer as opposed to those who have strong loyalty to domestic brews. These targeted individuals are more likely to spend the extra money for a premium, craft brewed beer. However, BCB Company does not intend to focus marketing and advertising solely on those fitting this profile throughout the existence of the company. Once BCB Company has the economic means and a stable customer base, it will begin to focus attention on those not targeted by microbrewers. One of the main reasons BCB Company chose to brew a light pale ale is because the taste appeals to both male and female drinkers. Even though BCB Company is not directly targeting females, BCB Company anticipates Rooster Brew to attract female drinkers with a minimal amount of direct marketing. Statistics have also shown that the Hispanic population will begin to play a major role in the volume of beer consumed[2]. This does not apply to just microbrewed beer, but to the beer industry as a whole. Using this data, BCB Company plans to focus the marketing strategy on the Hispanic population during the time in which they will play a vital role in beer consumption.

4.2 Potential Customers

The most important customers of BCB Company are the owners and managers of liquor retail outlets in the targeted market location. The following statistical data illustrates the possible customers for the targeted market.[2]

This chart reflects which retailers sell the most beer. It is apparent that the top three retailers of beer are on-premise locations (bars, taverns, pubs, hotels, restaurants, etc.), convenience stores, and supermarkets.

Category	Percent Sales	Millions of Barrels
On-Premise	25%	51.2
Convenience Stores	23%	47.1
Supermarkets	20%	41.0
Liquor Stores	16%	32.8
Drug Stores	4%	8.2
Wholesale Clubs and Supercenters	3%	6.2

Table 4.1: Potential Customers

4.3 Priority Customers

At BCB Company, the marketing strategy is to concentrate on satisfying the demand of a core group of customers in the first years of production. Therefore, a select number of retail outlets in the targeted market location will receive priority. First, BCB Company will focus on those retail outlets that exist in the targeted market location. Then, BCB Company will focus attention on those establishments that are already serving microbrewed beers before offering Rooster Brew to those that are not yet carrying microbrewed beers. BCB Company wants to focus on these establishments first because they have already expressed a strong interest in selling microbrewed beers. Plus, if these establishments have an interest in microbrewed beers, they must have a customer base that is demanding this kind of beer. By selling Rooster Brew to these establishments, BCB Company can tap into the market, increase market share, and begin to establish a group of loyal clients. However, BCB Company will have to make this decision carefully so as to develop a core group of satisfied customers, while planning for a much broader distribution in the future. Eventually, BCB Company intends to introduce the product in establishments that have not yet begun to offer their customers microbrewed beers.

4.4 Competition

As a microbrewery, competition is small production scale breweries and other microbreweries that are fulfilling the market demand for domestically produced craft beers distributing in the selected regional markets. These include small scale breweries with small market share encompassing a small regional market.

Consumer interest continues to grow in a wide range of beers, ales, and other malt beverage products. Approximately 2,800 malt beverage brands are now produced in the U.S., three times the number of brands produced a decade ago. United States and international brewers continue to produce a tremendous array of beer styles with solid niche markets continuing to develop for industry members of every size.

BCB Company's competitive edge is founded on three principles:

- Allow BCB Company's mathematical model to determine the optimal location, size, and market for the brewery in the United States.
- Establish a process with the highest feasible level of automation to ensure product quality and predictability.
- Aggressively market Rooster Brew beer to ensure market share and market share growth.

In the last twenty years, the craft brewing industry has exploded, but only a few have risen to the top in national prominence, such as Spoetzle Brewery, Boston Brewing Company, and others. The question is what these companies have done to differentiate themselves from their competition. The first, obviously, was to produce a high quality beer to meet market demands. These beers have all been submitted for contests and have won some award of one kind or another.

4.5 Estimated Market Share and Sale Projections

As previously stated, BCB Company will be competing with other microbrewers in the specialty division. Currently, this division holds approximately 3% of the total U.S. beer market shares[1]. In the first year, we anticipate on cornering 2% of the specialty division's market shares. This would result in 0.06% of the market share for the desired targeted market. This data was calculated assuming that we would corner 0.06% of each of the targeted markets until 2010. This is a very conservative, but reasonable estimate. In the beginning, BCB Company is going to have limited production and capacity. It would be extremely difficult to produce the amount of beer to satisfy more than the 0.06% for each of the potential market locations. Therefore, this 0.06% was used to illustrate the minimum market share. In addition, BCB Company included the fact that the beer market is expected to increase by 1.5% each year until 2010[4]. Using the amount of beer consumed in each possible market for the year 2000, the 1.5% increase in consumption, and the 0.06% of the market share, we were able to project sales.

5.0 MARKETING STRATEGY

Big Cock Brewing Company is entering the market with Rooster Brew in the introductory stage of the product type's market life cycle. The intent is to use an assertive market penetration pricing strategy in concert with a promotion strategy. We will price Rooster Brew below the average of competitive product prices during the first several years to achieve significant market penetration.

BCB Company will market Rooster Brew by using distribution channels and a small in-house sales organization. Product promotion will be achieved with advertising effort and publicity by BCB Company. It is the intention of BCB Company to establish long term profitability and success by carefully concentrating on building a core group of satisfied customers.

The name for the new brewery was decided to be Big Cock Brewing Company. The name Big Cock Brewing Company could be considered by some to have a sexual connotation. Although this might discourage some people from trying our product, the benefits outweigh the drawbacks. The name Big Cock Brewing Company is a memorable name that will stick in people's minds helping to produce repeat customers. Many other companies have also used the same approach with great success. *Hooters Bar and Grill* has based its entire success around its name and the fact that sex sells. *Hooters* has a lucrative marketing strategy. They sell hundreds of different merchandising products over the internet and in their restaurants. This is all geared to increasing revenue and promoting the company name.

5.1 Promotion

Some of the promotion will be done through the distributors by providing them suggested ad content, art work, photographs and product literature which they in turn use to promote the products to their customers. BCB Company will also have an in-house promotion team. Because of the reputation the product will gain, the distributors will be enthusiastic about promoting the product.

