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AGRIBUSINESS PLANNING – TEACHING AND CASES AT THE UNIVERSITY OF SASKATCHEWAN, CANADA

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ABSTRACT

The University of Saskatchewan (U of S) offers 2 courses in agribusiness planning where students form groups of 3 or 4 and prepare a complete business plan for an actual or planned agribusiness. Individuals or groups wishing to have a agribusiness plan completed can apply to the U of S and a student group will be assigned to their project. The components of a business plan includes the following sections; the executive summary, the introduction to the business being planned, the industry overview, the operations plan, the human resources plan, the marketing plan, and the financial plan which includes 10 years of financial projections. The paper also includes brief descriptions of a number of business plans completed by the students in the last number of years.

Key words - agribusiness, planning, teaching, cases

INTRODUCTION

The University of Saskatchewan (U of S) offers courses to students and workshops to industry personnel in agribusiness planning. The first course is Comm 492.3, which is a capstone course in the 4 year degree for Agribusiness Minors in the College of Agriculture and the College of Commerce. The course is taught in the fall term from September to December. The second course is Ag Ec. 75.6, which is a capstone course in the 2 year diploma for Agribusiness Majors in the College of Agriculture. The course is taught in the winter term from January to April. The final course is the Agribusiness Entrepreneurship Program (AEP), which is a week long intensive workshop for farmers, agribusiness professionals, lenders, and government personnel. The course is taught in January or February.

The students in the degree and diploma courses must form groups of 3 or 4 and prepare a complete business plan for an actual or planned agribusiness. The students must also present and defend their business plans in a question and answer session. Individuals or groups wishing to have an agribusiness plan completed can apply to the U of S and a student group will be assigned to their project. A nominal fee of \$500 is charged the proponent to cover student travel and expenses. The students in the AEP program are given the best 2 business plans from the previous year degree and diploma classes to review and critically analyze. This way all 3 groups of students are exposed to the approach used by the U of S in business planning.

COMPONENTS OF A BUSINESS PLAN

The components of a business plan as taught at the U of S includes the following sections; the executive summary, the introduction to the business being planned, the industry overview, the operations plan, the human resources plan, the marketing plan, and the financial plan with 10 years of financial projections.

EXECUTIVE SUMMARY

The executive summary should be short but sufficient enough to ‘Stand Alone’. Investors

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and other interested parties may read only the executive summary. Therefore they must be given a brief description of the business, the investment required, and the basic financial results in a form that will pique their interest to read the rest of the business plan and invest in the business.

INTRODUCTION

The introduction should describe the business including its history, if any, and nature. Include the business's vision and mission statement. The goals and objectives of the business including short term, medium term, and long term should be described as specifically as possible. For example, achieve a 10% annual growth in sales over the next 5 years or expand into the U.S. market by year 4, or increase number of employees from 100 to 200 in 3 years. The bottom line is that everything in the plan will be geared towards trying to achieve the goals and objectives.

INDUSTRY OVERVIEW

The industry overview should provide some background that describes the industry in which the business operates. The important things about the industry that affect the business plan and some of the expected challenges and hurdles in the future should also be described. This section provides a base for the reader.

THE OPERATIONS PLAN

The operations plan provides a detailed description of the operations of the business. First, it describes the organizational structure including an organizational chart. Next, it describes and shows the site plan and any building and floor plans that the business may need. These should be approximately to scale, but don't have to be 'blue print' quality. The third section of the operations plan explains any technical processes and procedures, the work plan and flow of work used by the business. This section should use flow charts and diagrams to clearly describe the production process used by the business and any quality control programs employed. Average business days, week, month, and /or year should also be outlined in the operations plan.

A major part of the operations plan is the capital budget. The capital budget lists the capital cost of all land, buildings, machinery, and equipment that the business plans to purchase over the planning period. In addition to the capital costs an estimate of the working capital is also required. The working capital includes estimates for cash requirements, inventory, accounts receivable and accounts payable. Liquidity or cash management is a very important part of any business. Too much cash in the business can be expensive in lost interest earned and too little can run the risk of not meeting obligations when due. Inventory management is also important, holding too much is expensive while too little may cause lost sales. Accounts receivable also add to working capital requirements and a regular review of credit policy, bad debts, overdue accounts, and collection policy is required. Accounts payable are a source of working capital, but a regular review of supplier's prices and interest rates relative to the competition is required. The bottom line is that the operations plan must provide the reader with a reasonably good understanding of how the business designs products, procures inputs, produces the products/services that it sells, and delivers the products/services to the customer.

THE HUMAN RESOURCES PLAN

The human resources plan provides a detailed description of the human resource requirements of the business. Job descriptions for each classification should include technical and management skills required. Planned additions or deletions of positions should also be included. Next, the total wage and salary costs including benefits should be calculated. A human

resource strategy for motivating employees and managing change in the organization should be outlined. Training programs, their type, timing, and cost in time, money, and human capital should also be included. The bottom line is that the human resources plan must provide the reader with a clear idea of the human resources required and how those resources will be managed.

