

Case Study: Mixed Farm Operation

See How a Farm Business Assessment Can Make a Difference.

Following is a fictitious Case Study prepared to illustrate the process and benefits of completing a Farm Business Assessment as offered through the Agricultural Policy Framework (APF) under Renewal's Canadian Farm Business Advisory Services program. The situation presented is common in the industry across the province. The Case Study illustrates how a Farm Business Assessment is conducted, the type of analysis that results, and how the work done can assist you in making decisions about your business. The purpose of this Case Study is not to recommend a particular course of action. Individual results may vary.

Quick links to sections within the case study:

[The Kattel Farm](#)

[Goals](#)

[Retirement/Succession](#)

[Status Quo Assessment](#)

[Before Change: Statement of Assets and Debt](#)

[Before Change: Income and Expense Summary](#)

[Challenges](#)

[The Action Plan](#)

[Operations Projected for Two Years - based on change](#)

[Summary](#)

The Kattel Farm

Michael and Martha Kattel operate a farm in the Plainview area in central Alberta. Operations focus on the production of beef calves, although typically some surplus crops are sold into the feed market. They have 250 cows, and normally sell the calves directly off the cows when they are weaned in late September. They own four quarters of land themselves, rent an additional two, and control a four section grazing lease. They have all the buildings and equipment necessary for their operation. Facilities and equipment are adequate, but they will need to replace their baler before the next haying season

Michael and Martha provide most of the labour required to operate. They have two children, Alex (aged 20) and Andrea (aged 17), who help out on the farm when able. In addition, they hire some part time help during the summer months. Alex is in University, and hopes to become an engineer. He has no real interest in farming. Andrea is in Grade 12, and lives at home. Andrea loves farming and hopes to take over the farm some day. Michael works on the farm full time. Martha has a part time job in nearby Plainview as a bookkeeper. Michael is 48 years old. Martha is 46.

Financially, the Kattels' fit the profile of many cow calf producers in the province. They have significant equity in their operation, and while cash flow has always seemed somewhat tight, they have always been able to pay their bills, and enjoy a reasonable

standard of living. In 2006, however, their neighbor offered to sell them an adjoining quarter of land, and even offered to carry the financing at 5% interest, but for only five years. They knew they couldn't afford the payments from present income, so they purchased an additional 50 cows, financed over five years, to generate extra income.

Over the Christmas holidays Michael and Martha had some time to sit down with Alex and Andrea to do some planning for 2007. They did some income, expense and cash flow projections for the upcoming year, and quickly came to the conclusion that their operation would have difficulty meeting all their financial commitments with this new debt and expanded operation. They met with their Account Manager at the bank in early January to discuss the situation, and he told them about the Canadian Farm Business Advisory Services (CFBAS) program and Farm Business Assessment (FBA) that is available through Agriculture Canada. He explained to them that the FBA, valued at \$2,000, only costs producer \$100 and the information they gained would help them in making business decisions. Michael and Martha decided that for \$100 they couldn't afford NOT to do it! They applied to the program and arranged a meeting with an approved Consultant from their area.

[Top](#)

Goals

Prior to his first meeting with them, their Consultant, Joe Analyst, asked them 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 on 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.

To develop their list of goals Michael and Martha met with their children Alex and Andrea. The family determined the following:

Personal Goals

The Kattels like their farm life, and feel it has been a great place to raise their family. Now that the children are in early adulthood, their priorities are changing. Michael and Martha would like to be able to spend more time and money on personal interests including travel.

Michael wants to continue to farm until he is about 60. Then would like to slow down. He would be really pleased if one of their children would take over the farm.

Martha enjoys her off-farm work, and as less time is required now in the home, she would like to pursue her career a bit more over the next few years.

Alex is in his third year of University, and wants to complete his education and establish himself in his profession. Michael and Martha have been helping with his University costs. When that is done, they would like to be able to assist with a down payment on a house for Alex.

Andrea wants to be a farmer. After finishing Grade 12 she hopes to attend Agriculture College then return to the farm. She will possibly work off-farm part time to earn extra income.

Goals for Their Business

The Kattels want to have a farm business that will provide them with an income to meet their financial requirements, provide for future growth so it can remain competitive in the industry and be profitable enough for Andrea to handle the debt required to buy the farm from her parents. Specific business goals within the next five years are:

Within the next year – to resolve the financial issues they are currently facing, and to purchase a new baler.

Within the next three years – to improve profitability to provide surplus funds for expansion.

Within five years – expand further, update equipment, and to start putting away money in another investment for Michael and Martha's retirement.

Retirement/Succession

The family agreed that the first priority is to meet the retirement needs of Michael and Martha. This will consist of a retirement home and sufficient income for them to have a suitable standard of living. They also agreed that they should work toward Andrea being able to take over an operation that is viable, without excessive debt. At some point Andrea will buy the operation from her parents. Alex appreciates that his parents assisted him in getting his University training, and feels that if he is able to purchase a house with their help after he is done schooling, he won't have any other near term financial needs. They agreed that any future inheritance he would receive from his parents would come from their estate.

