

# Evaluate Your Farm Financial Situation

## How Much Debt Is Too Much?

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## Farm Analyst Program

- What is the Farm Analyst Program?
- How we use financial software
  - FinPack®



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# Farm Analyst Clients

- Annual Clients
- Kansas Agricultural Mediation Services Clients
- Facilitation Clients

*“Do the difficult but important things now.....  
You can procrastinate later!”* Unknown

*“Time is what we want most, but what we  
use worst.”* William Penn

## Debt Structure

- Current (one year or less)
  - Line of Credit
- Intermediate (2-7 years)
  - Machinery and equipment
  - Breeding livestock
- Long term
  - Real estate
  - Buildings and improvements

## How Much Debt Can My Farm Carry?

- Income available
- Years to amortize
- Interest rate
- Current Ratio position
- Historic income potential
- Operator experience
- Operator health and age

## Does My Debt Cash Flow?

### “Cash flow plan”

- Term debt ratio analysis
- The debt repayment capacity / Term debt payments

Will the income generated by incurring the debt make the payments?

## Amortization Length and Interest Rate

- Current 1 year
- Intermediate 2 to 7 years
- Long term 8 + years

## Amortization Considerations

- Which is better
- Longest term available?
- Shortest term cash flow can handle?

## More Amortization Considerations

- How much debt can be serviced?
- Use an amortization calculator (FinPack has one)
- If you borrowed \$100,000 for 25 years at 6% interest the annual payment would be \$7,885 per year.
- At the end of 25 years one would have paid off the original principal borrowed plus \$97,118 in interest.

# Balance Sheet-Liquidity

<b>Current Assets</b>			Value	<b>Current Liabilities</b>			Balance
Cash and checking			-7,225	Accrued interest			29,723
Prepaid exp. & suppl. (Schd B)			162,563	Payables & accr exp (Schd T)			20,000
Growing crops (Schd C)			161,557				
Accounts receivable (Schd D)			22,915				
Hedging accounts			36,250				
Other current assets			-				
Crops (Schd G)			Quantity	Value/Unit			
Grass Hay			30	65.00/ton	1,950		
Alfalfa Hay			725	101.72/ton	73,750		
Livestock held for sale					-		
<b>Total Current Assets</b>			<b>451,760</b>	<b>Total Current Liabilities</b>			<b>708,394</b>

Current Ratio = Current Assets/Current Liabilities= **.64**

Working Capital = Current Assets-Current Liabilities= **-256,634**



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<b>Intermediate Assets</b>			Market Value	<b>Intermediate Liabilities (Schd V)</b>					
Breeding livestock			-	Loan	Int Rate	Principal Balance	P & I Due	Principal Due	Intermed Balance
Machinery and equipment			1,315,750	Centr-Machinery	3.50	427,461	127,334	107,185	320,276
Titled vehicles			-						
Other intermediate assets			-						
<b>Total Intermediate Assets</b>			<b>1,315,750</b>	<b>Total Intermediate Liabilities</b>					<b>320,276</b>
<b>Long Term Assets</b>			Market Value	<b>Long Term Liabilities (Schd W)</b>					
Land (Schd M)			Acres	Loan	Int Rate	Principal Balance	P & I Due	Principal Due	Lg Term Balance
South Farm			157	Centr-Farm Loan	4.75	287,430	27,217	12,903	274,527
Central Home			157	FSA-Hay Shed	3.125	14,301	7,488	7,020	7,281
Central Home Improved			157						
Bldgs & improve. (Schd N)			110,500						
Other long term (Schd O)			24,344						
<b>Total Long Term Assets</b>			<b>1,343,744</b>	<b>Total Long Term Liabilities</b>					<b>281,808</b>



