Farm Financial Performance

Considerations for Expanding the Grain Farm

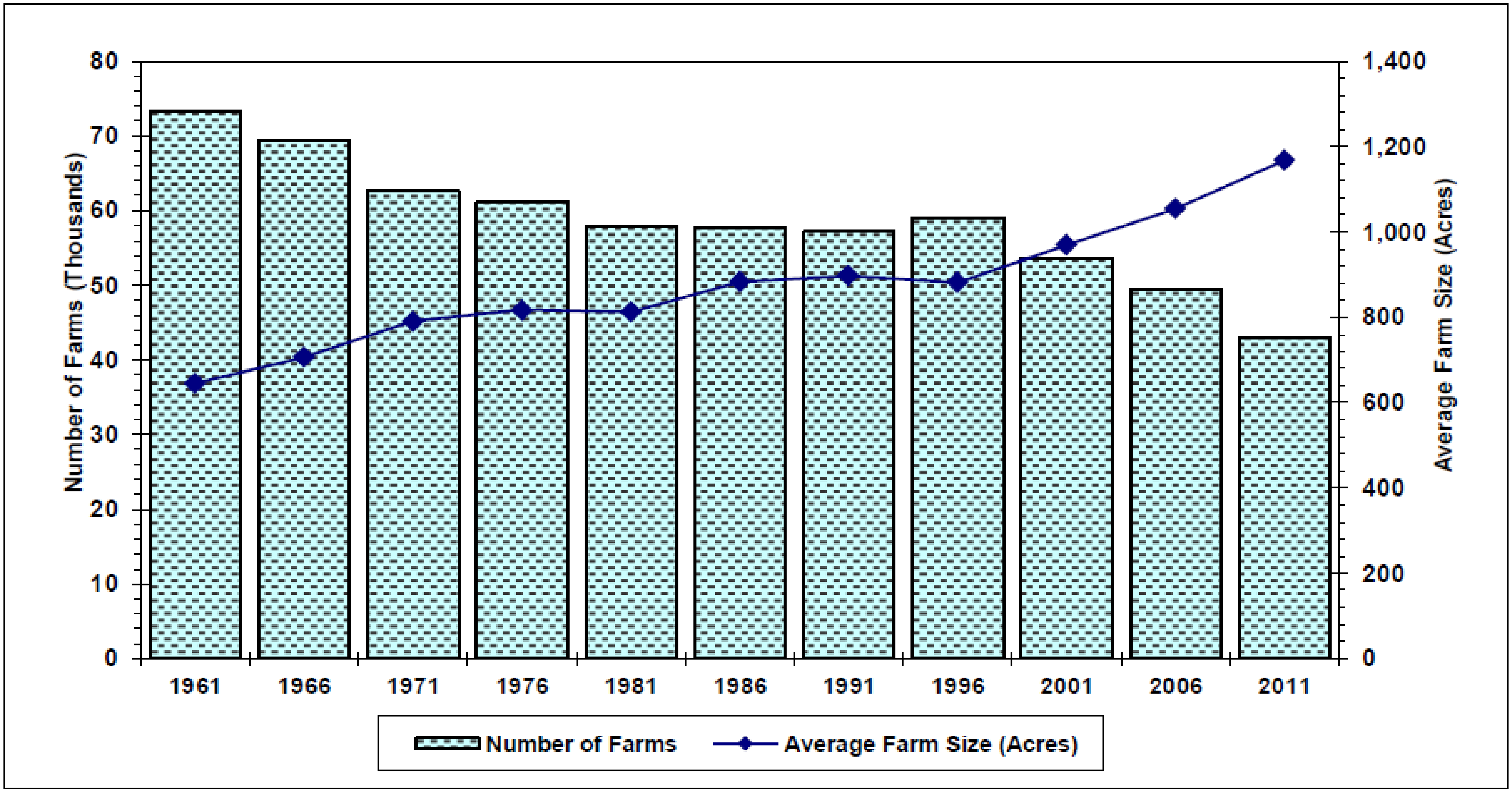
Canada

Alberta Government

Growing Forward
A federal-provincial-territorial initiative

Alberta farm size is increasing at an increasing rate (census data)

Fig. 36 Number and Average Size of Alberta Farms, 1961-2011

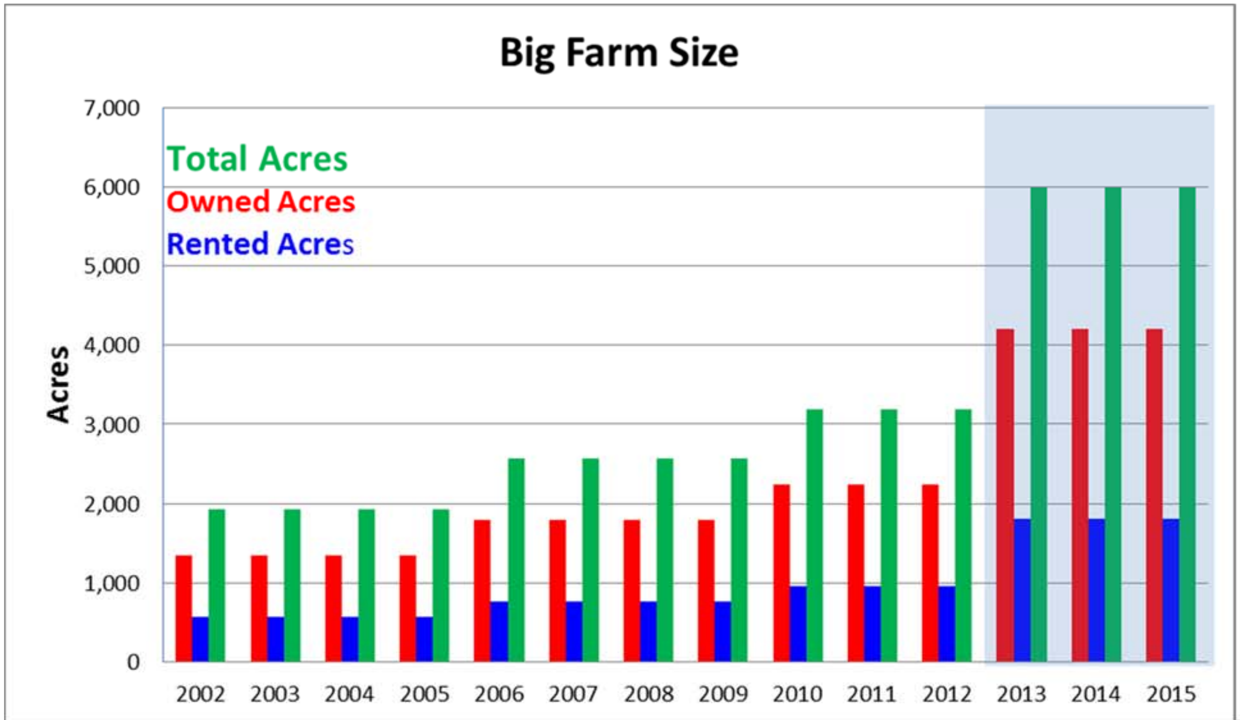


Common Reasons for Expansion

1. Bring in a new partner or family member
   - Part of a succession strategy
   - Quit off-farm job
2. Increase efficiency
   - Capitalize on new technology
   - Ability to bring specialized labour and experts
3. Increase income
   - Make up for years of marginal income
   - Keep up with the Jones's
4. Better Marketing and Risk Management Choices

Alternatives to Expansion

1. Intensification
   - higher value outputs (seed, specialties)
   - Intensive management in all aspects of business
     - o Farming Smarter – Trading better
2. Diversification
   - New or expanded alternative enterprises
     - o Use the same farm footprint
3. Whatever it takes to attract the next generation
   - Creative solutions

