



Case Study #2: Change to Operations - Blueberry Farm

Thinking of making changes to your farm operations? See how the BC Farm Business Advisory Services Program can help.

This is a fictitious Case Study prepared to illustrate the process and benefits of completing a financial review through the BC Farm Business Advisory Services Program. The situation presented is intended to be representative of a small developing blueberry farm in Lower Mainland area of British Columbia. This Case Study illustrates how a Tier 1 Farm Financial Assessment is conducted, and in this example, is followed by a Tier 2 Business Strategy analysis. The Case Study shows the type of analysis that results and how it can assist you in making decisions about your business. The purpose of this Case Study is not to recommend a particular course of action, rather to illustrate the process and the kind of information that can be provided. Individual results may vary.

The Premium Blue Blueberry Farm, Bill and Bobbie Berry

Bill and Bobbie Berry own and manage a small blueberry operation in the Abbotsford area. Their 20 acre farm is all in blueberry production except for a small area in the corner of the property where their house and outbuildings are located. The blueberries were planted three years ago when the Berrys purchased the property, so the plants are in their fourth year, or second year of production. In 2010, their first crop averaged about 2,500 lbs per acre. The Berrys grow the three most common blueberry varieties (Duke, Bluecrop and Elliot) which spreads out their workload somewhat and provides them with product from July through September. Of the 20 acres in production, 10 acres are in Duke, and five acres each are in Bluecrop and Elliot. Their buildings and facilities are modest but adequate for their scale of operation. Their equipment is limited to two tractors, a mower, a sprayer, a farm vehicle and necessary tools. At present, they hand pick all their production.

Even though the farm takes much of their time, both Bill and Bobbie have non-farm jobs. Bill works full-time in a local manufacturing business and Bobbie works part-time at a nursery. They have two children aged seven and nine, so a priority for Bobbie is to be available for them as necessary. Her mother lives with them and assists with child-care and domestic responsibilities.

The farm is a relatively new venture for Bill and Bobbie and their family. Prior to purchasing the property in 2007, they owned and lived on a lot in town. The property was purchased in 1996, so with the pay down of their mortgage over the years, and increase in property values, they had significant equity in it when they started thinking about purchasing their current operation. At that time too, blueberry prices were high. There seemed to be very good opportunity to establish a farm business that they hoped would one day provide them with either a strong source of supplemental income or possibly even full-time farm operation for Bill. When they purchased the present farm they were able to make a

significant down payment. They went to their mortgage lender for the balance needed to complete the purchase, and as well, borrowed \$200,000 to cover establishment costs for the new blueberries. Repayment on the land loan is blended over 20 years. The \$200,000 loan was interest only for three years while the blueberry plants became established, but now blended payments over 10 years will commence. As well, they retained part of the net proceeds from the sale of their previous property to supplement their cash flow until the blueberries start to produce. They were hopeful that in year four, where they are at present, there would be sufficient income from the farm to cover all their operating expenses and some of their payments. Unfortunately, the situation now is that the cash reserve is depleted, and with increased operating costs, low blueberry prices, and lower than expected production, they know they will have insufficient cash flow in the coming year at least, to meet their financial demands. Their non-farm income is sufficient to cover their living costs, and is able to assist with only a small portion of their payments.

Bill and Bobbie worried about how they were going to meet their financial commitments. They decided to visit their local Berry Industry Specialist to discuss some options they were considering. He told them about the Farm Business Advisory Services Program jointly funded by the federal and provincial governments through **Growing Forward**. He explained that a Farm Financial Assessment would provide a review of their present situation and would cost them only \$100. Then, if they want to continue with the Specialized Business Planning part of the program, they could review options and do projections on one or more of them with the program again paying the majority of the cost. Bill and Bobbie knew they needed to make some decisions about how to proceed with their operation, and decided that if changes were going to be made, they would need to be made with the best information possible. They applied to the program, and arranged a meeting with an approved Advisor from their area.

