

Getting Started with Year-end Financial Analysis 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



Income Statement

Gross income – cash expenses = **Net cash income**

Net cash income +
net worth change –
Depreciation = Net
Farm Income

Income Statement		
Crop sales	498,952	
Crop inventory change	48,807	
Gross crop income	and the second	547,759
Livestock sales	2,093,458	
Livestock inventory change	67,865	
Gross livestock income		2,161,323
Government payments		11,412-
Other cash farm income		91
Change in accounts receivable		(4) (4.9) (L _
Gain or loss on hedging accts		-16,725
Change in other assets		
Gain or loss on breeding lvst	Contracts of the	_
Gross farm income		2,703,861
		attenus i
Cash operating expense	2,155,037	
Change in prepaid exp and supplies	-7,496	
Change in growing crops	- 10	
Change in accounts payable	_ 10	
Depreciation	104,103	
Total operating expense		2,251,643
Interest paid	111,050	
Change in accrued interest	-804	
Total interest expense		110,246
Total expenses		2,361,890
Net form in come from an artist		044 074
Net farm income from operations		341,971
Gain or loss on capital sales		38,660
Net farm income		380,631

Slim Jim Sample Financial Analysis:	2012 1100/00		Page 2				
Income Statement							
Income	Quantity	Price	Amount	Exp	pense		Amount
Corn	30,607 bu.	6.24/bu.	190,913	See	ed		101,458
Soybeans	5,000 bu.	14.09/bu.	70,468		tilizer		91,416
Soybeans, Old Crop	18,633 bu.	12.75/bu.	237,571	Cro	pchemicals		34,162
Finish Beef, 596 Steers	596 head	129.95/cwt.	1,011,500	Cro	p insurance		25,077
Fin Yearling, 639 Yearling	639 head	130.75/cwt.	1,081,959		ing expense		2,809
Direct & CC govt payments			9,379	Cro	p Marketing		642
Livestock govt payments			2,033	Cro	p Miscellaneous		225
Patronage dividends, cash			91	Fee	eder livestock purchase		1,247,574
				Pur	chased feed		275,173
				Vet	erinary		11,647
				Sup	oplies		27,913
				Live	estock Hauling and truckin	g	28,516
				Live	estock Marketing		7,235
					erest		111,050
				Fue	el & oil		27,212
				Re	pairs		32,677
				Cu	stom hire		3,850
				Hir	edlabor		24,939
				Lar	nd rent		192,719
				Re	al estate taxes		1,680
				Fai	rm insurance		8,651
				Util	ities		6,849
				Du	es & professional fees		1,195
				Mis	scellaneous		1,418
Gross cash income			2,603,91		tal cash expense t cash income		2,266,087 337,827
	Beginning	Purcha		Sales/	Ending	Inventory	
Inventory Changes	Inventory	Depo	sits	Withdrawals	Inventory	Change	
Prepaids and supplies	95,584				103,080	7,496	
Hedging gains or losses	4,225	16	5,113	-	3,613	-16,725	
Crops and feed	729,520				778,327	48,807	
Market livestock	477,193				545,058	67,865	
Other assets	2,401		-	-	2,401	D. C. S. H. J. C. S. H.	
Accrued interest	28,986				28,182	804	100.017
Total inventory change							108,247
Net operating profit							446,074
	Beginning				Ending		
Depreciation	Inventory	Purch		Sales	Inventory	Depreciation	
Machinery and equipment	577,613		5,334	29,840	713,797 22,164	-79,310 -3,911	
Titled vehicles	26,075		-	-	396,736	-20,881	
Buildings and improvement	417,617		-		396,736	-20,001	-104,103
Total depreciation Net income from operations							341,971
Gain or loss on capital sales							38,660
Net farm income							380,631
FINPACK © Center For Farm Fina	ncial Management						by: Curtis Mahnken
University of Minnesota						Center for Fa	arm Financial Mgmt 28
							20