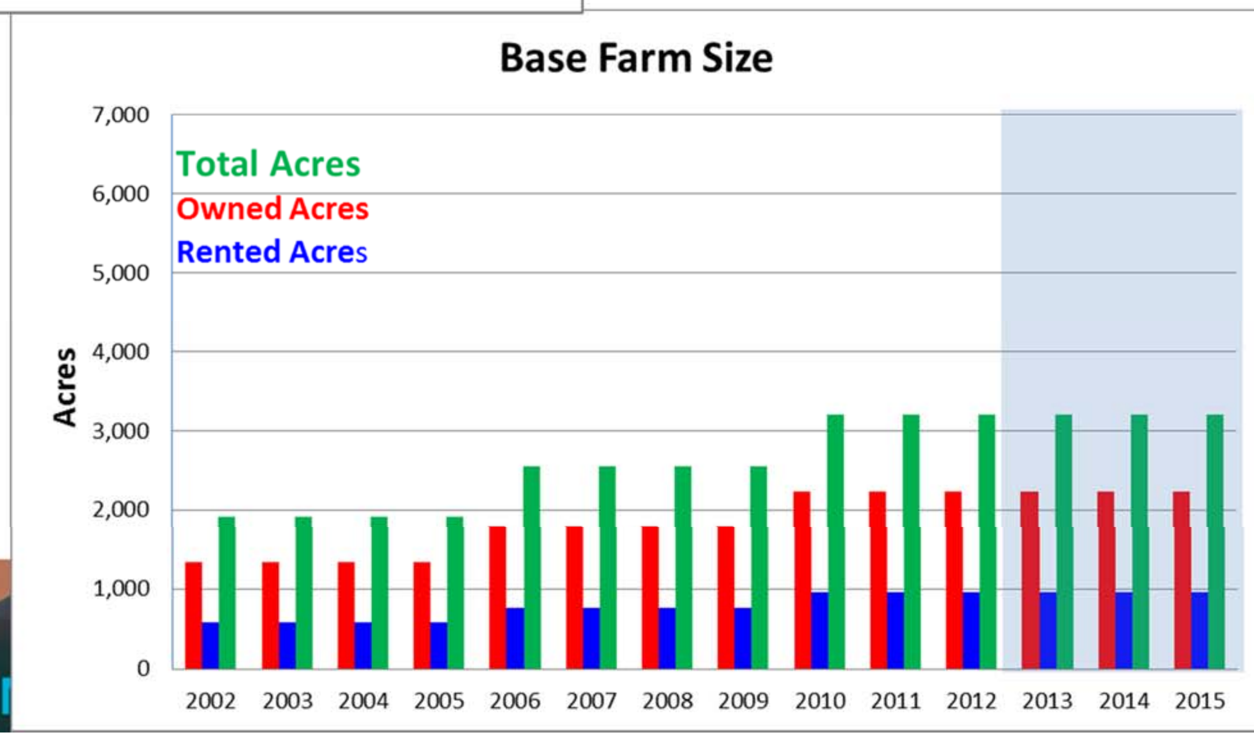


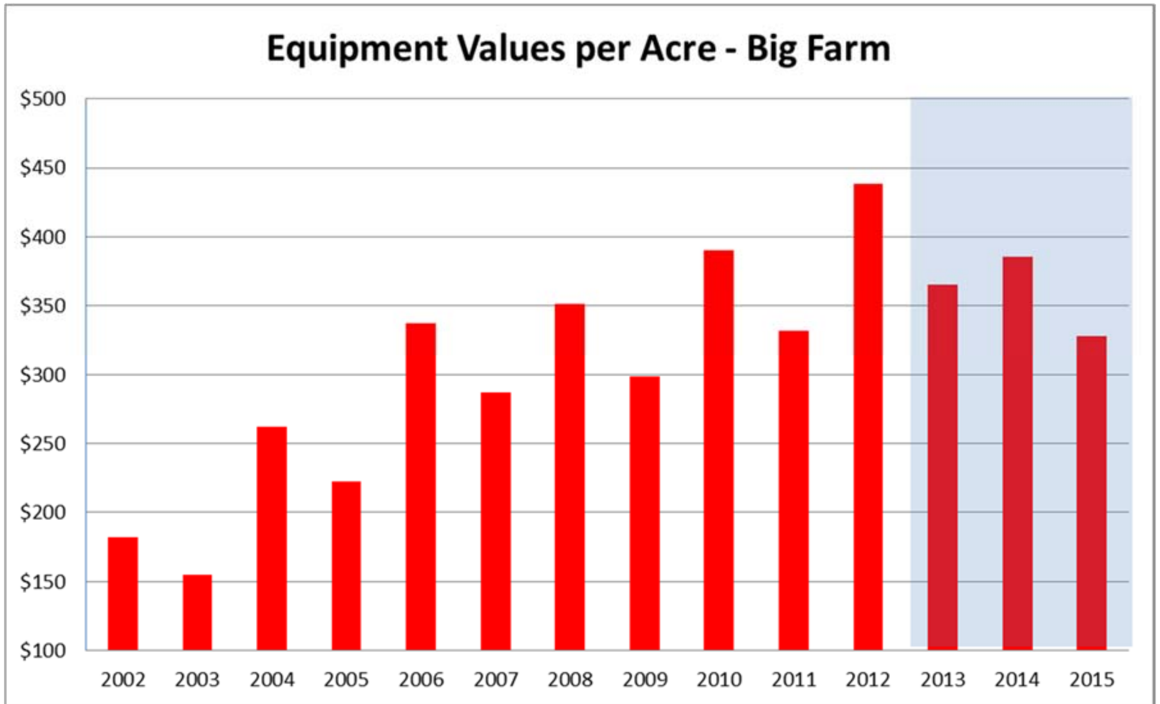
Big Farm Example

- Starts at 2000 acres
- Moderate growth
- Rapid growth after 2012
- Ends with 6000 acres

Base Farm Example

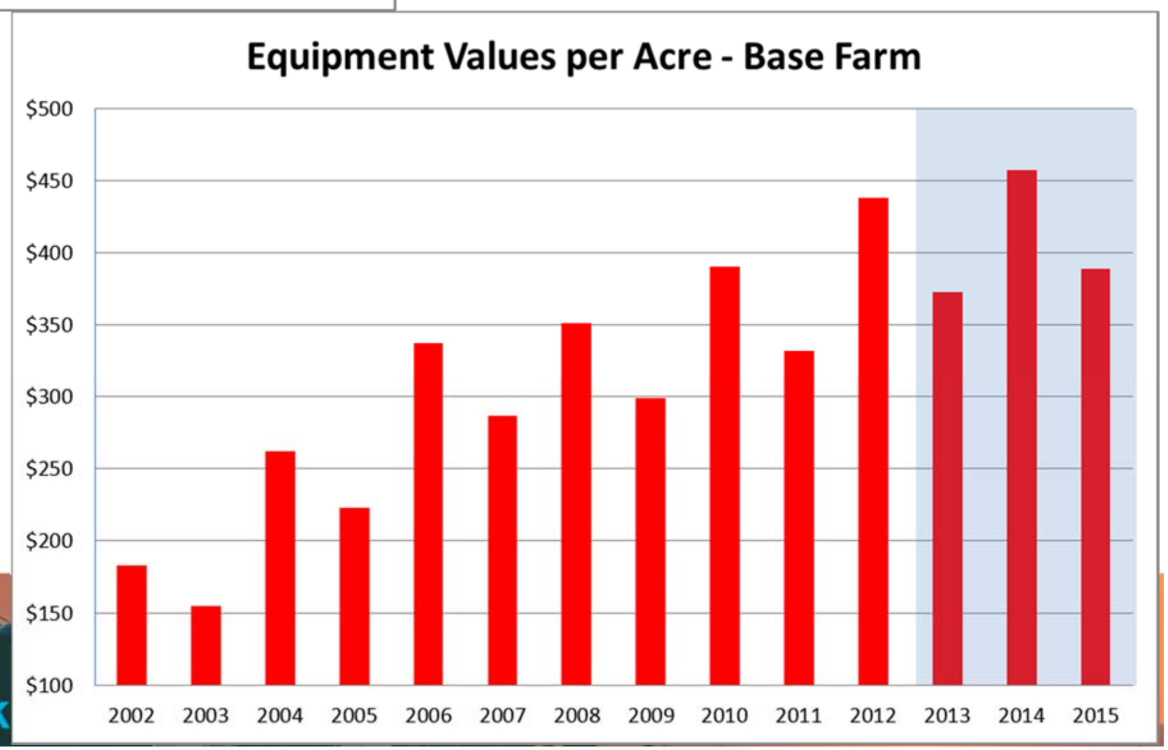
- Starts at 2000 acres
- Moderate growth
- No growth after 2012
- Stays at 3200 acres

