<u>Case Study #4</u>: The North Farm, Will and Jane North

Following is the fourth in a series of fictional Case Studies prepared to illustrate the process involved, and benefits of completing a financial review to analyze options that might be available for a farm operation. Everything about this Case Study is made up, although the situation presented is common in the industry across the province. This Case Study illustrates how a review such as this could be conducted, the type of analysis that would result, and how the work done can assist participating farmers in making decisions about their business. The purpose of this Case Study is not to recommend a particular course of action. Individual results may vary.

The North Farm

Will and Jane North run a small ranch in the Parkland area in north central Alberta. Although the land is marginally suitable for growing cereals and oilseeds, the Norths have recently concentrated on crops because of the higher returns being received in that enterprise. Typically, the land has been farmed in a canola/barley/oats rotation in about equal acreage amounts per year, and all efforts have been used to maximize production. They own 5 quarters of land, and rent a further 2 quarters on a cash basis. In all, they have 995 acres in production. The buildings and facilities are typical for this type and scale of operation – nothing fancy, but adequate. Their equipment line includes mostly everything they need except a sprayer. They get their spraying custom done. The combine they purchased last year has some extra capacity, so they hope to be able to do some custom combining to generate income to help make the payments.

Will and Jane manage the business and provide most of the labour. Some additional help is hired during busy times, during harvest season when Jane, or their kids aren't able to help. Jane has a part time job in Parkland in the senior's lodge and brings home about $2,500 per month net income after all deductions. They have 3 children all of whom now have homes and careers away from the farm. Their youngest son who is not yet married has expressed an interest in returning to the farm, but no plans have been made for that yet.

Will recently turned 54 years old and Jane will be 53 her next birthday, and both are feeling the strain of running a demanding farming business, maintaining a part time job (Jane), maintaining their assets, and trying to have a family life. Their area has always been somewhat marginal for cereal and oilseed production, which seemed to be ok when margins were better for growing crops, but with present prices and expenses, they seem to be just getting by. In the early years of this farm's history it was a cow/calf operation which seemed to be better suited to the area and the land they control. They wondered if going back to that enterprise might make sense now that the outlook for the beef industry looks better. One snowy day after harvest, Will and Jane decided to sit down with their children and talk about what they were doing, and why they were doing it. What really got them thinking about it was an unexpected early snowfall that came September 15, flattening much of their crop and leaving them with questions about the quality of crop they would harvest this year. Their neighbor Bob, who had made a full transition to a cow/calf enterprise, had his hay all up, his calves weaned, and was looking forward to a sure crop at a good price. Doing some quick penciling of the numbers, they wondered if the returns from raising beef in this area, could be better, and with much less uncertainty. Also, with the work load being spread out more evenly through the year, both Will and Jane hoped they would be able to better handle it with a little help from their kids.

When they all got together for Christmas, Will and Jane ran the idea of changing enterprises past their children to see what they thought of it. Their response was generally positive, as they had often talked about their location, and land base being better suited to beef production. One of their sons had heard about the Business Opportunity Program available through Growing Forward 2 that might help with the cost of hiring a consultant to assist in reviewing options. They decided to apply to the program, and arranged to meet with a Consultant.

Goals

Prior to the first meeting Will and Jane's Consultant, Joe Analyst asked them to provide information about their operation, their goals and other basic financial information including their assets and debts. At the first meeting on the farm, Joe collected additional information necessary to complete the financial review. A significant amount of time was spent discussing what they want to achieve for themselves personally and for their farm business. Following is a list of goals they identified.

Personal Goals

Will and Jane feel they have had a successful and satisfying farm career. They have worked hard, and have built up an operation they are proud of. It just seems that lately they have been working harder for less return, and fear a future that doesn't seem to hold much prospect of getting better.

Specific personal goals they identified are as follows:

- Will enjoys the farm, and would like to continue for possibly 10 more years, then would really like to retire, or semi-retire on the farm
- Jane likes her work, but has set a goal of retiring from it when she reaches age 55, a little over 2 years away. After that she would like to be a housewife and Grandma, but would help out on the farm a bit more as necessary. She hopes that when the time comes, they will have sufficient income from the farm to sustain them financially.
- Both Will and Jane really enjoy their rural life. They have a comfortable home, and it is home for their children. They want to continue to live there as long as possible
- They need to be financially secure, and know that their income will be sufficient to meet their needs. They want their financial situation to be such that when they stop farming, they can sell their non land assets, and between land rent, Jane's pension, government pension and return on money invested have sufficient income to live comfortably in retirement.

