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My Background

- Former Ag Lender - FCS
- Partner/CEO in diversified family farm business
 - **Transitioned from CEO to – Board Chairman/Transition Coach Jan. 1, 2017**
- Farm management consultant
 - Farm Family Transitions and Financial Planning
 - Focus: Implementation; changing management behavior; training consultants
- Industry boards/affiliations
 - Farm Financial Standards Council – Past President
 - PNW Direct Seed Assn – Director, Past President
 - Farm Journal Legacy Project Board of Advisors
 - Commodity group and bank boards – *Past Director*

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My Business Philosophy

- Committed to Family + Farm + Business
- Need balance between “process” & “results”
- Education only valuable if theory is put into practice

My Goal: Change Management Behavior

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Management Behaviors I will implement OR change.....

Goals:

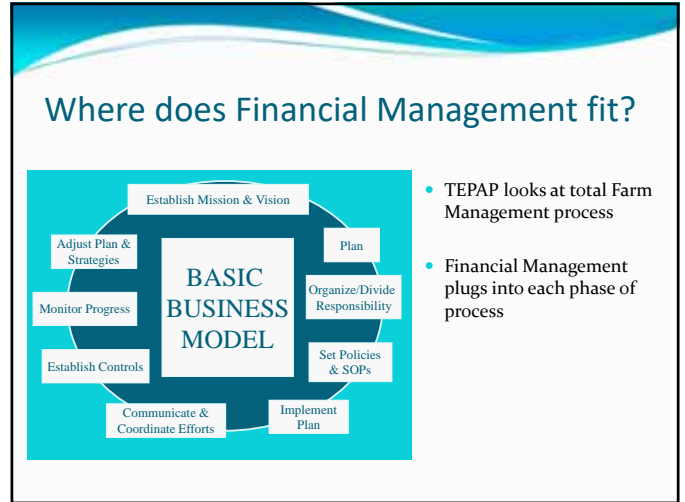
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Pull up favorite Reminder or Task Management Application

- Remember the Milk
- iPhone – Reminders

Label New List - TEPAP

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AGENDA

4 Core Elements in Financial Management

1. Understanding basic relationships – basic financial reports
 - How statements flow from transactional process
 - Proper report structures for evaluation
2. Analyzing Performance
 - Ratio analysis, trend analysis – whole farm
 - Performance @ manageable segment level (profit & cost centers, cost of production) – *focus on new standards for Managerial Accounting in Ag*

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AGENDA

Core Elements – cont'd

3. Using financial principles to optimize performance
 - Operating and strategic planning & decisions
 - Capital investment planning & decisions
4. Building proficiency in the Farm Management Team to understand and adapt Financial Management concepts

Selected resources & Guidebook Order Form available at www.wittmanconsulting.com

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Twenty Years Ago, Life Was Simple

- 6 family partners
- Three crops + hay
- Calves sold after weaning
- No timber “management”
- Lots of “recreational farming”
- Home storage – seed only
- High margins – little concern about enterprising
- Vacation breaks between seasons



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...After 40+ years of Transition

- 16 different crops
- Quadrupled size of farm
- Three partners (was 6)
- Calves fed - retained ownership
- Managing timber - harvesting, replanting
- Equipment and House Rentals, Land Development
- Numerous strategic alliances, joint ventures
- Self-service fertilizing and direct (no-till) seeding
- Expanded home storage
- Long haul trucking
- Bio-farming; RO Water Systems
- Numerous “value added” crops

*Created huge Financial Management challenge. WHY?
Everyone trying to remain competitive & viable.*

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Our Competitive Environment

- Global competition pressuring margins
- Consumer focus on sustainability influencing how we farm
- Policymakers and consumers increasingly misinformed about farming industry—can't count on sound policy
- “Way of life” nepotism-oriented farmers succumbing to professionally managed farms
- Not everybody will survive



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Definition of “Successful Farmer” Changing

Traditional Definitions

“Tiller of the Soil”
“Producers of Food”

Current Definitions

“Manager of People, Resources, Information, and Technology”
“Strategic Thinker” (Mike Boehlje)

“Resource manager who can turn knowledge into profits.”
(Australian Economist, Rob Napier)

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Stage III – Mix of Principals in Operation
 Cousins, nephews, father/daughter, son-in-laws




What is your (my former) job?

Empower a skilled team of *responsibility center managers* to make quality decisions.

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Questions We Ask Constantly...



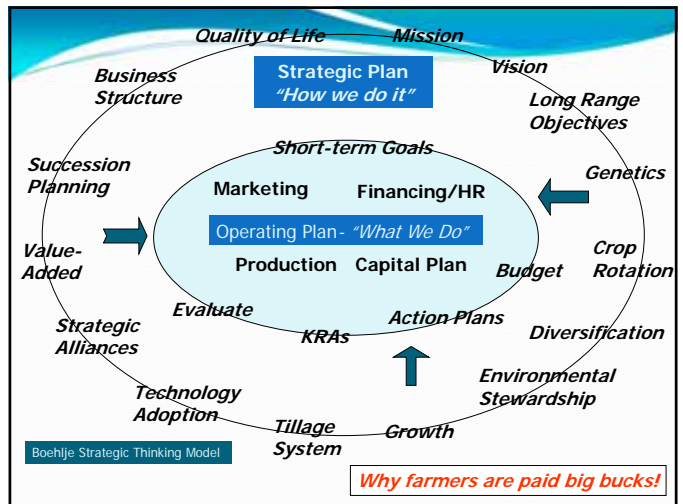
- What strategies are keeping us successful?
- What strategies should change?
- How will change impact performance?
- What information is needed to make good decisions?

