

**A BUSINESS PLAN FOR A 600-ACRE FARM  
& 300-HEAD COMMERCIAL COW HERD IN  
SOUTH CENTRAL IDAHO**

by

JOSHUA STALEY

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Dr. Michael Langemeier

## **ABSTRACT**

This thesis was written for the purpose of looking at the feasibility of operating a prospective business; a farm and ranch in southern Idaho. For practical reasons, I looked at a specific farm consisting of 600 irrigated acres, which are irrigated via 5 center pivots. Attached to the farm is an additional 400 acres of pasture ground seeded to crested wheat. In conjunction with operating the farm, I examined the feasibility of leasing a 300 head commercial cow herd from a separate owner than the land owner. Summer pasture for the cows would be leased from a grazing association located in northern Nevada and winter feed would come from the farm pasture, crop aftermath located on the farm, and corn stalks from a neighboring farm.

Crops looked at being produced were grain corn and alfalfa hay. Operating cost projections were made using current market values, while the price received for each commodity is based on ten-year historical prices. Historical prices were used to determine whether the business is viable in the long-run. Rent on the farm is based on a 60/40 percent crop share of which the land owner's share is 40 percent. Lease payment for the cow herd is based on a 2/3, 1/3 calf crop split of which the cow owner's share is 1/3 of the calf crop. After analyzing the operation's financials the business is not feasible.

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## **CHAPTER I: INTRODUCTION**

### **1.1. Purpose of the Thesis**

I have been involved in production agriculture in southern Idaho all my life, mostly working for producers, two of which are a couple of the most efficient producers in the region. Both of these producers have been excellent mentors. While working in a family construction business the past four years, which installs pipeline systems in new subdivisions to pouring concrete foundations and flat work for steel buildings and erecting those buildings, I have been leasing a small 200 acre farm and 100 Black Angus cows. My goal is to operate a farm and cow operation large enough to support a family. I have gained valuable experience related to operating a small farm and cow operation, however having to manage the farm, cows, and family construction business has proven to be a headache; perhaps I am still young and naive enough to realize that's just life in a management/foreman type position. Production agriculture is a good fit for my young family and I as we love the life style, love hard intelligent work, and love the land and livestock, and did I mention we understand the TIME required to operate such a business.

Economies of scale play a huge role in a profitable production agriculture business of the type this thesis presents. We have come to realize this as leasing the small farm and cow herd has only proven to be a breakeven proposition. Therefore, I want to see on paper, if we increase the size of the farm and cow herd, can we produce a sustainable income for a family and be able to work towards the ownership of livestock, equipment, and land; if not then this business plan ought to be something to present to an owner of a production agriculture business to help secure a manager/foreman position.

The purpose of this thesis is to examine the feasibility of someone starting up a farm and ranch that has little to no capital and leases practically everything. We will be exploring the ability to operate a farm and ranch in the most efficient manner to lower costs and increase profits. The main objective is to see if the business is feasible. Another objective is to have a plan and budgets that could be presented to potential investors. Also, a road map will be laid out which will discuss the plan of action to take for operation procedures of the business.

## **1.2. Research Description**

For practical purposes we will be looking at a particular farm in south central Idaho which consists of 600 acres which are irrigated by 5 gravity pressurized pivots. There is an additional 400 acres of non-irrigated pasture with the farm, which consists of 200 AUMs. The farm has a house, a couple of storage sheds, a shop, and a set of corrals large enough to feed and process 300 stocker calves.

In addition to the farm, this thesis will examine the feasibility of leasing 300 commercial cows and grazing them at an association in northern Nevada, which is located approximately 50 miles south of the farm. Cows will graze in Nevada for seven months then will be brought back to the farm to graze the pasture and clean up crop aftermath and also graze the neighbor's corn stalks. Costs of production and yields will be specific to the farm and pastures.

The lease on the farm will be paid to the owner using a 60/40 percent crop share of which the owner's share is 40 percent. The lessee will assume all costs of production except the land owner will pay for 40 percent of all alfalfa and grass seed planted on the farm. The land owner will also cover the water assessment fees, and regular maintenance



of the irrigation systems (e.g., the pivots, the pipeline transferring water to pivots, and head gate). Regular maintenance of the house, outbuildings, and corrals will also be the responsibility of the land owner. The animal units taken off the farm will be based on \$0.50 per head per day, 40 percent of that value will be paid to the land owner as rent on the pasture. The house, outbuildings, shop, and corrals are included in the lease.

### **1.3. Mission, Vision, and Goals**

The mission statement, vision and goals for this farm and cattle operation are listed below.

#### *1.3.1 Mission Statement*

The mission of the business is to provide a family friendly environment which supports a livelihood where individuals can learn and contribute their time and talents to produce crops and livestock. Integrity and top quality are essential. Being good stewards of the livestock and land is fundamental. Making decisions which are socially, economically, and financially sound are considered keys to success.

#### *1.3.2. Vision and Goals*

The vision is to own a cow herd of 500 cows and be paying toward owning a farm and ranch in ten years.

Goals of how to achieve this include the following:

- Have equipment paid for in five years and purchase newer equipment when needed without taking on debt
- Use annual profits from farm to pay down equipment loan and or purchase back replacement heifers, whichever is more economically feasible at the time

- On average, we will need to keep 50 head of our own heifers per year to reach the 500 head
- Maintain a reasonable balance of work and family by setting a certain number of hours for work and family per day/week

## **CHAPTER II: LITERATURE REVIEW**

### **2.1. The Purpose of a Business Plan**

Tips from an expert at helping organizations create business plans suggest that business plans help in three important areas. First, the plan will help an owner/management team consider the details, meaning that working through a plan will help one see that there could be many aspects of a business overlooked. A plan will help you save money and time since you will be able to deal with issues before they become a problem (Gabriel). Next, business plans will help in receiving funding if outside funding is required. Lenders want to see that a business has a plan of action and they want to see the financials and will check to make sure they are credible. An effective plan shows investors that you are serious about being successful. Lastly, a business plan is a management tool that can help management focus on where they currently are and where they want to be in the future. Business plans help keep daily tasks managed and will help to accomplish long term goals (Gabriel).

In speaking about the importance of business plans Bill Moss, a partner in the Phoenix accounting firm Henry and Horne, said “it’s extremely critical in dealing with a bank to have a business plan... it is much more important in today’s tighter economy” (Jeras). A business plan essentially forces the owner to spend time thinking about the business, industry, and competition, and to determine the best direction for the business (Jeras). “We think of a business plan as very basic,” says Dennis Landauer, a partner in Gallant and Co. “Most people can’t cook without a recipe or go to college without a curriculum. That’s how we think of it. The business plan is the tool that helps the lender

understand what the business does, how it makes money and how the borrower will pay back the loan,” Landauer indicates (Jeras).

The folks at Quantum Solutions, Inc. have also discussed why a business plan is essential. A business plan will show whether it is financially feasible to start a business; it will show you what funding is needed to start; it will show the possible problems you will face; it will keep management and employees focused; it will turn a good idea into a viable business while showing you your weaknesses; and it will show how the business can grow (Quantum Solutions).

## **2.2. Development of a Business Plan**

The business is currently in need of a plan so that management may make the correct decisions to help the company move forward. The University of Minnesota has developed a business plan organizer designed specifically to assist the agricultural producer in compiling a successful business plan. This will be an effective method to use as an aid in organizing the information needed for the business plan. The sections and content within each section are as follows. The executive summary describes the business and the mission and vision of the company. The business description provides an overview of the business, including business location and structure. The operation section describes the products produced, quality control, and implementation timeline. The marketing plan section discusses market trends along with marketing strategies. Contracting and competitive advantage is also discussed in this section. The management and organization section describes the management team, board of directors, personal plan, and any professional services required. The last section helps develop the financial plan. The

financial plan section describes the financial position, historical performance, financial projections, benchmarks, and capital requirements (AgPlan).