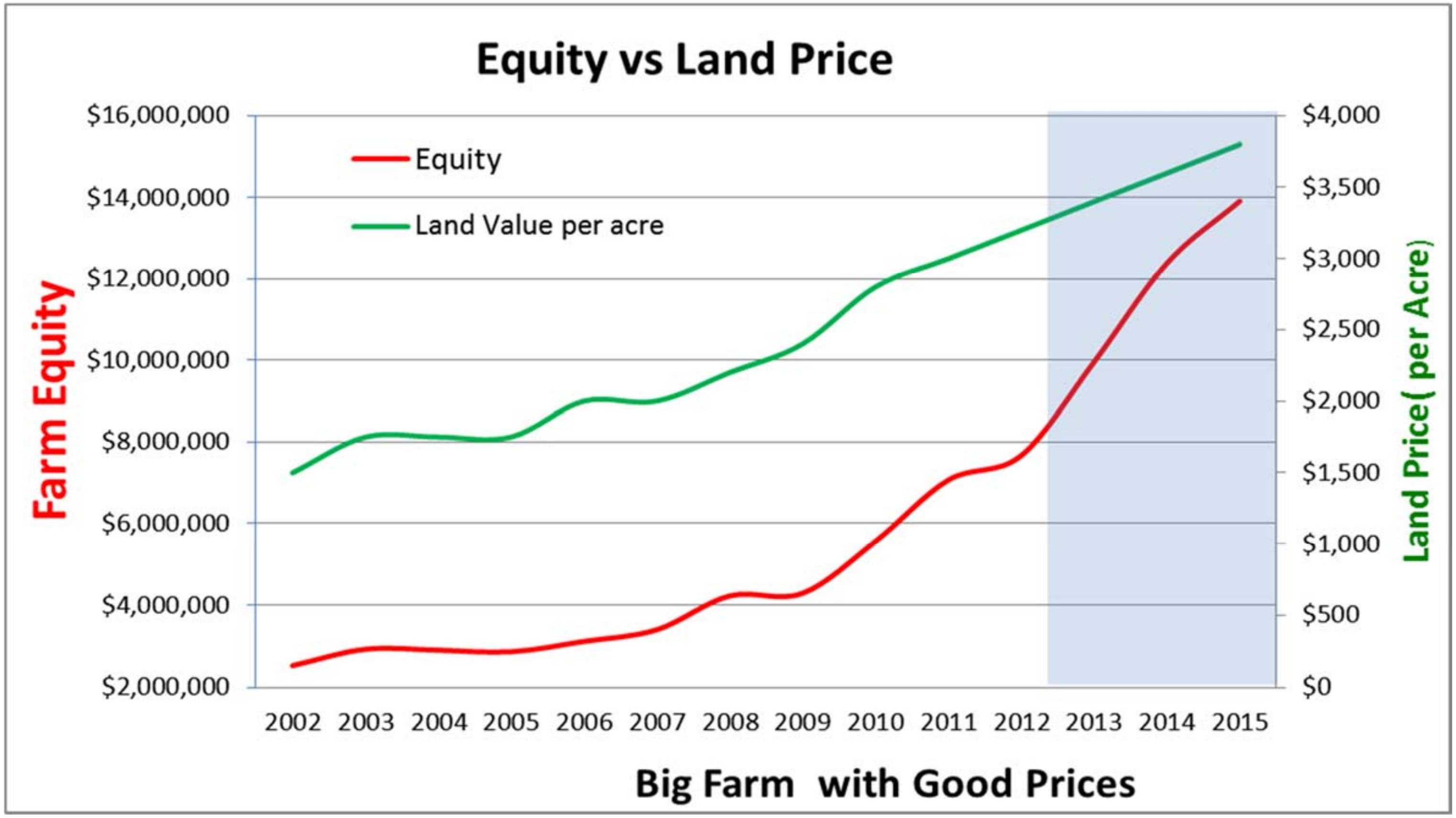




Equipment Comparison

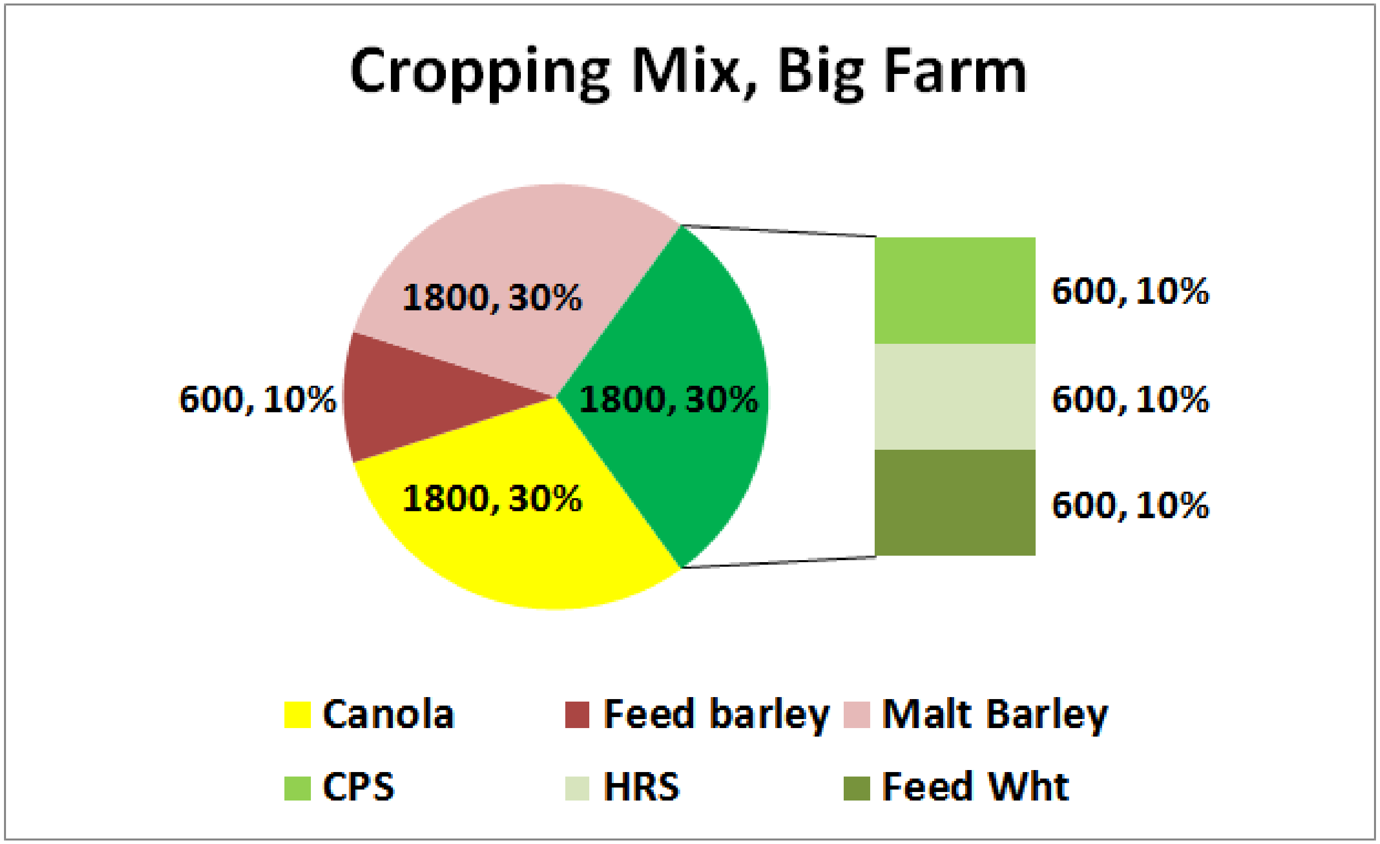
- Both farms make updates
- Big farm spreads investment over more acres





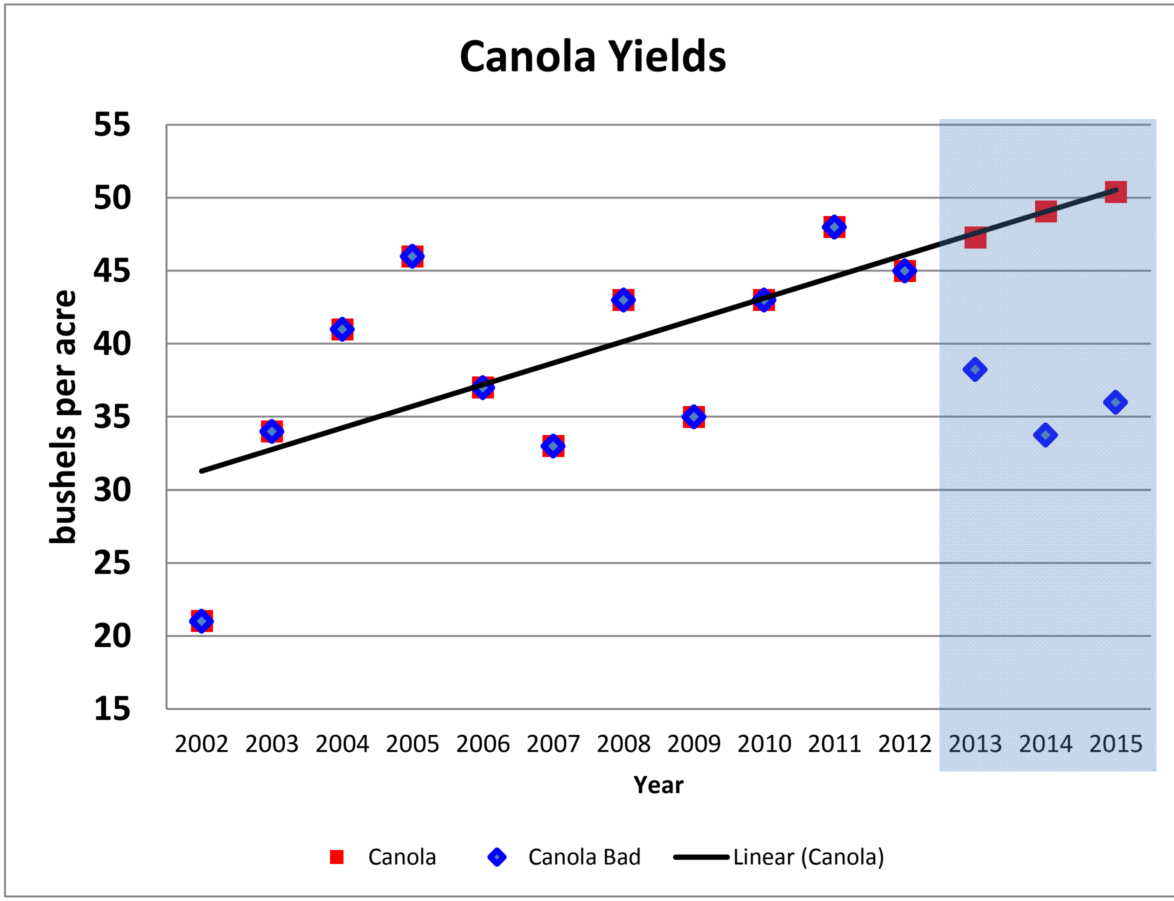
How did the farms expand?