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Metric of a Good Decision

- Optimizes financial results – least cost, most profitable
- Improves or sustains profitability
- Financially feasible – Cashflows, services debt, and supports family living
- Contributes to long-term financial soundness – proactive...not reactive
- Promotes quality of life and teamwork


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What gauges do we monitor?

What are the consequences when it goes in the RED?




- Seeding Rate
- Temperature
- Oil Pressure
- Acres/Hour
- Gallons/Acre

- Working Capital
- Debt/Asset Ratios
- ROE & ROA
- Accrual Net Income
- Cap Debt Rep Capacity
- Unit Cost of Production

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What are the Key Farm Management Proficiencies we should master to manage a farm in today's environment?



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Survey Results*

Percent Adoption of Key Farm Management Proficiencies

Management System/Personnel Management Proficiencies	2001 - '23 Range	AVE	2024
Mission, Vision, Values defined	22 - 56	37	
History documented	17 - 59	44	
Goals and Objectives documented	13 - 44	28	
Operating Plan and Cashflow Budget compiled annually	38 - 63	46	
Strategic Plan in place that periodically addresses strategic issues	16 - 41	28	
Written Job Descriptions/Division of Responsibility in place	18 - 44	35	
Personnel & Operating Policies written & distributed	18 - 49	33	
Standard Operating Procedures documented-repetitive duties	11 - 41	24	
Compensation program matched to market rates	25 - 51	38	
Performance Appraisals done regularly	12 - 37	25	
Performance Records shared regularly - key managers, owners	20 - 53	34	
Hold quality meetings for investors, owners, spouses	26 - 63	48	
Owner Board is transparent and functioning part of governance	New metric	24	
Advisory board or peer groups used to bring outside influence	New metric	22	
Culture or Management Audits used to assess farm buy-in	New metric	17	

< 1/4 set goals, 15% strategic plans, <1/4 formalize duty statements
1/4 do performance appraisals; ,15% have SOPs

*Surveys administered to participants of TEPAP Program

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Survey Results

Percent Adoption of Key Farm Management Proficiencies

Financial Management Proficiencies	TEPAP '2001-'23	AVE	2024
Financial records updated and circulated monthly	44 - 68	53	
Balance sheets & income statements prepared annually (12/31 basis)	89 - 100	96	
Balance sheets reflect cost and market values & deferred tax liability	32 - 75	50	
Income statements calculate cash (tax) and accrual net income	47 - 80	64	
Audit systems in place to assure financial statement integrity	36 - 73	58	
Profit and Cost Center performance is tracked on at least annual basis	30 - 60	46	
Budget Projections and Performance reports are used regularly	38 - 58	49	
Field or livestock records complete and accessible to unit managers	49 - 70	60	
Key performance measures (ratios) reviewed at least annually	13 - 43	28	
Policies for owner investments and withdrawals defined and followed	7 - 32	20	
Policies for dividing earnings (owners vs labor/mgmt) clearly defined	9 - 39	25	
Capital Investment Analysis tools understood & accessible	25 - 49	34	
Partial Budget techniques understood and utilized regularly	29 - 58	39	
Activity Based Costing used to ID standard cost of repetitive operations	New metric	43	

ONLY 45% do budgets & track profit/cost centers
→ 1/4 track key ratios
→ 1/5 have policy for dividing earnings & withdrawing capital

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Survey Results

Percent Adoption of Key Farm Management Proficiencies

Marketing and Risk Management Proficiencies	TEPAP Score Range	AVE	2024
Inventory to market is defined well in advance of marketing	53 – 85	70	
Market Targets are established based on known Break Even Point, Cost of Production, & Cash Flow requirements	44 – 75	60	
Forward contracts, hedging, and option tools are understood & utilized regularly	54 – 82	68	
Crop Insurance provides balanced protection-hail, fire, all risk	67 – 96	83	
Liability insurance covers balance of risks – liability, health, environmental exposures	75 – 97	86	
Business Risk Assessment and contingency plans designed to cope with catastrophic events	New metric	23	

2/5 market production with no idea of production cost!
 Would you loan money or invest in an industry that gets a flunking grade in core management proficiencies?

