

To Invest Or Not To Invest

**Making long-term investments for
your small to medium sized
business**

**John Molenhuis and Dave McLeod,
OMAFRA**

Introduction

- This session is for the small to medium-sized producer
- Your business is at the point where you are thinking of expanding, or upgrading
- This may be to prepare for future growth, a new product, or to take advantage of cost/energy efficiencies
- Will help answer the question: how do I know if my business is at the stage where I can afford this investment?



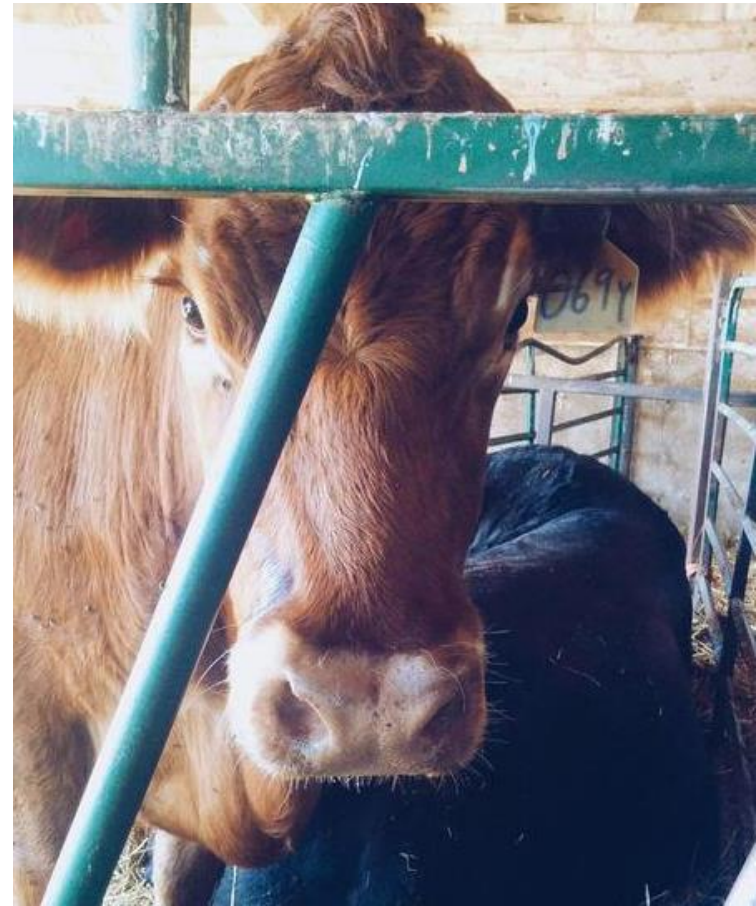
Purpose of Session



- Review reasoning behind capital investments
- Overview of capital investment options for different sectors
- Considerations when deciding on investments
- Capital budgeting
- Example of long-term capital investment
- Overall investment considerations

Scenarios

- Dairy Goat Operation
 - Automation
 - Energy efficiencies
 - Bio-security enhancement
- Beef Producer
 - Fencing
 - Housing



Scenarios

- Grain Corn Operation
 - Grain Storage
 - Grain Dryer
- Apple Farm
 - Storage facility
 - Cidery



General Considerations

- Technology



- Taxes



- By-laws

General Considerations

- Growth Opportunities
- Complimentary investments
- Available Property



Capital Budgeting

- What are your long-term goals?
- What are the potential investment options for meeting these goals?
- Do you have the appropriate cash flow for this investment?
- Is it financially feasible to make this investment?

Capital Budgeting

- Payback period calculation:

$$\frac{\text{Cost of investment}}{\text{Annual net cash flow}} = \text{Expected payback period}$$

- Example:
 - New lighting for a small scale greenhouse
 - Cost of \$10,000
 - Savings of \$1,000 annually
 - 10 year payback period

Session Example

- Grain Corn



Grain Corn Storage Options

- <https://www.youtube.com/watch?v=aA4Ra5UQx8k>

Grain Corn Operation

- 350 acre example
- Addition of grain storage
- 25,000 capacity
- Data from current grain corn prices, field crop budgets and average bu/tonne estimates
- Grain storage price estimates from Alberta's Department of Agriculture and Forestry
- Corrugated, flat bottom on concrete

Grain Corn Operation

Calculation numbers and assumptions – 350 acre operation:

- 158.5 bu/acre (2016 Statistics Canada)
- 39.37 bu/tonne
- \$189.73 average Ontario corn price/tonne, or \$4.82/bu (2017 OMAFRA Crop Market Data)
- Handling equipment for loading/unloading grain is already a farm asset
- Land available for future expansion

