

## Multi County Landowner 101

Farm Business Management

Jose A. Lopez, Ph.D.

Associate Professor of Agribusiness
College of Agricultural Sciences and Natural Resources
Texas A&M University - Commerce

Myers Park & Event Center 7117 County Rd 166 McKinney, Texas 75071 Friday, May 20, 2022

## Introduction



- Texas Farm Business Management and Benchmarking Education and Outreach Alliance
  - Project TEXW-2020-06880
  - Funded by the FBMB Competitive Grants Program, NIFA, USDA
- A collaboration between:
  - Texas A&M University Commerce (TAMUC)
  - West Texas A&M University (WTAMU)
  - Regional Texas A&M AgriLife Extension Service agencies
- Overall Goal:
  - Contribute to the well-being of agricultural producers
- Objectives:
  - Recruit Texas agricultural producers to participate and provide information for the national Farm Financial Management Database (FINBIN)
  - Provide professional consulting services to interested agricultural producers about farm financial management, business analysis, credit analysis, and financial benchmarking

## Financial Benchmarking

- In simple words, the project is about Farm Business Management and Benchmarking
- **Benchmarking** is about comparing and studying "best practices"
- **Financial planning** is about preparing balance sheets, income statements, cash flows, budgeting, etc.
- Financial benchmarking seeks opportunities for
  - Reducing costs
  - Increasing revenues

## Who Benefits?

- Ag research
- Ag education
- Ag extension programs
- Ag producers

## How Ag Producers Benefit?

- The project provides:
  - Professional consulting services
  - Business analysis
  - Credit analysis
  - Financial benchmarking

## Why Are Financial Statements Important?

### They are important for many reasons:

- Sole proprietors
  - Assess the financial health of a business
  - Assess if the business can expand
  - Access to credit
  - Assist in financial planning
    - Tax preparation
- Corporations
  - Provide information about the business to current owners, managers, potential investors, current or potential lenders, etc.

## What Are the Project Resources/Tools?

- FINPACK financial software
- The national Farm
   Financial Management
   Database (FINBIN),
   supported by the USDA's
   National Institute of Food
   and Agriculture (NIFA)
- Center for Farm Financial Management, University of Minnesota
- Other project collaborators at A&M-Commerce







## A&M-Commerce Project Team



Jose A. Lopez, Ph.D.

Associate Professor

Jose.Lopez@tamuc.edu

Phone: 903-886-5623

Kelley Smith, B.S.

Graduate Assistant

Ksmith106@leomail.tamuc.edu

Phone: 214-912-2865

Henry Jonathan Flowers, B.S.

**Graduate Assistant** 

hflowers1@leomail.tamuc.edu

Phone: 903-217-1583

Yves Kacou, B.S.

**Graduate Assistant** 

ykacou@leomail.tamuc.edu

Phone: 903-274-1122

### Other Collaborators



- Dr. Rafael Bakhtavoryan
  - Assistant Professor
  - Agribusiness
- Dr. Bob Williams
  - Professor
  - Agriculture, Food, and Family
- Dr. Curtis Jones
  - Assistant Professor
  - Plant and Soil Science
- Dr. Megan Owen
  - Assistant Professor
  - Animal Science



- Mr. Todd Williams
  - Rockwall County Extension Agent
  - Agriculture and Natural Resources
- Ms. Sara Allen
  - Hunt County Extension Agent
  - Agriculture and Natural Resources
- Dr. Mario Villarino
  - Hopkins County Extension Agent
  - Agriculture and Natural Resources
- Mr. Stephen Gowin
  - Rains County Extension Agent
  - Agriculture and Natural Resources

## WTAMU Team



- Dr. Lal Almas
  - Associate Dean and Regents
     Professor of Agricultural
     Business and Economics
- Dr. Bridget Guerrero
  - Associate Professor of Agricultural Business and Economics



- Dr. Justin Benavidez
  - Assistant Professor and Extension Management Economist
  - Texas A&M AgriLifeExtension Service for District1 in Amarillo
- Ms. DeDe Jones
  - Risk Management Specialist
  - Texas A&M AgriLife
     Extension Service for District
     1 in Amarillo

## **Financial Statements**

- Income Statement
- Balance Sheet
- The Statement of Owner's equity
- The Statement of Cash Flows

## **Income Statement**

- An income statement measures the *performance* of a business (i.e., the performance of assets, management, and labor).
- Income statements often pertain to a year's length of time, but monthly, quarterly, and semiannual income statements can be prepared as well.

## **Balance Sheet**

- A balance sheet reports the balances in assets, liabilities, and owner's equity as of a specific date.
- The dollar amount of assets must equal the dollar amount of liabilities plus the dollar amount of owner's equity for the balance sheet to balance.
- Assets = liabilities + owner equity
- Balance sheets can be completed at any time, but mostly prepared at end of accounting period (i.e., a calendar year or a fiscal year).
- Provides measures of solvency and liquidity.

## Statement of Owner's Equity

- It is also called *Statement of Net Worth*.
  - It's the difference between a business assets and liabilities.
  - If all assets were sold and all debts were paid,
     owner's equity would be the amount left over.
  - It represents the net value of the business to the owner(s).
- It coordinates the income statement for a year with the beginning and ending balance sheets.