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https://ag.purdue.edu/commercialag/Documents/Resources/Management-Strategy/Business-Planning/2000_08_01_Boehlje_Checking_Farm_Business.pdf

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Evolution of Financial Management

Shoebbox Era

Early 1950-70's

- Cash accounting only
- Lenders prepared financial statements
- Inconsistent balance sheet dates
- Ratio analysis non-existent
- Lender focus: collateral lending
- Producer performance measured by:
 - \$ owed bank
 - inventory values
- Primary performance goals
 - Production – all you can produce
 - Marketing – minimize tax bill
 - Finance – annual pay off's

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Evolution of Financial Management

Shoebbox Era



Stone Wheel Technology Era

Early 1980s

- Prosperity, but record inflation & interest rates
- CFS = new fin stmt model (Frey, Klinefelter)
 - Cash to accrual analysis
 - Dual column Balance Sheets (cost/MV)
- More 12-31 Bal Sheets – grower prepared
- Rush to automate accounting
 - by 1983 numerous PCs & programs
- More multiple entities, diversified operations
- Enterprising "crudely" implemented
- Ratio analysis – done mostly by bankers
- Bankers loaning on "Collateral"
 - Rationale: "Inflation will bail us out!"

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Evolution of Financial Management

Shoobox Era

↓

Stone Wheel Tech Era

↓

New Religion Era

1985 thru Early 90's

- Farm Crisis of 80's – modern version depression
- Massive exodus from agriculture
- Huge losses in banking industry
- Financial principles found new fervor
 - Liquidity and cashflow
 - Repayment capacity
 - Financial Efficiency ratios
- Farm Financial Standards Council (FFSC) formed to standardize industry financial practices
- Cashflow lending in...Collateral lending out

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Evolution of Financial Management

Shoobox Era

↓

Stone Wheel Tech Era

↓

New Religion Era

↓

The New Millennium

Late 90's through Present

- Massive adoption of technology
 - Accounting, crop, livestock records
 - Biotech, GPS, Field mapping, VRA
- More emphasis on *organizing and using* data vs. *data collection*
- Strategic management, accountability and performance measurement "in"
- Enterprising → Management Accounting
 - Cost & profit centers
 - New emphasis on cost of production
- More CFOs, MIDs (Mgmt Info Dir), and CTOs (Chief Technology Officers)

What's next?

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Financial Information Hierarchy Audience

<p>Tax Reporting</p> <ul style="list-style-type: none"> • Cash-Basis Net Income 	<p>IRS, Provincial Tax Entity – Minimum Requirement</p>
<p>External Financial Reporting</p> <ul style="list-style-type: none"> • Accrual Basis Income Statements • Cost/Market Value Balance Sheets • Capital Debt Repayment Analysis 	<p>Investors & Owners Lenders</p>
<p>Managerial Reporting</p> <ul style="list-style-type: none"> • <u>Financial</u> and <u>physical</u> units tied together • Profit & Cost Centers • Focus on Cost Production • Integrates Financial & Economic Analysis 	<p>Responsibility Segment Managers – crop production, marketing, equipment support, etc.</p>

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Financial Analysis: A Quick Tour

Can't move to Third Level - Management Accounting until master basic concepts

- Balance sheet & income statement construction
- Accrual vs. cash income analysis
- Financial ratio analysis

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Analyzing Financial Performance is About...

- Defining key indicators - KPAs
- Analyzing trends and projections
- Defining basis for comparisons and how to use benchmarks
- Setting acceptable performance targets
- Understanding inter-relationships of key indicators - DuPont Model

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Key Uses - Financial Ratios and Benchmarks

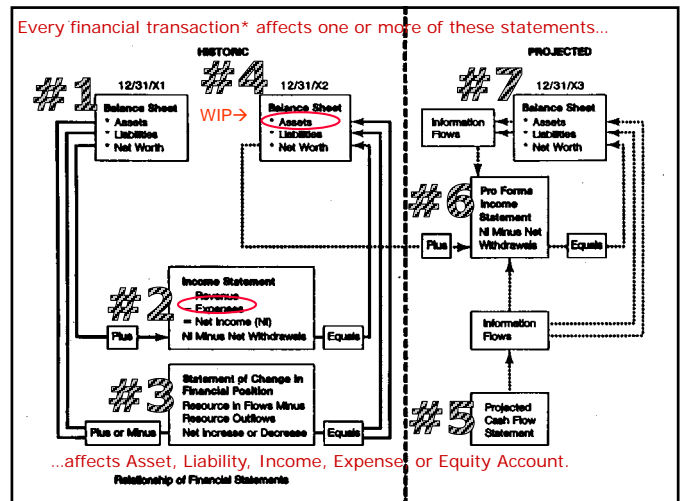
- **Performance comparisons**
 - Own historical performance
 - Benchmark comparisons – competitors, industry norms
- **Goal setting and decision making**
- **Lenders/creditors**
 - Risk assessment; constructive use of debt leverage
- **Investors**
 - Assess alternative opportunities to maximize ROE

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Foundation for Financial Analysis

- **Balance Sheets** – Cost & market; fiscal year-end
- **Income Statements** – Accrual based
- **Statement of Changes in Financial Position** – Funds Statement
- **Statement of Cash Flows** – Historical & Projected

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Farm Balance Sheet

A S S E T S	D E B T S
	N E T W O R T H Owner A- 50% <hr/> Owner B- 30% <hr/> Owner C- 20%

Beginning NW + Earnings - Withdrawals = Ending NW

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History of Financial Ratios

- Used in agriculture and lending for decades
- Definitions and ratios standardized 1989-1991 – Farm Financial Standards Council*
- Five focus areas – “Sweet 16 Ratios” – *modified to “Legal 21” – New in 2021!* 13 Key Metrics

Pull out your trend sheets now...