The Status Quo Assessment (Farm Financial Assessment)

Working from the information the Kattels 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.

[Top](#)

Before Change: Statement of Assets and Debt

<i>Kattel Farm Asset/ Debt Summary</i>			
<i>Assets (Jan 1, 2007)</i>		<i>Liabilities (Jan 1, 2007)</i>	
<i>Current Assets</i>		<i>Current Liabilities</i>	
Cash in bank	46,759	Operating loan	0
Cash saved	10,000	Feeder loans	0
Crops for sale	3,600	Acc. payable	0
Feed & sup.	66,700	Acc. interest	2,151
Market livestock	<u>15,840</u>	Cur. port. term debt	<u>70,600</u>
Total	142,899	Total	72,751
<i>Intermediate Assets</i>		<i>Intermediate Debt</i>	
Mach & equip	339,300	Tractor loan	32,936
Breeding l/s	<u>316,000</u>	Cow loan	<u>40,000</u>
Total	655,300	Total	72,936
<i>Long Term Assets</i>		<i>Long Term Debt</i>	
Land	750,000	Land loan	259,207
Grazing Lease	160,000	Private mortgage	144,000
Buildings	<u>150,000</u>	Total	<u>403,207</u>
Total	1,060,000		
<i>Total Assets</i>	<u>1,858,199</u>	<i>Total Debt</i>	<u>548,894</u>
		<i>Net Worth</i>	1,309,305

<i>Financial Ratios (Jan 1, 2007)</i>	
Current Ratio	1.96
Debt to Equity Ratio	0.42
Equity Ratio	0.70

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 15,064 of the Tractor loan, 10,000 of the Cow loan, 9,536 of the Land loan and 36,000 of the Private Mortgage.

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

Joe explained that the ratios and financial indicators for the present Asset/Debt Summary all appear to be within acceptable limits. The Current Ratio at 1.96 suggests that there should be sufficient resources to meet financial obligations within the next 12 months. He noted however, that the projections indicate that if no changes are made, the Current Ratio will deteriorate by the end of next year. The business has significant equity (\$1,309,305 and a 70% Equity Ratio), however, there is a large debt load, some of which is on relatively short terms requiring a high level of payments. [Top](#)

Before Change: Income and Expense Summary

<i>Kattel Farm Income/Expense Summary</i>					
<i>Income (Jan 1 - Dec 31, 2007)</i>			<i>Expenses (Jan 1 - Dec 31, 2007)</i>		
<i>Income</i>			<i>Expense</i>		
<i>Livestock sales</i>			<i>Livestock expense</i> 50,175		
calves	180 x	800 144,000	<i>Cropping expense</i> 50,850		
cull cows	35 x	400 14,000	<i>Overhead expense</i> 7,859		
repl. hfrs	15 x	900 13,500	<i>Operating interest</i> 40		
bulls	4	1,000 4,000	<i>Term interest</i> 32,463		
Total		<u>175,500</u>	<i>Total Cash Expense</i> 141,387		
 <i>Crop sales</i>			 <i>Non Cash Expense</i>		
oats	4000 x	1.80 7,200	<i>Depreciation</i> 31,644		
		0	<i>Exp. side acc. adj.</i> 838		
Total		<u>7,200</u>	<i>Total Non Cash Expense</i> 32,482		
 <i>Other income</i>			 <i>Total Accrued Expense</i> 173,869		
Gov't programs		10,000	<i>Net Accrued Farm Income</i> 28,631		
Custom work		5,000	<i>Net wages</i> 20,000		
Other		6,800	<i>Living costs</i> 35,000		
Total		<u>21,800</u>	<i>Income tax</i> 4,000		
Total Cash Income		<u>204,500</u>	<i>Debt Service Capacity</i> 73,738		
<i>inc. side accrual adjustments</i>		<u>(2,000)</u>	<i>(Net acc. Farm inc. + depreciation</i>		
Total Accrued Income		<u>202,500</u>	<i>+ term interest + non farm inc.</i>		
			<i>- living costs - income tax)</i>		

<i>Profitability Ratios:</i>	
Debt Service Ratio:	0.67
Return on Assets:	1.26%
Return on Equity:	-0.48%
Max. operating loan required:	5,296

<i>Payments</i>	
Principal	78,014
Interest	32,463
Total	<u>110,477</u>

<i>Closing Financial Ratios:</i>	
Current Ratio	1.41
Debt to Equity Ratio	0.39
Equity Ratio	0.72

Challenges

This Income and Expense statement provided further insight to the challenges the Kattels were facing.

- While the operation was projected to be profitable, net returns will be low relative to the assets controlled.
- With the debt being carried, at the terms presently in place, there would be insufficient repayment ability in the long term.
- Although cash flow would be adequate within the projected year, the extra draw on cash to meet financial demands would quickly deplete cash resources, and could shortly lead to a situation where debt could not be serviced.