Some strategic approaches to promoting Rooster Brew will be to hold promotional tastings. A few examples of these are brewmaster dinners, small off-premise tastings, on-premise tastings, and large festival tastings. These can be done in order to get the product introduced to the public and the name to potential consumers. For most of these, advertising will be necessary in order to achieve large turn-outs from the community. Some large festival beer-tasting competitions are the World Brewing Cup, Boston Brewers' Festival, and the Great American Beer Festival. For the large festival tastings, sponsorship, advertising, and public relations is often necessary in order to gain the recognition required.

5.2 Image

BCB Company's product is perceived at two levels: the distributors and the consumers that use the product. The distributors base their perception on the relationship BCB Company will establish with them through sales and delivery organizations. It is also influenced by how their customers accept the product. The consumers base their opinion on the price and quality of the beer. At both levels, the product image today is one of "top of the line" in both quality and price. For Rooster Brew, BCB Company wants to create an image of the "best" product (in quality, function and dependability) for the most competitive price.

5.3 Advertising

For all products, we expect the distributors to do some of the advertising. BCB Company will regularly provide them with product specifications, operational test results, suggested wordings for promotional literature, art and photographic works and any other materials that can help them in their promotional efforts. The prospect is likely to exert limited effort in evaluating Rooster Brew, taking a reasonably short amount of time to make a yes or no purchase decision. This means that the distributor

must deliver hard hitting sales literature that offers an irrefutable argument to try Rooster Brew.

Big Cock Brewing Company will not only generate revenue from the sale of alcohol, but will also incorporate internet sales of merchandise as a form of supplementary revenue. These sales will take place at the brewery website, which is already established at *www.bigcockbrewingcompany.com*. The sales will consist of shirts, hats, beer mugs, etc., which will all contain the BCB Company logo. The merchandise will also aid in advertising and spreading the word about Big Cock Brewing Company. Since these sales will mainly be conduced over the internet, this enables BCB Company to keep a limited supply of merchandise in stock at any given time. This reduces the amount of investment required for the merchandise and the space to store the merchandise.

5.4 Pricing

BCB Company will intend to aggressively price Rooster Brew below the expected pricing of the competition in order to capture as much market share as possible. Existing specialty brewed beers are expected to be on the market next year, with others entering the market early the year after. Because other pale ale brews have so much marketing strength, BCB Company will continue the aggressive pricing for several years.

5.5 Sales

BCB Company will have a staff of 2 personnel in the first two years who are responsible for interfacing with the distributors. They create all promotional materials and provide them to the distributors. BCB Company will be adding one more personnel during the following year as the Rooster Brew promotions get under way. This will probably continue until sometime next year, but there are plans to add additional personnel to adapt to the increasing production.

6.0 THE ENTERPRISE

Big Cock Brewing Company will be a startup enterprise, which will have a brewery in Indianapolis, Indiana in the first year and one in Milwaukee, Wisconsin in the fourth year. Because BCB Company will be classified as a microbrewery, the company will have few capabilities to limit competition, especially for the new Rooster Brew. Alternatively, the brewery's small size, good profitability, and strong technical expertise will allow BCB Company considerable freedom to act independently. BCB Company has a strong commitment to the marketplace and is confident in its ability to maintain growth and market Rooster Brew as a highly differentiated product.