**FFSC is a 40-member board of farm financial experts from all phases of agriculture. Focus is standards and guidelines for financial analysis and reporting.*

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1 Liquidity

Measures the ability of farm business to meet obligations as they come due

Expressed As Two Measures:

- 1) Working Capital = Current Assets – Current Liabilities
- 2) Current Ratio = $\frac{\text{Current Farm Assets}}{\text{Current Farm Liabilities}}$

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Farm Balance Sheet

A S S E T S Current Assets Non-Current Assets	D E B T S Current Liabilities Non-Current Liabilities N E T W O R T H Owner A- 50% <hr/> Owner B- 30% <hr/> Owner C- 20%
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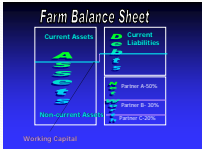
Current Ratio = Current Assets / Current Liabilities

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Liquidity *What is your Working Capital "burn rate"?*

Key Concepts & Benchmarks for Goal Setting

- No magic ratio or \$ amount
 - Depends on production & price risk
 - 1:1 minimum; 1.5:1 better
- 3 key uses
 - Transactions due 1-12 months
 - Operating expense risk
 - keep 33-50% operating budget
 - Opportunities - "Cash is King!"
- Working Capital "Reserves"
 - Borrowing capacity - CV Life Ins
 - Letters of Commitment, L-O-C



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Solvency

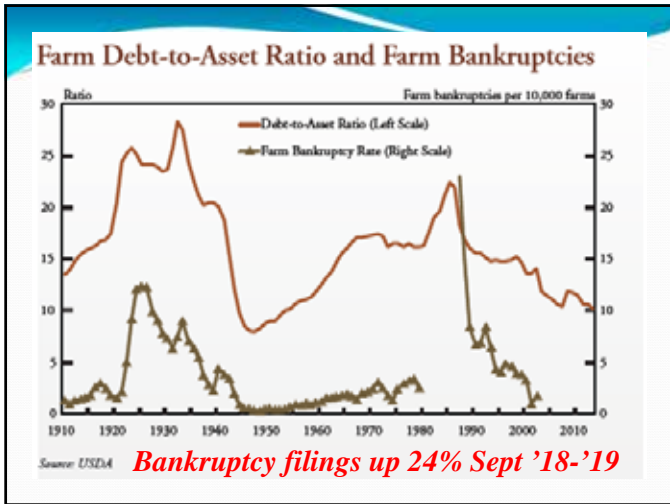
Measures ability to repay indebtedness, withstand risk, and continue operations after financial adversity.

Three Measures (only need one): TEPAP Median D/A '19 =.40; '20 =.37;'23 =.36

- Debt* Asset Ratio =** $\frac{\text{Total Farm Liabilities}}{\text{Total Farm Assets}}$
*aka Liab/Asset Ratio
- Equity to Asset Ratio =** $\frac{\text{Total Farm Equity}}{\text{Total Farm Assets}}$
- Debt/Equity Ratio =** $\frac{\text{Total Farm Liabilities}}{\text{Total Farm Equity}}$
(aka Leverage Ratio)

2010=.45 2012=.31 2013=.35 2015=.28.4 2016=.32:1 2017 = .36:1; 2018 = .45

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Recent Trends – D/A Ratios

Source: USDA ERS

Year	Debt /Asset Ratio	USDA % Incr-RE
2013	11.39	na
2014	11.78	5.4%
2015	12.39	0.4%
2016	12.84	1.5%
2017	12.99	3.0%
2018	13.30	1.5%
2019	13.67	1.4%
2020	13.90	3.7%
2021	13.56	9.7%
2022 Forecast	13.05	10.0%

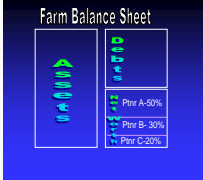
D/A Ratio bottomed 2010 @ 10%...peaked 2020 @ 13.90

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Solvency

Key Concepts & Benchmarks for Goal Setting

- Debt/Asset Target < 50%
- Factors to consider:
 - Weather, market, and management risks
 - Asset mix – leased, owned
- Capitalization policies
 - Minimum capital needed?
 - Ownership shares, withdrawals (...address in “special topics”)



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Profitability Measures

Measures ability of farm business to generate a profit as well as a return on assets and equity