## CHAPTER III: BUSINESS PLAN

### 3.1. Business Overview

The farm lease consists of 600 irrigated acres and 400 acres of dry grazing pasture land. Irrigated acres are watered by 5 gravity pressurized pivots (there is no electric pumping; electricity is only needed to run the motors which drive the wheels). This property is leased on a crop share basis of which 40 percent of crops are paid to the lessor as the lease payment. Also the value of any cows grazed on the farm and pasture will be figured at \$0.50 per head per day for a dry cow or pair and 40 percent of that will be paid to the land owner as pasture rent. All farm production expenses will be assumed by lessee except the land owner will pay for 40 percent of all alfalfa and grass seed planted on the farm and pastures. Lessor will pay for water assessment fees and regular maintenance of irrigation systems (e.g., service of pivots and pipelines). Lessor will also pay for fence repairs located on the farm and regular maintenance on the house and outbuildings.

300 cows will be leased and run in conjunction with the farm. Cows will be leased from a cow owner on a calf crop share based on a 2/3, 1/3 split of which the owner will receive 1/3 of the calf crop each year as payment. The lessee will provide all expenses and care and handling of the cows during the duration of the lease. The owner of the cows will provide bulls and replacement heifers. The cow to bull ratio will be 20 cows to every bull. Bulls will be used until six years of age; cows have a useful life of about eight years after placed in the cow herd. Each fall the lessor and lessee will agree upon which cows need culled; income from cull cows and bulls will be the cow owner's income.

### *3.1.1. Location of Farm*

The farm is located in Twin Falls County, Idaho. The location of the summer pasture for the cow herd is 50 miles south of the farm in northern Nevada.

### *3.1.2. Facilities*

Facilities located on the farm are as follows:

- 3 bedroom, two bath house
- 2 equipment storage sheds
- 30' by 40' enclosed shop
- Corrals and facilities to feed and process 300 stocker calves

All facilities are in good condition except the corrals will need some mending in order to be useable.

Equipment needed to be purchased or leased in order to operate the farm:

- 150 horsepower tractor
- 100 horsepower tractor
- Swather/mower
- Hay rack
- 16' disk
- 16' roller harrow
- 16' cultipacker
- 14' chisel plow
- 7 row cultivator/dicker

## **3.2. Operations**

This section will discuss how commodities will be produced, what crops will be grown, and the types of calves produced.

### *3.2.1. Products*

In this business plan we will look at growing only alfalfa hay and grain corn on the farm. There are several benefits associated with producing alfalfa. First, there are over 370,000 dairy cows within 100 miles of the farm which provide an excellent market for the product (United Dairymen of Idaho). Second, hay production is a great way to mitigate soil erosion and increase soil tilth (the physical condition of soil as related to its ease of tillage, fitness of seedbed, and impedance to seedling emergence and root penetration; soil with good tilth has large pore spaces for adequate air infiltration and water movement) and produces a canopy to shade noxious weeds (Alfalfa, Wildlife and Environment). Cutting hay three times a year also helps to abolish noxious weeds. But probably the best thing about hay is that you do not have to plant it every year. Producers growing high quality dairy hay are leaving a stand of alfalfa in a field for four to five years before rotating to another crop or reseeding back to alfalfa. Also, the biological nitrogen fixation by bacteria growing on alfalfa roots helps save nutrients - no nitrogen fertilizers are needed, in addition, alfalfa leaves behind nitrogen and improves soil structure for the crop that follows so less chemical fertilizer is needed for that crop (Alfalfa, Wildlife and Environment).

Corn is a crop that demands large amounts of nitrogen fertilizers. With growing corn after alfalfa we can utilize that nitrogen left behind by the alfalfa and reduce the amount that will have to be applied. Another benefit of growing corn is that corn stalk residue is a great feed source for grazing stock cows.



We will be leasing 300 stock cows which will graze for seven months in northern Nevada and then be brought back to the farm to graze pasture and crop aftermath. The cow herd will strictly be a commercial herd because cows will run in common with other rancher's cattle on a grazing association so other bulls could breed our cows. The best bulls in the industry are typically not used in this type of grazing. Cows will calve beginning the first of February; so February and March will be the heavy calving months. Calves will be sold to a private buyer at a weight of 500 to 600 pounds.

Our animal health program will be carefully managed and livestock will be vaccinated according to our local veterinarians' specifications. We will also have our bulls trichinosis tested annually to make sure they are free of trichinosis.

### *3.2.2. Production System*

#### *Year 1*

##### Hay

Two and a half of the five pivots currently are planted into alfalfa so we will need to seed one and a half to alfalfa in year one. The pivot ground will be chisel plowed, disked, and roller harrowed. Then the custom fertilizer operator will fertilize and hydro seed. The soil will then be packed with a cultipacker to put a light pack on the soil which will eliminate the seed and fertilizer from being blown off the field.

The pivots currently planted to alfalfa will be cut, raked, and stacked by us and will be baled into large square bales by a custom farmer. The alfalfa is currently yielding 7 tons per acre so it is anticipated that these fields will produce a total of 2,100 tons of alfalfa. The new seeding will yield 3 tons per acre the first year with an expected total production

of 540 tons.

### Corn

The ground planted to corn will be chisel plowed, disked, and roller harrowed by us and planted, harvested, and hauled by custom farmers. The corn seed used will be Roundup Ready seed. After 12 inches of growth, the crop will be sprayed by a custom operator and then cultivated by us. After the corn is harvested, we will rent a shredder from the neighbor and shred the corn stalks. Then we will bring in the hay rake and rake the corn into windrows. The windrowed corn stalks will be used for winter grazing.

### Cattle

The cow herd is a mixture of red and black cows mostly of Angus and Hereford influence. Black Angus bulls will be used on the cows and black and black baldy face calves are expected. The cow herd will graze in common with other ranchers' cows so calves produced may or may not be offspring of the bulls we have (definitely the worst part about grazing in an association). This is strictly going to be a commercial cow herd.

Cows will calve mostly in February and March and calves will be weaned in September. Cows will calve on the farm then be hauled to pasture in northern Nevada around April 15. Prior to hauling calves they will be branded and vaccinated according to a local vet's recommendations. At weaning, the calves will be hauled back to the farm and fed alfalfa hay for 30 days prior to being sold at the anticipated weight of 575 pounds for steers and 550 pounds for the heifers. The cows will be hauled to the farm around November 1, and then pregnancy checked and processed by a local vet. The cull cows will be picked up by the owner of the cows or hauled to a local sale barn at the owner's expense. The owner will also deliver replacement heifers during this time. Replacement

females will be selected from black heifers produced from the leased cow herd. These heifers will graze on the farm until calved and shipped to summer range with the rest of the cow herd.

The cows will graze on our farm for a month or until the neighbors harvest their corn, then walked to a neighboring farm to clean up corn stalk aftermath for a period of 75 days. The cows will return to our farm somewhere around mid to late January. While grazing on corn stalks, the cows will be fed alfalfa hay to fulfill their protein requirement and receive trace mineral with selenium granulated salt. Once the cows return to our farm in January, their protein intake will increase by feeding alfalfa hay as needed prior to and while the cows are lactating in order to maintain body condition. Also, when the cows return to our farm they will be supplemented with a 1-3 phosphorus balancer mineral along with granulated salt until they are shipped to summer range. Salt will always be available to the cows. All bulls and replacement heifers will be provided by the cow owner. Profits from the cattle operation will be used to buy back heifers produced from the leased cows in order to build our own cow herd. Heifers will be fed alfalfa hay until the spring or until they are turned out on farm pasture.

