

Getting Started with Balance Sheet Farm Financial Management

Frank Wardynski

Michigan State University Extension Educator



Frank Wardynski – Contact information

- wardynsk@anr.msu.edu
- 906-884-4386 office
- 906-281-0918 mobile





Joe and Fran Farmer
12/31/2015 Balance Sheet

Current Assets			Value	Current Liabilities					Balance
Cash and checking			4,500	Accrued interest				12,140	
Prepaid exp. & suppl. (Schd B)			34,950	Accounts payable and other accrued expenses				-	
Growing crops			-						
Accounts receivable			-						
Hedging accounts			-						
Other current assets			-						
Crops (Schd G)	Quantity	Value/Unit							
Corn	49,186	3.50/bu.	172,151						
Soybeans	9,826	9.00/bu.	88,434						
Livestock held for sale			-						
Total Current Assets			300,035	Total Current Liabilities				228,838	
Intermediate Assets			Market Value	Intermediate Liabilities (Schd V)					
Breeding livestock			-	Loan	Int Rate	Principal Balance	P & I Due	Principal Due	Intermed Balance
Machinery (Schd J)			577,500	Fourth Bank-Equipment	5.25	63,613	23,223	20,101	43,512
Titled vehicles			-	JDCC-Tractor	5.00	101,242	28,598	23,465	77,777
Other intermediate assets			-	JDCC-Combine	5.50	65,145	24,181	20,548	44,597
				Fourth Bank-Bins	5.50	58,242	13,508	10,404	47,838
Total Intermediate Assets			577,500	Total Intermediate Liabilities					213,725
Long Term Assets			Market Value	Long Term Liabilities (Schd W)					
Land (Schd M)	Acres			Loan	Int Rate	Principal Balance	P & I Due	Principal Due	Lg Term Balance
Home Farm	80		560,000	Fourth Bank-White Farm	5.95	103,355	13,351	7,370	95,985
White Farm	80		560,000	Fourth Bank-Green Farm	5.25	197,523	19,447	8,933	188,590
Green Farm	63		441,000						
Bldgs & improve. (Schd N)			147,000						
Other long term assets			-						
Total Long Term Assets			1,708,000	Total Long Term Liabilities					284,575
Total Farm Assets			2,585,535	Total Farm Liabilities					727,137
Personal Assets (Schd P)			38,000	Personal Liabilities (Schd X)					24,550
Total Assets			2,623,535	Total Liabilities					751,687
				Net Worth					1,871,848

<i>Current Assets</i>			Value
Cash and checking			4,500
Prepaid exp. & suppl. (Schd B)			34,950
Growing crops			-
Accounts receivable			-
Hedging accounts			-
Other current assets			-
Crops (Schd G)	Quantity	Value/Unit	
Corn	49,186	3.50/bu.	172,151
Soybeans	9,826	9.00/bu.	88,434
Livestock held for sale			-
Total Current Assets			300,035



Current Liabilities

Accrued interest

Balance

12,140

Accounts payable and other accrued expenses

-

Current loans (Schd U)

Int
Rate

P & I
Due

Principal
Balance

Fourth Bank-Operating

5.00

-

125,877

Principal due within 12 months on term liabilities

90,821

Total Current Liabilities

228,838



Intermediate Assets

	Market Value
Breeding livestock	-
Machinery (Schd J)	577,500
Titled vehicles	-
Other intermediate assets	-
Total Intermediate Assets	577,500



Intermediate Liabilities (Schd V)

Loan	Int Rate	Principal Balance	P & I Due	Principal Due	Intermed Balance
Fourth Bank-Equipment	5.25	63,613	23,223	20,101	43,512
JDCC-Tractor	5.00	101,242	28,598	23,465	77,777
JDCC-Combine	5.50	65,145	24,181	20,548	44,597
Fourth Bank-Bins	5.50	58,242	13,508	10,404	47,838
Total Intermediate Liabilities					213,725



Long Term Assets

		Market Value
Land (Schd M)	Acres	
Home Farm	80	560,000
White Farm	80	560,000
Green Farm	63	441,000
Bldgs & improve. (Schd N)		147,000
Other long term assets		-
Total Long Term Assets		1,708,000