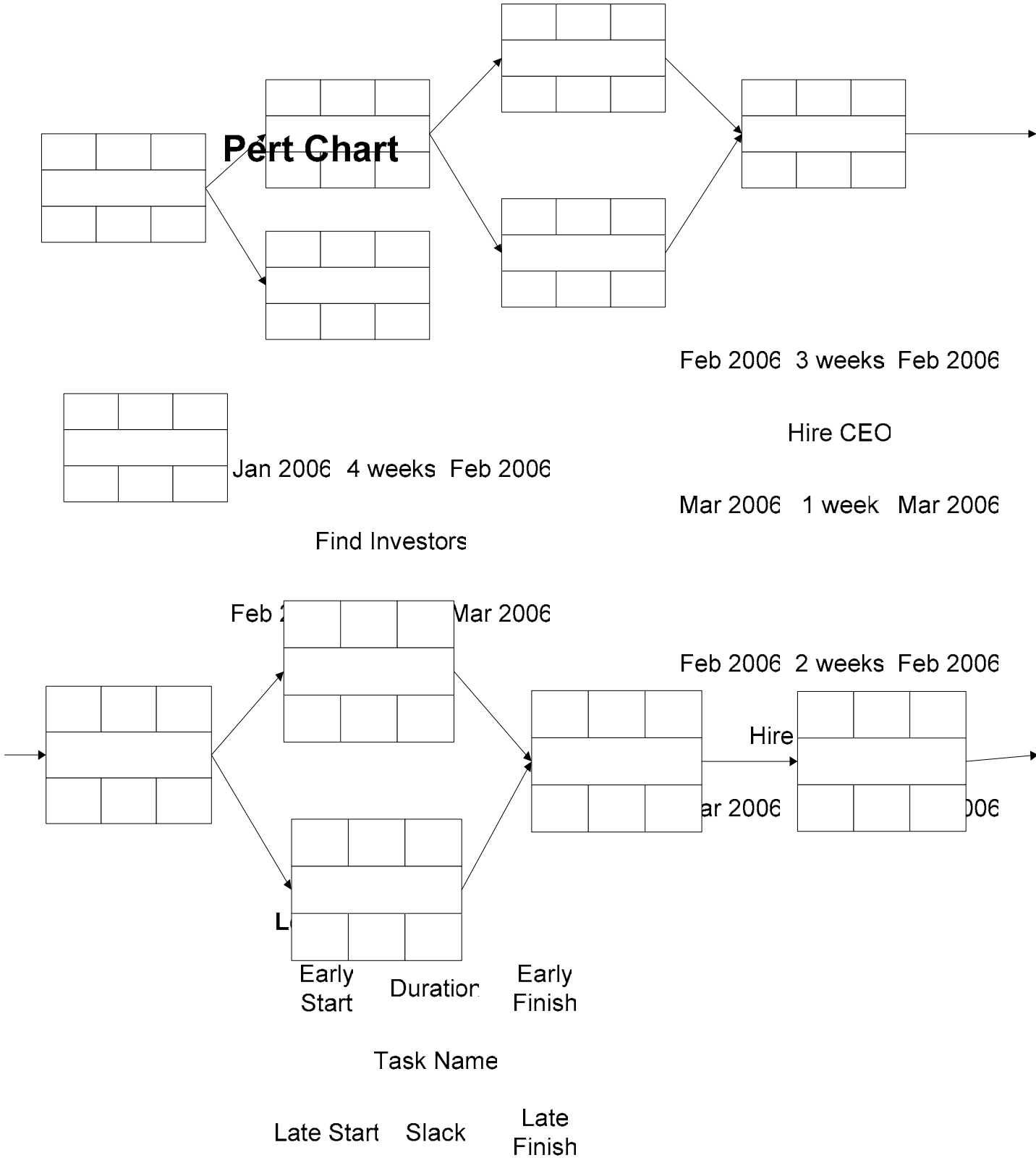
6.1 Task Timeline

There is a great deal of work that will go into each aspect of the brewery before the beer can actually be produced and distributed to the public. This work will involve planning, financing, and feasibility examinations. The significance of this commitment as well as the determination for success or failure makes these preoperational endeavors extremely important. A timeline has been constructed and the approximate length of time for each task is indicated. The following timeline can be seen below.

	Week															
Task	**1-16**	**17**	**18**	**19**	**20**	**21**	**22**	**23**	**24**	**25**	**26**	**27**	**28**	**29**	**30**	**31**
Register Business																
Find Investors																
Hire CEO																
Hire Brewmaster																
Find Site Location																
Lease Warehouse																
Warehouse Preparation for Equipment																
Contact Raw Material Suppliers																
Contact Equipment Suppliers																
Order Equipment																
Hire Assistants																
Install Equipment																
Order Raw Materials																
Initial Marketing																
Preliminary Production																
Bottling and Kegging																
Distributing																

Figure 6.1: Task Timeline

A more detailed task timeline was created, indicating an early start time, a late start time, an early finish time, a late finish time, the duration of the task, and any slack that is given to each task. This flow chart can be seen below. Please refer to the legend for the time analysis.


Pert Chart
Feb 2006 3 weeks Feb 2006
Hire CEO
Jan 2006 4 weeks Feb 2006
Mar 2006 1 week Mar 2006
Find Investors
Feb 2006 2 weeks Feb 2006
Hire
Early Start
Duration
Early Finish
Task Name
Late Start
Slack
Late Finish

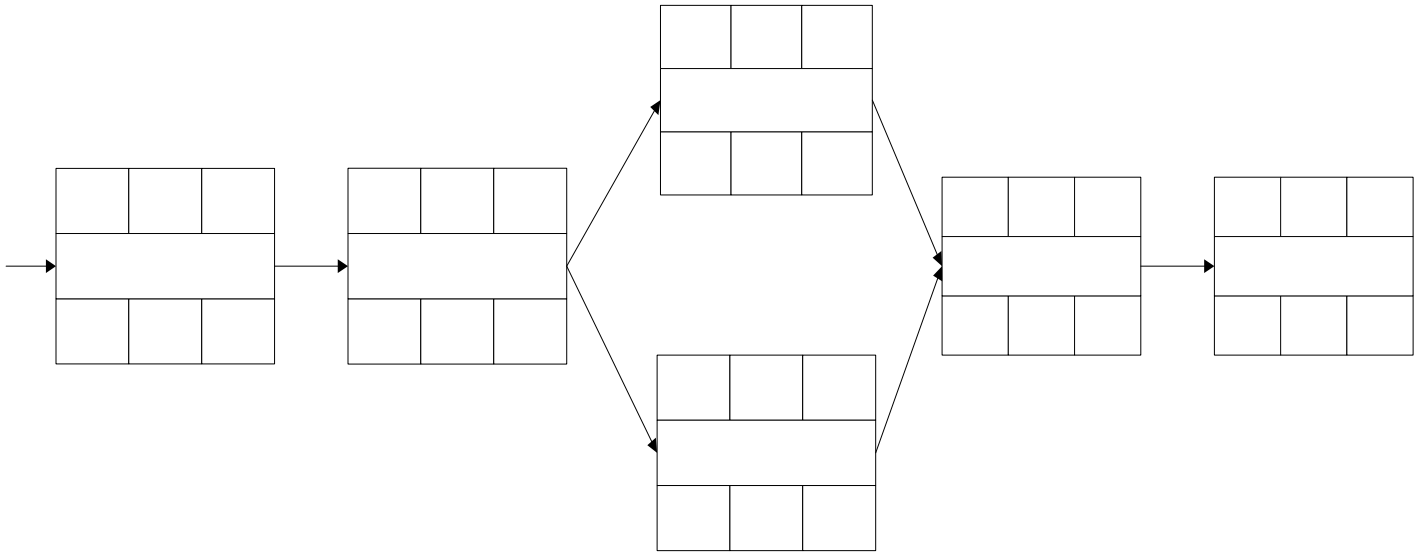


Figure 6.2: Pert Chart

July 2006 3 weeks Aug 2006 Aug 2006 1 week Aug 2006

6.2 Organization

Big Cock Brewing Company project to have 6 personnel at the start up year of 2006, most of whom will be involved in the manufacturing assembly process. The organization structure as shown below is quite traditional. BCB Company will be able to be selective about the personnel hired, thus maintaining a very high quality of expertise. The second year will be a period of much faster growth, putting more pressure on us to maintain the quality of personnel.