- Purchased land with 25% down and 25 year mortgages
- Purchased equipment on 5 year term loans
- Effective interest rates of 4-5%
- Land values increase to \$3800 per acre with good prices and yields



- 40% barley, 30% canola, 30% wheat
  - All malt barley goes as malt
- 2/3 of wheat acres to Hard Red Spring, 1/3 Canada Prairie Spring;
  - 1/3 of all wheat goes as feed
- Canola all grades #1

Yield Assumptions



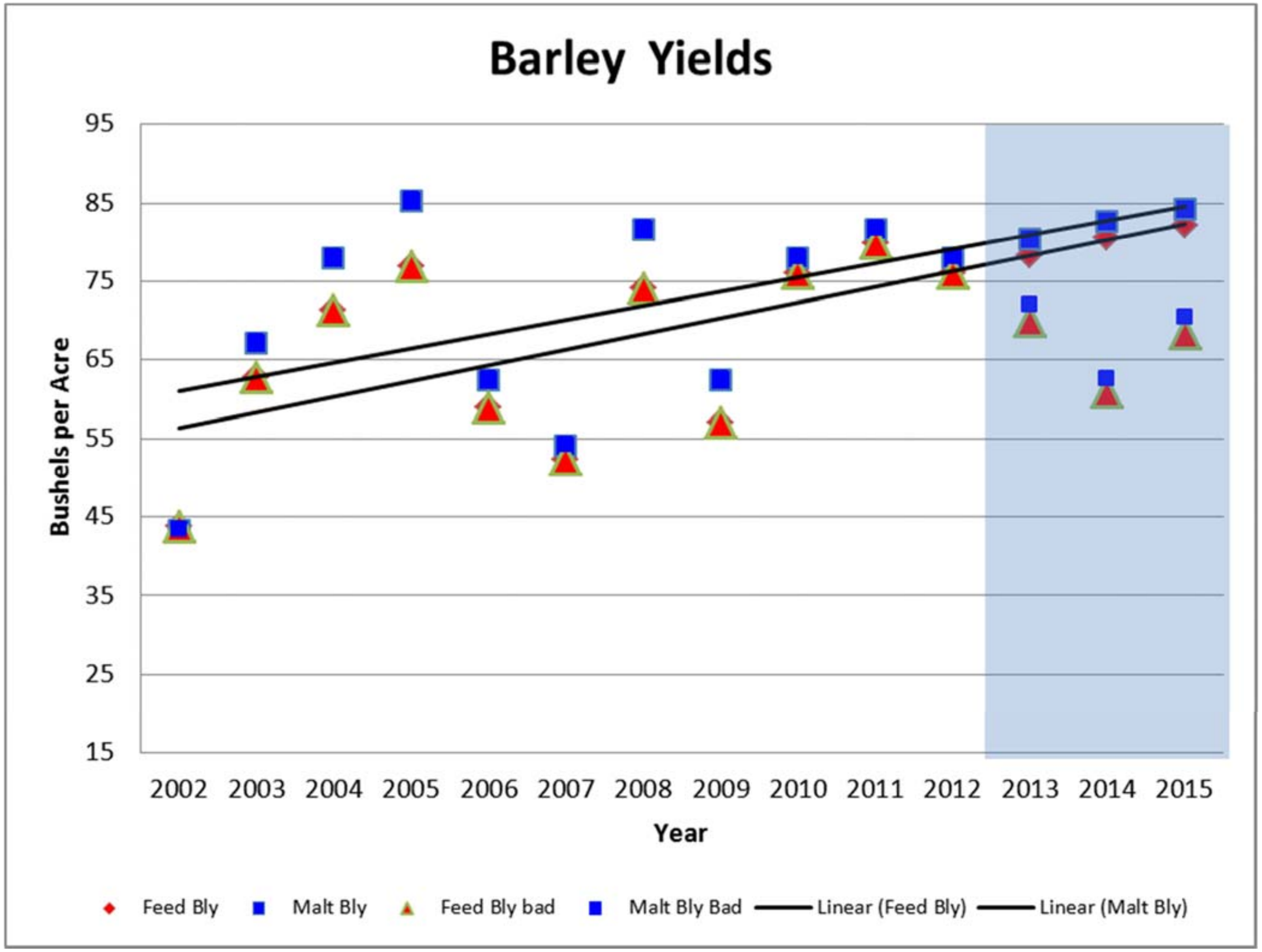
What if.......Canola yield drops to 35 bushels per acre?

Canola Yield Assumptions:

Scenario 1 - Yields for next 3 years continue at trend levels

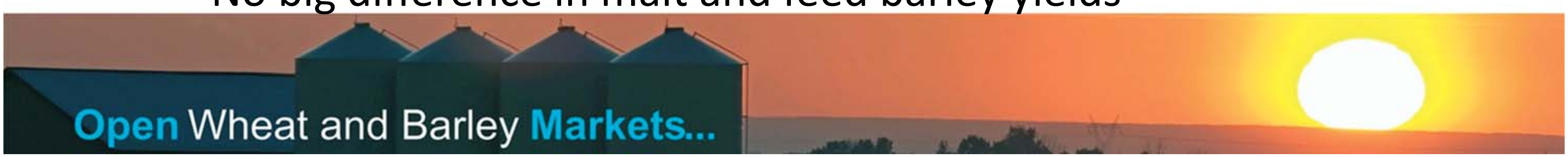
Scenario 2 - Sub-par yields (but not bad enough to trigger insurance)

- Crop insurance is used to protect from disaster yields

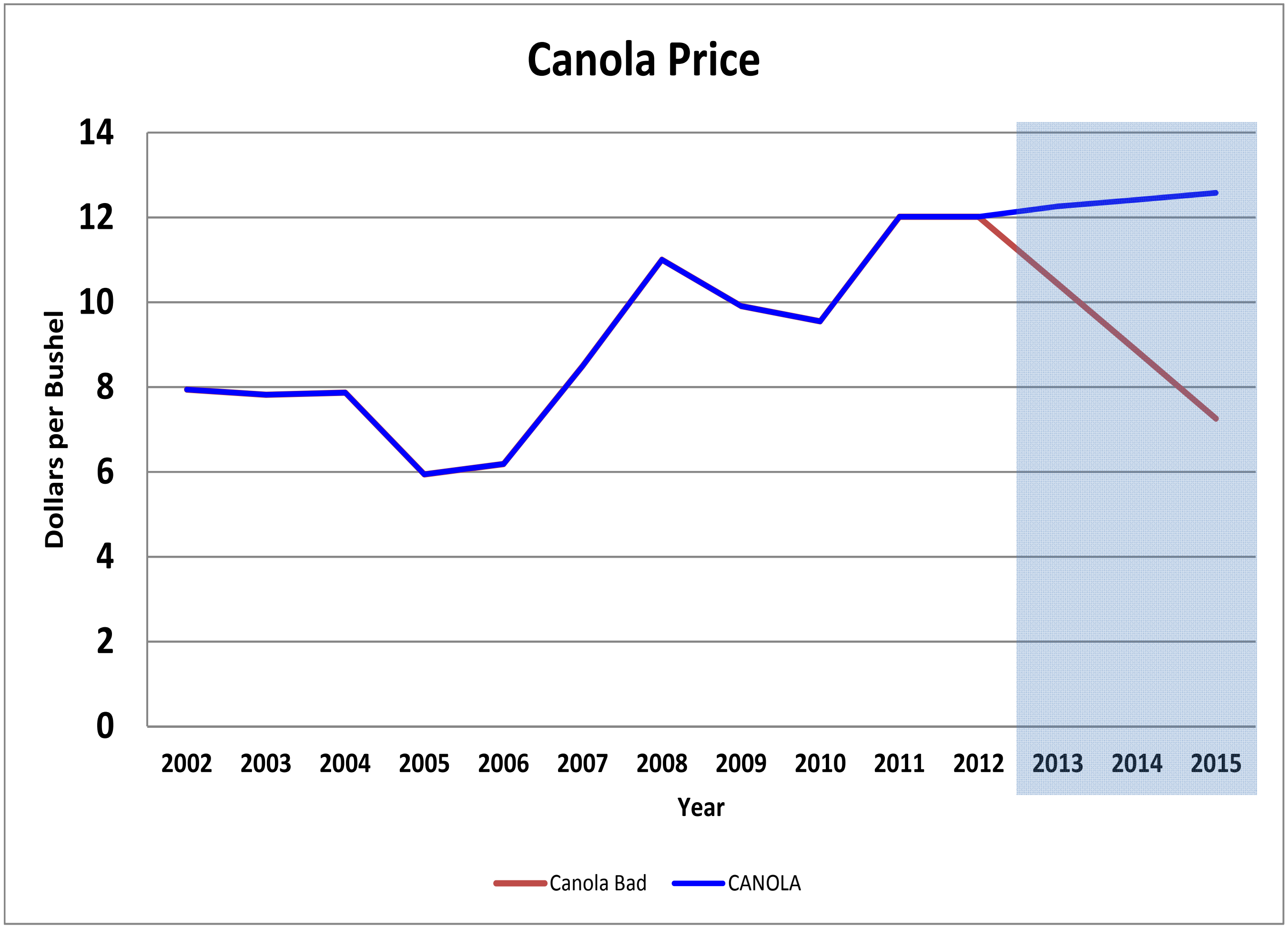


Barley Yield Assumptions:

- Important because 40% of farm is planted to barley
- No big difference in malt and feed barley yields



Price Assumptions

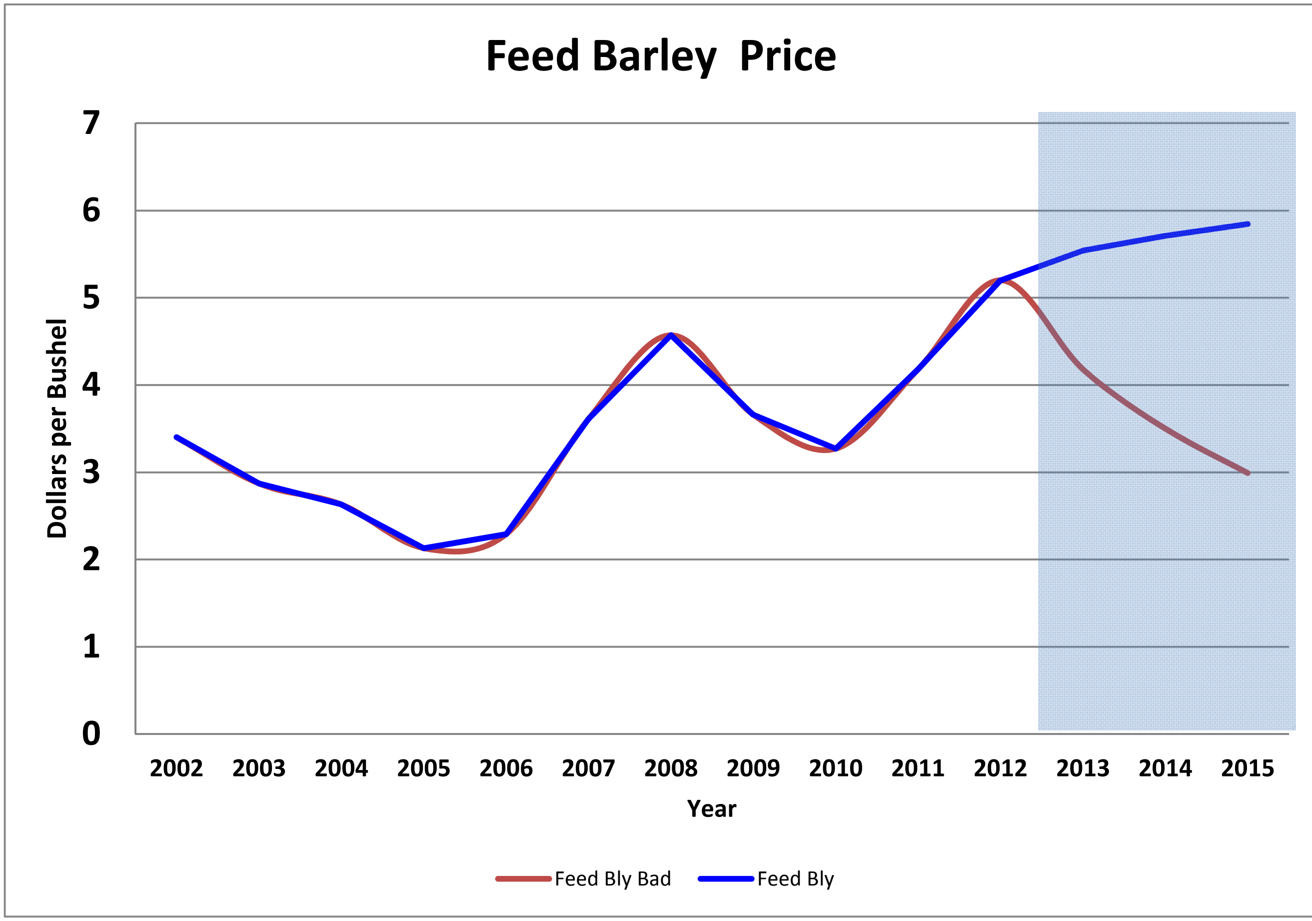


What is your opinion?

- 3 years out?
- 5 years out ?

Sensitivity Analysis with two different price scenarios for all crops

- A base scenario of grain prices at or above current levels
- Approximate 30% price slide sustained over the course of 3 years



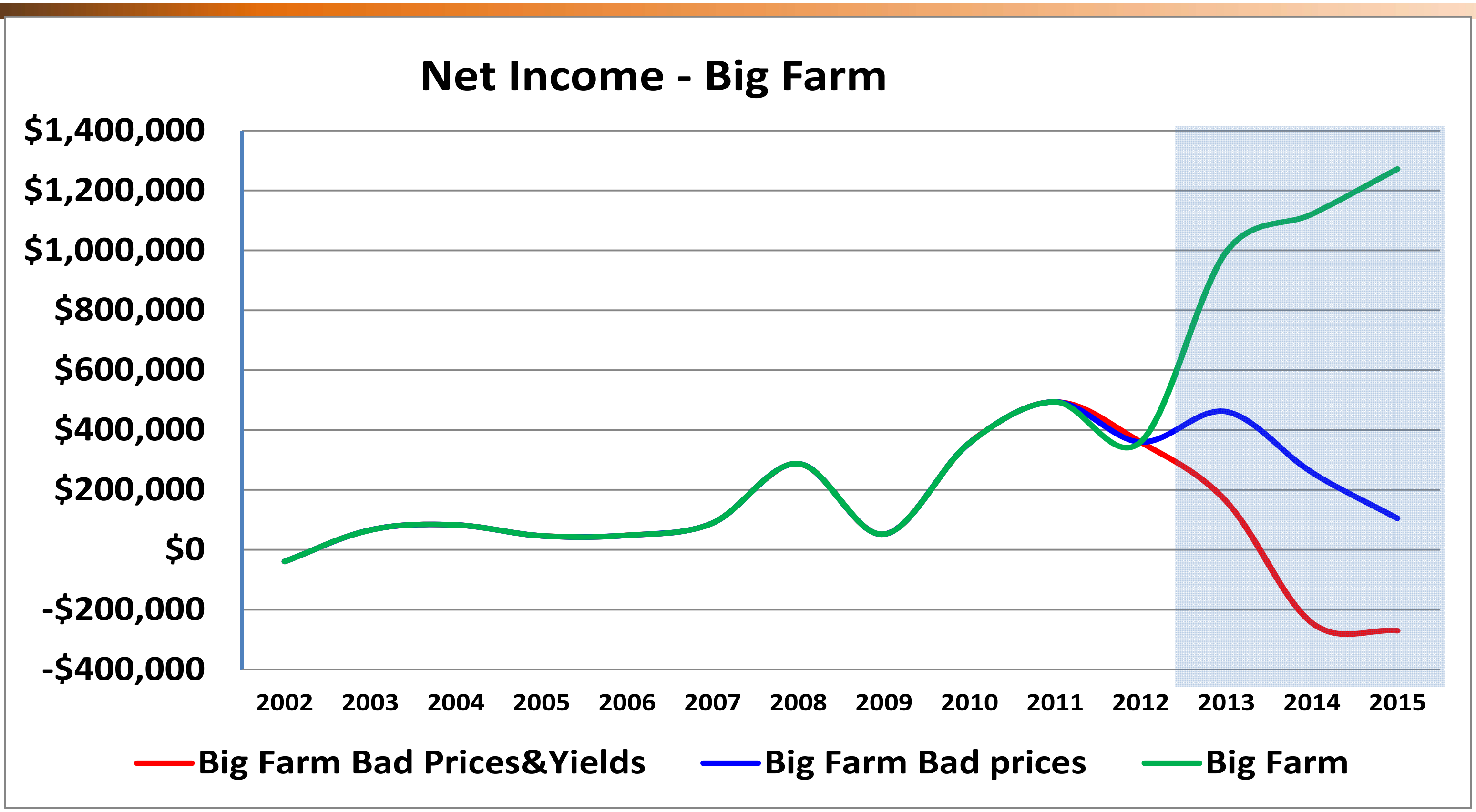
What if…….Feed barley price drops to $3/bushel?