Goals

Prior to his first meeting with them, their Advisor, Joe Analyst, asked Bill and Bobbie to provide him with information about their operation: their goals, financial challenges and other basic financial information including their assets and debts. In his first meeting with them at the farm, he collected additional information necessary to complete the financial review. A significant amount of time was spent discussing what they wanted to achieve for themselves personally, and for their farm business.

Reviewing their personal goals, Bill and Bobbie came up with the following:

Personal Goals

The Berrys like farming and their rural life-style and feel it is a great place to raise their family. They want to continue to live in the country and be involved in the rural community. They would like to make changes to the business now to allow them to focus more on things they want to accomplish personally:

- Bill's current employment is okay, but he doesn't really enjoy it. The demands of his full-time non-farm employment along with his work on the farm are affecting his family life. He is willing to do it until the farm becomes established, but is looking forward to the day when he can either quit his job and farm full-time, or make enough on the farm to hire more labour. Bobbie would like to quit her job at the nursery to spend more time helping on the farm and with her growing children.
- Bill and Bobbie don't know if their children will be interested in the farm or not, as they are still very young. Ideally, they would like to have a business that would provide them with a retirement income, or be some-

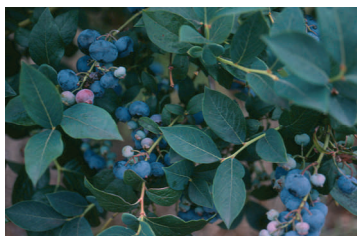
thing that one of their children would be interested in taking over some day.

- The Berrys would like to be able take annual holidays and buy some personal things that they could enjoy as a family.
- They would like to be able to spend more leisure time together, and less time working, something that seems to have increased since they established their blueberry operation.

Goals for their business

The Berrys want to have a business that will provide them with an income sufficient to meet the farm's financial demands, at least. Ideally, they would like the farm to be sufficiently profitable to allow Bill to end his employment and work full-time in the business. Specific business goals are:

- Within the next year – develop a plan that will address the cash shortfall issues they are presently facing, and to continue to develop the farm, and improve efficiencies to maximize production and minimize expense.
- Within the next five years – bring the planting to maximum production, then continuously work to improve efficiency. Also, at some point, they would like to buy into a mechanical harvester to reduce their labour costs on a portion of the crop.
- Within the next 10 years - if feasible, expand operations further. At some point, they would like to update and upgrade their facilities and equipment.



Farm Financial Assessment (Tier 1)

Working from the information the Berrys provided, Joe Analyst completed a Status Quo assessment of their operation. The purpose of this part of the review is to gain information about where the operation is currently, and what they can expect financially if no changes are made. The results are summarized below:

Before Change Statement of Assets and Debts

PREMIUM BLUE ASSET/DEBT SUMMARY			
Assets (Jan 1, 2011)		Liabilities (Jan 1, 2011)	
Current Assets		Current Liabilities	
Cash in bank	4,675	Operating loan	36,752
Cash saved	0	Acc. payable	15,800
Crops for sale	0	Acc. interest	7,122
Supplies	1,000	Cur. port. term debt*	28,702
Total	5,675	Total	88,376
Intermediate Assets		Intermediate Debt	
Mach & equip	34,000	Tractor loan	6,816
Plantings, etc.	200,000	Pickup loan	2,912
Total	234,000	Total	9,728
Long Term Assets		Long Term Debt	
Land	1,000,000	Mortgage loan	478,539
Buildings	153,200	Planting Loan	194,615
Total	1,153,200	Total	673,154
Total Assets	1,392,875	Total Debt	771,258
		Net Worth	621,617

Definitions

***Current Portion Term Debt** - is the portion of the Intermediate and Long Term Debt that is due within the next 12 months. This amount is in addition to the Intermediate and Long Term Debt shown. In this case, it includes 1,936 of the Tractor loan, 1,984 of the Pickup loan, 19,398 of the mortgage loan and 5,384 of the Plantings loan.

Current Liabilities - is debt that is normally due within the upcoming 12 months.