Install Equipment Order Raw Materials

Aug 2006 1 week Aug 2006 Aug 2006 2 days Aug 2006

Business Division	Number of Personnel
Presidents Office	1
Finance	0
Clerical	0
Manufacturing	
Components	2
Assembly	2
Marketing	
Components	1
Assembly	0
Total Personnel	6

Table 6.1: Personnel per Division

For the first year of business, BCB Company plans to keep personnel to a minimum. Some positions will be able to be covered by other personnel, such as finance and clerical positions. For each additional year, a few employees may be added, but personnel will not grow significantly because an increase in production demands does not necessarily require additional personnel.

6.3 Operations

Big Cock Brewing Company will project to lease an 8,000 square foot building which will be mostly manufacturing space with a small office. BCB Company's major investment in equipment will be for manufacturing, including a boiler, mash tun, whirlpool, a series of twelve fermenters to begin, carbon dioxide, and bottling machinery. This equipment will be owned and have a present value of approximately $340,000. As BCB Company enters into the specialty beer business, extra fermenters, carbon dioxide, and bottling capacity will be added to the brewing process for the possibility of expansion. BCB Company will expect to do virtually the entire product manufacturing "in-house," along with the packaging and shipping.

6.4 Distribution

The beer industry is comprised of brewers, distributors, and retailers. This group of professionals makes up the three tiers of the beer industry. However, many brewers do not realize the importance of the distributors. Beer distribution is a separate industry within the beer industry. The main roles of beer distributors are to purchase the beer from the brewers, market the beer to the retailers, store the beer before it is sold to the retailers, and then sell the beer to the retailers. Retailers include outlets such as restaurants, liquor stores, hotels, bars, taverns, pubs, supermarkets, and convenience stores. Typically, distributors work on a 25% gross margin for microbrewed beers. The advantage of having a distributor is that distributors reduce brewers' capital requirements and assume the responsibility of retailer non-payment for products.

Although most microbrewers have self-distribution in the beginning years of business, Big Cock Brewing Company has decided to hire a professional distributor. Due to the time and resources needed to self-distribute Rooster Brew plus the price of buying trucks and refrigerated trailers, BCB Company has decided that it would not be economical or reasonable to pursue self-distribution. In order to obtain a distributor, BCB Company plans to submit business plans to local distributors, obtain information about local distributors from retailers, and examine retail accounts of the various distributors. Along with having a professional distributor, BCB Company also plans to send out a separate marketer from the brewery to interest retailers in purchasing Rooster Brew.

7.0 THE MATHEMATICAL MODEL

A mathematical model was created to simultaneously account for all possible scenarios, based upon input variables, to determine the optimal placement and conditions for a microbrewery, which is nearly impossible to do by traditional decision making processes. This powerful tool makes it possible to analyze dozens of variables at the same time and calculate the optimal answer. This model calculates the optimal plant locations, market locations, and raw materials locations based on the input variables.

Model Variables

Figures 7.1 and 7.2 below are diagrams of the mathematical model variables. Figure 7.1 depicts the results that are outputs by the mathematical model. Figure 7.2 shows the variables that were input into the model.

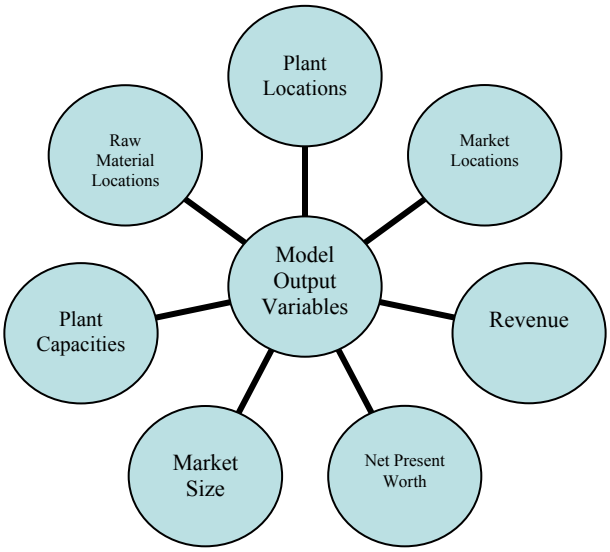


Figure 7.1: Model Output Variables

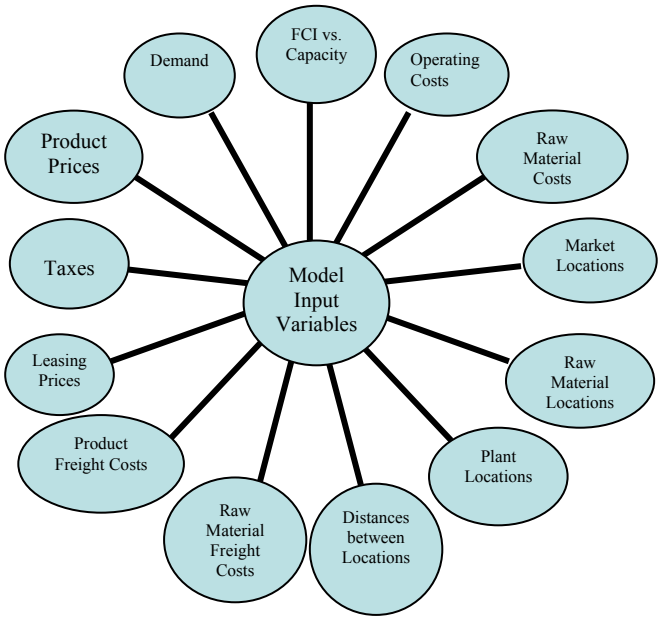


Figure 7.2: Model Input Variables

Each of the input variables is discussed in detail in its perspective location throughout this report. All sources for these variables can be found in the appendix.