Base Cash Flow Budget – 350 acres

Revenues	
Corn Sales	\$267,289.09
Expenses	
Seed	\$37,135.00
Seed Treatment	\$560.00
Fertilizer	\$41,790.00
Pesticides	\$4,952.50
Tillage	\$19,250.00
Planting	\$7,700.00
Spraying	\$3,850.00
Fertilizer Application	\$3,850.00
Harvesting & Trucking	\$28,227.50
Drying	\$28,122.50
Crop Insurance	\$4,410.00
Op Interest @ 3.7%	\$3,097.50
Marketing & Misc.	\$12,425.00
Overhead and Land	\$53,457.88
Total all Inputs	\$248,827.88
Cash available for investment	\$18,461.21

Grain Corn Operation

Calculation numbers and assumptions – 350 acre operation:

- 5% interest rate on loan
- \$93,750 storage cost, includes base, site prep and setup
- Storage cost based on five bins, 5,000 bu capacity each, at a cost of \$3.75/bu
- \$10,000 for aeration system
- \$80,000 for grain dryer
- 10% down on purchase = \$18,375

Repayment Period

	Amount Owing* 5 year repayment (\$38,197.46 annual payment)	Amount Owing* 10 year repayment (\$21,416.82 annual payment)	Amount Owing* 15 year repayment (\$15,932.61 annual payment)
Year 1	\$165,375.00	\$165,375.00	\$165,375.00
Year 2	\$135,446.29	\$152,226.93	\$157,711.14
Year 3	\$104,021.15	\$138,421.46	\$149,664.10
Year 4	\$71,024.75	\$123,925.71	\$141,214.69
Year 5	\$36,378.53	\$108,705.18	\$132,342.82
Year 6	-	\$92,723.62	\$123,027.36
Year 7	-	\$75,942.98	\$113,246.12
Year 8	-	\$58,323.31	\$102,975.82
Year 9	-	\$39,822.66	\$92,192.01
Year 10	-	\$20,396.97	\$80,869.00
Year 11	-	-	\$68,979.85
Year 12	-	-	\$56,496.23
Year 13	-	-	\$43,388.44
Year 14	-	-	\$29,625.25
Year 15	-	-	\$15,173.91

Grain Corn Operation

- Elevator vs. On-farm Storage Calculations:
 - Elevator drying cost = \$0.50/bu
 - Elevator storage cost = \$0.07/tonne per day
 - Elevator storage = 4 months
 - Elevator in cost = \$0.127/bu
 - On-farm drying (propane) = 0.02 gallons/bu per moisture level
 - Cost of propane = \$0.72/gallon (November 2016 price)
 - Aeration costs = \$0.07/bu
- Average of **eight** moisture levels removed during drying process.
- For elevator storage, it's assumed that the grain will be sold to the elevator, so no **out** cost.

Grain Corn Operation

- Elevator Costs vs. On-farm Storage cost

	Elevator costs	On-farm
Aeration	\$0.00	\$1,750.00
Drying - General	\$12,500.00	\$0.00
Drying - Propane	\$0.00	\$2,800.00
Storage	\$11,836.86	\$0.00
Elevation In	\$3,175.00	\$0.00
Depreciation	\$0.00	\$6,225.00
Interest	\$0.00	\$9,187.50
Repairs	\$0.00	\$2,756.25
Insurance	\$0.00	\$1,837.50
Labour	\$0.00	\$600.00
Total Cost	\$27,511.86	\$25,236.25

- Annual Savings = \$2,275.61

Capital Budgeting

- Calculations for on-farm costs:
 - Depreciation = 25 year life with salvage value of \$28,125
 - Interest = 5% per year on initial investment
 - Repairs = 1.5% on initial investment
 - Insurance = 1% on initial investment
 - Labour = 5 hours a month at \$20/hr for six months a year

Capital Budgeting

- Payback Period - with equal revenue

$$\frac{\$183,750.00}{\$2,275.61} = 80.74 \text{ years}$$

- Payback Period – with 10% increase per bushel (equals additional \$12,050/year)

$$\frac{\$183,750.00}{\$14,325.61} = 12.83 \text{ years}$$

Grain Corn Storage - Opportunities

- <https://www.youtube.com/watch?v=xo5xqPRBQp4>

Grain Corn Operation

- Investment considerations for grain corn operation:
 - Added revenue/reduced revenue
 - Reduction in costs/added costs
 - Availability of land
 - Track record as a business (to help secure funds)
 - Long-term considerations (for expansion)
 - Value-added capacity
 - Debt load
 - Other revenue sources

Conclusion

- Availability of land and facilities
- Access to capital
- Tax and municipal implications
- Value-added opportunities
- Financial stability of operation
- Proven technologies

Resources

- **Budgeting tools – OMAFRA**

<http://www.omafra.gov.on.ca/english/busdev/bear2000/Budgets/budgettools.htm>

- **Investment and Growth on Canadian Farms – Western University, Ivey Business School**

<http://sites.ivey.ca/agri-food/files/2013/03/Farm-Capital-Investment-and-Growth-2001-2009.pdf>

- **Capital budgeting basics – Iowa State University**

<https://www.extension.iastate.edu/agdm/wholefarm/html/c5-240.html>



Questions