Intermediate Debt - is the portion of the debt that is due beyond 12 months and within 10 years

Long Term Debt - is the portion of the debt that is due beyond 10 years.

Premium Blue Ratios						
Ratio	Definition	At start of Year	Projected at end of year	Industry Standards		
				Good	Caution	Weak
Current Ratio	Current Assets/Current Debt	0.06	0.01	>1.50	1:00-1.50	<1.00
Leverage Ratio	Total Debt/Net Worth	1.24	1.47	<0.428	0.428-0.818	>0.818
Net Worth Ratio	Net Worth/Total Assets	0.45	0.40	>0.70	0.55-0.70	<0.55

Joe Analyst explained that the ratios and financial indicators for the present Asset/Debt Summary generally appear to be within acceptable limits for an operation such as this where there is significant non-farm income. He noted, however, that the Current Ratio is very low, and the projections done indicate that if no changes are made, it may deteriorate further by the end of the upcoming year. The Berrys do have significant net worth (\$621,617 and a 45% Net Worth Ratio), however, this still is a large debt load for their scale of operation and where they are at in the development of the planting, given present blueberry prices.

Before Change Income and Expense Summary

This is a developing blueberry operation that won't be into full production for likely another four years. Projections were done for the upcoming three years to get a sense of what profitability and debt serviceability will be for the upcoming years, and are summarized in the following table:

Income (Jan 1 - Dec 31 each year)										
Farm Income		2011			2012			2013		
Blueberries	acres	#s/acre	price	income	#s/acre	price	income	#s/acre	price	income
Duke	10	4,000	0.90	36,000	6,000	0.90	54,000	9,000	0.90	81,000
Bluecrop	5	4,000	0.90	18,000	6,000	0.90	27,000	9,000	0.90	40,500
Elliot	5	4,000	1.75	35,000	6,000	1.75	52,500	9,000	1.75	78,750
Total crop income				89,000			133,500			200,250
Other				0			0			0
Income accrual adjustments				0			0			0
Total income				89,000			133,500			200,250
Expense (Jan 1 - Dec 31 each year)										
Cash Expense		2011			2012			2013		
Cropping expense				104,280			113,940			153,920
Overhead expense				7,100			7,100			7,100
Operating interest				5,699			7,017			8,776
Term interest				36,665			35,127			33,524
Total Cash Expense				153,744			163,184			203,320
Non Cash Expense										
Depreciation				7,996			7,518			7,078
Expense accrual adjustments				-1,455			-193			-201
Total Non Cash Expense				6,541			7,325			6,877
Net Accrued Farm Income				-71,285			-37,009			-9,947
Net Non-Farm Income				50,000			50,000			50,000
Living Costs				42,000			42,000			42,000
Income Tax				0			0			0
Debt Servicing Capacity				-18,624			13,636			38,655
(Net acc. farm income + depreciation + term interest + non-farm income - living costs - income tax)										
Payments:	Principal			28,702			30,240			30,496
	Term Interest			36,665			35,127			33,524
Total				65,367			65,367			64,020
Debt Service Ratio										
= Debt Service Capacity/Payments				-0.28			0.21			0.60
Max . Operating Loan Requirement				143,155			214,753			268,657

Assets/Debts	01-Jan-11	31-Dec-11	31-Dec-12	31-Dec-13
Assets	1,392,875	1,380,204	1,372,686	1,365,608
Debts	771,258	821,872	843,363	838,233
Net Worth	621,617	558,332	529,323	527,375
Net Worth Ratio				
=net worth/assets	0.45	0.40	0.39	0.39
Change in Net worth (over the year)		-63,285	-29,009	-1,948

The completed Income Expense Summary provided further insight about what Bill and Bobbie could expect financially if they continue without making changes:

1. With the production, blueberry prices and operating expenses as projected for the upcoming three years, net incomes, after depreciation, are expected to be negative in all three of the next years, but improving as production increases.
2. Even with the non-farm income being earned, with the debt carried, at the terms presently in place, there appears to be insufficient repayment ability in each of the years projected. As with income, however, it improves over time to the point where in 2013, there should be sufficient
3. The losses projected in the upcoming years will result in accumulation of short term debt because of the shortfall in ability to service the debt as it is presently structured. Equity is projected to erode over these years but in 2013 it should start to stabilize. Again, rough projections done indicate that in the following years as production increases further, equity should improve.
4. If payments are to be made during these years, additional debt will be required, either on a term basis, or accumulation on a short term basis.