The advantage of using a mathematical model is the flexibility in updating parameters and different business strategies as new information becomes available over time. By doing this, the effect of varying parameters can by evaluated. Factors, such as demand or shipping costs, might change during the course of the study, and the mathematical model can easily be updated to ensure accurate and precise results. This capability will be instrumental in determining the reliability of the final results. The mathematical model was implemented using GAMS interface with the CPLEX solver. For more detailed information on the mathematical model, please refer to the technical document.

8.0 FINANCIAL PROJECTIONS

The following charts are financial projections beginning the start-up year of 2006 and continuing for ten years.

8.1 Overview

These financial projections are based on certain criteria that are important in generating the charts and figures. The company does not plan to sell any assets and there is no predetermined amount of cash on hand

An initial investment capital will be required in the amount of $420,000 for equipment costs and working capital for a few months. This includes $340,000 in equipment costs and $80,000 in working capital, including leasing, labor, utilities, and licensing. This is a one-time cost for the start-up year of 2006. BCB Company believes that within five years the business will be successful enough to offer numerous opportunities to obtain a substantial return on investment.

For the first year, an estimated product sales was determined in the amount of $90,000 per month. This corresponds to approximately $1.08 million per year. This amount is based on producing 6,000 barrels per year for a selling price of $180 per barrel. BCB Company will be using a 30 barrel system process producing four to six batches per week, which will keep us under the 15,000 barrel per year mark to be considered a microbrewery.

8.2 Graphical Displays

The following chart is a ten-year analysis of the revenue versus the cash spent for each year. These projections are based on the data provided from the output of the mathematical model.

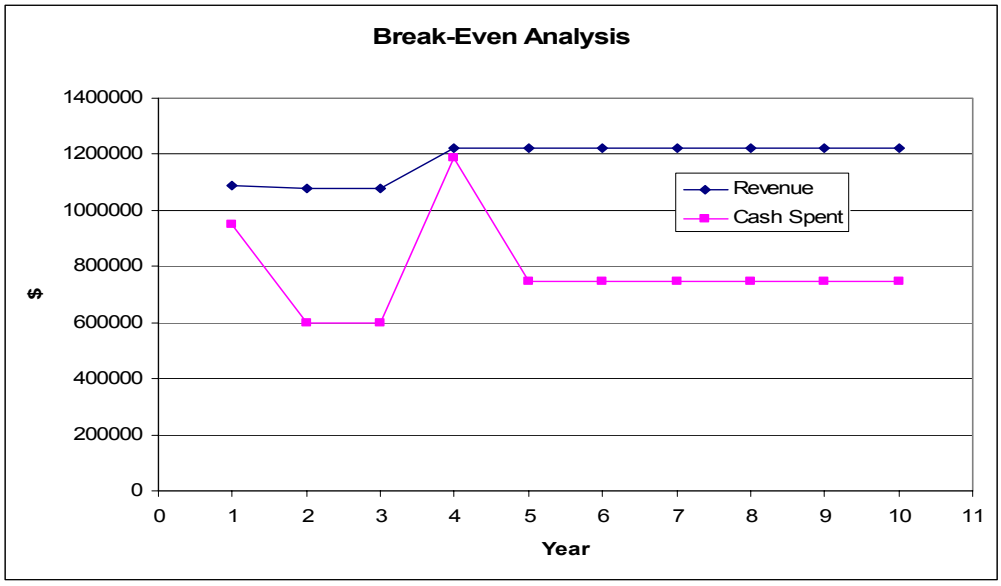


Figure 8.1: Ten-Year Break-Even Analysis

The revenue is always more than the cash spent for each year of the projection. A lot of money is spent in the first year for equipment and startup costs, but the amount of product sold is always more than the amount of cash spent. There is an increase in cash spent from year three to year four which is due to the brewery being built in Milwaukee in the fourth year and being expanded in the same year. Both the revenue and the cash spent become constant after year five, which is due to both breweries being at their maximum capacity.

The following chart is a ten-year cash flow analysis of the project. These projections are based on the data provided from the output of the mathematical model.

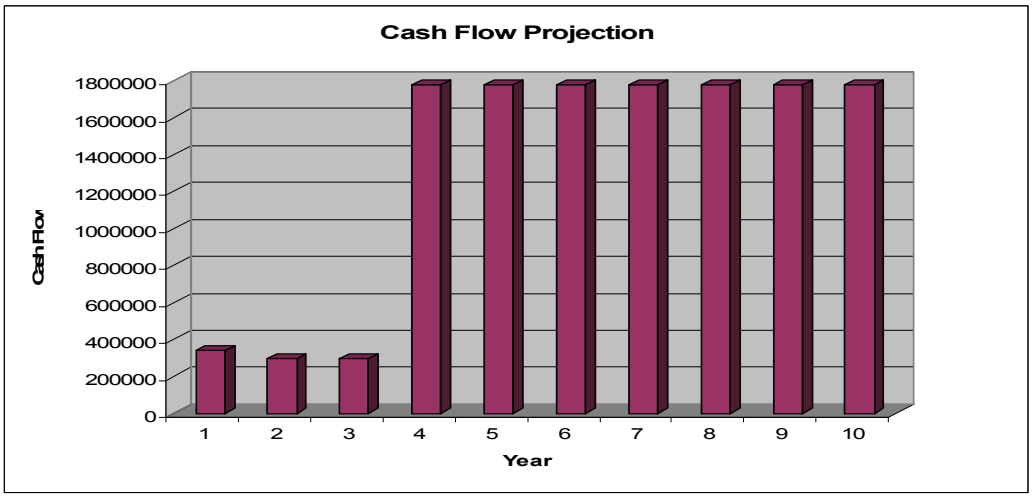


Figure 8.2: Ten-Year Cash Flow Analysis

In year one, there is a small positive cash flow, followed by a slight decrease in cash flow in years two and three. The slight decrease in cash flow is due to advertising costs and the portion of the profit the model is taking for reinvestment into the production of a new brewery. BCB Company will be saving money in years two and three in order to reinvest into the new brewery being built in Milwaukee in year four. The cash flow becomes constant after year four due to both breweries being at maximum operating capacity.