THE MARKETING PLAN

The marketing plan consists of two parts; a market analysis and a marketing strategy. The market analysis part first describes past performance, if any, including the markets sold into, how sales took place, competitors, the techniques used to achieve goals and the pricing and profitability of products/services. The next sections describe the market, the competition, the customers, the target markets, the match between the products/services and the needs of the customers. The final section summarizes the key aspects of the market opportunity. The marketing strategy section includes clearly stated sales and profit objectives, and descriptions of the pricing policy, the target markets selected, the distribution strategy, the selling and advertising program, and the marketing plan budget. The bottom line is the marketing plan clearly analyzes the market for the products/services provides and sets forth a marketing strategy on how the business plans to take advantage of the opportunity.

THE ACCOUNTING/FINANCIAL PLAN

The financial plan includes 10 year projections of statements of net income and retained earnings, balance sheets, and cash flow statements. The financial projections are based on an economic forecast of expected inflation, interest rates (lending and borrowing), growth rates in sales, and growth rates in inputs and expenses. The revenue estimates are derived from the marketing plan. Cost of goods sold or cost of sales, operating expenses, the capital budget, and working capital estimates are derived from the operations plan. Wages, salaries, and benefits are derived from the human resources plan. The financing budget determines the mix of short term debt, long term debt, and equity financing needed by the business. Debt repayment schedules should be outlined the principal and interest payments required. Income taxes whether individual or corporate should also be calculated. The financial analysis can be used to determine the ability to pay dividends and a dividend policy should be included. Important financial ratios measuring liquidity, solvency, profitability, and financial efficiency should also calculated.

The overall financial performance of the business should also be assessed using net present value (NPV), internal rate of return (IRR), and external rate of return (ERR) calculations. The NPV of equity uses a required rate return on equity to calculate the present value of cash flow to equity and compare it to the original investment of equity capital. The IRR represents the expected rate of return on the equity investment from the cash flows to equity over the planning period (10 years). The ERR represents the expected rate of return on the equity investors from the dividends paid to them over the planning period (10 years) based on their original equity investment.

The sensitivity or risk associated with the business can be measured in a number of ways. First a list of the critical variables should be compiled. There are usually only 2 to 4 critical variables in most businesses. Relatively small changes in any one of these critical variables will cause the business to experience financial difficulties. Examples of common critical variables are units of sales, growth in units of sales, selling prices, unit labor costs, supply and/or cost of direct material inputs, availability of skilled human resources, amount of equity financing available, interest rates, actions of competitors, government regulations. The next step in the risk analysis is to evaluate worst case and best case scenarios in which all of the critical variables move in a



pessimistic direction for the worst case and in an optimistic direction in the best case. Both the worst case and best case scenarios should be realistic. These scenarios give a feel for how bad and good things could be for the business. The final part of the sensitivity or risk analysis is the breakeven calculations. Breakeven calculations should be done on a cash flow, net income and economic basis. Cash flow breakeven indicates how poorly things could go before the business runs out of cash. Net income breakeven indicate how poorly things could go before the business can not make a profit. Economic breakeven sets the NPV to zero and thereby indicates how poorly things could go before the required rate of return on equity investment is no longer met. These breakeven calculations can be done with only 1 critical variable changing at a time or when all critical variables changing at once. The results of the sensitivity or risk analysis can be displayed in tables or charts to help the reader assess the results. The bottom line is that the financial plan must demonstrate financial feasibility and clearly illustrate future expectations of net income, cash flow, and return on equity investment based on the marketing, operations, and human resource plans, as well as expected economic and other financial variables.

CASE STUDIES

The following are examples of some of the business plans completed by the students in the last number of years.

Gryenders

- An innovative rye processing facility that extracts valuable gums from 20,000 tonnes of rye annually.
- The gums are sold into the food and cosmetic industries.

Biostuff (Feasibility of a Hog Manure Biodigester)

- Many existing hog barns are faced with the three important problems.
- how to manage manure slurry produced as a by-product of growing hogs.
- the disposal of manure, normally accomplished by spreading on farmland, is becoming difficult due to minimal available land. As the land becomes more saturated with nutrients the risk of ground water contamination increases substantially.
- Communities are beginning to object to the expansion of hog barns because of odor issues associated with slurry lagoons and the risk of ground water contamination.
- A biodigester removes biogas through anaerobic digestion. Biogas consists of several different gases, which include ammonia and methane, both odor producing compounds in excrement.
- Biogas is then combusted to produce energy and heat either in a combined heat and power unit (CHP) or a boiler. The electricity and heat are then sold to back to the pig barns.
- The liquid portion of the slurry is passed through a biofilter, which separates the solid particles from the liquid portion of the slurry, of which the liquid portion is sold as irrigation to local farmers and the solid portion as fertilizer to a local contractor.

Tree Bien

- The purpose of the business is to set up a greenhouse in conjunction with recycled heat from a SaskEnergy compressor station located near Rosetown, Saskatchewan. Tree Bien will establish and maintain contracts for the sale of 850,000 tree seedlings to be sold to Weyerhaeuser Canada.

- By using recycled heat, Tree Bien can help reduce carbon emissions and produce seedlings with lower production costs.