Development of a Strategic Plan (Business Strategy, Tier 2 Specialized Business Planning)

Joe Analyst took some time with Bill and Bobbie to explore changes that could be made to address the issues noted above. While reviewing alternatives, the Berrys checked the various options against their personal and business goals to ensure the alternative chosen would take them in the direction they want to go. They decided on a "Change Plan" as follows:

1. Ask their lender to change their land mortgage and plantings loans to interest only for another two years to take some pressure off their cash flow.
2. Use their equity to obtain an additional \$100,000 loan to be repaid over 10 years, to inject cash into operations until they get into higher levels of production. They would like this loan to be interest only until 2013 as well.
3. Increase their operating loan facility from \$50,000 at present to \$100,000.
4. Engage a consultant to review and adjust some cropping practices to improve production including:
 - a. better pollination
 - b. more efficient fertilization
 - c. better pruning
 - d. improved and cost-effective pest management.
5. With these changes, they feel they can improve production without significant increases in operating costs, from 6,000 lbs/ac to about 7,000 lbs/ac in 2012 and from 9,000 lbs/ac to about 11,000 lbs/ac in 2013. Production for the upcoming year will likely not change significantly from the projected 4,000 lbs/ac.

Operations were projected for 3 years again, based on these changes. The results follow:

Income (Jan 1 - Dec 31 each year)										
Farm Income		2011			2012			2013		
Blueberries	acres	#s/acre	price	income	#s/acre	price	income	#s/acre	price	income
Duke	10	4,000	0.90	36,000	7,000	0.90	63,000	11,000	0.90	99,000
Bluecrop	5	4,000	0.90	18,000	7,000	0.90	31,500	11,000	0.90	49,500
Elliot	5	4,000	1.75	35,000	7,000	1.75	61,250	11,000	1.75	96,250
Total crop income				89,000			155,750			244,750
Other				0			0			0
Income accrual adjustments				0			0			0
Total income				89,000			155,750			244,750
Expense (Jan 1 - Dec 31 each year)										
Cash Expense		2011			2012			2013		
Cropping expense				104,280			123,940			173,920
Overhead expense				7,100			7,100			7,100
Operating interest				1,991			1,341			2,194
Term interest				40,178			42,941			42,085
Total Cash Expense				153,549			175,322			225,299
Non Cash Expense										
Depreciation				7,996			7,518			7,078
Expense side accrual adjustments				491			-12			-316
Total Non Cash Expense				8,487			7,506			6,762
Net Accrued Farm Income				-73,036			-27,078			12,689
Net Non-Farm Income				50,000			50,000			50,000
Living Costs				42,000			42,000			42,000
Income Tax				0			0			0
Debt Servicing Capacity				-16,862			31,381			69,852
(Net acc. farm income + depreciation + term interest + non-farm income - living costs - income tax)										
Payments:										
Principal				3,921			4,158			35,378
Term Interest				40,178			42,941			42,085
Total				44,099			47,099			77,463
Debt Service Ratio										
= Debt Service Capacity				-0.38			0.67			0.90
Payments										
Operating Loan Requirement				42,407			69,994			108,196

Assets/Debts	01-Jan-11	31-Dec-11	31-Dec-12	31-Dec-13
Assets	1,392,875	1,380,204	1,372,686	1,365,608
Debts	771,258	823,623	835,201	807,436
Net Worth	621,617	556,581	537,485	558,172
Net Worth Ratio				
=net worth/assets	0.45	0.40	0.39	0.41
Change in Net worth (over the year)		-65,036	-19,096	20,687