## *Year 2*

### Hay

The pivot planted to corn in year 1 will be the new seeding of hay this year. The field will be chisel plowed, disked, and roller harrowed. Planting, fertilizing, and cultipacking will follow suit as was described for the previous year. Total production is expected to be 2,520 tons from the three pivots and 360 ton from the new seeding pivot of

alfalfa.

### Corn

The oldest pivot stand of alfalfa will be taken out by chisel plowing, disking, and roller harrowing. The corn will be planted just as in year 1. After the corn is harvested, stalks will be shredded and windrowed.

### Cattle

The cattle operations will be similar to that described for year 1. The heifers we kept from profits from year 1 will be artificially inseminated to a low birth weight black bull and then clean-up breed by a leased bull.

Years 3 and on will follow operational procedures from year 2.

### *3.2.3. Risk Management*

Multi-peril crop insurance will be used to protect against the risk of low crop yield, and unforeseen poor weather conditions which may destroy or harm the corn crop. Entering into a long-term lease contract for the use of the farm will help to eliminate any other farmer coming in and leasing the land from the owner. Obviously, land ownership is the best way to eliminate this problem from occurring, however, land ownership creates financial risk.

Making sure we understand what is written in crop contracts before signing will help identify what the marketing risks are and what our part of the contract will be. We will continue to meet federal farm program guidelines to maintain eligibility for crop disaster payments and also crop subsidy payments. Contracts will help to ensure a price for commodities sold; however, there is not an option to ensure a multiple year

commodity price guarantee so price contracts will only help to ensure a price paid during the specified growing season.

When the hay is sold a check will be in our hands before any hay leaves the farm. There are too many stories of farmers not getting paid for awhile after they actually sell the hay, this would be disastrous for our program.

Having animal health problems is always a potential risk; however, there are a few good measures we can take to help reduce the threat of poor health. First, we will follow a health program recommended by our vet. Next, grazing cattle on pastures as compared to feeding in a confined lot is a good way to break up disease cycles.

There are also risks of summer pastures burning which could be a loss of grazing and also possibly the loss of cattle if they were caught in the fire. There is insurance that covers any cattle burnt up in a range fire. Again, we will make sure we comply with all government regulations in order to receive any disaster payouts in the case of such a crisis.

#### *3.2.4. Environmental Issues*

The largest environmental threat which our business faces has to do with running cows on public lands in northern Nevada. There is always the threat that the BLM could cut AUMs on the ranch and therefore all shareholders would be cut back on the number of AUMs they could take off the ranch. Fire is another environmental issue that could have a negative impact on the summer grazing.

#### *3.2.5. Quality Control*

We will attend crop and livestock seminars and field days in order that we might continue our education and keep up with newer forms of production.

### *3.2.6. Implementation Timeline*

In this section I will outline each month of the year and dates associated with what activities need to be accomplished around those dates.

#### *Year 1*

##### February through March

Purchase or lease the equipment listed below.

- 100 horse power tractor equipped with a front end loader
- 150 horse power tractor
- 16' disk
- 16' roller harrow
- 16' cultipacker
- Hay rack
- Swather/mower
- 7 row cultivator/dicker
- 14' chisel plow

##### March

The following tasks will take place in March:

- Farm lease will take effect March 1
- Service tractors
- Service, check, fix, and replace any needed items on equipment

##### April

Before the 15<sup>th</sup>, chisel plow, disk, and roller harrow the pivot ground that will be planted to corn. This will be followed by the application of fertilizer to this ground.

Also, during this month, we will control weeds around the shop and yard. Around the 20<sup>th</sup> of the month, we will have corn custom planted. Towards the end of the month, the current alfalfa fields will be fertilized.

### May

We will chisel plow, disk, and roller harrow the 1.5 pivots which will be planted to alfalfa. Simplot Grower Solutions (our fertilizer, chemical, and seed company) will fertilize and seed the 1.5 pivots to alfalfa. After this we will run a cultipacker over the soil. We will check and service pivots during this month. A custom operator will spray Roundup on the corn field. Towards the end of the month, we will cultivate the corn field. The corn field will receive 2 inches of water throughout the month and alfalfa will receive 7 inches.

### June

Before the 15<sup>th</sup> of the month, we will spray weeds around roadways, ditches, and fences. We will cut, rake, and have a custom farmer bale 2.5 pivots of alfalfa followed by us stacking the hay on the farm. The corn field will receive 6 inches of water throughout the month and alfalfa will receive 7 inches. Towards the end of June, the alfalfa will be sprayed with insecticide by a custom sprayer to control weevil and aphids.

### July

Tasks for July include going through the swather and getting it ready to cut the second cutting of hay. Corn and alfalfa will receive 8 inches of water. Toward the end of the month alfalfa, including the new stand will be cut, raked, baled, and stacked.

## August

Corn and alfalfa will both receive 8 inches of water. We will go through the swather so it is ready to cut the third cutting of hay.

## September

The alfalfa fields will receive 7 inches of water while corn receives 6 inches of water. All alfalfa will be cut, raked, baled, and stacked around the middle of the month. Corral fences will be fixed and made ready to use.

## October

The alfalfa fields will receive 2 inches of water. Wire fences around the farm will be checked and fixed as needed.

## November

The corn will be thrashed and hauled to a local elevator by a custom farmer. Corn stalks will be shredded using a shredder rented from a neighbor farm and then windrowed with a hay rake. Cattle will be received toward the end of the month and will graze neighboring corn stalks for around 75 days during which time the cows will receive 5 pounds of alfalfa for protein supplement and also be given free choice salt. The cow business will purchase 240 tons of alfalfa hay from the farm for supplementing the cow herd.

## December

Check cows for sickness and supplement with alfalfa.



## *Year 2*

### January

Cows will be checked and supplemented. Towards the end of January, we will bring cows back to the farm to graze dry pasture and crop aftermath.

### February

We will supplement cows with 10 pounds of alfalfa per day, continue to use salt, and add a 1-3 prosperous balancer mineral supplement for the purpose of increasing prosperous intake which will help cows to clean out better after calving and also help cows heat cycle come breeding time. The 1-3 phosphorus balancer will be fed from February to mid April when cows are turned onto pastures. Cows will begin to calve this month.

### March

Cows will continue to calve and the majority of the cow herd should be finished calving by the end of the month. Cows will continue to receive 10 pounds of alfalfa for protein supplement. Cows will receive a magnesium supplement from March until the cows are shipped to summer range. Magnesium is to prevent the cows from being magnesium deficient when they are turned out on summer range, which is caused by a lack of magnesium in fast growing grasses. This month we will begin to do the farming routine (e.g., servicing equipment and implements).

### April

Cows will be fed 35 pounds of hay per day until around the 15th when they will be hauled to summer range. Prior to hauling to summer range, calves will be branded and vaccinated according to a local vet's specifications. Bull calves will be castrated as well.

The oldest pivot of alfalfa will be chisel plowed, disked, and roller harrowed. Fertilizing will take place prior to tilling ground. A custom seeder will plant corn around the 20<sup>th</sup> of the month.

### May

Bulls will be turned out and cows checked. Last year's ground that was planted to corn will be chisel plowed, disked, and roller harrowed. The field will be seeded to alfalfa and fertilized by Simplot. Directly after fertilization, we will use a cultipacker. We will check and service pivots during this month. A custom operator will spray Roundup on the corn field. We will cultivate/dike the corn field. The corn field will receive 2 inches of water and alfalfa will receive 7 inches of water throughout the month.