Five Measures

- 1) **Net Farm Income (NFI)** = Revenue – Expenses + Gains/Losses
(must be Accrual Based to be meaningful)
- 2) **Operating Profit Margin Ratio (OPM)** = **← Key Performance Indicator**

$$\frac{\text{Net Farm Income} + \text{Interest Exp} - \text{Value of Unpaid Labor/Mgmt}}{\text{Gross Revenue}}$$
 Median OPM = 10.6; 18%; 22%; 20%; 21.5%; 21.6%; 17.4%; 16%; '15 = 18%; '16 = 18%; '17=19%; '18 = 18.9% '19 = 12.4; '20 = 14.9
- 3) **EBITDA – Earnings Before Interest Taxes Depreciation and Amortization**
 Net Farm+ Non-Farm Inc + Deprec/Amort + Int Exp – Family WD*)
* if WD proxy for unpaid labor/management

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Profitability Measures (cont'd)

- 4) **Return on Assets (ROA)** = **← Key Performance Indicator**

$$\frac{(\text{Net Farm Income} + \text{Farm Interest Exp} - \text{Value Unpaid Labor/Mgmt})}{\text{Average Farm Assets}}$$
 TEPAP Median 10.0; 9.3; 6.1; 9.3;7.0;4.0,6.0,5.3, 4.4, '20=5.3; '23=5.8%
- 5) **Return on Equity (ROE)** = **← Key Performance Indicator**

$$\frac{(\text{Net Farm Income} - \text{Value of Unpaid Labor/Mgmt})}{\text{Average Total Farm Equity}}$$
 TEPAP Median 15.0;9.5;12.0;8.5;3.5;4.0;8.2;7.3;4.4%;'20=5.5;'23=9.8%

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Profitability

Key Concepts & Benchmarks (cont'd)

ROA

- Should be > cost of debt
- Goal - depends on % owned vs. leased assets
- **Key drivers:**
 - Operating Profit Margin - operating efficiency indicator
 - Asset Turnover Ratio (Revenue/s of Assets)

ROE

- Ultimate “Bottom Line” indicator
- Key indicator for investment analysis

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Issues: Interpreting ROA, ROE

- Unrealized capital appreciation not included in ratios...alternate investments not always “better”
- Cost versus market value - which divisor is right?
 - Cost - measures actual operational performance
 - Market - useful for “opportunity analysis”
- Use pre-tax income for benchmarking & investment comparisons
- Is family withdrawal valid proxy -labor/mgmt?



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What is “Family Living Cost”?

Averages - Farm Bus/Farm Mgmt Assn Records

University of Nebraska \$56-60,000 2000

University of Nebraska \$97,000 2013

University of Illinois* \$92,337 2021

*incl. living expenses and personal capital outlays; this equates to \$108/ac -- \$.45/bu corn raised.



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Compensation Summary				Name: <u>Joe Owner-Operator</u>	
				Year: _____	
	Period	Rate/Mo	No Mos.	Yearly Total	
Salary	Nov-Feb	\$4,000	12	\$48,000.00	
	Rate/Hr	Hrs/Mo			
Wages	Mar-Oct	\$0.00	250	0	\$0.00
Cash Salary & Wages Subtotal:				\$48,000	
Employer Pd Soc Sec/Gov't Retirement % Rate:				7.65%	\$3,672.00
		Rate/Mo			
Housing		\$1,200.00	12	\$14,400.00	
Utilities - Power, Phone, etc		\$350.00	12	\$4,200.00	
Meal Allowance, Groceries	270 days @ \$6.00/day			\$1,620.00	
Beef, Farm Produce	1/2 beef - 350# @ \$1.40/lb			\$490.00	
Other		\$0.00	12	\$0.00	
Medical Insurance		\$900.00	12	\$10,800.00	
Uncovered Medical Reimbursement				\$4,000.00	
Other				\$3,000.00	
Commuting Pickup				\$4,000.00	
Other- Auto Insurance, gas, maint.- Spouse & children				\$	
Other-				\$	
Total Wage and Benefits Value (Items 1-7)				\$94,182.00	
Bonus- Based on Yearend Results				10%	\$4,800.00
Retirement Contribution @				7%	\$3,360.00
Total Compensation:					\$102,342.00