8.3 Financial Projection Charts

8.3.1 General Operating Expenses – Year One

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
Revenue:													
Product/ Service sales	90,000	90,000	90,000	90,000	90,000	90,000	90,000	90,000	90,000	90,000	90,000	90,000	1,080,000
Total revenue	$90,000	$90,000	$90,000	$90,000	$90,000	$90,000	$90,000	$90,000	$90,000	$90,000	$90,000	$90,000	$1,080,000
Expenses:													
Cost of goods sold													
Management Salaries	4,800	4,800	4,800	4,800	4,800	4,800	4,800	4,800	4,800	4,800	4,800	4,800	57,600
Non-management Salaries	26,000	26,000	26,000	26,000	26,000	26,000	26,000	26,000	26,000	26,000	26,000	26,000	312,000
Production Expenses	17,000	17,000	17,000	17,000	17,000	17,000	17,000	17,000	17,000	17,000	17,000	17,000	204,000
Gross margin	$42,200	$42,200	$42,200	$42,200	$42,200	$42,200	$42,200	$42,200	$42,200	$42,200	$42,200	$42,200	$506,400
Depreciation	4,196	4,196	4,196	4,196	4,196	4,196	4,196	4,196	4,196	4,196	4,196	4,196	50,357
Loan Payment Interest	0	0	0	0	2,083	2,070	2,056	2,043	2,029	2,016	2,002	1,988	16,288
Total Operating Expenses	$4,196	$4,196	$4,196	$4,196	$6,280	$6,266	$6,253	$6,239	$6,226	$6,212	$6,198	$6,185	$66,645
Pre-Tax ($)	$38,004	$38,004	$38,004	$38,004	$35,920	$35,934	$35,947	$35,961	$35,974	$35,988	$36,002	$36,015	$439,755
Pre-Tax (%)	42.23%	42.23%	42.23%	42.23%	39.91%	39.93%	39.94%	39.96%	39.97%	39.99%	40.00%	40.02%	40.72%
Net Profit	$38,004	$38,004	$38,004	$38,004	$35,920	$35,934	$35,947	$35,961	$35,974	$35,988	$36,002	$36,015	$329,816

8.3.2 Five Year Projection

	2006	2007	2008	2009	2010
Revenue:					
Product/service sales	1,080,000	1,080,000	1,112,600	1,129,300	1,146,300
Total revenue	$1,080,000	$1,080,000	$1,112,600	$1,129,300	$1,146,300
Expenses:					
Cost of Goods Sold					
Management Salaries	57,600	57,600	65,000	69,000	72,000
Non-management Salaries	312,000	312,000	314,000	316,000	318,000
Production Expenses	204,000	204,000	207,060	210,000	215,000
Gross margin	$506,400	$506,400	$526,540	$534,300	$541,300
Depreciation	50,357	50,357	50,357	50,357	50,357
Loan Payment Interest	16,288	22,765	20,674	18,475	16,165
Total Operating Expenses	$66,645	$73,122	$71,031	$68,833	$66,522
Pre-Tax Income	$439,755	$433,278	$455,509	$465,467	$474,778
Pre-Tax (%)	40.72%	40.12%	40.94%	41.22%	41.42%
Fedl Tax Provision	109,939	108,320	113,877	116,367	118,695
Net Profit	$329,816	$324,959	$341,632	$349,101	$356,084

8.3.3 Year One Net Cash Flow

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
Source of Funds													
Beginning cash	-500,000	-531,033	-517,189	-502,474	-460,274	-423,377	-413,965	-377,068	-340,172	-330,759	-293,863	-256,966	-500,000
Sales/Svcs Income	0	61,644	90,000	90,000	90,000	90,000	90,000	90,000	90,000	90,000	90,000	90,000	961,644
Loans	500,000	0	0	0	0	0	0	0	0	0	0	0	500,000
Available Cash	$0	($469,389)	($427,189)	($412,474)	($370,274)	($333,377)	($323,965)	($287,068)	($250,172)	($240,759)	($203,863)	($166,966)	$961,644
Use of Funds													
Salaries	30,800	30,800	30,800	30,800	30,800	30,800	30,800	30,800	30,800	30,800	30,800	30,800	369,600
Other oper. expenses	233	17,000	17,000	17,000	17,000	17,000	17,000	17,000	17,000	17,000	17,000	17,000	187,233
Loan payments	0	0	0	0	5,303	5,303	5,303	5,303	5,303	5,303	5,303	5,303	42,426
Capital Expenditures	500,000	0	0	0	0	0	0	0	0	0	0	0	500,000
Tax Payments			27,485			27,485			27,485			27,485	109,939
Total Cash Out	$531,033	$47,800	$75,285	$47,800	$53,103	$80,588	$53,103	$53,103	$80,588	$53,103	$53,103	$80,588	$1,209,198
Net Cash Flow	($531,033)	($517,189)	($502,474)	($460,274)	($423,377)	($413,965)	($377,068)	($340,172)	($330,759)	($293,863)	($256,966)	($247,554)	($247,554)

8.3.4 Five Year Net Cash Flow

	2006	2007	2008	2009	2010
Source of Funds					
Beginning cash	-500,000	-247,554	86,887	432,589	785,295
Sales/Svcs Income	961,644	1,080,000	1,109,027	1,127,470	1,144,437
Loans	500,000	0	0	0	0
Available Cash	$961,644	$832,446	$1,195,915	$1,560,059	$1,929,732
Use of Funds					
Salaries	369,600	369,600	379,000	385,000	390,000
Other oper. expenses	187,233	204,000	206,808	209,758	214,589
Loan payments	42,426	63,639	63,639	63,639	63,639
Capital Expenditures	500,000	0	0	0	0
Tax Payments	109,939	108,320	113,877	116,367	118,695
Total Cash Out	$1,209,198	$745,559	$763,325	$774,765	$786,923
Net Cash Flow	($247,554)	$86,887	$432,589	$785,295	$1,142,809