Income Statement					
Income	Quantity	Price	Amount	Expense	Amour
	· 10050 DOM: 1				
Corn	30,607 bu.	6.24/bu.	190,913	Seed	101,45
Soybeans	5,000 bu.	14.09/bu.	70,468	Fertilizer	91,41
Soybeans, Old Crop	18,633 bu.	12.75/bu.	237,571	Crop chemicals	34,16
Finish Beef, 596 Steers	596 head	129.95/cwt.	1,011,500	Crop insurance	25,07
Fin Yearling, 639 Yearling	639 head	130.75/cwt.	1,081,959	Drying expense	2,80
Direct & CC govt payments			9,379	CropMarketing	64
Livestock govt payments			2,033	Crop Miscellaneous	22
Patronage dividends, cash			91	Feeder livestock purchase	1,247,57
				Purchased feed	275,17
				Veterinary	11,64
				Supplies	27,9
				Livestock Hauling and trucking	28,5
				Livestock Marketing	7,23
				Interest	111,08
				Fuel & oil	27,2
				Repairs	32,6
				Customhire	3,88
				Hired labor	24,9
				Land rent	192,7
				Real estate taxes	1,68
				Farm insurance	8,6
				Utilities	6,8
				Dues & professional fees	1,1
			2000	Miscellaneous	1,4
Gross cash income			2,603,914	Total cash expense	2,266,0
Closs casil illoune			_,,	Net cash income	337,8

198	Beginning	Purchases/	Sales/	Ending	Inventory	
Inventory Changes	Inventory	Deposits	Withdrawals	Inventory	Change	
Prepaids and supplies	95,584			103,080	7,496	
Hedging gains or losses	4,225	16,113	-	3,613	-16,725	
Crops and feed	729,520			778,327	48,807	
Market livestock	477,193			545,058	67,865	
Other assets	2,401	e recologió de	- 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1	2,401	section and the	
Accrued interest	28,986			28,182	804	
Total inventory change						108,247
Net operating profit						446,074
, 31	Beginning			Ending		
Depreciation	Inventory	Purchases	Sales	Inventory	Depreciation	
Machinery and equipment	577,613	245,334	29,840	713,797	-79,310	
Titled vehicles	26,075		-	22,164	-3,911	
Buildings and improvement	417,617	-	-	396,736	-20,881	
Total depreciation						-104,103
Net income from operations						341,971
Gain or loss on capital sales	X					38,660
Net farm income						380,631