## Financial Analysis (FINAN)

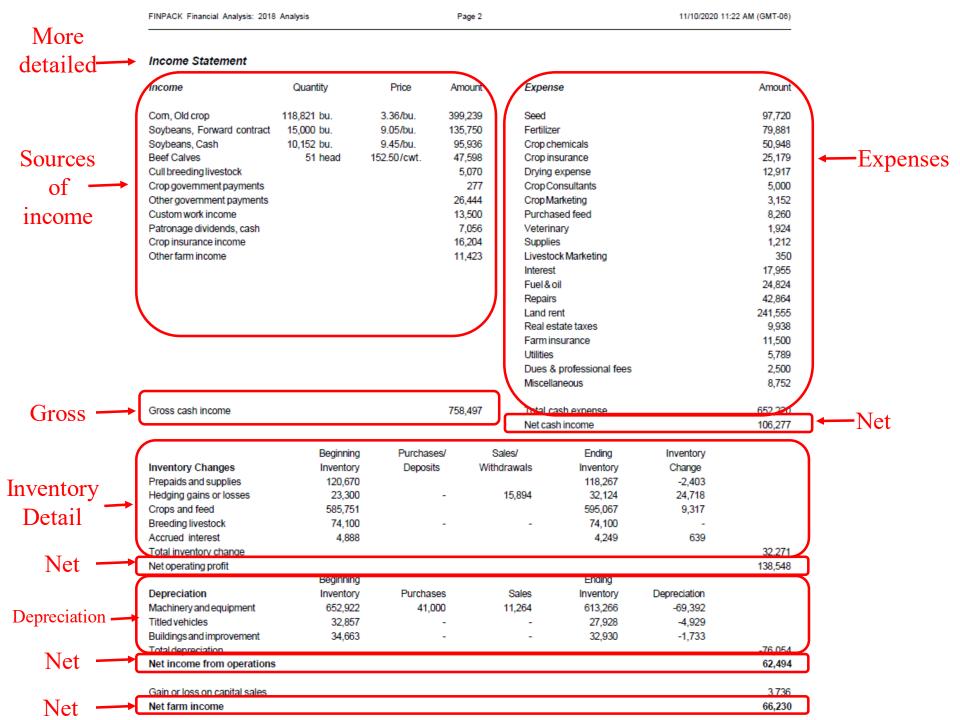
### FINPACK'

FINPACK 2018 Analysis

Income Statement

	2018 Fir	nancial Anal	ysis Executive Summary		_
ncome Statement			Financial Standards Measures		
Crop sales	630,925		Liquidity	Beg	En
Crop inventory change	9,317		Current ratio	4.25	7.19
Gross crop income		640,242	Working capital	569,088	642,55
Livestock sales	47,598		Working capital to gross revenues	71.8 %	81.1 9
Livestock inventory change	-				
Gross livestock income		47,598	Solvency (market)	Beg	En
Government payments		26,721	Debt to asset ratio	32 %	31 9
Other cash farm income		53,253	Debt to equity ratio	0.47	0.4
Change in accounts receivable		-			
Gain or loss on hedging accts		24,718	Profitability	Cost	Market
Change in other assets		-	Net farm income	66,230	80,39
Gain or loss on breeding lvst		-	Rate of return on assets	1.3 %	1.6 9
Gross farm income		792,532	Rate of return on equity	0.3 %	1.2 9
			Operating profit margin	2.7 %	4.5 9
Cash operating expense	634,265				
Change in prepaid exp and supplies	2,403		Repayment Capacity		
Change in growing crops	-		Term debt coverage ratio (farm only)		1.0
Change in accounts payable	-		Replacement margin coverage ratio		0.93
Depreciation	76,054				
Total operating expense		712,722	Efficiency	Cost	Market
Interest paid	17,955		Asset turnover rate	46.9 %	34.6 9
Change in accrued interest	-639		Operating expense ratio		80.3 9
Total interest expense		17,316	Depreciation expense ratio		9.6 9
Total expenses		730,038	Interest expense ratio		2.2 9
			Net farm income ratio		7.9 9
Net farm income from operations		62,494			
Gain or loss on capital sales		3,736	Other		
Net farm income		66,230	Term debt coverage (farm+personal)		1.0
			Term debt to EBITDA		10
Other Measures					
			Information Accuracy		
Total crop acres		1,174	0.1.5		
Cow-Calf Cows		57	Cash discrepancy		
			Liability discrepancy		
Change in earned net worth	11,183	1 %	Cash discrepancy to gross revenue		0 9
Change in market value net worth	28,695	2 %			

- Financial
  Ratios
  - Liquidity
  - Solvency
  - Profitability
  - Repayment Capacity
  - Efficiency
  - Other



## More Detailed → Financial Ratios

	Profitability Measures		Cost	Market
(A)	Net farm income from operations		62,494	76,658
	Rate of return on assets	(E/F)	1.3 %	1.6 %
	Rate of return on equity	(G/H)	0.3 %	1.2 %
	Operating profit margin	(E/I)	2.7 %	4.5 %
	Asset turnover rate	(I/F)	46.9 %	34.6 %
	ЕВПТОА		155,864	170,028
	Change in market valuation		-	14,164
	Interest expense		17,316	17,316
	Value of unpaid oper labor & mgm		58,500	58,500
	Return on farm assets	(A+C-D)	21,310	35,474
	Average farm assets		1,671,382	2,266,149
	Return on farm equity	(A-D)	3,994	18,158
	Average farm net worth		1,357,877	1,556,604
(I)	Value of farm production		784,272	784,272
	Liquidity Measures		Begin	End
(J)	Current assets		744,083	747,020
(K)	Current liabilities		174,994	104,466
	Current ratio	(J/K)	4.25	7.15
	Working capital	(J-K)	569,088	642,554
	Change in working capital			3,466
	Working capital to gross revenue:	S	71.8 %	81.1 %
	Solvency Measures (Mark	et)	Begin	End
(L)	Total assets		2,460,185	2,448,064
(M)	Total liabilities		739,692	698,876
	Net worth	(L-M)	1,720,493	1,749,188
	Net worth change		28	3,695
	Current debt to assets	(K/J)	24 %	14 %
	Intermediate debt to assets		10 %	15 %
	Long term debt to assets		12 %	9 %
	Personal debt to assets		4 %	3 %
	<del>-</del>		4 /0	
	Total debt to assets ratio	(M/L)	30 %	29 %
	Repayment Capacity	(M/L)		29 %
	Repayment Capacity  Net farm income from operations			62,494
	Repayment Capacity	(+)		
	Repayment Capacity  Net farm income from operations Depreciation Personal income	(+) (+)		62,494 76,054 17,087
	Repayment Capacity  Net farm income from operations Depreciation	(+) (+) (-)		62,494 76,054 17,087 61,247
	Repayment Capacity  Net farm income from operations Depreciation Personal income	(+) (+) (-) (-)		62,494 76,054 17,087 61,247 9,556
	Repayment Capacity  Net farm income from operations Depreciation Personal income Family living expense Income taxes accrued Interest on term debt	(+) (+) (-) (-) (+)		62,494 76,054 17,087 61,247
(N)	Repayment Capacity  Net farm income from operations Depreciation Personal income Family living expense Income taxes accrued Interest on term debt Capital debt repayment capacity	(+) (+) (-) (-)		62,494 76,054 17,087 61,247 9,556 22,697 107,530
(O)	Repayment Capacity  Net farm income from operations Depreciation Personal income Family living expense Income taxes accrued Interest on term debt Capital debt repayment capacity Scheduled term debt payments	(+) (+) (-) (-) (+) (=)		62,494 76,054 17,087 61,247 9,556 22,697
(O) (P)	Repayment Capacity  Net farm income from operations Depreciation Personal income Family living expense Income taxes accrued Interest on term debt Capital debt repayment capacity Scheduled term debt payments Capital debt repayment margin	(+) (+) (-) (-) (+)		62,494 76,054 17,087 61,247 9,556 22,697 107,530
(O) (P)	Repayment Capacity  Net farm income from operations Depreciation Personal income Family living expense Income taxes accrued Interest on term debt Capital debt repayment capacity Scheduled term debt payments Capital debt repayment margin	(+) (+) (-) (-) (+) (=)		62,494 76,054 17,087 61,247 9,556 22,697 107,530 104,753
(O) (P)	Repayment Capacity  Net farm income from operations Depreciation Personal income Family living expense Income taxes accrued Interest on term debt Capital debt repayment capacity Scheduled term debt payments	(+) (+) (-) (-) (+) (=)		62,494 76,054 17,087 61,247 9,556 22,697 107,530 104,753 2,776
(O) (P)	Repayment Capacity  Net farm income from operations Depreciation Personal income Family living expense Income taxes accrued Interest on term debt Capital debt repayment capacity Scheduled term debt payments Capital debt repayment margin Cash replacement allowance	(+) (+) (-) (-) (+) (=)		62,494 76,054 17,087 61,247 9,556 22,697 107,530 104,753 2,776 12,101

