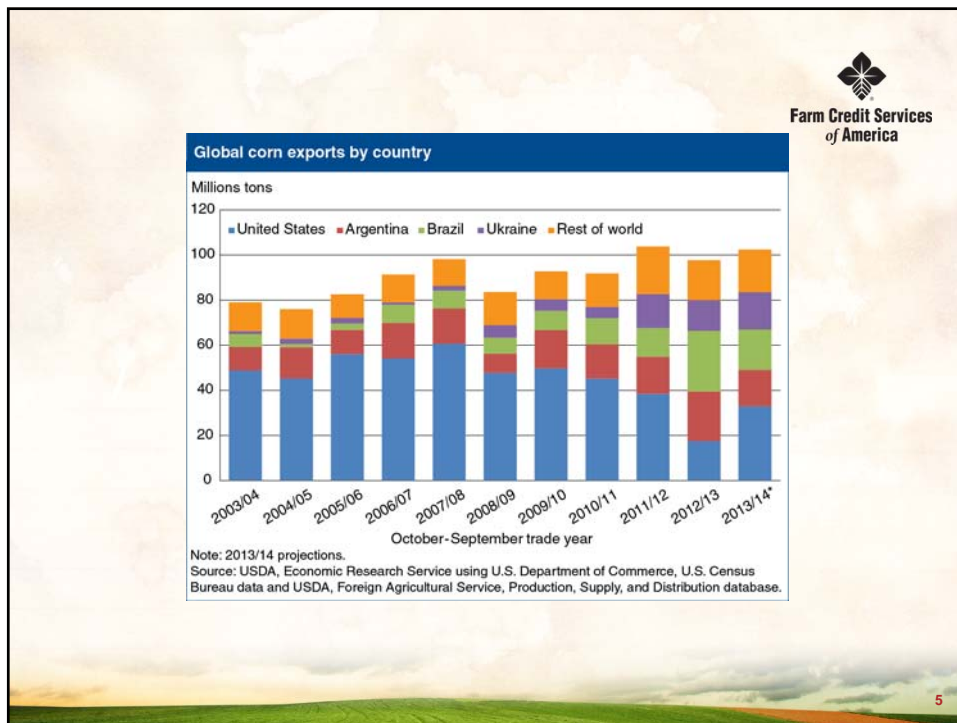
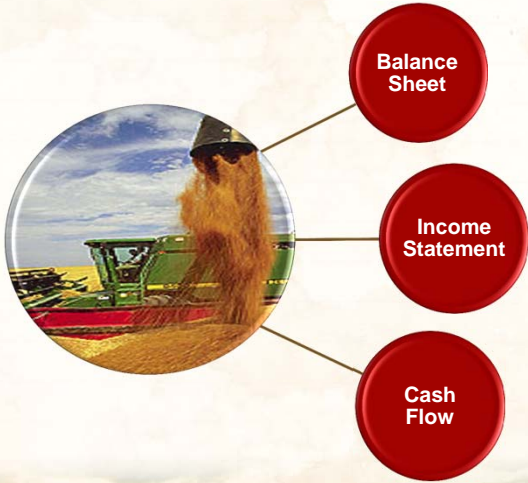



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5

Tools of the trade



Balance Sheet

Income Statement

Cash Flow

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Information



Timely

Accurate

Detailed

7

Just a few of the uses:



- **Ability to manage what you can control**
 - Business plan (budgeting/ "what if " scenarios)
 - Risk management
 - Crop insurance decisions
 - Marketing
 - In preparation of market shifts
- **Expansion/capital addition consideration**
 - Important financing/investment decisions
- **As a performance measure**
 - Personal historical measure
 - Peer comparison
- **Diagnostics**
- **Identify areas where greater efficiency can be gained**

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Balance Sheet


Balance Sheet (Financial Statement)



- **Snap shot in time**
- **List of assets owned**
 - Current
 - Can easily be liquidated to cover debt due in the next 12 months
 - Non-Current
 - Not typically sold as a course of business
- **List of liabilities owed**
 - Current
 - Term principal due in 1 year
 - Accrued interest as of the balance sheet date
 - Non-Current
 - Principal due beyond 1 year
- **Net Worth**
 - Assets – Liabilities
 - What you would have remaining if you would liquidate your assets and pay your debts before taxes


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Farm Credit Services of America
Balance Sheet
Archie and Betty Farms Inc Consolidation Date of Statement : 01/04/2012