Working capital 477,907 628,096 Working capital to gross revenues 17.7 % 23.2 % Solvency (market) Beg End Debt to asset ratio 56 % 50 % Debt to equity ratio 1.27 0.96 Profitability Cost Market Net farm income 380,631 405,885 Rate of return on assets 12.9 % 12.0 % Rate of return on equity 19.4 % 18.7 % Operating profit margin 33.4 % 35.6 % Repayment Capacity Term debt coverage ratio (farm only) 3.75 Replacement margin coverage ratio 2.74 Efficiency Cost Market Asset turnover rate 38.6 % 33.7 % Operating expense ratio 79.4 % Depreciation expense ratio 3.9 % Interest expense ratio 4.1 %	Liquidity	Beg	End
Working capital to gross revenues 17.7 % 23.2 % Solvency (market) Beg End Debt to asset ratio 56 % 50 % Debt to equity ratio 1.27 0.98 Profitability Cost Market Net farm income 380,631 405,888 Rate of return on assets 12.9 % 12.0 % Rate of return on equity 19.4 % 18.7 % Operating profit margin 33.4 % 35.6 % Repayment Capacity 2.74 Term debt coverage ratio (farm only) 3.75 Replacement margin coverage ratio 2.74 Efficiency Cost Market Asset turnover rate 38.6 % 33.7 % Operating expense ratio 79.4 % Depreciation expense ratio 3.9 % Interest expense ratio 4.1 %	Current ratio	1.54	1.74
Solvency (market) Beg End Debt to asset ratio 56 % 50 % Debt to equity ratio 1.27 0.98 Profitability Cost Market Net farm income 380,631 405,889 Rate of return on assets 12.9 % 12.0 % Rate of return on equity 19.4 % 18.7 % Operating profit margin 33.4 % 35.6 % Repayment Capacity 2.74 Term debt coverage ratio (farm only) 3.75 Replacement margin coverage ratio 2.74 Efficiency Cost Market Asset turnover rate 38.6 % 33.7 % Operating expense ratio 79.4 % Depreciation expense ratio 3.9 % Interest expense ratio 4.1 %	Working capital	477,907	628,096
Debt to asset ratio 56 % 50 % Debt to equity ratio 1.27 0.98 Profitability Cost Market Net farm income 380,631 405,889 Rate of return on assets 12.9 % 12.0 % Rate of return on equity 19.4 % 18.7 % Operating profit margin 33.4 % 35.6 % Repayment Capacity Term debt coverage ratio (farm only) 3.75 Replacement margin coverage ratio 2.74 Efficiency Cost Market Asset turnover rate 38.6 % 33.7 % Operating expense ratio 79.4 % Depreciation expense ratio 3.9 % Interest expense ratio 4.1 %	Working capital to gross revenues	17.7 %	23.2 %
Profitability Cost Market Net farm income 380,631 405,889 Rate of return on assets 12.9 % 12.0 % Rate of return on equity 19.4 % 18.7 % Operating profit margin 33.4 % 35.6 % Repayment Capacity Term debt coverage ratio (farm only) 3.75 Replacement margin coverage ratio 2.74 Efficiency Cost Market Asset turnover rate 38.6 % 33.7 % Operating expense ratio 79.4 % Depreciation expense ratio 3.9 % Interest expense ratio 4.1 %	Solvency (market)	Beg	End
Profitability Net farm income Rate of return on assets Rate of return on equity Operating profit margin Repayment Capacity Term debt coverage ratio (farm only) Replacement margin coverage ratio Efficiency Asset turnover rate Operating expense ratio Depreciation expense ratio Interest expense ratio San Ada	Debt to asset ratio	56 %	50 %
Net farm income 380,631 405,889 Rate of return on assets 12.9 % 12.0 % Rate of return on equity 19.4 % 18.7 % Operating profit margin 33.4 % 35.6 % Repayment Capacity Term debt coverage ratio (farm only) 3.75 Replacement margin coverage ratio 2.74 Efficiency Cost Market Asset turnover rate 38.6 % 33.7 % Operating expense ratio 79.4 % Depreciation expense ratio 3.9 % Interest expense ratio 4.1 %	Debt to equity ratio	1.27	0.98
Rate of return on assets Rate of return on equity Operating profit margin Repayment Capacity Term debt coverage ratio (farm only) Replacement margin coverage ratio Efficiency Asset turnover rate Operating expense ratio Depreciation expense ratio Interest expense ratio 12.9 % 19.4 % 18.7 % 19.4	Profitability	Cost	Market
Rate of return on equity Operating profit margin Repayment Capacity Term debt coverage ratio (farm only) Replacement margin coverage ratio Efficiency Asset turnover rate Operating expense ratio Depreciation expense ratio Interest expense ratio 19.4 % 18.7 % 18.	Net farm income	380,631	405,889
Operating profit margin 33.4 % 35.6 % Repayment Capacity Term debt coverage ratio (farm only) 3.75 Replacement margin coverage ratio 2.74 Efficiency Cost Market Asset turnover rate 38.6 % 33.7 % Operating expense ratio 79.4 % Depreciation expense ratio 3.9 % Interest expense ratio 4.1 %	Rate of return on assets	12.9 %	12.0 %
Repayment Capacity Term debt coverage ratio (farm only) Replacement margin coverage ratio 2.74 Efficiency Cost Market Asset turnover rate Operating expense ratio Depreciation expense ratio Interest expense ratio 3.7 % 3.7 % 3.8 % 3.7 % 3.9 % 4.1 %	Rate of return on equity	19.4 %	18.7 %
Term debt coverage ratio (farm only) Replacement margin coverage ratio 2.74 Efficiency Asset turnover rate Operating expense ratio Depreciation expense ratio Interest expense ratio 3.75 Asset turnover at a control of the c	Operating profit margin	33.4 %	35.6 %
Replacement margin coverage ratio Efficiency Asset turnover rate Operating expense ratio Depreciation expense ratio Interest expense ratio 2.74 Market 38.6 % 33.7 % 79.4 % 3.9 % 4.1 %	Repayment Capacity		
Efficiency Cost Market Asset turnover rate 38.6 % 33.7 % Operating expense ratio 79.4 % Depreciation expense ratio 3.9 % Interest expense ratio 4.1 %	Term debt coverage ratio (farm only)		3.75
Asset turnover rate 38.6 % 33.7 % Operating expense ratio 79.4 % Depreciation expense ratio 3.9 % Interest expense ratio 4.1 %	Replacement margin coverage ratio		2.74
Operating expense ratio 79.4 % Depreciation expense ratio 3.9 % Interest expense ratio 4.1 %	Efficiency	Cost	Market
Depreciation expense ratio 3.9 % Interest expense ratio 4.1 %	Asset turnover rate	38.6 %	33.7 %
Interest expense ratio 4.1 %	Operating expense ratio		79.4 %
	Depreciation expense ratio		3.9 %
Net farm income ratio 12.6 %	Interest expense ratio		4.1 %
	Net farm income ratio		12.6 %