	Statement of Owner's Equity		
(a)	Beginning net worth		1,720,493
	Netfarmincome		66,230
	Personalincome	(+)	17,087
	Family living expense	(-)	61,247
	Income taxes accrued	(-)	9,556
	Change in personal assets	(+)	-1,331
	Change in nonfarm accounts payable	(+)	-
(b)	Total change in retained earnings	(=)	11,183
	Change in market value of capital assets		29,590
	Change in deferred liabilities	(-)	12,078
(d)	Total change in market valuation	=	17,512
(e)	Total change in net worth	(b+d)	28,695
	Ending net worth		1,749,188

## Statement of Owner's Equity

### Statement of Cash Flows

(f)	Beginning cash balance (farm & person	nal)	14,362
	Gross cash farm income		758,497
	Cash farm expenses	(-)	652,220
	Net cash from hedging transactions	(+)	15,894
(g)	Cash provided by operating activities	(=)	122,171
	Sale of machinery and equipment	(+)	15,000
	Purchase of machinery and equipment	(-)	41,000
	Purchase of personal assets	(-)	3,000
(h)	Cash provided by investing activities	(=)	-29,000
	Money borrowed		119,718
	Principal payments	(-)	170,106
	Personalincome	(+)	17,087
	Family living expense	(-)	61,247
	Income taxes paid	(-)	11,423
(i)	Cash provided by financing activities	(=)	-105,971
	Net change in cash	(g+h+i)	-12,800
	Ending cash balance (farm and person	ıal)	1,562

Statement
of Cash
Flows

Livestock Summary

### **Crop Summary**

#### Cow-Calf Cows Total acres owned Total crop acres 1,174 Number of cows 57.0 98.2 Crop acres owned 98 Pregnancy percentage Crop acres cash rented 1,076 Calving percentage 98.2 Crop acres share rented Weaning percentage 89.5 Percent crop acres owned 8 % Calves sold per cow 0.89 Average weaning weight 541 Machinery investment/crop acre (cost) 565 Lb. weaned/exposed female 484 Machinery investment/crop acre (market) 639 Avg wgt/ Beef Calves sold 612 Avg price / cwt. 160.00

Crop Yields	Acres	Yield
Corn	522.0	200.0 bu.
Soybeans	616.0	51.0 bu.
Hay	36.0	2.8 ton

### **Labor Summary**

Total unpaid labor hours	3,500
Total hired labor hours	-
Total farm labor hours	3,500
Value of farm production per hour	224.08
Net farm income per unpaid hour	17.86
Average hourly hired labor wage	n/a

### Crop Enterprise Analysis

		Corn		Sovbeans	
	Corn	Rented	Soybeans	Rented	Hay
	Owned	Cash Rented	Owned	Cash Rented	Owned
	Owned	Cash Nemed	Owned	Cash Nemed	Owned
Returns					
Acres	32.00	490.00	30.00	586.00	36.00
Unit	bu.	bu.	bu.	bu.	ton
Yield per acre	202.50	199.80	52.00	51.00	2.78
Share of production (%)	100.00	100.00	100.00	100.00	100.00
Value per unit	3.20	3.20	8.23	8.23	115.00
Total product value	648.00	639.36	427.96	419.73	319.44
Crop insurance	-	-	26.31	26.31	-
Other crop income	C40.00	-	42.93	42.93	240.44
Gross return per acre	648.00	639.36	497.20	488.97	319.44
Direct Expenses					
Seed	106.31	106.31	66.78	66.78	33.33
Fertilizer	98.23	98.23	43.63	43.63	7.64
Crop chemicals	41.76	41.76	49.49	49.49	13.89
Crop insurance	23.56	23.56	20.91	20.91	-
Drying expense	19.62	19.62	4.34	4.34	-
Land rent	4.00	222.73	4.70	222.73	-
Marketing Fuel & oil	4.03 24.29	4.03 24.29	1.70 19.87	1.70 19.87	13.25
Repairs	38.94	38.94	31.86	31.86	21.24
Operating interest	5.27	5.27	4.31	4.31	2.88
Total direct expenses	362.02	584.75	242.90	465.63	92.23
Return over direct expenses	285.98	54.61	254.30	23.33	227.22
Overhead Expenses					
Real estate taxes	99.38		99.38	_	99.38
Farm insurance	10.45	10.45	8.55	8.55	5.70
Utilities	4.98	4.98	4.08	4.08	2.72
Dues & professional fees	2.27	2.27	1.86	1.86	1.24
Interest on interm. debt	5.99	5.99	4.90	4.90	3.27
Interest on Ing term debt	52.50	-	52.50	-	52.50
Machinery depreciation	69.66	69.66	56.99	56.99	37.99
Building depreciation	1.49	1.49	1.22	1.22	0.81
Miscellaneous	7.95	7.95	6.51	6.51	4.34
Total overhead expenses	254.67	102.79	235.98	84.10	207.95
Total dir & ovhd expenses	616.69	687.54	478.88	549.73	300.18
Net return per acre	31.31	-48.18	18.32	-60.76	19.27
Government payments	-	-	0.45	0.45	-
Net return with govt pmts	31.31	-48.18	18.76	-60.31	19.27
Labor & management charge	53.15	53.15	43.49	43.49	28.99
Net return over lbr & mgt	-21.84	-101.33	-24.72	-103.80	-9.72
Cost of Production Per Unit	. =-				
Total direct expenses	1.79	2.93	4.67	9.13	33.20
Total dir & ovhd expenses	3.05	3.44	9.21	10.78	108.06
Less govt & other income	3.05	3.44	7.87	9.41	108.06
With labor & management	3.31	3.71	8.71	10.27	118.50
Net value per unit	3.20	3.20	8.23	8.23	115.00
Machinery cost per acre	138.87	138.87	113.62	113.62	75.75
Est. labor hours per acre	3.18	3.18	2.60	2.60	1.73