### June

We will spray weeds around roadways, ditches, and fences on the farm. We will cut, rake, and have a custom operator bale 3 pivots of alfalfa and stack the hay on the farm. The corn field will receive 6 inches of water throughout the month and alfalfa will receive 7 inches. Toward the end of June, the alfalfa will be sprayed with insecticide by a custom sprayer to control weevil and aphids.

### July

Any time after the hay has been baled and stacked it can be sold and hauled. Corn and alfalfa will receive 8 inches of water. Toward the end of the month, the alfalfa including the new stand will be cut, raked, baled, and stacked.

### August

The corn and alfalfa will receive 8 inches of water.

## September

The alfalfa will receive 7 inches of water while the corn receives 6 inches. The alfalfa will be cut, raked, baled, and stacked around the middle of the month. The calves will be weaned towards the end of the month and hauled back to the farm. A week after they arrive they will receive their booster vaccine shots. The calves will be fed 15 pounds of alfalfa per day for 30 days until sold. We will purchase 78 tons of alfalfa to feed calves. When the calves are weaned, the bulls will also be hauled back to the farm and turned out to graze.

## October

The alfalfa will receive 2 inches of water. Wire fences around the farm will be checked and fixed as needed. Towards the end of the month, calves will be sold and profits from the cow herd will be used to purchase heifers to build our cow herd. Heifers will remain on the farm and turned out to graze crop aftermath. These heifers will be supplemented with 10 pounds of alfalfa hay per day.

## November

The corn will be thrashed and hauled to a local elevator by a custom farmer. Corn stalks will be shredded using a shredder rented from a neighbor farm and then windrowed with a hay rake. The cows will be hauled back to farm around the first of the month and grazed on our pasture until the end of the month or until the neighbor's corn stalks are ready to graze. Prior to leaving the farm for grazing neighbor corn stalks, cows will be pregnancy checked and vaccinated by a local vet. Cull cows will be held back and sold or hauled back to owner's ranch. Cows will remain on the neighbor's corn

stalks for around 75 days and fed 5 pounds of alfalfa hay for protein. Salt will also be provided to the cows.

### December

Check cows for sickness and supplement with alfalfa.

### *Year 3*

### January

We will purchase 240 tons of alfalfa hay for the cows. The cows will be checked frequently and supplemented. Towards the end of January, we will bring the cows back to the farm to graze.

### February

We will supplement the cows with 10 pounds of alfalfa per day, continue to provide salt, and add a 1-3 phosphorous balancer mineral supplement for the purpose of increasing phosphorous intake which will help cows to clean out better after calving and also help cows heat cycle come breeding time. The cows will begin to calve this month.

### March

The cows will continue to calve and the majority of the cow herd should be finished calving by the end of the month. The cows will continue to receive 10 pounds of alfalfa for protein supplement.

### April

The cows will be fed 35 pounds of hay per day until around the 15<sup>th</sup> of the month when they will be hauled to summer range. Prior to hauling the cows to the summer range, the calves will be branded and vaccinated according to a local vet's specifications. Bull calves will be castrated as well. The oldest pivot of alfalfa will be chisel plowed,

disked, and roller harrowed. Fertilizing will take place prior to tilling the ground. A custom seeder will plant corn around the 20<sup>th</sup> of the month. Bulls will be trichinosis tested by the vet. Our heifers will be heat checked and we will A.I. them to a low birth weight black bull for a desired calving date in January.

### May

The bulls will be turned out and cows checked. Last year's corn ground will be chisel plowed, disked, and roller harrowed. This ground will be seeded to alfalfa and fertilized by a custom operator. We will follow the seeding with a cultipacker. A custom operator will spray Roundup on the corn field. We will cultivate/dike the corn field. The corn will receive 2 inches of water and the alfalfa will receive 7 inches of water.

The rest of the months will follow the schedule for year 2.

### **3.3. Marketing Plan**

This section will describe what, how, when, and to whom we will be marketing our products.

There are three local buyers which purchase large amounts of corn each year and we will contract with one of the three based on price, delivery dates, and specifications established for the condition of the corn.

Within the southern Idaho region there are over 370,000 dairy cows which are located within 100 miles of the farm. Our alfalfa market will be to dairy producers in the area. The current land owner has good relations with some of these producers having sold hay to them in the past. We hope to continue good relations with them and market our hay to these dairymen. Another way to find hay buyers is simply to stop and talk to the dairy

owners in early spring as this is the time they usually make plans for purchasing hay. A third option is to call a couple of hay brokers who buy, sell, and haul hay.

There are several different options that can be used to market the calves including using a video market, a sale barn, and a contract with a local buyer. Each of these options is further described below.

There are several video markets around the country now. The one which we favor the most is Superior Livestock Auction simply for the fact we know a video representative from Superior and know through him that they never have had any problems paying their customers. If we choose to market our calves with Superior, the representative would come to our farm and video the calves, place the video on their website so prospective buyers can look at the calves, then on the sale day, Superior would broadcast the video and bidders would phone in to purchase the calves. Calves would be sold FOB from our farm. Cattle are usually only sold in truck loads at a time otherwise the seller might have to pay part of the freight. There is a commission to be paid to Superior.

The local sale barn provides an easy way to market calves as every Wednesday there is a beef sale. On average, there is anywhere between 1,200 to 2,000 head that are sold on any given sale day. All one has to do is show up at the sale barn with the cattle, unload them, and they will be sold. It is important to note that a person selling cattle this way has a freight bill in order to get the cattle to the sale barn. Again, a commission has to be paid.

To compare the two methods of marketing calves I have looked at a study which shows that video auctions appear to reduce trucking costs which suggests buyers may pay slightly higher prices for cattle, and competition may be keener as more buyers participate

to purchase cattle through video; other considerations that can make video auctions more desirable are lot sizes of cattle sold, and vaccination history (Bailey and Kettle).

A research study conducted at Utah State University compared prices received at three regional auctions (Oklahoma City, OK; Greeley, CO; and Dodge City, KS; all considered high-volume regional markets) to prices received from video auctions for cattle within a 400-mile radius of the regional auctions. If one considers only quoted prices, the regional auction prices were slightly higher than the video auctions. If cost of transportation and shrinkage were considered, then prices received in the video auctions were 95¢/cwt higher than Oklahoma City, \$3.36/cwt above Greeley, and \$1.48/cwt more than Dodge City. These results are averages over the entire 400-mile market area. The differences would be smaller, or even reversed, for cattle close to the regional markets and higher for cattle further away from the regional market (Bailey and Kettle).

For our type of operation marketing through video would be the more desired way to market the calves when comparing the local sale barn with selling through a video market.

The final way in which we could market the calves is simply to find a buyer ourselves and come to an agreement on the price. In this case, there would not be a commission. This is how we prefer to sell the calves just as long as we know the buyer and his/her reputation of paying. The person we will lease the cows from operates his own feedlot and would likely purchase the calves and feed them in his lot. If this is the route we go with for marketing the calves, we will contact the potential calf buyer and settle on a price for the calves based on prices received for the same type of calves sold through Superior Livestock Auction, and then sign a contract with a set date and weight. On this

particular farm there is a livestock scale that could be registered and calves could be weighed directly on the farm. This would be beneficial for selling through the video market as well.

### *3.3.1. Market Trends*

Trends in the corn market tend to be somewhat predictable because of seasonal patterns which are mainly due to the availability of corn in the market during different times of the year. According to Joseph Vaclavik, who is a broker with MF Global specializing in the agriculture futures markets, there are a fall, winter and spring, and summer seasonal trends which drive the corn market (Vaclavik).