8.3.5 Alternative Best Case Scenario

	% Chg	2006	2007	2008	2009	2010
Revenue:						
Product/service sales	+5%	1,134,000	1,134,000	1,168,230	1,185,765	1,203,615
Total revenue		$1,134,000	$1,134,000	$1,168,230	$1,185,765	$1,203,615
Expenses:						
Cost of Goods Sold						
Management Salaries	-2%	56,448	56,448	63,700	67,620	70,560
Non-management Salaries	-4%	299,520	299,520	301,440	303,360	305,280
Production Expenses	-3%	197,880	197,880	200,848	203,700	208,550
Gross margin		$580,152	$580,152	$602,242	$611,085	$619,225
Depreciation		50,357	50,357	50,357	50,357	50,357
Loan Payment Interest		16,288	22,765	20,674	18,475	16,165
Total Operating Expenses		$66,645	$73,122	$71,031	$68,833	$66,522
Pre-Tax Income		$513,507	$507,030	$531,211	$542,252	$552,703
Pre-Tax (%)		45.28%	44.71%	45.47%	45.73%	45.92%
Fedl Tax Provision		128,377	126,758	132,803	135,563	138,176
Net Profit		$385,130	$380,273	$398,408	$406,689	$414,527

8.3.6 Alternative Worst Case Scenario

	% Chg	2006	2007	2008	2009	2010
Revenue:						
Product/service sales	-10%	972,000	972,000	1,001,340	1,016,370	1,031,670
Total revenue		$972,000	$972,000	$1,001,340	$1,016,370	$1,031,670
Expenses:						
Cost of Goods Sold						
Management Salaries	+5%	60,480	60,480	68,250	72,450	75,600
Non-management Salaries	+5%	327,600	327,600	329,700	331,800	333,900
Production Expenses	+5%	214,200	214,200	217,413	220,500	225,750
Gross margin		$369,720	$369,720	$385,977	$391,620	$396,420
Depreciation		50,357	50,357	50,357	50,357	50,357
Loan Payment Interest		16,288	22,765	20,674	18,475	16,165
Total Operating Expenses		$66,645	$73,122	$71,031	$68,833	$66,522
Pre-Tax Income		$303,075	$296,598	$314,946	$322,787	$329,898
Pre-Tax (%)		31.18%	30.51%	31.45%	31.76%	31.98%
Fedl Tax Provision		75,769	74,150	78,737	80,697	82,475
Net Profit		$227,306	$222,449	$236,210	$242,091	$247,424

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Appendix A

Equipment Costs for 30 Barrel System

General Quotation

30 Barrel Brewery System

System Configuration

30 barrel, 2 vessel, low pressure steam fired brewhouse - brewkettle/whirlpool and mash/lauter tun
3 x 60 barrel unitank/fermenters
1 x 60 barrel bright tank
kegging equipment

Annual Production

Assume 100% ales @ 14 day fermentation cycles (26 cyles/year/vessel)
3 x 60 barrel unitanks x 26 cyles/year = **4680 barrels/year**
4680 barrels/year / 30 barrel brewhouse = 156 brews/year

Item	Description	Qty.	Unit Price	Extended Price
30 Barrel Brewhouse				
Mash / Lauter Tun	"V-Wire" false bottom with underscreen flush	1	$31,135.00	$31,135.00
	lautering rakes w/ spent grain plow and variable speed drive	included		
	side steam jacket	included		
Option	retractable rake assembly with hydraulic piston	not quoted	$3,910.00	
Brewkettle / Whirlpool	2 low pressure steam heat transfer panels	1	$19,365.00	$19,365.00
Option	Conversion to MashKettle; mash agitator with variable speed drive, modified bottom arrangement, includes additional plumbing	not quoted	$5,800.00	
Brewkettle Venting	internal drip ring	1	$365.00	$365.00
Whirlpool		not quoted	$10,300.00	
Hot Liquor Tank	single batch capacity - 45 barrels	not quoted	$10,750.00	
	double batch capacity - 90 barrels	1	$16,370.00	$16,370.00
Hot Liquor Pump	stationary	not quoted	$1,235.00	
Cold Liquor Tank	single batch capacity - 45 barrels	not quoted	$10,750.00	
	double batch capacity - 90 barrels	1	$16,370.00	$16,370.00
Diverter Panel	two pumps & controls	1	$5,090.00	$5,090.00
	variable speed motor	2	$850.00	$1,700.00
	washdown pump motor	2	$115.00	
Hot Wort Grant	closed / horizontal grant on lauter tun	1	$1,300.00	$1,300.00
	auto level control	not quoted	$650.00	
Heat Exchanger	2 stage with water & glycol	1	$6,500.00	$6,500.00
Brewhouse Process Plumbing	complete stainless pre-plumb	1	$4,200.00	$4,200.00

Flow Control Valves	micro adjustable butterfly	1	$280.00	$280.00
	butterfly	3	$145.00	$435.00
Thermometer		1	$190.00	$190.00
Gas Diffuser		1	$425.00	$425.00
1.5" Sight Glass Assembly	includes extra glass	1	$170.00	$170.00
Brewer's Platform	all stainless	1	$5,200.00	$5,200.00
Wrenches		2	$25.00	$50.00
Brewhouse Control Panel	U.L. listed panel	1	$1,100.00	$1,100.00
	number of controllers	2		
			Total	**$110,245.00**

Grain Handling / Milling Equipment				
Malt Mill	2 roll; capacity @ 750 KG/hr	1	$5,400.00	$5,400.00
Mill Stand & Boot Assembly		1	$430.00	$430.00
Grist Hopper with Cover		1	$3,700.00	$3,700.00
Hopper Slide Gate		1	$175.00	$175.00
Grist Hydrator	SMS style	1	$550.00	$550.00
Flex Auger	50 feet c/w 2 elbows	1	$1,800.00	$1,800.00
			Total	**$12,055.00**