### LIVESTOCK ENTERPRISE ANALYSIS -- Beef Cow-Calf

	Per C Produ		Pe Co		Enterprise Total	е
	Quantity	Value	Quantity	Value	Quantity	Value
Returns	quantity	•	quantity		quartery	• 41.00
Beef Calves	82.76 lb.	132.42	547.58 lb.	876.12	31212.0 lb.	49939
Cull sales	17.24 lb.	13.44	114.04 lb.	88.95	6500.0 lb.	5070
Otherincome		-		-		
Gross return	100.00 lb.	145.87	661.61 lb.	965.07	37712.0 lb.	55009
Gross margin	100.00 lb.	145.87	661.61 lb.	965.07	37712.0 lb.	55009
Direct Expenses						
Hay	768.99 lb.	32.93	5087.72 lb.	217.89	145.0 ton	12420
Com	1.70 bu		11.23 bu.	36.49	640.0 bu	2080
Protein Vit Minerals	53.03 lb.	6.63	350.88 lb.	43.86	10.0 ton	2500
Veterinary	33.03 lb.	5.10	330.00 lb.	33.75	10.0 1011	1924
Supplies		3.21		21.26		1212
Utilities		1.54		10.16		579
Marketing		0.93		6.14		350
Fuel & oil		3.54		23.45		1337
Repairs		5.68		37.60		2143
Total direct expenses		65.09		430.61		24545
Return over direct expenses		80.78		534.46		30464
Overhead Expenses		0.50		0.40		400
Real estate taxes		0.53		3.49		199
Farm insurance		1.52		10.09		575
Utilities		0.00		0.00		0
Dues & professional fees		0.33		2.19		125
Interest on interm. debt		0.34		2.24		128
Interest on Ing term debt		0.72		4.75		271
Machinery depreciation		3.94		26.08		1486
Building depreciation		0.46		3.04		173
Miscellaneous		1.16		7.68		438
Total overhead expenses		9.00		59.55		3395
Total dir & ovhd expense		74.09		490.17		27939
Net return		71.78		474.90		27070
Labor & management charge		7.76		51.32		2925
Net return over lbr & mgt		64.02		423.59		24145
Est. labor hours per unit		0.46		3.07		175
Cost of Prod Per Cwt. Produced	Othe	r Information				
Total direct expenses	65.09 Numl	per of cows	57.0	Cows per FTE		912.0
Total dir & ovhd expenses	74.09 Pregr	nancy percentage	98.2	Average weaning v	weight	541
With other revenue adjustments	60.64 Cullin	ng percentage	8.8	Lb. weaned/expose	ed female	484
With labor & management	68.40 Calvi	ng percentage	98.2	Feed cost per cow		298.25
-	Wear	ning percentage	89.5	Avg wgt/ Beef Calv	es sold	612
	Calve	es sold per cow	0.89	Avg price / cwt.		160.00

### Contributions to Overhead Expenses

### Nonfarm Summary

		Contribution	Total		
Enterprise	Units	Per Unit	Contribution	Personal Income	Amount
Corn	522. Acres	68.79	35,910	Personal wages & salary	16,787
Soybeans	616. Acres	35.03	21,580	Personal business income	-
Hay	36.0 Acres	227.22	8,180	Personal rental income	-
Cow-Calf	57.0 Cow	534.46	30,464	Personal interest income	300
Total contributions			96,134	Personal cash dividends	-
				Tax refunds	-
Overhead expenses				Other personal income	-
Real estate taxes			9,938	Total personal income	17,087
Farm insurance			11,500		
Utilities			5,210		
Dues & professional fees			2,500		
Interest on interm. debt			6,388		
Interest on Ing term debt			5,416		
Machinery depreciation			74,321		
Building depreciation			1,733		
Miscellaneous			8,752		
Total overhead expense			125,758		
Total return over overhead exp	oe .		-29,624		

Discrepancy (inflows - outflows)

0

### Cash Accuracy Check

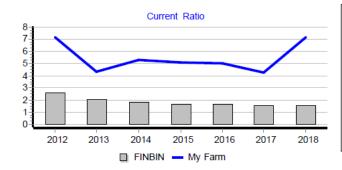
Beginning cash balance	14,362	Ending cash balance	1,562
Gross cash farm income	758,497	Total cash farm expense	652,220
Personal income	17,087	Family living expense	61,247
Hedging account withdrawals	15,894	Hedging account deposits	-
Capital sales	15,000	Capital purchases	44,000
Money borrowed	119,718	Principal payments	170,106
Gifts and inheritances	-	Gifts given	-
Beginning personal savings	-	Ending personal savings	-
		Income taxes	11,423
Total inflows	940,558	Total outflows	940,558

### Liabilities Check

Beginning liabilities		739,692
Money borrowed	(+)	119,718
Principal payments	(-)	170,106
Change in accounts payable	(+)	-2,506
Change in deferred liabilities	(+)	12,078
Ending liabilities calculated	(=)	698,876
Ending liabilities reported	(-)	698,876
Discrepancy	(=)	0

### Crop & Feed Check

Crop	Com	Soybeans	All Hay
Beginning inventory Produced Purchased Total sources	118,821 104,382 - 223,203	25,152 31,446 - 56,598	40 100 40 180
Sold Fed Ending inventory Total uses	118,821 640 103,742 223,203	25,152 - 31,446 56,598	145 35 180
Discrepancy	0	0	0



# Working Capital to Gross Revenues 100 80 40 20 2012 2013 2014 2015 2016 2017 2018 ■ FINBIN — My Farm





### **Current Ratio**

The extent to which current farm assets, if liquidated, would cover current farm liabilities.