The fall seasonal trend will be discussed first. Vaclavik's basic argument, which makes sense, is that the price in the corn market is at its lowest during harvest because there is plenty of corn to go around. The fall is the time when farmers deliver their corn to local elevators and the supply of corn is the greatest at least in North America. Vaclavik also makes the comment that there is also corn in storage which is sold to make way for the current years corn (Vaclavik).

The winter and spring seasonal trend will be discussed next. In most years the opposite usually occurs in the corn market from December to May. Once farmers' grain has been sold prices tend to move upward. Also the "acreage battle" has something to do with the effect of corn prices during this period as corn and soybeans battle for acreage. If it looks as though there could be a shortage in acreage, then corn prices will be pushed upward (Vaclavik).

The last seasonal trend that Vaclavik discusses is the summer seasonal trend. Corn prices during this time of year tend to be a little lower than in the winter and spring.



However, the weather has a huge role to play with corn prices during this season. If weather is normal and mild, then prices will not fluctuate much. Conversely, if we see poor growing conditions and extreme weather which damages crops then corn prices tend to move upward (Vaclavik).

In summary, corn prices tend to be lower in October, November, and December, and higher in February through May. This is just a general idea of corn price trends throughout a year and how supply and demand play a role in prices. This year might go down in history as a year where the "Fall Seasonal Trend," just so happens to be the period with the highest prices. This is at least partially due to USDA's incorrect corn production forecast which was 500 million bushels short of their earlier projections. This caused a jump in the price of corn almost instantly. In the last three years we have seen how the government has had a huge role in increasing the overall price of corn by pushing the demand for the gasoline additive ethanol. If it had not been for the push in ethanol, corn prices would not be where they are today.

Just as with corn there are seasonal trends in alfalfa hay prices. There are four different grades of alfalfa hay which the USDA uses to classify hay. First and highest is supreme, second is premium, then good, and the last and poorest quality of hay grade is fair. We are going to look specifically at prices of hay in Idaho because of the importance that local Idaho dairies have on the market. In an article about the seasonal patterns of Idaho hay prices, C. Wilson Gray, an extension professor with the University of Idaho, discusses the seasonal changes in the prices of hay. For the supreme, premium, and good qualities of hay, prices paid were highest in the months of August, September and October (Gray). The months where hay production is greatest is June through

September. A question that could arise is how can prices be highest when supply is high which contradicts the supply and demand cycle (e.g., when supply is high demand is low which in turn should indicate lower prices). The reason for higher prices during high supply is because dairy producers purchase enough hay to last a year during harvesting months.

This trend of high prices is opposite of corn as corn prices are the lowest at harvest time. This is not always the case for all hay prices throughout the country. According to Clement Ward, a professor and extension economist with Oklahoma State University, hay prices in Oklahoma peak in January and decline sharply through May at which time they tend to increase again until January (Ward). Idaho's lowest hay prices historically for supreme, premium, and good quality of hay are in April while fair quality hay historically bottoms out in May. According to the Idaho trends the best time to sell hay is during the months of August through October because of the higher prices. If we sell when prices are high we will not have to store hay for very long.

Trends in the beef industry show that cattle numbers are decreasing and currently they are as low as production was in the early 1950s. There are many indicators that point to a positive outlook for producers. A continuing decrease of production is forecasted for the next few years. In addition, an increase in populations in key countries, such as many Asian countries, means from a global standpoint beef demand will be high.

### *3.3.2. Marketing Contracts*

One of the contracts that will need to be made will be with the company in which we sell our corn to. Ideally we will enter into these contracts before planting which will allow us to plan for a specific price. We will also have a contract with the company we

insure our corn through. A contract for marketing the calves will be used which will specify a predicted weight and quantity sold and what the buyer will pay in return.

A contract with the land owner will be entered into for a period of five to ten years. This will specify that the owner is responsible to pay for water assessment fees, and the regular maintenance of the watering systems (e.g., pivots, pipelines, and all systems tied to irrigating the farm land). This contract will also include the use of the house, buildings, and corrals. Also, this contract will discuss what the owner is responsible for in terms of providing weed killer for controlling weeds in the farm yard and pastures.

### *3.3.3. Strategic Partners*

There are a few strategic partners we will need to establish and work with. First, we will need to continue to develop a good relationship with our fertilizer, chemical, and seed salesman. This person works for a company called Simplot Grower Solutions. They sell fertilizers, chemicals, and crop seeds as well as apply fertilizers and chemicals, and plant seeds that can be applied by hydro-seeding. This person will be very important to the success of the business as seed, fertilizer, and chemical costs are significant. We will rely on him for purchasing the best seeds, fertilizers, and chemicals available in the industry. With that, we understand the importance of periodically shopping around for different prices and hearing what other chemical, fertilizer, and seed specialists have to say.

Another person whose influence will be pertinent to the success of the cattle portion of the business will be the individual whom we lease the cows from. A good relationship will need to be established and the agreement will need to be a win-win situation for both parties.

We hope to also establish a good relation with one or two customers whom we can count on to purchase our hay each year. Having a dairy that we can trust and know will pay their bills would be a huge benefit to our business. Ideally, we would like to get to where we have the hay baled in the field and have the buyer send trucks and pick up the hay directly from the field.

A fourth person we need to establish a good relation with is whomever we sell our corn to, be it a dairy or some other commodity purchasing entity.

The final individual or entity whom will contribute to the success of our operation will be our lenders. We will use lenders for operating loan needs and for loans used to purchase assets.

#### *3.3.4. Competitive Advantage*

Locally and nationally the operation's competitors are those who produce commodities. Our ability to compete with them will depend on our capability to produce at lower costs and also our ability to operate larger scale production enterprises in comparison to the norm. Economies of scale play a huge role in the success of agricultural enterprises. Our farm will be larger than the average farm size in the U.S. which according to the USDA is 418 acres while the average farm size in Idaho is 452 acres (USDA). The average beef cow herd size in the U.S. is 40 cows. Our cow herd will be nearly eight times the average. Given our above average farm and cow herd size, our business should be more efficient than the average farm and ranch. The one thing that small scale farm owners/producers have going for them is they tend to have off farm jobs which pay for living expenses, where we are trying to make a full-time living off the farm.

Below is a list of strengths and weaknesses. Strengths include the following:

- Educated and committed to life long learning with a desire to implement new practices which will benefit the business economically, socially, and environmentally
- Strong work ethic
- Have the support of the family
- Honest

Possible weaknesses are as follows:

- Not a good public relations kind of person (I am simply a straight forward person with not a lot of frill. Some times to build relationships of trust with strategic people a little extra is needed)
- Lack of capital and equipment
- Do not understand hedging commodities all that well
- Lack diversification of crop enterprises
- Have to haul cows
- Leasing land and cattle

It is important to examine what strengths we can capitalize on and what weaknesses need to be addressed. I feel all of my strengths are important and all can be capitalized on in some form. My education will be a huge strength which will help me manage the businesses more efficiently and will help in understanding the financial aspect of the business. This will be pertinent in dealing with lenders. Probably the one weakness that I need to address the most which will help throughout life will be the first one on the list, the need to become more of a people person. Having connections with

the right people and maintaining those will open doors and help the company to be successful.

This business can succeed as long as we can control our input costs. Historical production levels for the farm are average for the southern Idaho region, meaning there is room for improvement. To start with we will expect average production levels. With proper management, we expect production levels to become above average. The location and land are excellent, being located on a water tract that has had ample water the past ten years where many Idaho water tracts have reduced the amount of water to farmers during low water level years (this is why we can get away with producing crops that require large amounts of water such as alfalfa and corn). Machinery we will purchase will not be brand new which will reduce our investment in equipment.

### **3.4. Management & Organization**

Management and tasks needed to be accomplished in the business will be described below.