	Profitability Measures		Cost	Market
(A)	Net farm income from operations		341,971	367,229
	Rate of return on assets	(E/F)	12.9 %	12.0 %
	Rate of return on equity	(G/H)	19.4 %	18.7 %
	Operating profit margin	(E/I)	33.4 %	35.6 %
	Asset turnover rate	(I/F)	38.6 %	33.7 %
	EBITDA		556,320	581,578
(B)	Change in market valuation		-	25,258
(C)	Interest expense		110,246	110,246
(D)	Value of unpaid oper labor & mgmt		57,356	57,356
(E)	Return on farm assets	(A+C-D)	394,861	420,120
(F)	Average farm assets		3,058,938	3,503,309
(G)	Return on farm equity	(A-D)	284,615	309,873
(H)	Average farm net worth		1,466,297	1,659,939
(I)	Value of farm production		1,181,114	1,181,114
	Liquidity Measures		Pogin	End
	Liquidity ineasures		Begin	End
(J)	Current assets		1,355,416	1,473,655
(K)	Currentliabilities		877,509	845,559
	Current ratio	(J/K)	1.54	1.74
	Working capital	(J-K)	477,907	628,096
	Working capital to gross revenues		17.7 %	23.2 %
	Solvency Mossures (Marke	<i>+</i>)	Pogin	End
	Solvency Measures (Marke	"	Begin	End
(L)	Total assets		3,513,076	3,801,403
(M)	Totalliabilities		1,906,154	1,833,890
	Net worth	(L-M)	1,606,922	1,967,513
	Net worth change			,590
			A CONTRACTOR OF THE PARTY OF TH	

	Statement of Owner's Equity		
(a)	Beginning net worth		1,606,922
	Net farm income		380,631
	Personalincome	(+)	50,462
	Family living expense	(-)	75,738
	Income taxes accrued	(-)	20,043
	Change in personal assets	(+)	<u>-</u>
	Change in nonfarm accounts payable	(+)	19
(b)	Total change in retained earnings	(=)	335,331
	Change in market value of capital asse	ts	58,696
(4)	Change in deferred liabilities		33,438
(d)	Total change in market valuation		25,258
(e)	Total change in net worth	(b+d)	360,590
	Ending net worth		1,967,513
	1391		1001
	Statement of Cash Flows		
(f)	Beginning cash balance (farm & persor	nal)	48,894
	Gross cash farm income		2,603,914
	Cash farm expenses	(-)	2,266,087
	Net cash from hedging transactions	(+)	-16,113
(g)	Cash provided by operating activities	(=)	321,715
	Sale of machinery and equipment	(+)	68,500
	Purchase of machinery and equipment	(-)	245,334
(h)	Cash provided by investing activities	(=)	-176,834
	Money borrowed		1,449,138
	Principal payments	(-)	1,554,016
	Personalincome	(+)	50,462
	Family living expense	(-)	75,738
(i)	Income taxes paid	(-)	20,043
(i)	Cash provided by financing activities	(=)	-150,197
	Net change in cash	(g+h+i)	-5,316
	Ending cash balance (farm and personal	al)	43,578



New Year's Resolution - 2018

- Develop Beginning year Balance Sheet
- Separate personal from farm checking account
- Develop an organized accounting system that tracks every transaction



New Year's Resolution - 2019

- Develop year end balance sheet
- Utilize farm accounting to calculate Net Farm Income
- Utilize beginning and ending year balance sheets to determine Net Worth Change
- Call for help if needed!