Fermentation / Cellar Equipment				
Unitank / Fermenter	30 BBL working capacity, 30% headspace	not quoted	$16,480.00	
	60 BBL working capacity, 30% headspace	3	$22,150.00	$66,450.00
Conditioning/Bright Vessel (for walk-in cooler)	30 BBL	not quoted	$8,345.00	
	60 BBL	not quoted	$12,625.00	
Conditioning/Bright Vessel (glycol cooled vessel)	30 BBL	not quoted	$11,555.00	
	60 BBL	1	$17,065.00	$17,065.00
Carbonating Stone Assembly	Zahm & Nagel ceramic	1	$500.00	$500.00
Fermentation / Bright Control Panel	U.L. listed panel	1	$3,200.00	$3,200.00
	number of controllers (with 3 spare for future tanks)	8		
Glycol Chilling System	7.5 Hp. condensing unit w/ 800 gallon glycol reservoir, glycol supply and recirculating pumps, and liquid chiller - all stainless plumbed	not quoted	$15,040.00	
	10 Hp. Condensing unit w/ 800 gal reservoir	1	$16,300.00	$16,300.00
	2 x 7.5 hp. condensing units w/ 800 gal reservoir	not quoted	$22,630.00	
Solenoid Valve		4	$100.00	$400.00
Stainless/Brass Glycol Fittings		4	$50.00	$200.00
CIP/Beer Transfer Pump	2 Hp.	1	$1,500.00	$1,500.00
	variable speed motor	1	$850.00	$850.00
Filter		not		

		quoted		
			Total	**$106,465.00**

Supporting Equipment				
Fittings Package	1" TC hose end fitting	10	$30.00	$300.00
	1.5" TC hose end fitting	10	$35.00	$350.00
	2" TC x 1.5" TC	1	$75.00	$75.00
	1.5" BS to TC adapter	2	$40.00	$80.00
Perlick Tank Tapping Fittings		1	$50.00	$50.00
TC Clamp and Cap Kit	10 caps and clamps	1	$170.00	$170.00
Stainless Quick Disconnects	male	15	$3.50	$52.50
	female	11	$18.50	$203.50
	1/4" s.s ball valve	15	$19.00	$285.00
	1/4" s.s. nipple	9	$3.00	$27.00
	1/4" NPT(M) x 3/8" hose end	11	$8.00	$88.00
Gasket Kit		1	$100.00	$100.00
Process Pumps Seal Kit		1	$22.80	$22.80
Glycol Pumps Seal Kit		1	$60.75	$60.75
Brewer's Hose	1.5" @ 100 feet	1	$900.00	$900.00
Hydrometer Flask		1	$110.00	$110.00
Hydrometers	0-8 Brix, 8-16 Brix	2	$52.00	$104.00
Thermometers		2	$47.00	$94.00
Sugar Refractometer		1	$370.00	$370.00
CIP Hose	15 feet	not quoted	$30.00	
Portable CIP Tank		not quoted	$1,660.00	
Lab Kit		not quoted	$1,950.00	
Perlick Proof Coil		not quoted	$160.00	
			Total	**$3,442.55**

Steam Boiler & Equipment				
Low Pressure Steam Boiler	1,050,000 BTU input	not quoted	$8,300.00	
Assembled condition, skid mounted				
	condensate receiver w/ pump	not quoted	$1,300.00	
4 x	1.5" brass gate valve	not quoted	$34.25	
9 x	3/4" swing check valve	not quoted	$20.00	
5 x	3/4" float & thermostatic steam trap	not quoted	$117.00	
5 x	3/4" strainer	not quoted	$19.00	
1 x	1 1/2" actuated steam solenoid valve	not quoted	$310.00	
			Total	

Kegging Equipment				
Sankey Keg Racker	single head	not quoted	$275.00	
	double head	not quoted	$475.00	
	triple head	1	$675.00	$675.00
Sankey Keg Rinser/Washer	SMS 050 - manual system with single head, requires pump and CIP tank	not quoted	$480.00	
	SMS 911 (single head) semi-automated	not quoted	$8,600.00	
	SMS 912 (two head) semi-automated	not quoted	$9,500.00	
	SMS 913 (three head) semi-automated	1	$9,700.00	$9,700.00
			Total	**$10,375.00**

Total - 30 Barrel Brewery Equipment Package	**US**	**$242,582.55**

All applicable taxes extra
F.O.B. factory, Victoria, BC, Canada
Delivery - to be determined upon placement of order
Prices are valid for 30 days

Start-Up & Recipe Formulation Package			
includes:	Planning		
	Brewing Formulae - 3 recipes		
	Start-up Assistance - 4 days on site		
	Personnel Training		
	Raw Materials & Supplies Sourcing		
	Continued Telephone Consulting for up to 6 months		
Additional Recipes	$600 per additional recipe (not included)		
Additional Start-up Assistance	$400 for each day exceeding initial start-up time		
	Airfare & Expenses not included		
		Total	**$5,400.00**

Shipping Services				
Brokerage Fees		2	$110.00	$220.00
Freight to Site - estimated	price per 48' container	2	$2,500.00	$5,000.00
			Total	**$5,220.00**

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Supervision of Brewery Re-Assembly Package (5 days on-site)	
SMS Technician to provide on-site, hands on direction and support to local trades	
Airfare (cost to be confirmed)	
Local Transportation	
Lodging	
Meals	
Tool Freight	
Two Days Travel Time	
Additional Time, if required @ $ 60.00 per hour plus expenses (minimum 8 hours charged per day)	
Supervision & Direction of Local Trades On-Site ; Labor 40 hrs. @ $ 60/hr.	
re-assembly of brewhouse stainless plumbing, "leveling vessels on their floor pads, attach vessel components	
Total	**$6,530.00**