#### *3.4.1. Management Team*

I will act as manager of the operations. Major responsibilities will include:

- Managing labor/part time personnel
- Communicating with buyers
- Communicating with lenders and veterinarian
- Making overall decisions with input from others
- Making capital purchase decisions
- Completing business analysis, cash flow projections, and marketing plans

Rebecca Staley will be the assistant manager. Her duties will include the following:

- Making decisions in the absence of the manager
- Generating accounting and financial reports

#### *3.4.2. Personal Plan*

Major operational tasks described in the operational section of the business plan will be carried out by me. There will be times when an extra person will be needed to drive a tractor or help build fence and help process and move cows. Marketing and financial decisions will be made by me and the assistant manager.

#### *3.4.3. Professional Services*

Professional outside services which we will use in our operations are as follows:

- Veterinary – Lanting Veterinary Services
- Nutrition – Rangen Inc.
- Crops, Fertilizer, Seeds, and Chemicals – Simplot Grower Solutions
- Machinery – Agri Services
- Lenders – Wells Fargo Bank, Idaho Ag Credit, and a private investor
- Accountant – Ware and Associates

### **3.5. Financial Plan**

This section will outline the enterprise net returns, will present a pro forma income statement, and will provide detail related to capital needs.

### *3.5.1. Enterprise Budgets*

All resources included in the budgets found below are valued at opportunity costs or current market prices. Seed and fertilizer costs are quotes from our Simplot Grower Solution's representative while production costs for machinery are taken from University of Idaho's extension web site. Selling prices for commodities are ten year averages not the current market price. For corn, there will be 40,000 seeds planted per acre in 22-inch rows to Roundup Ready corn. The cost for alfalfa seed is split according to the crop share agreement with the land owner paying for 40 percent of alfalfa seed costs. Alfalfa seed will be planted at a rate of 20 pounds per acre. Budgets are figured based on an average growing year. Operating interest for the farm is figured at 7 percent of total capital needed to operate during a season divided by each farmable acre. Operating interest for the cow portion of the business is figured at 7 percent of the total capital needed to operate annually. Hired labor is an estimate of extra labor needed during busy times, such as haying or processing and hauling cows.

Crop production per acre for corn is based on 165 bushels per acre; however, I only figured 60 percent of that amount in the corn budget as the other 40 percent is the land owner's portion of the crop. Alfalfa currently in production is based on an average of 7 tons per acre; however, I only figured 60 percent of that amount in the alfalfa budget. The new seeding alfalfa budget is based on an average of 3 tons per acre production with 60 percent of that being ours.

Calf crop is figured at 90 percent of total pregnant cows wintered. Pregnancy rate is figured at 95 percent; so with a cow herd of 300, 15 will be open each year. With the nature of the contract, open cows will be retained in the cow herd and lessee assumes the



costs to run the cow. Cow death loss is anticipated to be 2 percent and the lessee is responsible for replacing any cow or bull which dies during the duration of the lease.

### *3.5.2 Financial Projections*

Table 3.1 shows income and expenses for the Roundup Ready grain corn. Table 3.2 shows the breakeven analysis of yield and price for the grain corn. The base yield/acre is 99 bushels (our 60 percent of the 165 bushels expected) and the plus or minus 10 percent above and below the 99 bushels is figured so we can see what the price would need to be to breakeven if yield was 10 percent better or worse than the 99 bushels expected. The total breakeven price/acre is the price needed to breakeven at the base yield/acre. In contrast the base price per bushel paid is \$4.50 and then there are prices above and below that based on 10 percent. The total yield/acre breakeven is the yield needed at the base price to breakeven.

Table 3.3 shows income and expenses for already established alfalfa. Table 3.4 displays the income and expenses for newly established alfalfa (a pivot of alfalfa will be seeded annually). Table 3.5 is the breakeven analysis for all alfalfa hay production. The base tonnage per acre is 3.6 tons with plus and minus 10 percent above and below 3.6 tons. \$88.61 is the amount per ton needed to breakeven. The base price per ton is \$110 with plus and minus 10 percent above and below this. At the base price 2.63 tons of alfalfa is needed to be produced in order to breakeven. Table 3.6 shows the predicted budget for the cow/calf herd. Value or cost per head is based on the 300 head of cows not the 172 head of calves sold. This is so we can figure cost per cow.

**Table 3.1 Roundup Ready Corn**

---

Item	Quantity per Acre	Unit	Price or Cost	Value or Cost/Acre
<b>Gross Returns</b>				
Field Corn	99	bu	4.50	445.50
<b>Operating Inputs</b>				
Seed	0.5	bag	160.00	80.00
<u>Fertilizer</u>				
Dry Nitrogen	180	lb	0.47	84.60
Dry P <sub>2</sub> O <sub>5</sub>	50	lb	0.45	22.50
K <sub>2</sub> O	60	lb	0.49	29.40
Sulfur	25	lb	0.18	4.50
<u>Pesticides</u>				
Roundup	40	oz	0.35	14.00
Ammonium Sulfate	2	lb	0.25	0.50
<u>Custom and Consultants</u>				
Custom Fertilize	1	ac	7.00	7.00
Custom Combine	1	ac	36.00	36.00
Custom Hauling	165	bu	0.16	26.40

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**Table 3.1 continued**

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Item	Quantity per Acre	Unit	Price or Cost	Value or Cost/Acre
Custom Seeding	1	ac	16.00	16.00
<u>Irrigation</u>				
Irrigation Energy	32	acin	0.68	21.76
<u>Machinery</u>				
Fuel - Gas	1.5	gal	3.25	4.88
Fuel - Diesel	8.5	gal	2.50	21.25
Lube	1	ac	3.00	3.00
Machinery Repairs	1	ac	8.45	8.45
<u>Other</u>				
Crop Insurance	1	ac	21.00	21.00
Hired Labor	0.288	hour	10.00	2.88
<u>Interest</u>				
Operating Interest @ 7.00%	1	ac	20.80	20.80
<b>Total Operating Costs</b>		ac		424.92
<b>Operating Costs per unit</b>		bu		4.29
<b>Net Returns above Operating Expenses</b>		ac		20.59

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**Table 3.1 continued**

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Item	Quantity per Acre	Unit	Price or Cost	Value or Cost/Acre
<u>Ownership Costs</u>				
Equipment Insurance	1	ac	0.27	0.27
Equipment PMT	1	ac	30.49	30.49
<b>Total Ownership Costs</b>		ac		30.76
<b>Ownership Costs per unit</b>		bu		0.31
<b>Total Costs per Acre</b>		ac		455.68
<b>Total Cost per unit</b>		bu		4.60
<b>Return to Operator Labor and Management/acre</b>				(10.18)

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**Table 3.2 Roundup Ready Corn Breakeven Analysis**

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Item	- 10%	Base	+10%
Yield/Acre	89.10	99.00	108.90
Operating Cost Breakeven	\$4.77	\$4.29	\$3.90
Ownership Cost Breakeven	\$0.35	\$0.31	\$0.28
<b>Total Price/Acre Breakeven</b>	\$5.11	\$4.60	\$4.18

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Price/bu	\$4.05	\$4.50	\$4.95
Operating Cost Breakeven	104.92	94.43	85.84
Ownership Cost Breakeven	7.60	6.84	6.21
<b>Total Yield/Acre Breakeven</b>	112.51	101.26	92.06

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**Table 3.3 Established Alfalfa**