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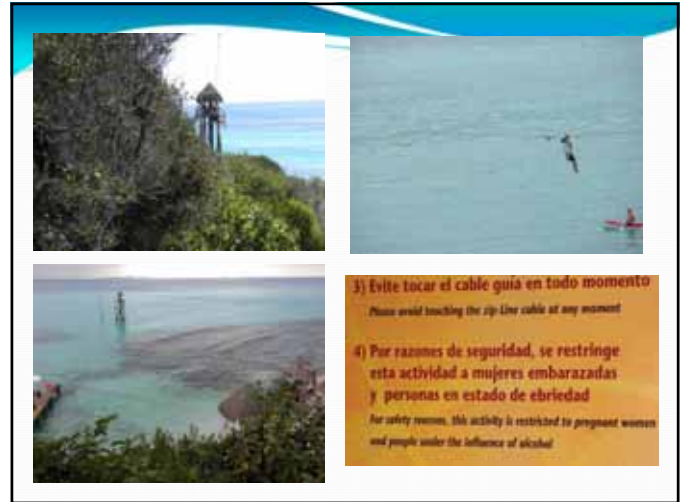
Total Hours Worked Per Year	2700	Days Worked	270
Total Compensation per Hour (excl bonus & ret)			
Total Compensation per Hour	\$34.88	(line 8/line 11)	\$37.90
Total Compensation per Day	\$348.82		\$379.04
Total Value of Non-Taxable Benefits (Items 4-7)			\$42,510.00
Non-Taxable Benefit Analysis @ Tax Rate: *			
	43.15%		30.15%
Pre-Tax Wage Equivalent (Line 12/(1-TaxRate)	\$74,776		\$60,859
Total Tax Savings (Line 13-Line 12)	\$32,266		\$18,349
Tot. Pre-Tax Wage Equivalent-(Line 9c+ Line 14)			
"	"	"	"
"	"	"	"
"	"	"	"
"	"	"	"
* Tax Table Summary			
	High Rate	Low Rate	
Federal Tax	28.00%	15.00%	
State Tax	7.50%	7.50%	
Social Security/Gov't Retirement Prgm Tax	7.65%	7.65%	
Total Tax Rate	43.15%	30.15%	

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Survey Results – TEPAP 2024

	2003-2023 Ave	Median 2023
Total Value of Compensation	\$81,352	\$
Total Non-Taxable Compensation	\$17,574	\$
Est # Days Worked Per Year	297	
Est # Hours Worked Per Year	2,888	
Total Pre-Tax Salary/Wage Equiv* <small>*At 36% tax rate</small>	\$108,811	\$
	Per Day	Per Hour
Total Farm Package Value	\$274 \$	\$28.17 \$
Pre-Tax Wage Equivalent	\$366 \$	\$37.67 \$

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Repayment & Replacement Capacity

Measure ability to service debt, pay lease obligations and replace capital

Multiple measures – Two **important ones...** '17 = 1.6:1; '18 = 1.5:1
'19 = 2.25; '20 = 1.74

1) **Debt Coverage Ratio** –
Repayment and Replacement Capacity/Scheduled Principal and Interest*

2) **Replacement Margin & Ratio - 2023 Median Ratio 2.35**

Margin = Capacity* – Commitments**

Ratio = Capacity/Commitments

*Capacity = Inc from Opns + Non-Farm/Misc Inc + Depr – Inc Tax– Owner WD

**Commitments = Total Debt Repayment + Unfunded Capital Replacement


[Repayment and Replacement Capacity Measures and Ratios](#)

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Repayment & Replacement Capacity Key Concepts & Benchmarks

- Key credit factor
 - Earnings pays debt service, not asset liquidation or appreciation
- Profitability not enough; must also:
 - service term debt & leases
 - pay living & taxes, and
 - replace capital
- Goal for Repayment & Replacement Margin
 - 1:1 minimum; 150% better
 - Depends on
 - Equipment replacement needs
 - Growth patterns
 - Operating Profit Margin (more later...)

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Asset Use Efficiency

Asset Turnover Ratio (ATR)

Measures how efficiently a farm's assets are being used to generate revenue.

Asset Turnover Ratio (ATR) = $\frac{\text{Total Revenue}}{\text{Average Total Assets}}$

Median = .35; .49; .42; .45; .49; .41; .34; .40; 44; .35; .41
2018 = .37:1, 2019 = .32:1; 2020 = .34:1; 2023 = .35:1

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Asset Turnover Ratio

Key Concepts & Benchmarks

- Depends on enterprise
 - Grains, orchards, cow-calf turn assets every 3-6 yrs
 - → ATR .33 to .17
 - Feedlots, dairies, nurseries turn assets 1-2 yrs
 - → ATR 1.0 to 0.5
- Ratio shows downside of *asset accumulation*
 - "Farmers love to own toys and land!"
- Major driver of ROA along with OPM Ratio

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Relationship – GFR to OPM

(Gross Farm Revenue divided by Operating Profit Margin)

Assumptions:
 Operating Profit Margin = 12%
 Compensation to Fund Family Unit = \$60,000

GFR required to sustain added family:

GFR	=	$\frac{\$60,000}{.12}$	=	\$500,000
OPM		.12		

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The Dupont Model

Looks at Big Picture & Inter-Relationships

- Developed early 1900s at Dupont
- Shows how bottom line (ROE) affected by:
 - Asset Use Efficiency (Turnover Ratio)
 - Operating Efficiency (Operating Profit Margin)
 - Financial Leverage (Assets to Equity Ratio)

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Dupont Model – ROA Drivers

(Asset Turnover Ratio)* x (OPM Ratio) = Return on Assets**

$$\frac{\text{Gross Farm Revenue}}{\text{Ave Farm Assets}} \times \frac{\text{Inc from Operations}}{\text{Gross Farm Revenue}} = \text{ROA}$$

Note: **Income from Operations** and **ROA** are before interest deduction and adjustments for other revenue and expense