Long Term Liabilities (Schd W)

Loan	Int Rate	Principal Balance	P & I Due	Principal Due	Lg Term Balance
Fourth Bank-White Farm	5.95	103,355	13,351	7,370	95,985
Fourth Bank-Green Farm	5.25	197,523	19,447	8,933	188,590

Total Long Term Liabilities

284,575



Total Farm Assets	2,585,535	Total Farm Liabilities	727,137
Personal Assets (Schd P)	38,000	Personal Liabilities (Schd X)	24,550
Total Assets		Total Liabilities	
	2,623,535		751,687
Net Worth		1,871,848	



Why is the balance sheet so important?

- Calculate ratios – financial stability of the business
 - $\text{Current ratio} = \text{Current Assets} / \text{Current Liabilities}$
- Track net worth over time
- Used for year end financial analysis



Financial Measures

- Liquidity – ability to meet financial obligations as they come due
 - Current Ratio=current assets/current liabilities 1-1.5
 - Working Capital=current assets – current liabilities
 - Working capital rule
 - Working capital/Total expenses >50% vs <20%
- Cash Flow



Financial Measures

- Solvency – ability to meet long-term financial obligations
 - Debt to Asset Ratio
 - Equity to Asset Ratio
 - Debt to Equity Ratio



Financial Ratios – from previous example

Working Capital	\$71,197	
Current Ratio	1.31	1.0-1.5
Debt to Asset Ratio	0.28%	30-70%
Equity to Asset Ratio	0.72%	30-70%



Great articles - MSUE

- http://msue.anr.msu.edu/news/financial_ratios_p_art_1_of_21_the_current_ratio



Farm Financial Ratios and Benchmarks Calculations & Implications

(> = greater than; < = less than)

Liquidity Analysis	Calculation	Strong	Stable	Weak
Current Ratio	Total Current Farm Assets ÷ Total Current Farm Liabilities	> 1.50	1.00 - 1.50	< 1.00
Working Capital	Total Current Farm Assets – Total Current Farm Liabilities	Compare with business expenses; amount varies by size of operation		
Working Capital Rule**	Working Capital ÷ Total Expenses	> 50%	20 - 50%	< 20%
Solvency Analysis	Calculation	Strong	Stable	Weak
Debt / Asset Ratio	Total Farm Liabilities ÷ Total Farm Assets	< 30%	30 - 70%	> 70%
Equity / Asset Ratio	Total Farm Equity ÷ Total Farm Assets	> 70%	30 - 70%	< 30%
Debt / Equity Ratio	Total Farm Liabilities ÷ Total Farm Equity	< 42%	42 - 230%	> 230%
Profitability Analysis	Calculation	Strong	Stable	Weak
Rate of Return on Farm Assets (ROA) <i>(mostly owned)</i>	(NFIFO* + Farm Interest Expense – Operator Management Fee) ÷ Average Total Farm Assets	> 5%	1 - 5%	< 1%
Rate of Return on Farm Assets (ROA) <i>(mostly rented or leased)</i>	(NFIFO* + Farm Interest Expense – Operator Management Fee) ÷ Average Total Farm Assets	> 12%	3 - 12%	< 3%
Rate of Return on Farm Equity (ROE)	(NFIFO* – Operator Management Fee) ÷ Total Farm Equity	Look at trends and compare to other farm and non-farm investments		
Operating Profit Margin	(NFIFO* + Farm Interest Expense – Operator Management Fee) ÷ Gross Revenue	> 25%	10 - 25%	< 10%



Importance and uses of Balance Sheets

- Evaluate current position of the business
- Compare year to year
 - Change of Net Worth, Big changes in categories
- Identify reasons for change
 - Expansion, selling of equipment, restructure loans
- Analyze ability to pay debt with ratios
- Calculate amount of debt you can safely add



New Year's Resolution

- Try to go back to January 1, and Develop beginning year balance sheet
- Develop year end balance sheet
- Find expert help develop and analyze the balance sheet