Total current farm assets divided by total current farm liabilities.

Strong Greater than 2
Caution 2 to 1.3
Vulnerable Less than 1.3

### Working Capital to Gross Revenues

Measures operating capital available against the size of the business.

Working capital divided by gross revenues.

Strong Greater than 30 Caution 30 to 10 Vulnerable Less than 10

### Debt to Asset Ratio (mkt)

The proportion of total farm assets owed to creditors.

Total farm debt divided by total farm assets.

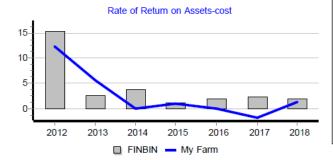
Strong Less than 30% Caution 30% to 60% Vulnerable Greater than 60%

### Debt to Equity Ratio (mkt)

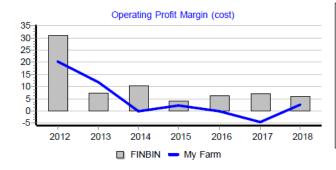
The relative amount of money borrowed as a percentage of equity capital.

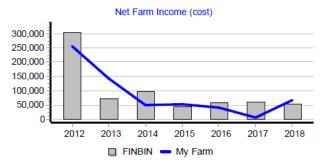
Farm debt divided by equity.

Strong Less than 0.43
Caution 0.43 to 1.5
Vulnerable Greater than 1.5



# Rate of Return on Equity-cost 25 20 15 10 2012 2013 2014 2015 2016 2017 2018 FINBIN — My Farm





### Rate of Return on Assets-cost

The rate earned on the total business investment, equity and borrowed capital.

Net farm income + interest - value oper labor & mgmt divided by average farm assets.

Strong Greater than 8%
Caution 8% to 4%
Vulnerable Less than 4%

### Rate of Return on Equity-cost

The rate earned on equity capital invested in the business.

Net farm income - value oper labor & mgmt divided by average farm net worth.

Strong Greater than 10% Caution 10% to 3% Vulnerable Less than 3%

### Operating Profit Margin (cost)

Measures the operating efficiency of the business in terms of return as a percentage of gross income.

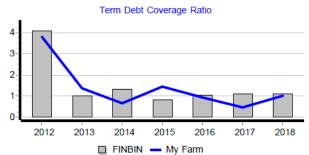
Net farm income + interest - value of labor & mgmt divided by the value of farm production.

Strong Greater than 25%
Caution 25% to 15%
Vulnerable Less than 15%

### Net Farm Income (cost)

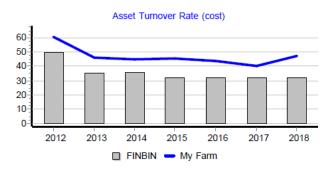
The net income from the farm that is available for owner withdrawals, income taxes and equity growth.

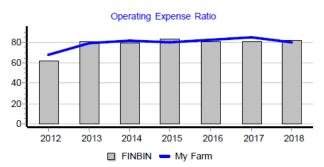
Cash income - cash expense + inventory change - depreciation.



# Replacement Margin Coverage Ratio 3.5 3 2.5 2 1.5 1 0.5 0 2012 2013 2014 2015 2016 2017 2018

FINBIN — My Farm





### Term Debt Coverage Ratio

The ability of the business to generate enough income to cover all scheduled intermediate and long term debt payments.

Net farm oper income + net nonfarm income + interest on term debt - fam liv & taxes / term debt prin & int.

Strong Greater than 1.75 Caution 1.75 to 1.25 Vulnerable Less than 1.25

### Replacement Margin Coverage Ratio

A ratio below 1.0 indicates you did not generate enough income to cover term debt payments and unfunded capital purchases.

Strong Greater than 1.5 Caution 1.5 to 1.1 Vulnerable Less than 1.1

### Asset Turnover Rate (cost)

Measures efficiency of capital invested in the business in terms of the gross revenue generated by each dollar of investment.

Value of farm production divided by average farm assets.

Strong Greater than 45%
Caution 45% to 30%
Vulnerable Less than 30%

### Operating Expense Ratio

The portion of gross revenue used to pay operating expenses.

Farm operating expense - interest expense divided by gross income.

Strong Less than 60%
Caution 60% to 80%
Vulnerable Greater than 80%

Comparative Balance Shee	ts (cost)							
	2011	2012	2013	2014	2015	2016	2017	2018
Current Assets					C	ost and Market		
	29,779	65 570	45 570	35,644	17 020	17 250	14 262	1.560
Cash and checking Prepaid exp. & supplies	116,016	65,579 112,225	45,579 133,632	134,216	17,920 135,046	17,350 136,770	14,362 120,670	1,562 118,267
Hedging accounts	2,733	2,733	2,733	23,300	23,300	23,300	23,300	32,124
Crop inventory	950,395	958,592	788,779	684,797	683,972	653,437	585,751	595,067
Total Current Assets	1,098,923	1,139,129	970,723	877,957	860,238	830,857	744,083	747,020
Total Cullent Assets	1,030,323	1,109,129	310,123	677,357	000,200	650,657	744,000	747,020
Intermediate Assets								
Breeding livestock	26,157	27,732	56,232	64,814	74,814	77,214	74,100	74,100
Machinery and equipment	266,825	380,229	755,729	737,156	701,440	668,251	652,922	613,266
Titled vehicles	20,990	17,841	15,165	12,890	45,476	38,654	32,857	27,928
Total Intermediate Assets	313,972	425,802	827,126	814,860	821,730	784,120	759,879	715,294
Long Term Assets								
Land	130,020	130,020	154,448	154,448	154,448	154,448	154,448	154,448
Buildings and improvements	47,155	44,797	42,557	40,429	38,408	36,487	34,663	32,930
Total Long Term Assets	177,175	174,817	197,005	194,877	192,856	190,935	189,111	187,378
Total Farm Assets	1,590,070	1,739,748	1,994,854	1,887,695	1,874,824	1,805,912	1,693,072	1,649,692
Total Personal Assets	119,774	130,703	172,703	172,433	171,349	176,559	174,993	176,662
Total All Assets	1,709,844	1,870,451	2,167,557	2,060,128	2,046,173	1,982,471	1,868,065	1,826,354
Current Liabillities								
Accrued interest	13,263	9,630	15,046	13,223	12,007	8,653	4,888	4,249
Total Current Loans	123,855	108,356	119,686	84,179	81,989	69,881	88,050	47,233
Principal due on term loans	44,455	41,656	89,025	68,693	74,595	87,931	82,056	52,984
Total Current Liabilities	181,573	159,642	223,756	166,096	168,591	166,466	174,994	104,466
Total Intermediate Loans	80,068	44,257	205,551	193,507	184,472	150,897	85,675	122,622
Total Long Term Loans	135,866	129,996	123,752	117,131	110,104	94,667	78,349	60,903
				.=. =				
Total Farm Liabilities	397,507	333,895	553,060	476,734	463,166	412,030	339,018	287,991
Total Personal Liabilities	30,000	30,000	30,000	30,000	8,000	8,000	8,000	6,133
Total All Liabilities	427,507	363,895	583,060	506,734	471,166	420,030	347,018	294,124
Equity								
Retained earnings	1,282,336	1,506,556	1,584,498	1,553,394	1,575,006	1,562,441	1,521,047	1,532,230
Retained earnings chg	0	224,220	77,941	-31,103	21,612	-12,565	-41,394	11,183