<u>Current Assets</u>		<u>Current Liabilities</u>	
Cash & Equivalents	22,000	Accounts Payable	
Marketable Bonds & Securities		FCSAmerica Operating Loans	466,729
Accounts & Notes Receivable	56,282	Other Operating Loans	
Commodity Trading Accounts	32,000	Outstanding Drafts/Checks	
Market Livestock Inventory	404,126	Commodity Credit Corp Loans	
Crops & Feed Inventory	421,129	Credit Card Debt	
Investment in Growing Crop	6,000	Accrued Interest	21,005
Prepaid Expenses		Current Portion Term Debt	66,991
Other Current Assets		Income & FICA Taxes Payable	
		Other Current Liabilities	
Current Assets	\$941,537	Current Liabilities	\$554,725
<u>Non Current Assets</u>		<u>Non Current Liabilities</u>	
Machinery & Equipment	347,623	FCSAmerica Term Loans	36,739
Vehicles	112,562	Other Term Loans	87,677
Breeding Livestock	180,800	FCSAmerica Real Estate	278,273
Buildings & Improvements	57,000	Other Real Estate Loans	12,721
Real Estate	941,017		
Other Non Current Assets	198,523		
Non Current Assets	\$1,837,325	Non Current Liabilities	\$415,410
Total Assets	\$2,778,862	Total Liabilities	\$970,135
		Total Equity	\$1,808,727
Working Capital	\$386,812		
Current Ratio	1.7:1	Equity/Asset %	65.06%

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Income Statement

Income Statement



- Summary of income and expenses during a specific period
- Can build an income statement from tax returns
 - Using the returns without adjustments however is not as effective
 - Will need several years to get a trend
- Best approach...accrual or inventory method
 - It's not just cash sales that create income
 - Changes in inventory create value
- Tools needed to prepare an accrual income statement
 - Farm records and tax returns
 - Beginning and ending net worth statements for the year

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Farm Credit Services of America
Cash Income Statement Trend

Archie and Betty Farms Inc Consolidation

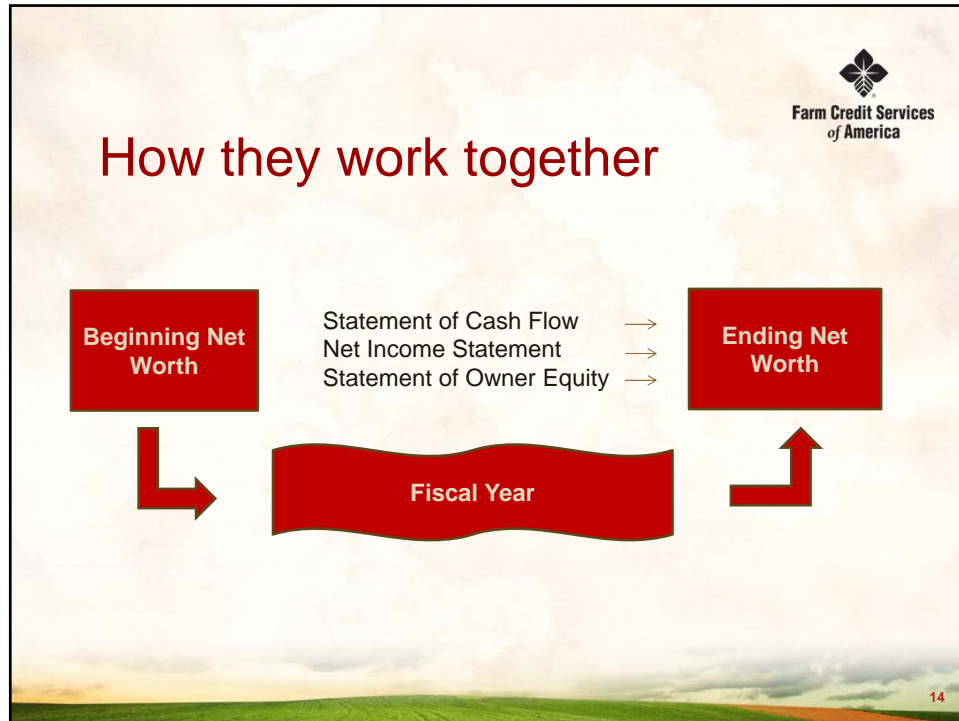
	3 year average	*FCU PG 2010	*FCU PG 2009	*FCU Tax Return 2008
Farm Revenue:				
Crops	238,812	282,719	302,827	274,889
Market Livestock	648,197	578,653	591,563	778,325
Breeding Livestock				
Meat				
Livestock Products	10,509	9,088	6,548	13,899
Government Payments				
Capital Sale				
Other Income	68,819	20,114	7,828	178,814
New Death Income				
Gross Farm Revenue	\$1,047,336	\$894,584	\$1,091,766	\$1,243,617
Purchases for Resale	328,216	210,182	201,448	428,842
Feed	62,173	52,190	70,183	64,143
Value Farm Production	\$656,947	\$634,212	\$820,135	\$750,632
Costs & Expenses:				
Chemicals	447		1,323	
Conservation	25,168	17,500	25,906	41,020
Custom Hire	48,259	44,479	49,089	51,209
Depreciation	117,884	103,176	143,363	107,492
Electricity	8,826	1,000	903	37,222
Gas, Fuel, & Oil	38,363	49,270	38,306	42,975
Insurance	22,970	22,876	24,289	18,978
Interest - Term	18,064	15,135	14,234	24,642
Interest - Operating	14,342		9,263	33,768
Labor	88,748	84,906	93,541	87,789
Repairs - Machinery				
Repairs - Land	63,720	85,899	48,739	88,767
Repairs	68,614	76,026	42,891	48,116
Seed	32,406	38,891	5,676	51,852
Supplies	22,961	20,808	18,842	31,304
Taxes	26,199	17,740	12,560	48,876
Utilities	26,878	24,780	28,889	22,986
Vet & Animal Health	11,081	15,423	10,877	12,742
Other Expenses	22,046	22,877	4,628	42,284
Total Farm Expenses	\$641,873	\$629,492	\$106,508	\$741,222
Net Farm Inc - Operations	\$1,074	\$65,082	\$34,268	\$4,395
Non-Farm Income	36,868	38,121	37,879	34,006
Non-Farm Expenses	1,728			1,218
Family Living Expense	30,000	30,000	30,000	30,000
Income Taxes	399			1,727
Net Income (NIAT)	\$10,885	\$73,203	\$32,137	\$6,466
Depreciation	48,259	44,479	49,089	51,209
Term Interest	18,064	15,135	14,234	24,642
Repayment Capacity	\$77,208	\$64,899	\$90,460	\$82,327
Term Interest	18,064	15,135	14,234	24,642
Term Principal	64,367	62,842	61,624	64,416
Margin After Servicing	\$7,077	\$6,922	\$14,602	\$3,069
Debt Coverage Ratio	1.36:1	1.32:1	1.46:1	1.32:1