Ceres

- Ceres Farms Incorporated specializes in grain, oilseed, and pulse crop production and marketing. Ceres will operate in two locations farming approximately 10,000 acres at each location. The two locations chosen were Melfort (north) and Aneroid (south), Saskatchewan.
- These locations were chosen because of the different growing seasons and weather patterns in the two areas. Yield risk will be reduced because of the difference in weather.
- The different climates also allow Ceres to grow a more diverse selection of crops.
- Equipment costs will also be minimized because both areas can be farmed with one set of equipment.
- Due to the size of Ceres Farms, it is likely to receive purchasing power when dealing with input suppliers, and greater marketing power due to large volumes of grain being sold.

North West Feeders

- NorthWest Feeders (NWF) is a farmer-owned 10,000 head capacity beef feedlot committed to marketing finished cattle, and also providing a custom feeding service for local area producers.
- NWF will also create a new market for local feed grains, silage, straw and hay. NWF is a corporation formed by 150 local shareholders.
- Animals purchased will range from 400-900 lbs in weight. These animals will then be finished to a weight of 1250 lbs by feeding a specific ration composed of a combination of grain, silage, hay, and canola meal (protein supplement).

Prairie Pride Retreat

- The main objective of Prairie Pride Retreat is to provide tourists with a healthy and enjoyable vacation experience in Southwest Saskatchewan.
- Prairie Pride Retreat will offer one-week vacation packages that incorporate riding and local tours to tourists during the summer months.
- Prairie Pride Retreat will be located near Robsart, Saskatchewan. 320 acres of land.
- A lodge consisting of 6 double rooms and 1 suite will be built on the land for the guests to stay in. Capacity will be set at 14 people per week but it is not expected to reach capacity every week.

From The Root Up

- The business plan outlines the development and feasibility of From The Root Up (FTRU) herb processing company which assists farmers in growing herbal crops to be delivered to FTRU where storage and primary processing will take place.
- FTRU is utilizing six herb crops that have different medicinal properties (Arnica, Dandelion, Nettle, Red Clover, St John's Wort, Fireweed).
- The farmers will grow 6 acres of each crop to have a total of 36 acres.
- Crops will be grown under production contracts where the harvested product will be delivered to FTRU.

Carolinny Sprouts Ltd.

- This business produces nine different varieties of sprouts, which come from a seed that



is certified organic and is organically grown.

- Carolinny Sprouts has an opportunity to expand their production to meet this increasing demand for sprouts.
- This business proposal investigates the possibility of expansion for Carolinny Sprouts.

Pea Fractionation

- Pound-Maker Agventures is a 28,500-head cattle feedlot and a 12,000,000-litre ethanol plant. The ethanol facility currently uses CPS wheat as a source of starch. The entire wheat kernel is used in the distillation process. The starch is used in the ethanol, and the remaining product, the distiller's grain, is fed to the cattle in the feedlot. The Pound-Maker Pea Fractionation Plant is a proposed addition to the ethanol plant. The addition would use feed peas as a substitute for CPS wheat.
- This substitution will allow the protein to be sold, the hulls and screenings to be fed and the starch to be processed into ethanol and then fed as wet distiller's grain. The addition benefits from an existing, trained labor force and management. Grain handling facilities are already in place.
- The peas will first be dehulled and cleaned, producing hulls, screenings, and chaff. This product can be fed directly to the cattle without having to go through the ethanol plant, reducing the volume of product going through the distillery. The cleaned, dehulled peas are then fractionated in 3 pin mills and separated in 1 air classifier. The protein is lifted off, pelleted, and stored ready for shipment. Five to six carloads a week (45-55 tonnes per railcar) will be shipped. The starch is fed directly into the ethanol plant.
- The initial capital requirements are around \$6.9 million. This will be raised half in equity, and half by debt financing. The \$3 million dollars of debt will be financed over 10 years at 6.5%.

Big Catch Fishing

- Located 150 miles south of the North West Territories. Big Catch Fishing has a lake with about 32 sq miles of water and 40 sq miles of shoreline. With capacity to hold 12 customers for a week at a time, BCF upgraded to state of the art equipment, tools and facilities.
- BCF's new upgrades to its cabins and lodge make it look both elegant and comfortable, catching the eye of customers from all over.
- The typical customer visiting BCF will be 35-65 years old. This age group is targeted because people in this category usually have a reasonable income and are interested in having very memorable experiences. The potential clients live and work in urban areas and desire a vacation that consists of outdoor activities in a peaceful and natural setting.
- The early bird price and late season is \$5635 CAN, as opposed to the regular price of \$6,000 CAN. This includes airport pick-up at Saskatoon, meals, knowledgeable guides, world class fishing, beautiful nature and exquisite meals. The package will be available for 21 weeks from May through October. It is expected that 169 people will stay at the camp the first year, 182 people the second year and in year three 186 people. The full capacity of BCF's operation is 220 customers.
- BCF will require \$1,860,000 in capital costs.

CONCLUSION

The courses have proven to be an excellent way to teach agribusiness planning. The sense of pride the students have in the final document is very noticeable. The projects are also practical and low cost enough to get funding from the agribusiness community.