Goals for their business

As the Norths would like to continue operating for a few more years, they want to be sure that during this time the farm will be profitable and provide a financial return, and that they aren't just depleting their assets staying in business, something they fear is happening now. Specific business goals within the next five years are:

- <u>Within the next year</u>, if the final decision is to go ahead with the change of enterprises:
  - by spring, to finalize the details of the plans to change enterprises
  - within the 2016 production year, to effect the transition from cash crops to beef production
- <u>Within the next 3 years</u> – to complete the transition in all respects into the new farming operation
- <u>Within 5 years</u> – to operate profitably, and be working towards a plan to retire and terminate operations

The Status Quo assessment (statement and projections assuming no changes)
Working from the information the Norths provided, Joe Analyst completed a Status Quo assessment of their operation. The purpose of this part of the review is to gain information about their current operation and financial situation, and what they can expect financially if no changes are made. The results are summarized below.

Before Change Statement of Assets and Debts:

North Farm Asset/ Debt Summary

Assets (Jan 1, 2016)		Liabilities (Jan 1, 2016)	
Current Assets		**Current Liabilities**	
Cash in bank	0	Operating loan	62,300
AgriInvest	64,500	Crop Advance	35,000
Crops for sale	180,600	Acc. payable	17,000
Feed & sup.	5,000	Acc. interest	2,164
Market livestock	0	Cur. port. term debt	48,810
Total	250,100	Total	165,275
Intermediate Assets		**Intermediate Debt**	
Mach & equip	420,000	Tractor loan	36,708
Breeding l/s	0	Combine loan	56,954
Total	420,000	Total	93,662
Long Term Assets		**Long Term Debt**	
Land	1,350,000	Mortgage loan	428,567
Grazing lease	0		
Buildings	240,000		
Total	1,590,000	Total	428,567
Total Assets	2,260,100	**Total Debt**	687,504
		Net Worth	1,572,596

Financial Ratios (Jan 1, 2016)	
Current Ratio	1.51
Debt to Equity Ratio	0.44
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 17,292 of the Tractor loan, 13,046 of the Combine loan and 18,472 of the Mortgage 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

Joe explained that the ratios and financial indicators for the present Asset/Debt Summary all appear to be strong. The Current Ratio of 1.51 suggests that there should be sufficient resources to meet financial obligations within the next 12 months, however, he noted that the Status Quo projections suggest it may deteriorate somewhat by the end of the year. Their overall equity situation is presently good as well (overall Net Worth is $1,572,596). The Debt to Equity Ratio (0.44) and Equity Ratio (.70) demonstrate that the Norths have significant equity in their business relative to the interest that their creditors hold.

Before Change Income and Expense Summary:

North Farm Income/Expense Summary

Income (Jan 1 - Dec 31, 2016)					Expenses (Jan 1 - Dec 31, 2016)	
Income					**Expense**	
Crop sales					Cropping expense	224,345
canola	14000	x	10.00	140,000	Overhead expense	10,500
barley	25000	x	4.10	102,500	Operating interest	1,174
oats	35000	x	2.50	87,500	Term interest	23,433
Total				330,000	**Total Cash Expense**	259,452
Other income					**Non Cash Expense**	
gov't programs				5,000	Depreciation	40,800
custom work				8,000	Exp. side acc. adj.	-200
leases				4,800	**Total Non Cash Expense**	40,600
other				2,000	**Total Accrued Expense**	300,052
Total				19,800	**Net Accrued Farm Income**	43,738
					Net wages	30,000
Total Cash Income				349,800	Living costs	48,000
					Income tax	3,000
					Debt Service Capacity	86,971
Inc. side accrual adjustments				-6,010	(Net acc. farm inc. + depreciation	
					+ term interest + non farm income	
Total Accrued Income				343,790	- living costs - income tax)	

Profitability Ratios:	
Debt Service Ratio:	1.17
Return on Assets:	0.83%
Return on Equity:	-0.28%
Max. operating loan required:	77,930

Payments	
Principal	50,753
Interest	23,433
Total	74,186

Closing Financial Ratios:	
Current Ratio	1.22
Debt to Equity Ratio	0.39
Equity Ratio	0.72

The Income/Expense Summary provides further insight about what Will and Jane could expect financially if they were to continue on as at present:

1. Farm operations should continue to be profitable. Net income is projected to be $43,738, which is the net return to equity and labour. This results in negative returns on equity when family living withdrawals are considered
2. Income from all sources is only marginally sufficient to meet all financial demands. Cash, and other asset reserves may need to be accessed to fully meet all payment requirements if income is less than projected, and/or expenses higher
3. Unless prices for their commodities improve, financial progress over time will be marginal, and the non farm income may be needed indefinitely to meet all financial demands

The Action Plan:

The above results confirmed what Will and Jane thought about the financial situation and financial performance of their farm operation. While uncertain about whether or not they should even consider a change of enterprises they decide to do some projections to see how it might all work out. Their Consultant, Joe Analyst told them that in looking at any change such as this, they need to take into consideration all aspects of their operation that would be impacted, and all the steps that would need to be involved. He pointed out that the Ag

Business Analyzer, the financial analysis tool he uses to do these types of projections, does an excellent job of simulating transition. In doing the analysis then, he was able to input all the costs, returns, revenues and cash outflows they think they will experience, and the analysis template showed them how everything should work financially, using the information they provided.

Some of the features of the plan they are considering are as follows:

- they will seed all the land to crops in 2016, following their established rotation. 800 of the 995 cultivated acres will be underseeded to provide hay and pasture in 2017
- the 300 acres to be planted to oats in 2016 will be baled for feed to provide winter feed for the livestock to be purchased
- the cow herd consisting of 200 bred cows, along with heifers for replacement next year will be purchased in November, 2016. Those cows will then be calved in the spring, 2017
- a round baler and wagon to haul bales will be purchased in the summer of 2016. The rest of the beef enterprise related equipment needed will be purchased in the spring, 2017. The grain equipment no longer required will be sold in 2017 in the season of use to maximize returns
- new fencing and facilities required will be built in the summer of 2016
- in 2017, the farm be fully transitioned to the new beef enterprise, and should operate that year as such. Final grain sales from 2016 production will be sold in the spring of 2017. Following those sales, and going forward, production income should be from the beef enterprise only
- revenues from the sale of grain, and excess equipment and bins will fund part of the transition costs to the beef enterprise. Projections done indicate that an additional $300,000 in term financing will be required long term. A bridge loan of $200,000 repayable from the sale of grain and surplus equipment in spring/summer of 2017 will be required for about 1 year to fund the transition
- Will North will continue to operate the farm with some hired labour. For the present at least, Jane will continue with her part time job at the seniors facility
- by the end of 2017, the transition should be largely complete, After that, capital purchases to replace existing items only should be required.

Operations were projected for 2 years based on this change. The results follow:

After Change Projection (Year 1)

Income (Jan 1 - Dec 31, 2016)

Income	Quantity		Price	Amount
Livestock sales				
calves	0	x	0	0
cull cows	0	x	0	0
repl. hfrs	0	x	0	0
bulls	0		0	0
Total				0
Crop sales				
canola	14000	x	10.00	140,000
barley	25000	x	4.10	102,500
oats	22000	x	2.50	55,000
Total				297,500
Other income				
Gov't programs				5,000
Custom work				8,000
Other				6,800
Total				19,800
Total Cash Income				317,300
Inc. side accrual adjustments				355,740
Total Accrued Income				673,040

Expenses (Jan 1 - Dec 31, 2016)

Expense	Amount
Livestock purch. & expense	416,200
Cropping expense	226,245
Overhead expense	10,500
Operating interest	1,298
Term interest	23,433
Total Cash Expense	677,676
Non Cash Expense	
Depreciation	40,800
Exp. side acc. adj.	-48,495
Total Non Cash Expense	-7,695
Total Accrued Expense	669,981
Net Accrued Farm Income	3,059
Net wages	30,000
Living costs	48,000
Income tax	0
Debt Service Capacity	49,292

(Net acc. farm inc. + depreciation + term interest + non farm income - living costs - income tax)

Profitability Ratios:	
Debt Service Ratio:	0.55
Return on Assets:	-0.33%
Return on Equity:	-2.90%
Max. operating loan required:	92,924

Payments	
Principal	66,690
Interest	23,433
Total	90,123

Closing Financial Ratios:	
Current Ratio	0.60
Debt to Equity Ratio	0.73
Equity Ratio	0.58

After Change Projection (Year 2)

Income (Jan 1 - Dec 31, 2017)

Income	Quantity		Price	Amount
Livestock sales				
calves	144	x	1,500	216,000
cull cows	26	x	1,400	36,400
repl. hfrs	12	x	2,000	24,000
bulls	4		2,500	10,000
Total				286,400
Crop sales				
canola	5200	x	10.00	52,000
barley	17400	x	4.10	71,340
Total				123,340
Other income				
Gov't programs				5,000
Custom work				8,000
Other				6,800
Total				19,800
Total Cash Income				429,540
Inc. side accrual adjustments				-99,340
Total Accrued Income				330,200