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Item	Quantity per Acre	Unit	Price or Cost	Value or Cost/Acre
<b>Gross Returns</b>				
Alfalfa Hay	4.2	ton	110.00	462.00
<b>Operating Inputs</b>				
<u>Fertilizer</u>				
Dry P <sub>2</sub> O <sub>5</sub>	78	lb	0.45	35.10
K <sub>2</sub> O	60	lb	0.49	29.40
Sulfur	25	lb	0.17	4.25
Cart Rental	1	ac	1.00	1.00
<u>Pesticides</u>				
Sencor 4L	0.5	qt	23.73	11.87
Warrior	3	oz	2.00	6.00
<u>Custom and Consultants</u>				
Custom Bale	7	ton	16.00	112.00

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**Table 3.3 continued**

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<u>Item</u>	<u>Quantity per Acre</u>	<u>Unit</u>	<u>Price or Cost</u>	<u>Value or Cost/Acre</u>
Custom Air Spray 3G	1	ac	5.70	5.70
<u>Irrigation</u>				
Irrigation Power-CP	36	acin	0.68	24.48
<u>Machinery</u>				
Fuel-Gas	1.4	gal	3.25	4.55
Fuel-Diesel	4	gal	2.50	10.00
Lube	1	ac	0.50	0.50
Machinery Repairs	1	ac	2.35	2.35
<u>Labor</u>				
Hired Labor	0.288	hour	10.00	2.88
<u>Interest</u>				
Operating Interest @ 7.00%	1	ac	20.80	20.80
<b>Total Operating Costs</b>		ac		270.88
<b>Operating Costs per Unit</b>		ton		64.49

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**Table 3.3 continued**

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Item	Quantity per Acre	Unit	Price or Cost	Value or Cost/Acre
<b>Net Returns above Operating Expenses</b>		ac		191.13
<u>Ownership Costs</u>				
Equipment Insurance	1	ac	0.27	0.27
Equipment PMT	1	ac	30.49	30.49
<b>Total Ownership Costs</b>		ac		30.76
<b>Ownership Costs per Unit</b>		ton		7.32
<b>Total Costs per Acre</b>		ac		301.64
<b>Total Cost per Unit</b>		ton		71.82
<b>Return to Operator Labor and Management/acre</b>				160.37

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**Table 3.4 New Seeding Alfalfa**

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Item	Quantity per Acre	Unit	Price or Cost	Value or Cost/Acre
<b>Gross Returns</b>				
Alfalfa Hay	1.8	ton	110.00	198.00
<b>Operating Inputs</b>				
Seed	12	lb	3.00	36.00
<u>Fertilizer</u>				
Dry Nitrogen	23	lb	0.50	11.50
Dry P <sub>2</sub> O <sub>5</sub>	52	lb	0.45	23.40
K <sub>2</sub> O	37	lb	0.49	18.13
Sulfur	24	lb	0.18	4.33
<u>Custom and Consultants</u>				
Custom Bale	3	ton	16.00	48.00
Custom Fertilize	1	ac	8.00	8.00
<u>Irrigation</u>				
Irrigation Power-CP	25	acin	0.68	17.00
<u>Machinery</u>				
Fuel-Gas	1.35	gal	3.25	4.39

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**Table 3.4 continued**

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Item	Quantity per Acre	Unit	Price or Cost	Value or Cost/Acre
Fuel-Diesel	6.5	gal	2.50	16.25
Lube	1	ac	2.35	2.35
Machinery Repairs	1	ac	5.70	5.70
<u>Labor</u>				
Hired Labor	0.3	hrs	12.00	3.60
<u>Interest</u>				
Operating Interest @ 7.00%	1	ac	20.80	20.80
<b>Total Operating Costs</b>		ac		219.45
<b>Operating Costs per Unit</b>		ton		121.92
<b>Net Returns above Operating Expenses</b>		ac		-21.45
<u>Ownership Costs</u>				
Equipment Insurance	1	ac	0.27	0.27
Equipment PMT	1	ac	30.49	30.49
<b>Total Ownership Costs</b>		ac		30.76
<b>Ownership Costs per Unit</b>		ton		17.09
<b>Total Costs per Acre</b>		ac		250.21
<b>Total Cost per Unit</b>		ton		139.00

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**Table 3.4 continued**

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<b>Return to Operator Labor and Management/acre</b>	-52.21
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**Table 3.5 Alfalfa Breakeven Analysis**

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<b>Item</b>	<b>-10%</b>	<b>Base</b>	<b>+10%</b>
Ton/Acre	3.24	3.60	3.96
Operating Cost Breakeven	\$87.61	\$78.85	\$71.68
Ownership Cost Breakeven	\$10.85	\$9.77	\$8.88
Total Price/Ton Breakeven	\$98.46	\$88.61	\$80.56
Price/Ton	\$99.00	\$110.00	\$121.00
Operating Cost Breakeven	2.61	2.35	2.13
Ownership Cost Breakeven	0.31	0.28	0.25
Total Ton/Acre Breakeven	2.92	2.63	2.39

**Table 3.6 Cow/Calf Budget**

Item	Weight	Quantity	Unit	Value or Cost/Unit	Price or Cost	Value or Cost/Hd
<b>Gross Returns</b>						
Steer Calves	5.75	86	cwt	109	53,901	179.67
Heifer Calves	5.5	86	cwt	99	46,827	156.09
<b>Operating Inputs</b>						
Alfalfa Hay		250	ton	110	27,500	91.67
Summer Range		2205	AUM	15	33,075	110.25
Neighbor Corn Stalks		750	AUM	15	11,250	37.50
Crop Aftermath		700	AUM	15	10,500	35.00
Salt/Mineral		2705.69	\$	1	2,706	9.02
Brand Inspection		585	head	1.25	731	2.44
Freight/Trucking		17	Load	192.5	3,273	10.91
Vet/Medicine		585	head	6.56	3,838	12.79

**Table 3.6 continued**

Item	Quantity	Unit	Value or Cost/Unit	Price or Cost	Value or Cost/Hd
Machinery (fuel/repair)	2388	\$	1	2,388	7.96
Vehicles (fuel/repair)	3572	\$	1	3,572	11.91
Other	500	\$	1	500	1.67
Hired Labor	80	hr	10	800	2.67
Operating Interest	4372	\$	1	4,372	14.57
<b>Total Operating Costs</b>				104,504	348.35
<b>Operating Costs per Unit</b>				348	1.16
<b>Net Returns above Operating Expenses</b>				(3,777)	(12.59)
<u>Ownership Costs</u>					
Pickup/stock Trailer PMT	2423	ea	1	2,423	8.08
Insurance	527	ea	1	527	1.76
<b>Total Ownership Costs</b>				2,950	9.83

**Table 3.6 continued**

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<b>Item</b>	<b>Quantity</b>	<b>Unit</b>	<b>Value or Cost/Unit</b>	<b>Price or Cost</b>	<b>Value or Cost/Hd</b>
<b>Ownership Costs per Unit</b>				10	0.03
<b>Total Costs</b>				107,454	358.18
<b>Total Cost per Unit</b>				358	
<b>Return to Operator Labor and Management</b>				(6,727)	(22.42)

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Table 3.7 shows the breakeven analysis for calves sold (e.g. the base is the number of calves sold, which is 172). The average price per calf needed to breakeven is \$624.42 per calf. If we figure the average price paid for each calf is \$104.00 per cwt (derived by averaging the prices paid per steer and heifer) then the average weight per calf needs to be 600 pounds to breakeven.