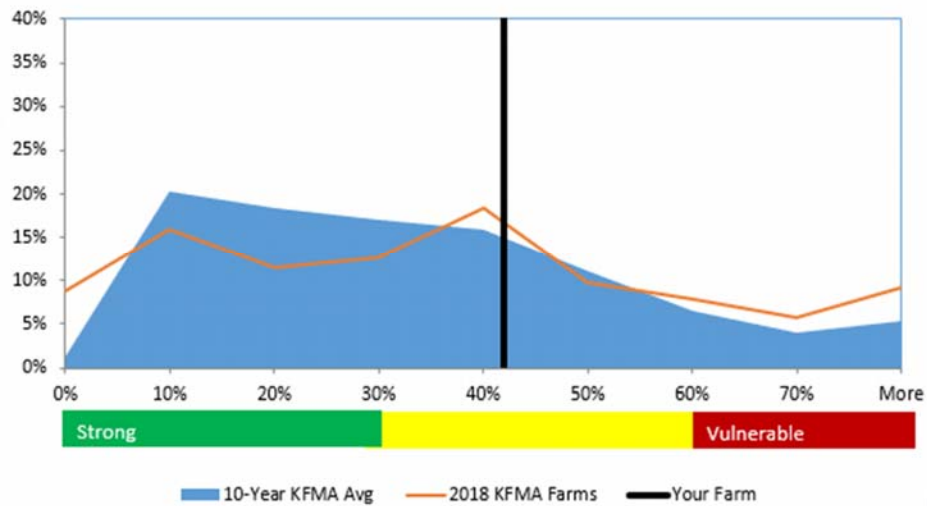
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# Balance Sheet-Solvency

Total Farm Assets	\$3,111,254	Total Farm Liabilities	\$1,310,478
Net Worth = \$1,800,776			

Debt/Asset Ratio = **.42**  
**42% of your assets are owned by creditors!**

# Financial Benchmarking Tool Debt to Asset Ratio



# Liquidity

- Liquidity = solid working capital that one has at least \$1 of current assets to cover current liabilities.

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# Solvency

- Solvency measures the amount of debt and other obligations relative to the amount of owner equity invested in the business
- Solvency Ratios indicate the business's ability to repay financial obligations
  - Farm Debt to Asset Ratio = Total Farm Liabilities/Total Farm Assets
  - Equity to Asset Ratio = Total Farm Equity/Total Farm Assets
  - Debt to Equity Ratio = Total Farm Liabilities/Total Farm Equity

## Balance Sheet-Solvency

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## Stability of Income

- History
- Access to risk management tools
- Utilizing the resources available

## Age & Health

Younger farmers have a longer time horizon to weather the storms

1. Take on additional part time jobs
2. Explore alternative business strategies

Older operators may not have the health, vigor, or willingness to take on the challenges of a new business venture.

# The Importance of Managing Cash Flow

- Proper debt structure is important
- Maintain sufficient working capital
- Know and Control costs (enterprise budgeting)
- Seek to know and understand the resources you have and properly assess those you “need”

# Working Capital

- Should be #1 priority on the balance sheet
- Current Assets minus current liabilities
- Divide working capital by total farm expenses
- < 10% = vulnerable operation
- 10-33% = resilient
- > 33% = agile

## Evaluate 3 years of Schedule F's

- Remove depreciation and interest expense.
- Divide the income by the operating expense.
- The result is the operating expense to income ratio.

Schedule F	3 YEAR			
	2018	2017	2016	AVERAGE
Income				
Gross Income	\$1,232,655	\$1,240,748	\$1,066,577	\$1,179,993
Expense				
Total Expenses	\$1,411,430	\$1,303,507	\$1,167,813	\$1,294,250
CASH FARM PROFIT (LOSS)	-\$32,830	\$80,192	\$36,236	\$27,866
NET FARM PROFIT (LOSS)	-\$178,775	-\$62,759	-\$101,236	-\$114,257
<b>Expense to income ratio</b>	<b>95.59%</b>	<b>87.78%</b>	<b>90.47%</b>	<b>91.31%</b>
w/out depreciation/interest				
Interest to Gross income %	7.08%	5.76%	6.13%	6.33%