Comparative Balance Sheet	ts (market)							
	2011	2012	2013	2014	2015	2016	2017	2018
					С	ost and Market		
Current Assets	00.770	05 570	45.570	05.044	47.000	47.050	44.000	4.500
Cash and checking	29,779	65,579	45,579	35,644	17,920	17,350	14,362	1,562
Prepaid exp. & supplies	116,016	112,225	133,632	134,216	135,046	136,770	120,670	118,267
Hedging accounts	2,733	2,733	2,733	23,300	23,300	23,300	23,300	32,124
Crop inventory	950,395	958,592	788,779	684,797	683,972	653,437	585,751	595,067
Total Current Assets	1,098,923	1,139,129	970,723	877,957	860,238	830,857	744,083	747,020
Intermediate Assets								
Breeding livestock	36,500	38,075	72,525	82,650	95,000	98,000	93,300	93,300
Machinery and equipment	361,500	465,437	815,887	794,298	754,868	737,236	723,509	709,966
Titled vehicles	37,059	31,500	26,775	22,759	50,012	42,510	36,134	30,713
Total Intermediate Assets	435,059	535,012	915,187	899,707	899,880	877,746	852,942	833,980
Long Term Assets								
Land	412,500	495,000	588,000	588,000	588,000	637,000	637,000	637,000
Buildings and improvements	56,000	53,200	50,540	48,013	45,612	43,332	41,165	39,107
Total Long Term Assets	468,500	548,200	638,540	636,013	633,612	680,332	678,165	676,107
Total Farm Assets	2,002,482	2,222,341	2,524,450	2,413,677	2,393,731	2,388,935	2,275,190	2,257,107
Total Personal Assets	120,435	131,364	173,364	176,815	180,977	186,561	184,995	190,957
Total All Assets	2,122,917	2,353,705	2,697,814	2,590,492	2,574,707	2,575,496	2,460,185	2,448,064
Current Liabillities								
Accrued interest	13,263	9,630	15,046	13,223	12,007	8,653	4,888	4,249
Total Current Loans	123,855	108,356	119,686	84,179	81,989	69,881	88,050	47,233
Principal due on term loans	44,455	41,656	89,025	68,693	74,595	87,931	82,056	52,984
Total Current Liabilities	181,573	159,642	223,756	166,096	168,591	166,466	174,994	104,466
Total Intermediate Loans	80,068	44,257	205,551	193,507	184,472	150,897	85,675	122,622
Total Long Term Loans	135,866	129,996	123,752	117,131	110,104	94,667	78,349	60,903
·								
Total Farm Liabilities	397,507	333,895	553,060	476,734	463,166	412,030	339,018	287,991
Total Personal Liabilities	30,000	30,000	30,000	30,000	8,000	8,000	8,000	6,133
Deferred liabilities	457,241	473,812	438,123	412,492	414,705	420,765	392,674	404,752
Total All Liabilities	884,749	837,707	1,021,183	919,226	885,871	840,795	739,692	698,876
Equity	4.000.00	4 500 555	4.504.405	4 556 55	4 575 55-	4 505 441	4 504 5 ==	4 500 000
Retained earnings	1,282,336	1,506,556	1,584,498	1,553,394	1,575,006	1,562,441	1,521,047	1,532,230
Market valuation equity	-44,168	9,442	92,134	117,872	113,830	172,260	199,446	216,959
Net worth	1,238,168	1,515,998	1,676,631	1,671,266	1,688,836	1,734,701	1,720,493	1,749,188
Net worth change	0	277,830	160,633	-5,365	17,570	45,865	-14,208	28,695