Cash
Flow

Cash Flow



- Listing of flows of cash into and out of the business
 - During the last accounting period
- Concerned with not only the amount of the cash flow but the timing
 - Can be broken down by month, quarterly...annually
- Cash Flow Budget
 - Project needs for upcoming period




Farm Credit Services
of America

Financial Statement Ratios

Sometimes referred to as the “Sweet 16”

Liquidity

- Ability to meet financial obligations as they become due

Solvency

- Ability to pay off all debt if your business was sold today

Profitability

- Ability to create revenue in excess of expenses


Repayment Capacity

- Ability to repay term debts

Efficiency

- Ability to generate revenue and control costs

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Commonly used by FCSA

Liquidity

Current Ratio = $\frac{\text{Total Current Farm Assets}}{\text{Total Current Farm Liabilities}}$

The higher the ratio the better-shoot for at least 1.5-2.0

Working Capital = Total Current Farm Assets - Total Current Farm Liabilities

Positive, stable to increasing depending on the operation

Balance Sheet

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Commonly used by FCSA


Solvency

Equity Ratio = $\frac{\text{Total Farm Equity}}{\text{Total Farm Assets}}$

Goal greater than 60%

Balance Sheet

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Farm Credit Services
of America

Commonly used by FCSA

Profitability

Return on Assets (ROA) =

$$\frac{\text{Net Farm Income} + \text{Farm Interest Expense} - \text{Family Living}}{\text{Total Farm Assets}} \times 100$$

Over 4% is the goal

Balance
Sheet

Income
Statement

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Farm Credit Services
of America

Commonly used by FCSA

Profitability

Operating Profit Margin =

$$\frac{\text{Net Farm Income} + \text{Farm Interest Expense} - \text{Family Living}}{\text{Gross Revenue}} \times 100$$

Higher ratio indicates profitability, shoot for 20%- 30%

Income
Statement

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Commonly used by FCSA



Repayment Capacity

Term Debt and Capital Lease Coverage Ratio =

(Net Farm Income + Total Non-Farm Income + Depreciation + Interest on Term
Debt and Capital Leases - Total Income Tax - Family Living)
 Principal and Interest Payments on Term Debt and Capital Leases

Keep it greater than 1.25

Balance
Sheet

Income
Statement

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Commonly used by FCSA



Financial Efficiency

Operating Expense Ratio = $\frac{\text{Operating Expense} - \text{Depreciation \& Interest}}{\text{Gross Revenue}} \times 100$

Lower ratio indicates efficiency of using inputs

Interest Expense Ratio = $\frac{\text{Interest Expense}}{\text{Gross Revenue}} \times 100$

Less than 15% is desirable, the lower the % the less reliant you are on borrowed capital