Stress Test:

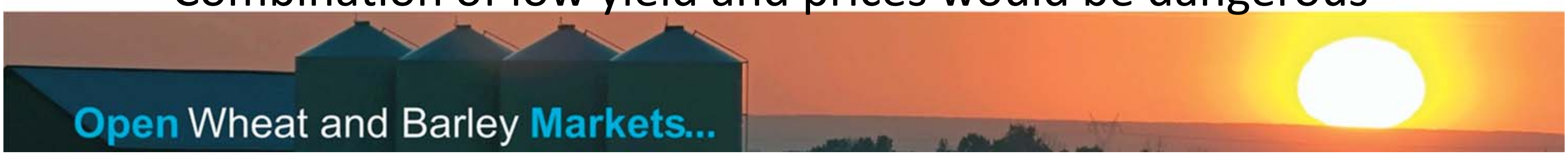
- In low price scenario, all crops decline about the same percentage
- Price declines intensify by 2015 as global stocks rebuild
- A severe but not unprecedented price reduction

Expanding Farm (Big Farm) Financial Results

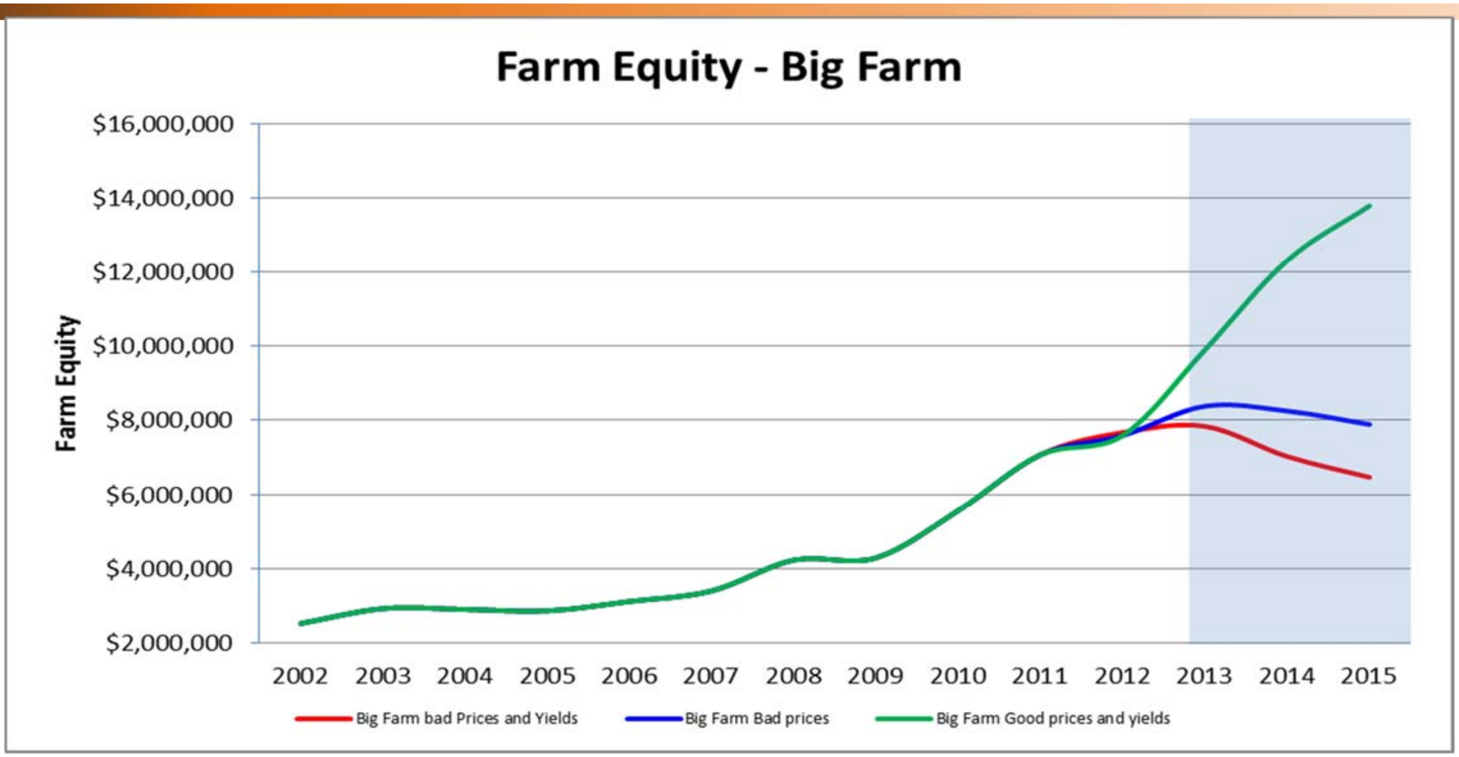
Results: Profitability



- Net Income: could be very good, could be pretty bad
- Combination of low yield and prices would be dangerous



Results: Wealth

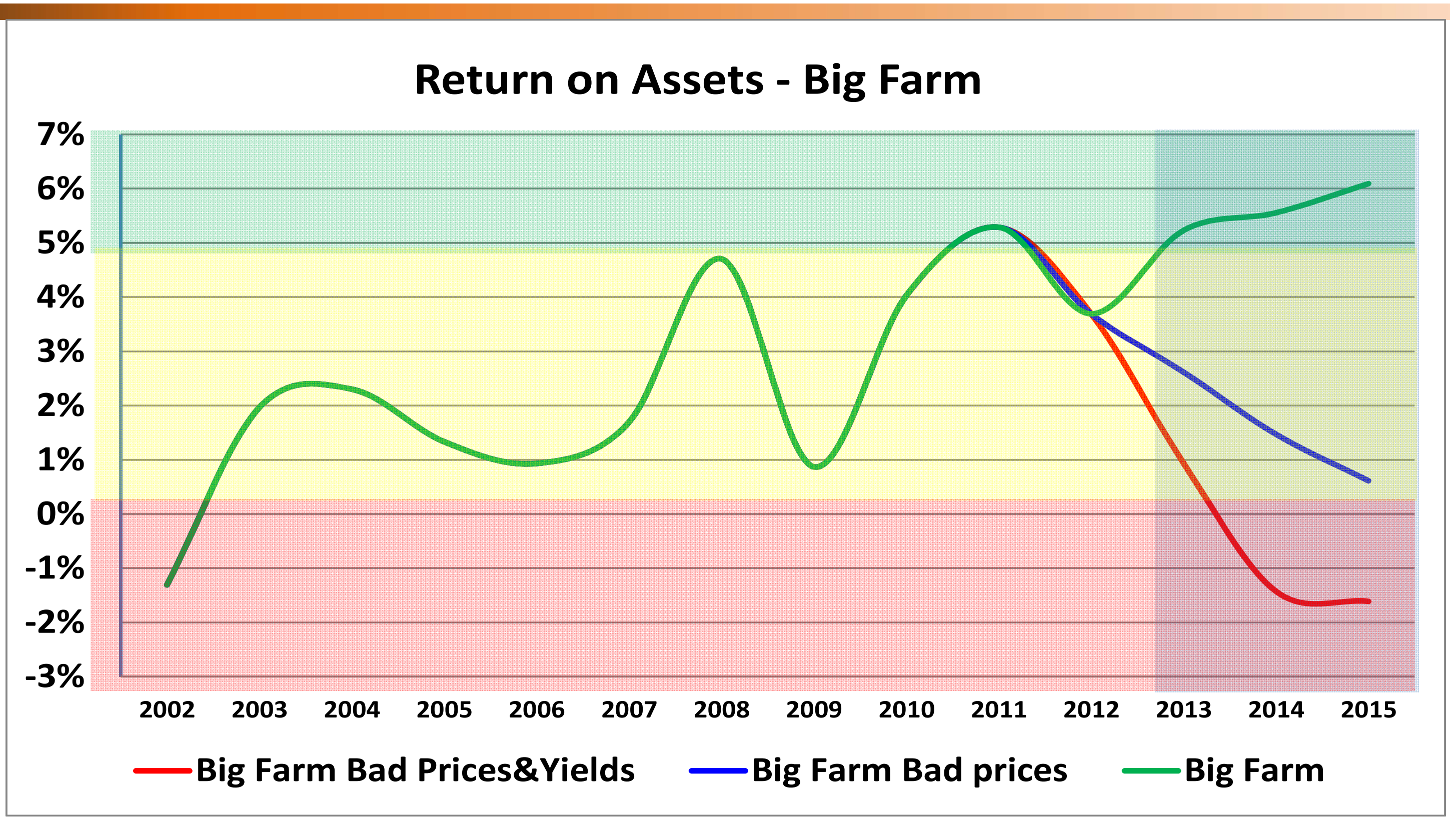


- Equity will nearly double at current or higher prices
- Most equity can be maintained in bad scenarios