Comparative Trend							
•	2012	2013	2014	2015	2016	2017	2018
Profitability							
Gross farm income (accrual)	1,013,152	865,159	869,646	855,265	806,780	714,479	792,532
Total farm expense (accrual)	757,832	721,761	819,964	803,143	766,724	709,317	730,038
Net farm income from oper.	255,320	143,398	49,682	52,122	40,056	5,162	62,494
Rate of return on assets	12.4 %	5.5 %	0.0 %	0.9 %	-0.1 %	-1.8 %	1.3 %
Rate of return on equity	13.8 %	4.8 %	-1.8 %	-0.9 %	-1.7 %	-3.8 %	0.3 %
Operating profit margin	20.4 %	11.9 %	0.0 %	2.1 %	-0.3 %	-4.6 %	2.7 %
Asset turnover rate	60.6 %	46.1 %	44.7 %	45.3 %	43.4 %	40.4 %	46.9 %
11							
Liquidity Current ratio	7.14	4.34	5.29	5.10	4.99	4.25	7.15
Working capital	979,487	746,967	711,862	691,647	664,391	569,088	642,554
Working capital Working cap, to gross rev.	96.7 %	86.3 %	81.9 %	80.9 %	82.4 %	79.7 %	81.1 %
vvoiking cap. to gross rev.	30.1 /6	00.5 /6	01.5 /0	00.5 %	02.4 /0	13.1 /0	01.1 /0
Solvency (market)							
Total assets	2,353,705		2,590,492				2,448,064
Totalliabilities	837,707	1,021,183	919,226	885,871	840,795	739,692	698,876
Net worth	1,515,998	1,676,631	1,671,266	1,688,836	1,734,701	1,720,493	1,749,188
Debt to asset ratio	36 %	38 %	35 %	34 %	33 %	30 %	29 %
Repayment Capacity							
Term debt coverage ratio	3.79	1.36	0.65	1.45	0.94	0.47	1.03
Replacement coverage ratio	3.63	1.06	0.63	1.18	0.81	0.44	0.92
Efficiency							
Operating expense ratio	67.5 %	78.8 %	81.8 %	79.9 %	82.3 %	84.9 %	80.3 %
Interest expense ratio	2.6 %	4.0 %	2.9 %	3.5 %	2.7 %	2.7 %	2.2 %
more of expense rate	2.0 %		2.0 70	0.0 70	2 70	2	2.2 70
Other Cash Flows							
Personalincome	16,499	17,067	17,067	17,067	17,087	17,087	17,087
Owner draws/Adj. family living	74,752	65,500	65,506	59,554	57,599	62,099	61,247
Crop and Livestock Summar	v						
Total crop acres	,	_	_	_	_	_	1,174
Crop acres owned	_	_	_	_	_	_	98
Crop acres cash rented	_	_	_	_	_	_	1,076
•							
Corn							
Acres	-	-	-	-	-	-	522
Yield (bu.) / acre	-	-	-	-	-	-	200.0
Price / bu.	-	-	-	-	-	-	3.36
Hay							
Acres	_	-	_	_	-	_	36
Yield (ton) / acre	-	-	-	-	-	-	2.8
Soybeans							
Acres	_	_		_	_	_	616
Yield (bu.) / acre	-	-	-	-	-	-	51.0
Price / bu.	_	_	_	-	_	_	9.21
							0.21

### **Comparative Trend**

	2012	2013	2014	2015	2016	2017	2018
Number of cows	-	-	-	-	-	-	57
Calves sold	-	-	-	-	-	-	51
Price / cwt.	-	-	-	-	-	-	152.50

### **Balance Sheet**



### ABC Farms 12/31/2017 Balance Sheet

						12/31	/201/ Balai	nce Sneet
Current Assets		Value	Current Liabilities					Balance
Cash and checking		14,362	Accrued interest					4,888
Prepaid exp. & suppl. (Schd B)		120,670	Accounts payable and oth	er accrue	dexpenses			-
Growing crops		· -	. ,					
Accounts receivable		-		Int		P&I		Principal
Hedging accounts		23,300	Current loans (Schd U)	Rate		Due		Balance
Other current assets		· -	5th N-Operating	5.00		-		88,050
Crops (Schd G) Quantity V	alue/Unit		Principal due within 12 mo	onths on te	erm liabilities			82,056
	3.00/bu.	356,463						,
,	8.95/bu.	225,088						
•	5.00/ton	4,200						
Livestock held for sale	5.00/10/1	.,200						
Total Current Assets		744,083	Total Current Liabilities					174,994
Intermediate Assets	0	Martin	Intermediate Liabilitie			Б. 6.	Detector	Internal I
	Cost	Market		Int	Principal	P&I	Principal	Intermed
Brdg Ivst (Schd I) No.	Value	Value	Loan	Rate	Balance	Due	Due	Balance
Cows 57	68,400	85,500	JDCC-13Combine	5.00	35,863	37,681	35,863	-
Heifers 5	4,500	6,000	JDCC-13Tractor	5.00	10,078	20,420	10,078	
Bull 2	1,200	1,800	5th N-Machinery	4.50	79,058	16,348	12,602	66,456
			Ford Credit-Truck-2015	4.25	26,346	8,123	7,127	19,219
* *	652,922	723,509						
Titled vehicles (Schd K)	32,857	36,134						
Other intermediate assets	-	-						
Total Intermediate Assets	759,879	852,942	Total Intermediate Liabil	lities				85,675
Long Term Assets			Long Term Liabilities	(Schd W	9			
	Cost	Market		Int	Principal	P&I	Principal	Lg Term
Land (Schd M) Acres	Value	Value	Loan	Rate	Balance	Due	Due	Balance
Land 98	154,448	637,000	Parents-Farm	6.00	94,735	22,182	16,386	78,349
Bldgs & improve. (Schd N)	34,663	41,165						
Other long term assets	_	-						
Total Long Term Assets	189,111	678,165	Total Long Term Liabilit	ies				78,349
Total Farm Assets 1.	,693,072	2,275,190	Total Farm Liabilities					339,018
	174.993	184.995	Personal Liabilities (Schd	X)				8.000
, 5,55,12,1	,	101,000	. 0.001141 2.42111100 (00114	,				0,000
							Cost	Market
			Deferred Liabilities (c)					392,674
			Total Liabilities (d)(e)				347,018	739,692
			Retained Earnings/Contril	outed Capi	tal	[a-d]	1,521,047	•
			Market valuation equity			[b-a-c]		199,446
Total Assets (a)(b) 1,	,868,065	2,460,185	Net Worth			[b-e]		1,720,493