Some comments about these "After Change" results are as follows:

1. With the increased production, net income increases in the years following 2011 to the point where it is positive in 2013. Assuming the production changes increase yield to 16,000 lbs/ac by 2015, net income in that year would improve to about \$74,000.
2. Borrowing an additional \$100,000 on a term basis, along with converting the two long term loans to interest only payments for two more years means that for 2011 and 2012 the present operating loan of \$50,000 should be adequate if some expenses are deferred during the summer of 2012. Operating loan requirements would increase to about \$100,000 in 2013, however after that, as production and income increase, operating loan requirements should decrease.
3. The changes in repayment terms for the two existing long term loans included in this plan reduce repayment requirements significantly. There would still be a shortfall in repayment ability in all three of the projected years, but it would decrease to the point where repayment ability would be close to adequate in 2013, the year when principal payments are projected to start again. If interest only repayment on those loans, and on the new \$100,000 loan to cover operating shortfalls was to continue for 2013 as well, there would be adequate repayment ability in 2013. Rough projections done suggest that production in this case needs to be about 11,600 lbs/ac for there to be repayment ability if appropriate principal payments are included on these three long term loans.
4. Rough projections done suggest that after 2013, assuming yields of 13,000 lbs/ac in 2014 and 16,000 lbs/ac in 2015, cash flow and debt service should be adequate to meet financial demands in those years. At that time there would be a resumption of the former repayment terms on the land mortgage and the plantings loan, and repayment of the new term loan of \$100,000 over 10 years. This is also assuming non-farm income and living costs would continue as at present. Those projections done suggest as well, that there may be sufficient net income and debt service capacity from the farm at yields of 16,000 lbs/ac for Bill to end his non-farm income and work full-time on the farm.

Summary

Bill and Bobbie decided to implement these changes, subject, of course to approval by their lender. They asked their Advisor, Joe Analyst to provide them with both hard and electronic copies of the analysis completed, to show their account manager, and to support their requests. They will also meet with production specialists for their area to develop a comprehensive program to make changes that will hopefully provide them with the extra production they feel they can get from their plants.

If they are able to move ahead with their proposal, some additional things they will work on are:

- √ Look into the Advance Payments Program. They have not been using the program to fund input costs, but realize that if they are able to access the program, it might be a tool that could save them some operating interest.
- √ Develop a Risk Plan to identify and assess the risks they face, and prepare a strategy to deal with them should they occur. Possible risks might include things such as reduced yield and price, increased cost, and a rise in interest rates. Any of these events could impact on their ability to implement their plan, and require changes to the plan before they can move forward.
- √ Prepare annual financial reviews. This assessment and analysis helped them see where they are at present, what to expect if they don't make changes, and develop a plan that they feel should work for them. They will now work with their Advisor to do an assessment at the end of every year to see where they are at financially at that time, review results for the prior year, and do new projections for the upcoming year. This will allow them to reassess and modify their plan as they move forward, and track their progress in moving toward their goals.
- √ Produce annual production reviews. They know that if they are going to maximize production every year going forward they will need to work closely with their production consultant to ensure they are following the best management program to obtain optimum returns on their inputs and minimize risk from the many threats to blueberry yield and quality.
- √ Review marketing options. To this point, they have focused on production, but realize there may be other markets they can access for at least part of their crop to increase return.

Because of their involvement in the BC Farm Business Advisory Services Program, the Berrys were able to assemble the information necessary to assess where they are at presently financially and operationally, and make informed decisions about changes they need to implement to meet their goals and attain viability.

To arrange for a Farm Business Assessment, contact:

BC Farm Business Advisory Services Program
BC Ministry of Agriculture
Phone: 250-260-3000
Toll Free: 1-877-702-5585
Fax: 250-549-5488
Website: http://www.al.gov.bc.ca/busmgmt/FB_Advisory_Services.html
Email: BCFBAS@gov.bc.ca

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