**Table 3.7 Cow/Calf Breakeven Analysis**

Item	-10%	Base	+10%
Number of Calves Sold	154.80	172.00	189.20
<b>Total Average Price/Calf Breakeven</b>	\$675.09	\$624.42	\$567.65
Average Price/Calf (cwt)	\$93.60	\$104.00	\$114.40
<b>Total Average lbs/Calf Breakeven</b>	667	600	546

*3.5.3. Pro Forma Income Statement*

Below in table 3.8 is a pro forma income statement which outlines expected revenue from crops, calves sold, and income from farm pasture based on the amounts of AUMs expected to be taken from the pasture and crop residue, versus the expected expenses for operating the farm and cattle business. This shows a net farm income of \$47,102. With this income we have covered all expected costs including equipment payments. The net farm income ratio is 13.44 percent indicating that for every dollar in sales there is a \$0.1344 gain. A desired net farm income ratio is 20 percent which allows us to meet the goals described in section 1.3.2. We have yet to pay ourselves a desired owner's draw of \$40,000 which will come from the net farm income of which \$5,000 of the owner's draw should come from the cow portion of the business.

### 3.5.4 Capital Request

Operating capital needed is \$325,000. This covers a year's production cycle (e.g., purchasing seeds, fertilizers, pesticides, fuel and repairs, custom farmers, equipment payment, insurance, pasture costs, vet expenses, labor and management fees).

Below is a list of equipment and implements needed and the projected cost of each. To help keep the initial equipment investment low new equipment cannot be purchased therefore all prices are for used equipment and implements.

- 150 horsepower tractor - \$20,000
- 100 horsepower tractor - \$15,000
- Swather/mower - \$10,000
- Hay rake - \$5,000
- 16' disk - \$5,000
- Cultipacker - \$2,000
- Chisel plow - \$4,000
- Cultivator - \$4,000
- Roller Harrow - \$5,000
- Small pickup - \$5,000

Total funds needed to purchase equipment are \$75,000. Below is the amount amortized for a specific period:

- Rate 7%
- Period is 5 years with one payment annually
- Yearly payment will be \$18,291.80



- Each farmable acre must pay \$30.49 per year for equipment payment

**Table 3.8 Pro Forma Income Statement**

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<b>Revenue</b>	
Corn	53,460
Established Alfalfa	166,320
New Seeding Alfalfa	23,760
Calf Sales	100,728
Income from Farm Pasture	6,300
<b>Total Revenue</b>	<b>350,568</b>
<b>Expenses</b>	
Seeds	13,920
Fertilizers	48,913
Pesticides	10,315
Custom & Consultants	59,340
Irrigation Electricity	13,464
Machinery (Fuel/Lube)	16,604

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Table 3.8 continued

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**Expenses**

Hired Labor	2,528
Crop Insurance	2,520
Cow Insurance	527
Interest	16,852
Equipment Insurance	822
Equipment Payment	18,294
Pickup/Trailer Payment	2,423
Hay	27,500
Pasture	54,825
Salt and Mineral	2,706
Brand Inspection	731
Trucking	3,273
Vet	3,837

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Table 3.8 continued

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**Expenses**

Vehicles 3,572

Other 500

**Total Farm & Cattle  
Expenses** 303,465

**Net Farm & Cattle Income** 47,102

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## CHAPTER IV: CONCLUSION

### 4.1. Feasibility and Profitability of Business

In reviewing the financials of the business it becomes very clear, holding all things constant, the business does not generate desired net farm income to accomplish the objectives, and therefore should not be pursued. Maybe using ten year historical sales prices while figuring today's high production costs was not giving the business a fair chance to be successful. However, if the average market price for each commodity is any indication of what prices will be in the future, then using them was a fair indication of how the businesses would perform during not-so-favorable years. I think it is fair to say that we probably will not see a decline in production costs, but there is a good possibility of seeing commodity prices drop below where they are today. Next we will examine each commodity produced.

If we used the current market price to budget the grain corn, which is \$5.71 per bushel at Rangens Inc., a local elevator, and holding all else constant we would have seen a return to risk of \$108.52 per acre of corn produced instead of the \$10.18 loss. The established alfalfa is the only commodity which had a profit selling at the historical average price. If we would have figured selling the hay at the current market price, \$125 per ton, we would have seen the established alfalfa making a profit of \$223.37 per acre instead of \$160.37. The new seeding alfalfa would have only had a loss of \$24.49 per acre instead of the \$52.21 loss.

The current market price for a 575 pound mixed breed steer at the local sale barn is \$122 per cwt and for a 550 pound mix breed heifer is \$114 per cwt. At these prices the income above operating and ownership costs would be \$6,798 instead of the loss of

\$6,727. Overall, if I would have calculated all budgets using the current market commodity prices holding all else constant the operation could have made a profit of \$100,920 above operating and ownership costs.

#### **4.2. Action to be Taken**

With current market prices, the business is predicted to generate a respectable profit; however the risk one would take in expecting the commodity prices to remain where they are today is too great. The business should not be pursued holding everything constant. However, there are a few things to address which could change the outcome and make the operation feasible.

First is to establish contracts. A person can contract some of their production costs beforehand (e.g., seeds and fertilizers). Also entering into sales contracts where one knows they will receive an agreed upon price for the commodities would take away some of the risk; these types of contracts however, are only seasonal not multi-year so that does not help establish a multi-year risk management. Next, the rent payment on the farm would need to be adjusted in favor of the producer. For the area in which the farm is located there currently are not many producers renting land on a crop share basis anymore; most pay cash rent per acre. The few that operate under a crop share agreement their portion of the crop is typically 2/3; this would make the operation look more feasible. We do see some agreements in the area of southern Idaho where crop share payments are greater than 40 percent; however, in these cases the land owner pays for some of the production costs. This would be an option as long as the land owner would agree to this. Average cash rent per acre in the area is \$200; this does not include the use of a house and facilities. I mention this because this is definitely a factor that ought to be considered and a fair market

price should be determined for the use of facilities and that price should be estimated into the lease payment; this thesis does not establish the fair market price for the rent on a house, buildings, and facilities. According to the above budgets using average commodity prices the land owner is receiving on average \$270 per acre. On a year like this one the land owner would be receive the equivalent of \$315 cash rent per acre.

The lease was figured with a 60/40 percent split was for two reasons. First, someone just starting a production agriculture business having to ask a lender for an additional \$120,000 to cover cash rent on top of the \$325,000 needed to operate would be a little difficult. For a business already established and a seasoned producer borrowing \$445,000 should not be as difficult as long as they have the history to prove they can accomplish what is needed.

Another reason for figuring the farm lease on a 60/40 percent split is because finding a land owner willing to rent their ground to someone who has not operated this size of a farm might want a little more for the risk they think they are taking by allowing the unseasoned producer to operate the farm.

Now a few words about the cow business; with historical selling prices the cows lose nearly \$7,000. When figuring the calves sold at current market value the return only leaves \$1,727 after paying for the cow business's portion of the owners draw. An adjustment on the calf crop share would make the business adventure look more favorable. In order to breakeven while selling calves at historical prices 71.5 percent is needed for our share of the calves. For the cow portion of the operation to look feasible our portion of the calf crop share would have to be at least 75 percent. This would leave the lessor with a return on the investment of 11 percent based on valuing the 300 cows at \$1,000 per head

and \$2,500 per bull (15 bulls). So lessor's investment is \$337,500 and his return would be, based on historical calf prices and figuring lessor's calf crop share at 25 percent, \$38,066 a 11 percent return. If the crop share could not be adjusted, then operating the cow business in conjunction with the farm is not a good business venture. A person would be better off to rent the AUMs on the farm to someone else and simply collect the income from the pasture.

A large reason for growing grain corn was to have some winter forage for the cow herd. If there were no cow herd then another crop might be more profitable. Alfalfa is a stable cash crop in southern Idaho and focusing all production on the alfalfa might not be a bad idea. One could focus exclusively on producing alfalfa hay; however, I think that having a little diversification in what is grown will help a producer make it through years when alfalfa net returns are not as favorable.

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