Schedule B: Prepaid expens	ses and supplies	s			Schedule G: Crop inventory					
	Expense		Value Per					Value Per		
	Category	Quantity	Unit	Value	Crop	Description	Qua	ntity Unit	Value	
Fuel	Fuel & oil	-	-	11,910	Corn		118,82	1 bu. 3.00	356,463	
Chemicals	Chemicals	-	-	22,065	Soybeans	Forward Cont	ract 15,000	0 bu. 9.05	135,750	
Fertlizer	Fertilizer	-	-	38,346	Soybeans		10,15	2 bu. 8.80	89,338	
Seed	Seed	-	-	48,349	Hay		4	0 ton 105.00	4,200	
Total prepaid expenses and s	upplies		1	120,670	Total crop inve	ntory			585,751	
Schedule I: Breeding livesto	ock									
	No.	Year	Purchase	Mkt Value	Cost	Marke	et			
	Head	Purchased	Price	Per Head	Value	e Valu	е			
Cows	57	-	-	1,500	68,400	85,50	00			
Heifers	5	-	-	1,200	4,500	6,00	00			
Bull	2	-	-	900	1,200	1,80	00			
Total breeding livestock					74,100	93,30	00			
Schedule J: Machinery and	equipment									
	Mode	al .			Year	Purchase	Pct.	Cost	Marke	
Make/Model	Year		Serial No./VIN	Pu	ırchased	Price	Ownership	Value	Value	
Other machinery - 2015		-			-	-	100.00 %	30,780	34,214	
Other machinery		-			-	-	100.00 %	34,628	36,450	
Wagon (used at auction)		-			2014	-	100.00 %	6,926	7,699	
Skid steer	2014	4	USE-326E		2016	38,900	100.00 %	33,260	36,970	
Combine		-			-	-	100.00 %	164,354	156,201	
Tractor	2012	2			2013	-	100.00 %	82,013	86,605	
Old listing		-			-	-	100.00 %	224,468	280,374	

### Schedule K: Titled vehicles

Total machinery and equipment

	Model		Year	Purchase	Pct.	Cost	Market
Make/Model	Year	Serial No./VIN	Purchased	Price	Ownership	Value	Value
Ford 9000	1985		1998	-	100.00 %	3,686	6,656
Ford F250	2013		2015	-	100.00 %	29,171	29,478
Total titled vehicles						32,857	36,134

652,922

723,509

Schedule	M:	Land
Concaure		

	Acres	Year Purchased	Purchase Price	Mkt ∀alue Per Acre	Cost Value	Market Value
Land	98	-	-	6,500	154,448	637,000
Total land	98				154,448	637,000

### Schedule N: Buildings and improvements

	Year Purchased	Purchase Price	Cost Value	Market Value
Buildings and improvement	-	-	34,663	41,165
Total buildings and improvemen	ts		34,663	41,165

### Schedule P: Personal assets

	Quantity	Year Purchased	Purchase Price	Mkt Value Per Unit	Cost Value	Market Value
Savings and checking					-	-
Stocks and bonds					5,494	6,610
Other personal current assets					-	-
Furnishings and appliances					-	-
Schedule Q: Personal vehicles					8,874	8,874
Cash value of life insurance					22,126	22,126
Retirement accounts					66,368	75,254
Personal business investment					-	-
Other intermediate assets					-	-
Personal real estate					72,131	72,131
Other long term assets					-	-
Total personal assets					174,993	184,995

### Schedule Q: Personal vehicles

	Model		Year	Purchase	Pct.	Cost	Market
Make/Model	Year	Serial No./VIN	Purchased	Price	Ownership	Value	Value
Chevy Equinox	2013		2013	-	100.00 %	8,874	8,874
Total personal vehicles						8,874	8,874

### Schedule U: Current loans

	Interest	Principal	Accrued	Normal	Past Due	Month	
	Rate	Balance	Interest	P&I	P&I	Due	Balance
5th N-Operating	5.00 %	88,050	-	-	-	7	88,050
Total current loans		88,050	-	-	-		88,050

Schodula	v.	Intermediate I	oan

	Interest	Principal	Accrued	Normal	Past Due	Month	Final	Principal	Intermed
	Rate	Balance	Interest	P&I	P&I	Due	Year	Due	Balance
JDCC-13Combine	5.00 %	35,863	1,346	37,681	-	4	2018	35,863	-
JDCC-13Tractor	5.00 %	10,078	167	20,420	-	4	2018	10,078	-
5th N-Machinery	4.50 %	79,058	1,179	16,348	-	3	2023	12,602	66,456
Ford Credit-Truck-2015	4.25 %	26,346	-	8,123	-	1	2021	7,127	19,219
Total intermediate loans		151,345	2,693	82,572	-			65,670	85,675

### Schedule W: Long term loans

Parents-Farm	Interest Rate 6.00 %	Principal Balance 94,735	Accrued Interest 2,196	Normal P & I 22,182	Past Due P & I	Month Due 2	Final Year 2022	Principal Due 16,386	Lg Term Balance 78,349
Total long term loans		94,735	2,196	22,182	-			16,386	78,349

### Schedule Y: Deferred liabilities

### Deferred Taxes On Current Inventories

Market value of current inventories		729,721
Accounts payable and accrued expenses	(-)	4,888
Purchase cost of feeder livestock	(-)	
Government crop loans already taxed	(-)	
Tax loss (NOL) carryforwards	(-)	
Taxable current inventory value	(=)	724,832
Estimated marginal tax rate (%)	(*)	34
Deferred taxes on current liabilities		246,443

	Market	Cost	Selling	Estimated
Estimated Capital Gains	Value	Basis	Costs	Gain
Breeding livestock	93,300	1,535	_	91,765
Machinery and equipment	723,509	652,922	-	70,587
Titled vehicles	36,134	32,857	-	3,277
Other intermediate assets	-	-	-	-
Land	637,000	154,448	-	482,552
Buildings and improvements	41,165	34,663	-	6,503
Other long term assets	-	-	-	-
Personal assets	153,995	143,993	-	10,002
Total taxable capital gain				664,685
Estimated marginal tax rate (%)			(*)	22
Deferred taxes on capital assets			(=)	146,231
Total selling costs			(+)	-
Deferred liabilities on capital assets			(=)	146,231
Total deferred liabilities				392,674

Schedule Z: Ratio analysis	Cost	Market
Current ratio	4.25	4.25
Current ratio (business and personal)	4.10	4.10
Working capital	569,088	569,088
Working capital (business and personal)	566,582	567,698
Current percent in debt	24 %	24 %
Intermediate percent in debt	11 %	10 %
Long term percent in debt	41 %	12 %
Personal percent in debt	5 %	4 %
Total debt to asset ratio	19 %	30 %
Total equity to asset ratio	81 %	70 %
Total debt to equity ratio	0.23	0.43
Excluding deferred liabilities:		
Total debt to asset ratio	19 %	14 %
Total equity to asset ratio	81 %	86 %
Total debt to equity ratio	0.23	0.16

- We would like to know if you would like to participate.
- We need your help spreading the word about the project.
- We welcome any leads to agricultural producers that may be interested.
- Additional information provided in flyers/handouts.
- Feedback Evaluation Form.

## Thanks!