Expanding Farm Analysis

A few ratios and Dr. Kohl’s benchmarks

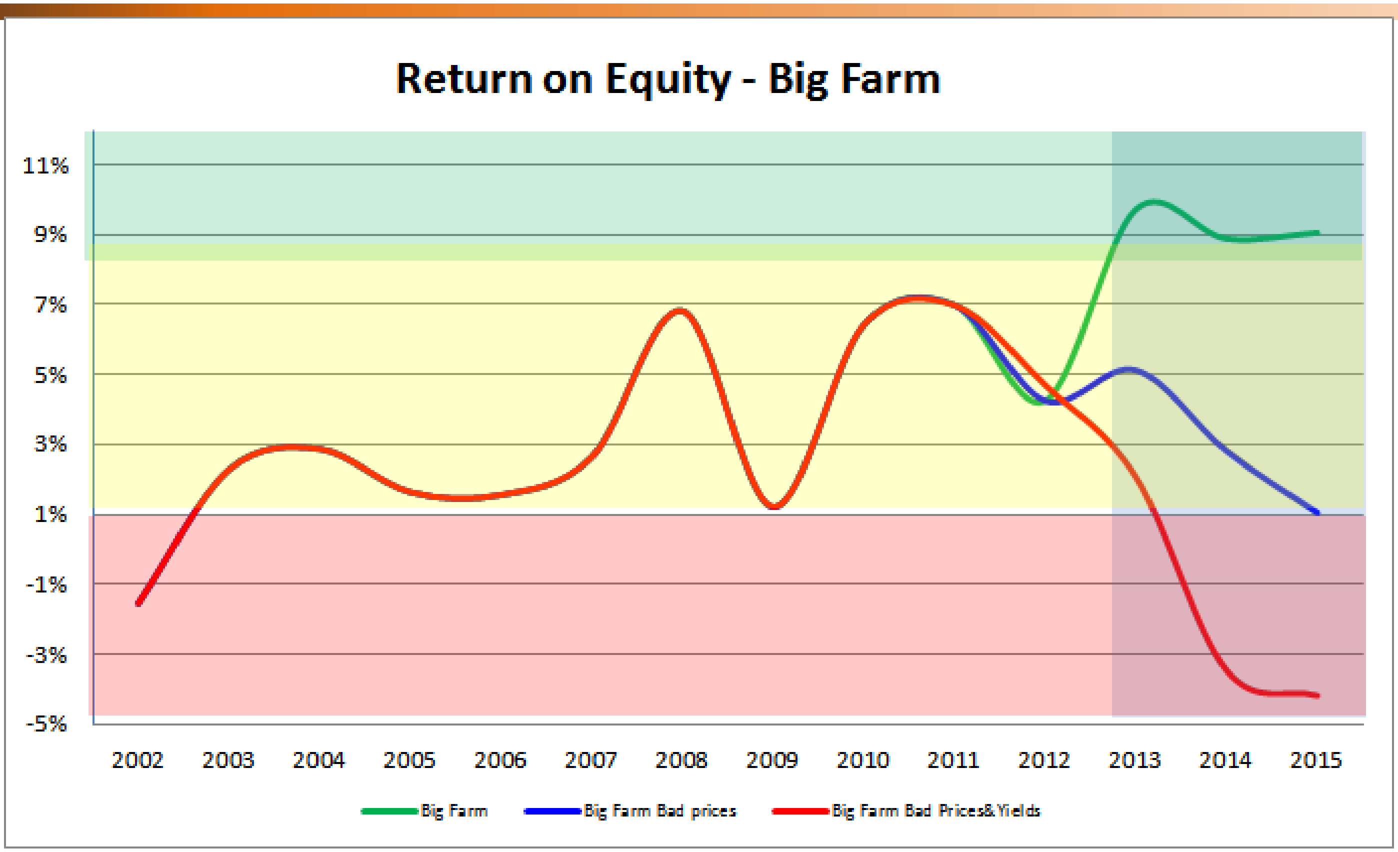
Analysis: Profitability



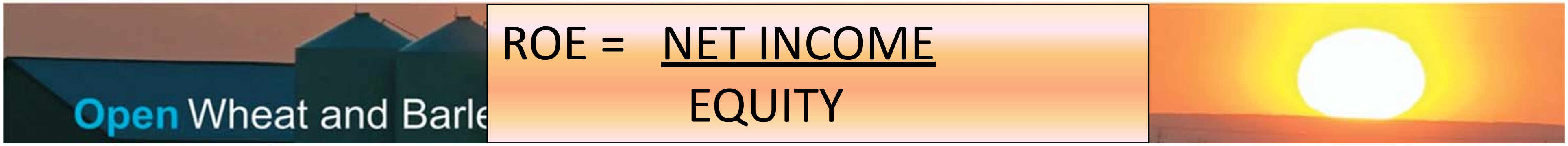
- At current prices ROA improves with expansion into “green zone”
- In low price and yield scenario ROA drops into “red zone”

$$\text{ROA} = \frac{\text{NET INCOME}}{\text{TOTAL ASSETS}}$$

Analysis: Profitability

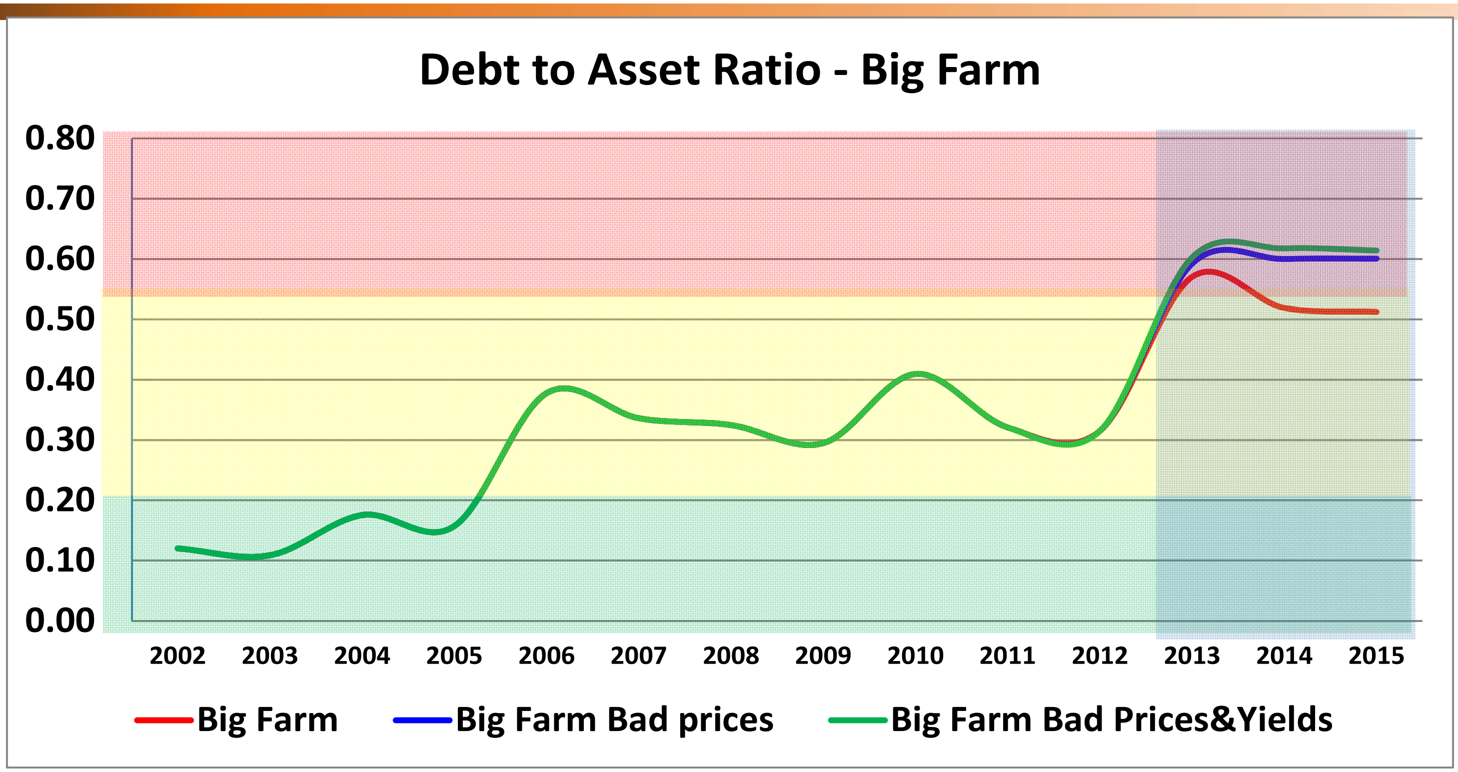


- Through leverage, return on equity has potential to reach 10%
- Or could drop to negative on low price/low yield scenario!



