

It's accrual world! (Except for taxes)

- **Cash.** Income is income when it is received. Expenses are expenses when they are paid
- **Accrual.** Income is income when it is accrued and expenses are expenses when they are incurred
- 99% of farmers file income taxes on a cash basis

Electronic Farm Accounting Options

- Many Cash & Accrual Options
 - Common Cash Record Keeping System: Quicken, or even Excel (Single Entry Systems)
 - Accrual Systems: Quickbooks, Redwing, AAIMS & many others (Double Entry Systems)

Balance Sheet Ratios:

- Current Ratio = Current Assets / Current Liabilities
Typically > 2 to 1 for dairy farms
- Asset Turnover Ratio
= Value of Farm Production / Average Total Farm Assets
Asset Turnover Ratio is an indication of how productive the farm assets are.
Asset Turnover Ratios typically are > .3 on a cost basis.

Net Farm Income

- Return to Unpaid Labor
- Unpaid Management
- Unpaid Equity Capital

NFIFO

- NFIFO is the returns to unpaid
 - Labor
 - Management
 - Equity Capital
- Unfortunately we must assign a value to either labor & management or to equity capital in order to make the other a residual claimant

Assume NFIFO = \$100,000

- Assume total farm equity = \$1,000,000
- There are 2 full time unpaid owners each worth \$35,000
- What would the rate of return on farm equity be?

ROROA

- Assume \$1,000,000 in Farm Assets
- Assume NFIFO = \$100,000
- Assume Farm Interest Paid was \$40,000
- Assume unpaid labor was \$40,000
- Assume total liabilities were \$400,000

- What would the rate of return on assets be?

Solution:

- $\text{NFIFO} + \text{Farm Int. Paid} - \text{Unpaid Labor} /$
- Total Farm Assets

- $(\$100000 + \$40000 - \$40000) / \$1000000 = 10\%$

ROROE

- Assume \$1,000,000 in Farm Assets
- Assume NFIFO = \$100,000
- Assume Farm Interest Paid was \$40,000
- Assume unpaid labor was \$50,000
- Assume total liabilities were \$400,000

- What would the rate of return on assets be?

ROROE = return on farm equity!

- $\$100000 \text{ (NFIFO)} - \$50000 \text{ (unpaid labor)}$
- $= \$50,000 \text{ return to equity capital}$
- $\text{Total Equity} = \text{Assets} - \text{Liabilities or } \600000
- $\$50000 / \$600000 = 8.033\%$

Rate of Return on Assets ROROA

$\text{ROROA} = (\text{NFIFO} + \text{Interest Pd} - \text{Charge for unpaid labor}) / \text{Ending Total Assets}$
ROROA is the return to all assets (both *borrowed* and *owned*)

Net Farm Income from Operations

- Returns to unpaid labor, management and equity capital
- cash operating expenses (including interest)
 - Prepaid Expenses
 - ± Adjusted for livestock inventories
 - ± Depreciation or Capital Consumption
- = NFIFO

ROROE

- Rate of Return on Equity Capital
- $\text{ROROE} = (\text{NFI-charge for unpaid labor}) / \text{Ending Net Worth}$
- ROROE is the rate of return to owner's equity
- Goal # 1: ROROE should be at least as great as ROROA!

Financial Leverage

- When $\text{ROROA} > \text{Weighted Avg Int. Rate}$
 - The rate of return on equity will increase with each \$ borrowed.
- When $\text{ROROA} < \text{Weighted Avg Int. Rate}$
 - The rate of return on equity will decrease with each \$ borrowed