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Dupont Model – ROE Drivers

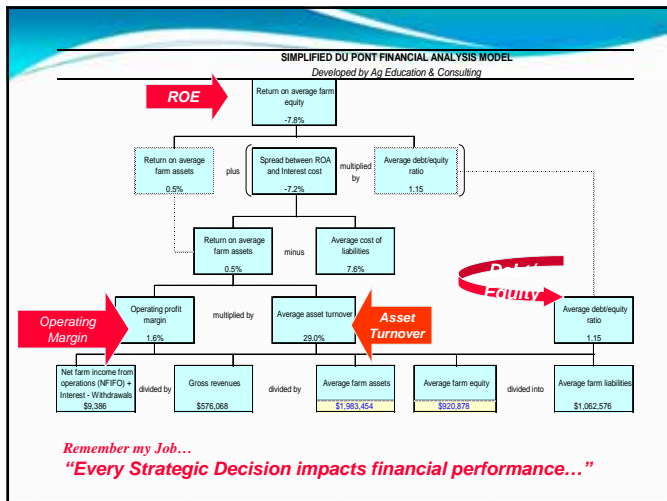
$$\text{ROE} = (\text{Profitability} \times \text{Asset Efficiency}) \times \text{Leverage Impact}$$

$$= (\text{OPM} \times \text{ATR}) \text{ plus } [(\text{ROA} - \text{COL}^*) \times \text{Debt/Equity Ratio}]$$

$$\frac{\text{NFI}}{\text{Equity}} = \left[\frac{\text{Inc Oprns}}{\text{GrFarm Rev}} \times \frac{\text{GrFarm Rev}}{\text{Farm Assets}} \right] + \left[(\text{ROA} - \text{COL}^*) \times \frac{\text{Debt}}{\text{Equity}} \right]$$

*Cost of liabilities (COB) = Interest Expense/Total Liabilities

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Break #1

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Dupont Simulation Case Study

Refer to Case Study at www.wittmanconsulting.com
[Du PontCentrec-RLW Case Examples](#)

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What's better: Grow? Or reduce costs?

Dupont Model Simulation Exercise

Review Cases A – D, test data

Test Alternative Strategies

1. Identify strategic shift
2. Develop \$ changes in operation
3. Enter revised \$ compared to baseline (Case A)
4. Record data changes and revised ratios on worksheet.

Data Set	Case A	Case B	Case C	Case D
Revenue	\$776,000	\$853,600		
Var Oper Costs	499,000	548,900		
Fixed Op Cost	95,000			
Interest Costs	78,000			
Net Farm Income	104,000			
Labor/Mgmt W/D	60,000			
Average Assets	1,800,000			
Ave Liabilities	1,000,000			
Average Equity	800,000			
OPM	15.7%	17.5%		
ATR	43.1%	47.4%		
ROA	6.8%	8.3%		
ROE	5.5%	9.0%		

Case A – Baseline data - grain and livestock operation

Case B – Grow 10% (assume unused capital and mgmt) Revenue & variable operating costs go up 10%.

Case C – Increase cost efficiency by 10%. Operating costs decrease \$49,900.

Case D – Reduced assets to produce same revenue. Example: Share ownership of drill & power unit. Financial impacts: Assets & debts -\$200,000; Depreciation - \$10,000 (Fixed Costs), Variable Oper Costs -\$4,000, Interest Costs -\$14,000.

[LINK TO Dupont Case Examples](#)
SEE HANDOUTS/Reference Files on Website

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Special Topics – Financial Analysis

- Cash, Accrual Adjusted, vs. True Accrual
- Cost vs. Market Value Balance Sheet
- Trend analysis – Key Ratios, Dupont Model
- Analyzing multiple entities
- Sustainable Growth Rate
- Deferred taxes
- Tax vs. economic depreciation
- Attributes of a transaction
- Net Present Value (NPV) –Time Value Money
- Activity Based Costing (ABC)

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Look familiar?



Annual Reports, Trend Sheets

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Trend Analysis

The past is the best indicator of the future!

- Tells story of farm's financial history and key trends (see your data)
- 1st tool banker reviews... about 25% do this!
- Shows impact of operating & strategic decisions
- Great tool for communicating with owners & family stakeholders
- Key baseline for goal setting & strategic planning