[Top](#)

The Action Plan

Joe Consultant took some time exploring alternatives for resolving the situation. While exploring alternatives, they continually checked the options against the goals to ensure the alternative chosen would take them in the direction they wanted to go.

The alternative they decided to pursue was:

- To refinance the new land loan and the new cattle loan over longer terms, 15 years for the land loan, and 10 years for the cattle loan.
- To background their calves prior to sale. They had been selling the calves in late September, but felt if they could keep them an extra 2-3 months and precondition/background them, they could add extra value to create additional income and profit. They have the corrals and equipment necessary to do this.
- To generate the extra feed for the calves they will silage the 50 acres of grain normally harvested for sale. The crop will be custom harvested and will generate the extra feed necessary for this change in operations.
- Martha will take some additional training to improve her skills for her off-farm job. Joe Analyst advised her that the Canadian Agricultural Skills Services (CASS) program would probably cover a good portion of the education expenses. She estimates that when her training is complete in 2008, her net off-farm income will increase to \$30,000/yr.

Operations Projected for Two Years: based on changes

After Change Statement and Projection (Year 1)			
Kattel Farm Income/Expense Summary			
Income (Jan 1 - Dec 31, 2007)		Expenses (Jan 1 - Dec 31, 2007)	
Income		Expense	
Livestock sales		Livestock expense 53,415	
calves	180 x 950 171,000	Cropping expense	52,100
cull cows	35 x 400 14,000	Overhead expense	7,859
repl. hfrs	15 x 900 13,500	Operating interest	135
bulls	4 1,000 4,000	Term interest	32,463
Total	202,500	Total Cash Expense	145,972
Crop sales		Non Cash Expense	
oats	2000 x 1.80 3,600	Depreciation	31,644
Total	3,600	Exp. side acc. adj.	1,786
Other income		Total Non Cash Expense	33,430
Gov't programs	10,000	Total Accrued Expense	179,402
Custom work	5,000	Net Accrued Farm Income	42,898
Other	6,800	Net wages	20,000
Total	21,800	Living costs	35,000
		Income tax	8,500
Total Cash Income	227,900	Debt Service Capacity	83,505
Inc. side accrual adjustments	(5,600)	(Net acc. Farm inc. + depreciation	
Total Accrued Income	222,300	+ term interest + non farm inc.	
		- living costs - income tax)	
Profitability Ratios:		Payments	
Debt Service Ratio:	1.16	Principal	39,353
Return on Assets:	2.16%	Interest	32,463
Return on Equity:	0.59%	Total	71,816
Max. operating loan required:	17,344		

After Change Statement and Projection (Year 2)

Kattel Farm Income/Expense Summary

Income (Jan 1 - Dec 31, 2008)				Expenses (Jan 1 - Dec 31, 2008)	
Income				Expense	
Livestock sales				Livestock expense	
calves	180	x	950	171,000	53,225
cull cows	33	x	400	13,200	52,100
repl. hfrs	15	x	900	13,500	7,859
bulls	4	x	1,000	4,000	31,158
Total				201,700	Total Cash Expense
					144,342
Crop sales				Non Cash Expense	
oats	0	x	0	0	Depreciation
				0	31,977
Total				0	Exp. side acc. adj.
					1,558
					Total Non Cash Expense
					33,535
Other income				Total Accrued Expense	
Gov't programs			10,000		177,877
Custom work			5,000		Net Accrued Farm Income
Other			6,800		45,623
Total			21,800		Net wages
					30,000
					Living costs
					35,000
					Income tax
					9,000
Total Cash Income			223,500	Debt Service Capacity	94,758
				(Net acc. Farm inc. + depreciation	
Inc. side accrual adjustments			0	+ term interest + non farm inc.	
				- living costs - income tax)	
Total Accrued Income			223,500		

Profitability Ratios:		Payments	
Debt Service Ratio:	1.25	Principal	44,626
Return on Assets:	2.22%	Interest	31,158
Return on Equity:	0.78%	Total	75,784
Max. operating loan required:	0		

Summary

Michael and Martha decided to implement these changes as they appear to be feasible and will allow them to work toward their stated goals. Some additional things they will work into their plan are:

- If, after the first year the plan appears to be working as expected, they will use part of their surplus funds each year to build a non-farm retirement fund for themselves.
- If Andrea is still interested in taking over the farm operation in five more years, they will access the Specialized Business Planning Service (SBPS) under the Canadian Farm Business Advisory Services Program to develop a Succession Plan to detail how this might take place.
- They will look into using life insurance policies in the shorter term to ensure that the farm will be able to remain intact for Andrea in the event of their deaths.

Because of their involvement in the Farm Business Assessment program, Michael and Martha were able to assemble the information necessary to assess where they were at financially and operationally, and make informed decisions about changes they needed to implement to meet their goals and remain viable.

[Top](#)