# Long Range Planning

- Base plan – long range projection of current operation
  - Ability to evaluate alternatives compared to this Base Plan
- Evaluate potential strategies for the farm business
- Develop an implementation plan for selected strategies



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## FINLRB Income Statement

### PROFITABILITY INCOME STATEMENT

			Base Pla
Wheat, Winter	\$	4.00/bu.	138,14
Soybeans	\$	8.50/bu.	268,87
Corn	\$	3.50/bu.	324,81
Hay, Alfalfa	\$	110/ton	77,66
Hay, Brome Grass	\$	65.00/ton	11,70
Custom work income			53,00
Other farm income			40,30
(A) <b>Gross farm income</b>			<b>914,49</b>

### Expenses

Seed	149,627
Fertilizer	131,726
Crop chemicals	59,527
Crop insurance	22,840
Interest	46,532
Storage	2,555
Fuel & oil	26,240
Repairs	68,500
Custom hire	3,500
Hired labor	48,569
Land rent	110,860
Machinery leases	17,656
Building leases	3,000
Grazing fees	8,175
Real estate taxes	17,450
Personal property taxes	2,000
Farm insurance	22,400
Utilities	6,077
Consultants	5,350
Marketing	8,156
Miscellaneous	750
(B) <b>Total cash farm expense</b>	<b>761,489</b>
(C) Net cash farm income (A-B)	153,010
(D) Depreciation	137,100
(E) <b>Net farm income (C-D)</b>	<b>15,910</b>



# FINLRB Cash Flow

## CASH FLOW

Net cash farm income	(C)	153,010
Nonfarm income	(+)	-
Family living	(-)	54,000
Income taxes	(-)	2,280
Cash available for principal payments	(=)	96,730
Farm interest paid	(+)	46,532
Cash avail. for principal and interest	(=)	143,261
John Deere Credit-Combine		25,810
John Deere Credit-1890 Drill		13,250
John Deere Credit-7930 Tractor		19,170
John Deere Credit-Grain Cart		5,140
John Deere Credit-JD 4850		5,918
John Deere Credit-Z925A Mower		3,143
AgCo Finance-Swather		8,438
John Deere Credit-4830 Sprayer		25,000
1st National Bank-JD Payloader		21,465
1st National Bank-Farm Loan		27,217
Farm Service Agency-Hay Shed		7,488
Operating interest		18,768
Total scheduled principal and interest	(-)	180,807
Cash available after loan payments	(=)	-37,545
Annual capital replacement		1
Principal paid on intermediate debt		112,351
Cash required for replacement	(-)	-
Cash surplus or deficit	(=)	-37,545

## Dave's observations

- Operating notes/Line of Credit misused
- Many operations have off-farm income to provide for family living and personal loans. Therefore, the farm profits are placed back into the business to build equity.
  - Goal: Current ratio of at least 1:1 and debt to asset no higher than 50%
- In some cases Balance sheet values (especially machinery) may be overvalued in today's market.

## Summary

- How much debt should a farm accept cannot be generalized
  - Historical success plays a large role
  - Create cash flow increases
  - Know when to hold them and know when to fold them
- 
- *Credit Michael Langemeier*
  - *Farm Management Guide MF-288*

## Questions or More Information

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### Websites:

- Extension Agricultural Economics
  - ✓ [www.AgManager.info](http://www.AgManager.info)
- Kansas Farm Analyst Program
  - ✓ [www.agmanager.info/programs/ksu-farm-analyst-program](http://www.agmanager.info/programs/ksu-farm-analyst-program)
- Kansas Farm Management Association (KFMA)
  - ✓ [www.AgManager.info/KFMA](http://www.AgManager.info/KFMA)
- Kansas Agricultural Mediation Services (KAMS)
  - ✓ [www.k-state.edu/KAMS](http://www.k-state.edu/KAMS)