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		Ratios & Indicators					
		2010	2011	2012	2013	2014	2015
Liquidity-WC	Total Current Assets	588,480	618,820	679,280	877,700	921,180	918,480
	Total Current Liabilities	1,042,240	978,880	1,118,240	1,028,200	1,027,720	1,027,480
	Working Capital	(453,760)	(360,060)	(438,960)	(150,500)	(106,540)	(109,000)
	Liquidity Ratio	0.57	0.63	0.61	0.86	0.90	0.89
Solvency-D/A	Total Assets	1,520,760	1,671,200	1,822,160	2,161,700	2,188,880	2,188,480
	Total Liabilities	637,120	642,880	658,880	648,200	651,470	651,880
	Total Equity	883,640	1,028,320	1,163,280	1,513,500	1,537,410	1,536,600
	Debt to Asset Ratio	42.2%	38.8%	36.2%	30.0%	30.2%	30.2%
Profitability	Operating Expenses	301,140	309,480	321,000	346,420	357,420	358,880
	Operating Profit	17,360	10,340	15,280	15,280	15,280	15,280
	Operating Profit Margin	3.2%	3.1%	3.3%	3.3%	3.3%	3.3%
	Interest Expense	17,370	40,240	49,470	79,170	89,280	89,280
ATR, OPM	Return on Assets	1.21%	0.75%	0.84%	0.71%	0.70%	0.70%
	Return on Equity	0.27%	0.30%	0.30%	0.48%	0.45%	0.45%
	Debt Servicing Ratio	0.27%	0.39%	0.43%	0.52%	0.58%	0.58%
	Debt to Capitalization Ratio	33.3%	33.3%	33.3%	33.3%	33.3%	33.3%
ROE, ROA	Return on Assets	1.21%	0.75%	0.84%	0.71%	0.70%	0.70%
	Return on Equity	0.27%	0.30%	0.30%	0.48%	0.45%	0.45%
	Debt Servicing Ratio	0.27%	0.39%	0.43%	0.52%	0.58%	0.58%
	Debt to Capitalization Ratio	33.3%	33.3%	33.3%	33.3%	33.3%	33.3%
Debt Serv Cap.	Operating Profit	17,360	10,340	15,280	15,280	15,280	15,280
	Interest Expense	17,370	40,240	49,470	79,170	89,280	89,280
	Debt Servicing Ratio	0.27%	0.39%	0.43%	0.52%	0.58%	0.58%
	Debt to Capitalization Ratio	33.3%	33.3%	33.3%	33.3%	33.3%	33.3%

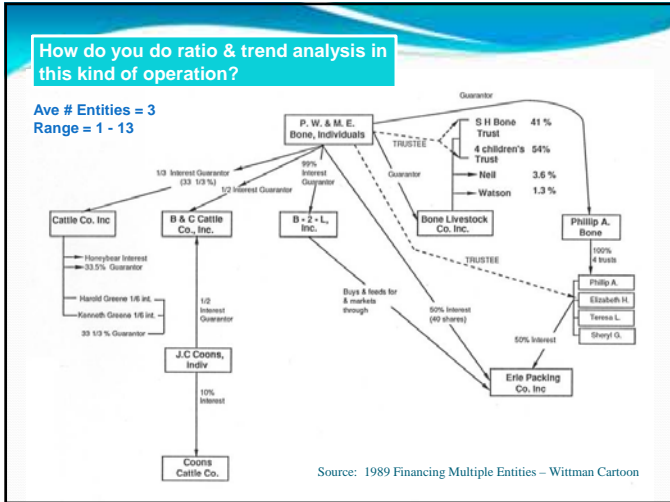
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Items to Add to Trend Analysis

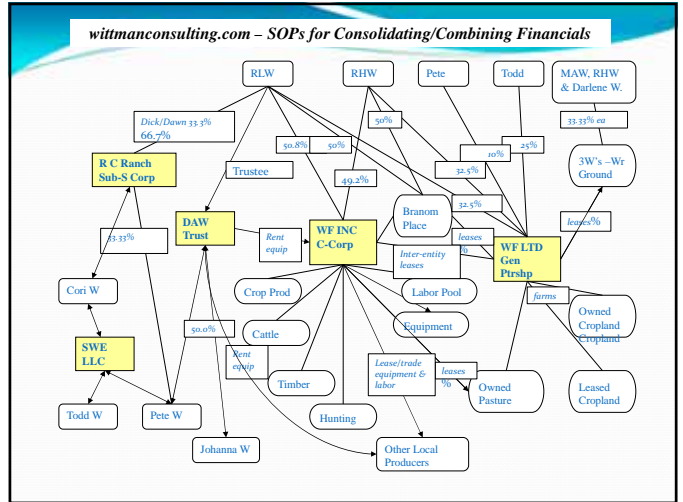
- Growth Rate
 - Production base
 - Gross Farm Revenue growth
- Gross Revenue per Family Unit
- Diversification Profile
 - Farm vs Non-farm assets (Stocks, Retirement, Housing, etc.)
 - % of Personal NW in Farm Equity

See www.WittmanConsulting.com for Trend Sheet Template

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Should Deferred Tax be Recorded?

Options:

- Record on the balance sheet as Deferred Liability**
 - Pros** – more realistic presentation of net worth
 - Cons** – bankers don't like this...distorts serviceable debt and financial ratios (WF case in point!)
- Record as footnote to financial statements**
 - Pros** – recognizes the liability exists; acknowledges that \$ amount is not an exact science (tax laws subject to change)
 - Cons** – tends to overstatement recognizable equity

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Tax vs. Economic Depreciation

- FFSC Prior Position**
 - Tax depreciation can be used as proxy for cost based income analysis
- Current Problem:** Accelerated write-offs distort real depreciation expense
 - Section 179 – added write off \$25,000
 - Special Depreciation Allowance – new equipment
- New Guidelines:**
 - If tax depreciation differs significantly, cost based analysis should use "book" instead of "tax" depreciation

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