Income
Statement

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Let's apply it



<p style="text-align: center;">Archie and Betty 2012</p> <ul style="list-style-type: none"> • Crop: <ul style="list-style-type: none"> - 90 acres owned - 300 acres rented • Cow/Calf <ul style="list-style-type: none"> - 150 head • Feed Lot <ul style="list-style-type: none"> - 400 head capacity 	<p style="text-align: center;">Archie and Betty 2013</p> <ul style="list-style-type: none"> • Crop <ul style="list-style-type: none"> - 90 acres owned - 300 acres rented - 100 acres being sold that adjoins their farm. Asking price \$8,500 per acre • Cow/Calf <ul style="list-style-type: none"> - 150 head • Feed Lot <ul style="list-style-type: none"> - 400 head capacity
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Let's apply it



<p style="text-align: center;">2012 Year End</p> <p>Working Capital: \$386,612</p> <p>Current Ratio : 1.7:1</p> <p>Equity to Asset Ratio: 65%</p> <p>ROA: 1%</p> <p>Operating Profit Margin: 6%</p> <p>Term Debt and Capital Lease Coverage Ratio: .97</p> <p>Operating Expense Ratio: 87%</p> <p>Interest Expense Ratio: 5%</p>	<p style="text-align: center;">2013 Year End <i>Possible Farm Purchase</i></p> <p>Working Capital: \$150,000</p> <p>Current Ratio : 1.24 : 1</p> <p>Equity to Asset Ratio: 55%</p> <p>ROA: 2%</p> <p>Operating Profit Margin: 8%</p> <p>Term Debt and Capital Lease Coverage Ratio: .78</p> <p>Operating Expense Ratio: 85%</p> <p>Interest Expense Ratio: 9%</p>
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Quick rules of thumb...



Land cost per acre =

$$\frac{\text{Real Estate Payments} + \text{Land Rent} + \text{Real Estate Taxes}}{\text{Total Acres}}$$

Lower land cost will allow for better risk bearing ability (\$250 and below)

Archie and Betty today:

$$\frac{\$25,000 + \$63,750 + \$2250}{390} = \$233.33 \text{ per acre}$$

Archie and Betty with additional 100 acres:

$$\frac{\$71,500 + \$63,750 + \$4750}{490} = \$285.71 \text{ per acre}$$

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Quick rules of thumb...



Working Capital per acre =

$$\frac{\text{Working Capital}}{\text{Total Acres}}$$

- At Least:
- Grain = \$200 per acres
- Feedlot Cattle = \$300 per head
- Cow/Calf = \$100 per head
- Market Hogs = \$30 per head

Archie and Betty today:

$$\frac{\$386,812}{390} = \$991.83 \text{ per acre}$$

Archie and Betty with additional 100 acres:

$$\frac{\$150,000}{490} = \$306.00 \text{ per acre}$$

Example Equation based on grain only

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Quick rules of thumb...



Machinery Cost per Acre = Industry Standard \$250 per acre

$$\frac{\text{Machinery Value}}{\text{Total Acres}}$$

Archie and Betty today:


$$\frac{\$447,623}{390} = \$1,147.75 \text{ per acre}$$

Archie and Betty with an additional 100 acres:

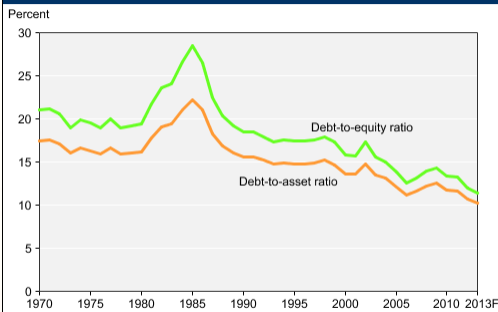
$$\frac{\$447,623}{490} = \$913.52 \text{ per acre}$$

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Where we have been... in terms of debt



Farm sector debt ratios, 1970-2013F



F = Forecast
Source: USDA, Economic Research Service, Farm Income and Wealth Statistics.
Data as of August 27, 2013.

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Take the whole operation into consideration



- Lenders will vary in the information requested
- The focus on certain aspects of information will vary between lenders
- Each segment of production agriculture will require attention to various areas of detail
 - Grain, Cow/Calf, Cattle feedlot, Farrow to Finish, Dairy
- It's the whole picture not just one piece. These are ranges not rules.
- Walk through your numbers with your lender annually
- Be familiar with other lenders
- **It's your information, be proactive and accurate in putting the foundation documents together**

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On-line Tools



Iowa State: Ag Decision Maker

<http://www.extension.iastate.edu/agdm/homepage.html>

The Ohio State University: Ag Manager

<http://ohioagmanager.osu.edu/>

University of Illinois: FarmDoc

<http://www.farmdoc.illinois.edu/>

Kansas State: AgManager.Info

<http://www.agmanager.info/Tools/default.asp>

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