Expense (Jan 1 - Dec 31, 2017)

Expense	Amount
Livestock expense	74,280
Cropping expense	65,950
Overhead expense	10,500
Operating interest	5,371
Term interest	34,828
Total Cash Expense	190,929
Non Cash Expense	
Depreciation	42,896
Exp. side acc. adj.	-1,508
Total Non Cash Expense	41,388
Total Accrued Expense	232,317
Net Accrued Farm Income	97,883
Net wages	30,000
Living costs	48,000
Income tax	20,000
Debt Service Capacity	137,607

(Net acc. farm inc. + depreciation + term interest + non farm income - living costs - income tax)

Profitability Ratios:	
Debt Service Ratio:	1.32
Return on Assets:	3.61%
Return on Equity:	3.07%
Max. operating loan required:	80,451

Payments	
Principal	69,355
Interest	34,828
Total	104,183

Closing Financial Ratios:	
Current Ratio	1.14
Debt to Equity Ratio	0.50
Equity Ratio	0.67

Some comments about these results are as follows:

1. Year 1 is the transition year when some assets are being sold, others purchased and extra costs are incurred seeding land down to hay and pasture, and building fences and livestock facilities. The cow herd, with the exception of the required bulls, will be purchased in November of Year 1, to calve in the spring of Year 2. The required bulls will be purchased prior to the start of the breeding season in Year 2.
2. Year 2 shows what is expected to be mostly a typical year after transition, except that the remaining crops from 2016 production will be sold in the spring. The income side accrual adjustments account for changes in inventory over the projected year, leading to calculated Net Accrued Farm Incomes that reflect the net returns from operations in the year, adjusted for inventory changes.
3. because of the large investment required for breeding stock, and the cost of required changes to fencing and facilities, some new term debt will be required, and bridge financing will be needed to fund the purchase. The Norths have accumulated $64,500 in their AgriInvest account, and that will be used as well to fund some of the investment required.
4. the Norths have a $100,000 operating loan limit, and asked their lender to increase the amount to $200,000. By accessing a $100,000 calf advance in the spring, repayable when the calves are sold in the fall, however, they hope to be able to keep operating loan requirements under $100,000 each year. The projections done suggest this should be possible.
5. because the projections were done based on current livestock prices, which may soften somewhat in future years, the Norths were concerned about how lower prices would impact on their ability to meet their financial commitments. As the surplus of debt service capacity over payments is about $33,000, calf prices could drop by about 15% before ability to service debt, after tax would drop below payment requirements, assuming all other incomes and costs stayed the same
6. the large expense to be incurred in 2016 to purchase the breeding herd means that income tax will not likely need to be paid for 4 or 5 years, but it has been Will and

Jane's practice to set aside money to pay tax as money is earned, whether or not payment is required. For that reason, tax requirement on earnings is calculated in this analysis so they know realistically what their ability is to service debt after tax, which helps them make sound management decisions.

Summary

The projections done suggest that with costs and prices expected over the next 2 years, the Norths should be able to make the transition from a grain operation to a beef operation which they feel would be better for their farm. The projections also indicate that as long as beef prices and costs remain at close to current levels, the change should meet the Business Goals the Norths have identified. The anticipated change in work load, and increased returns expected, should as well, allow them to meet the Personal Goals they have set for themselves.

The Norths realized, however, that these financial results are due to the high beef prices presently in place. While the results of the financial review done seem to suggest they should make the change, they were still hesitant, and expressed their concerns to Joe, their consultant:

- beef prices have gone up very quickly and could come down just as fast. What would the numbers look like if prices moderated?
- input costs are a significant expense. What would the results look like if they were to continue to rise?
- one of their Personal Goals is for Jane to retire from her job in just over 2 years. If beef prices moderate, will they still be able to afford to live without Jane's income when the time comes?
- the proposed change to beef production is being compared to crop production at a time when crop prices are not really strong. Maybe crop prices will rise, and they will wish they had stayed with it. What would the results to their operation as it presently is be, if crop prices were to rise by 10 % and 20%

The Norths decided they needed answers to the above before they make their final decision to change enterprises and asked their Consultant, Joe Analyst to run the projections again addressing the 4 concerns expressed above. Joe agreed, and those results will be considered prior to making a final decision.