ROE = $\frac{\text{NET INCOME}}{\text{EQUITY}}$

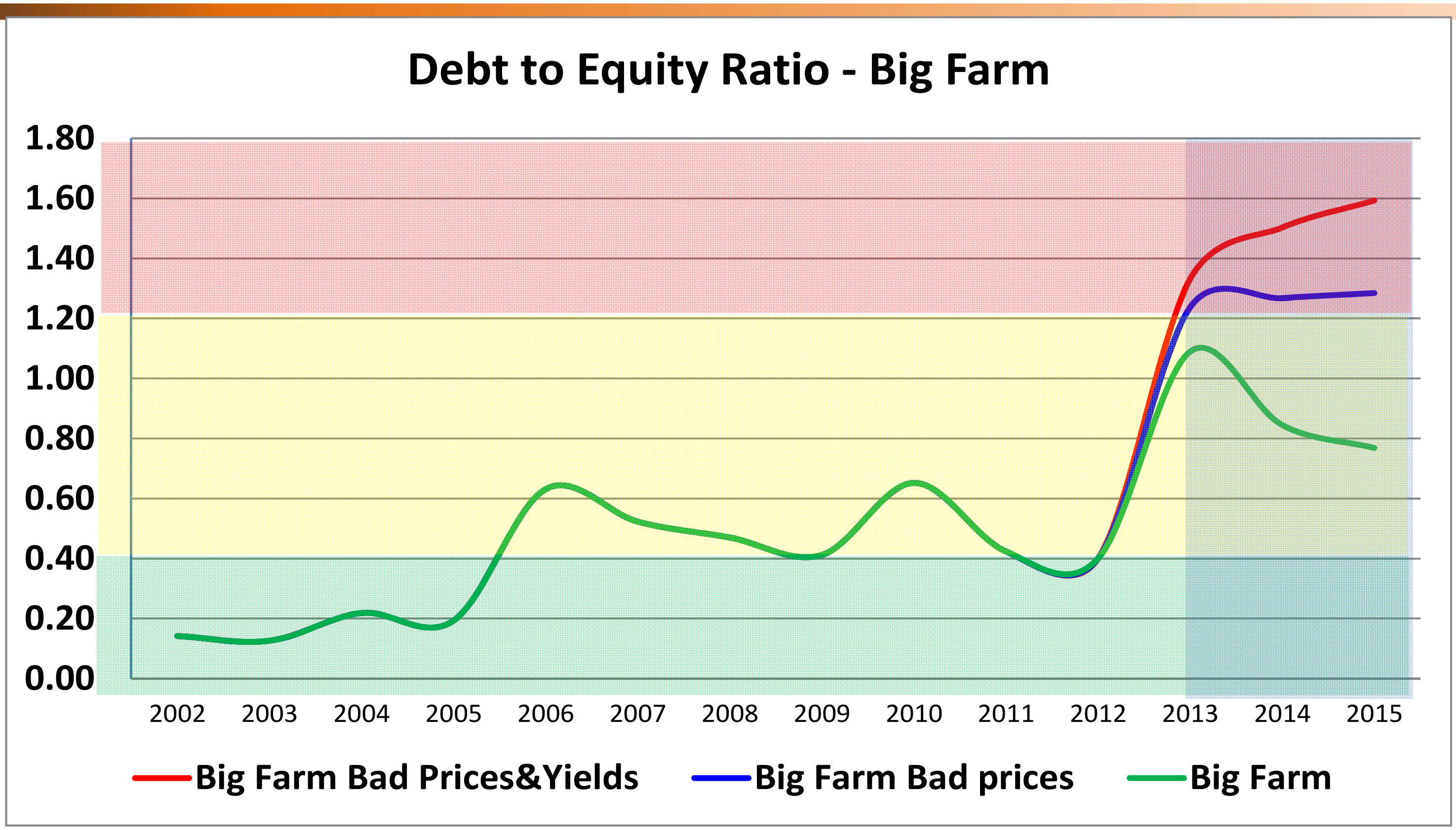
Analysis: Solvency



- Debt to asset ratio climbs over .50, to .60 on low price scenario
- This is considered a red light (>.5)
- Even good prices challenge this ratio

$$\text{Debt to Asset Ratio} = \frac{\text{Total farm Liabilities}}{\text{Total Farm Assets}}$$

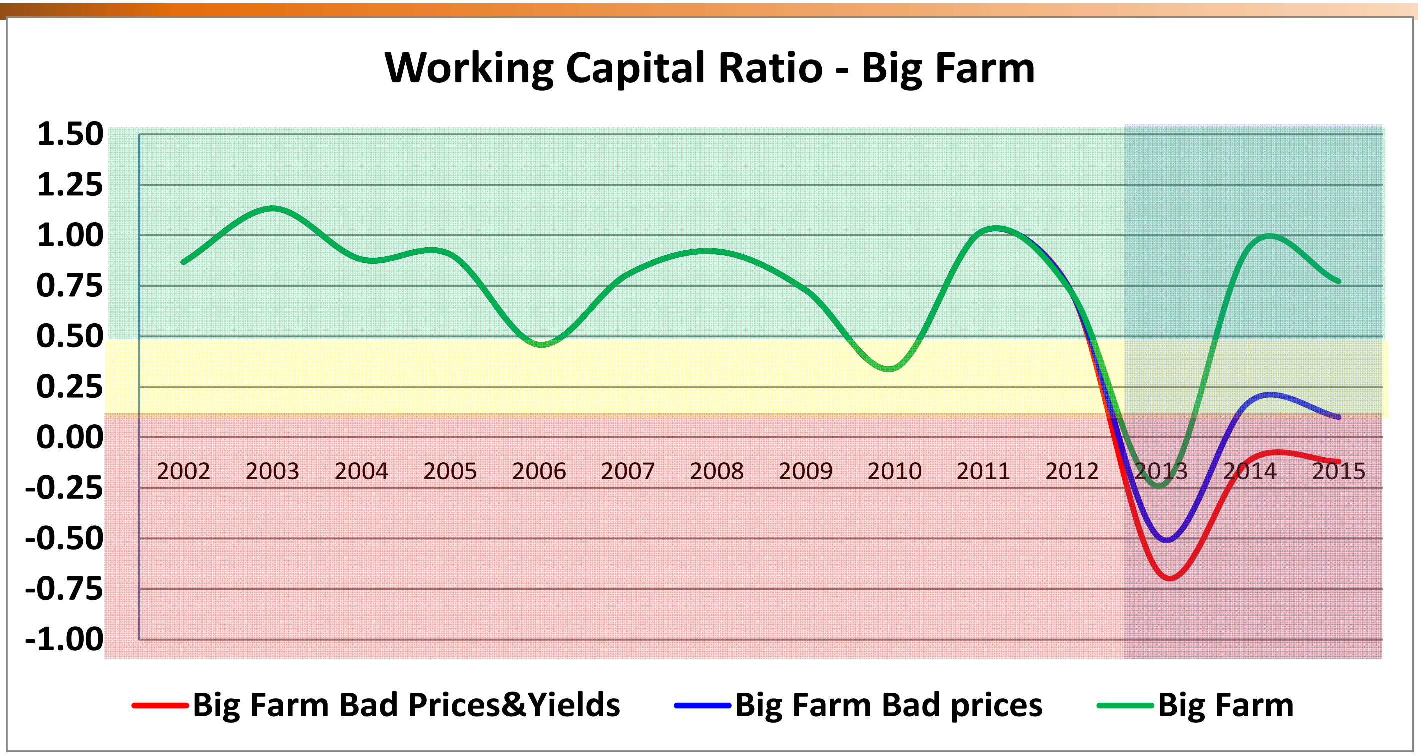
Analysis: Solvency



- The goal should be to keep ratios in the amber zone and trending towards the green zone during expansion

Debt to Equity Ratio= $\dfrac{\text{Total Farm Liabilities}}{\text{Total Farm Equity}}$

Results: Liquidity



- Goes negative, even with high prices - indicates need for debt restructuring
- Price risk management in Year 1 of expansion is vital

Working Capital Ratio= Working Capital / Total Farm Expenses

(California rule)

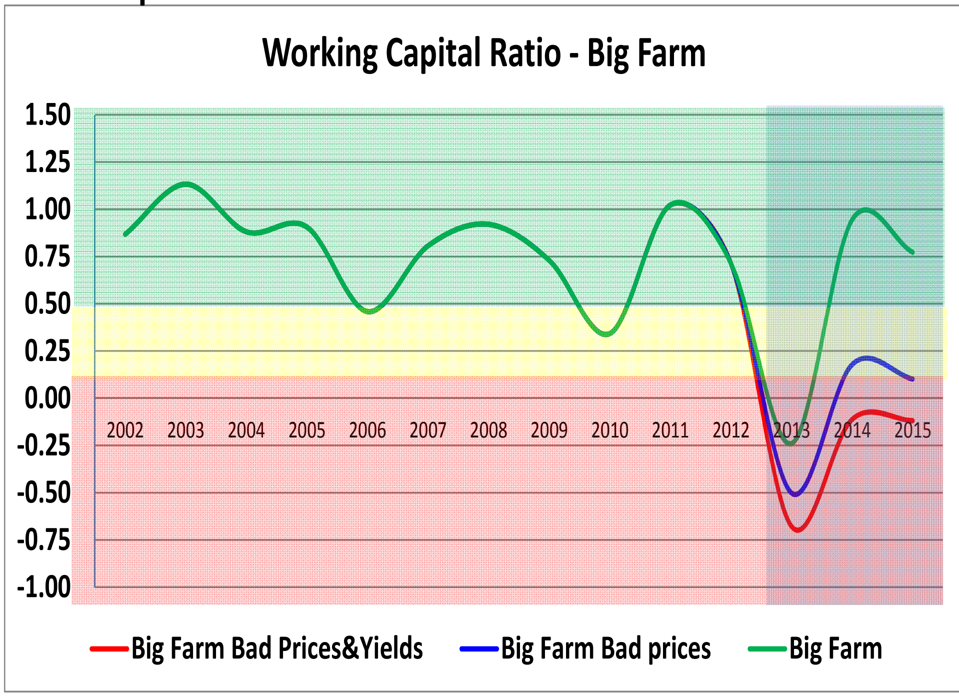
WORKING CAPITAL = CURRENT ASSETS – CURRENT LIABILITIES

Comparing the Two Farms

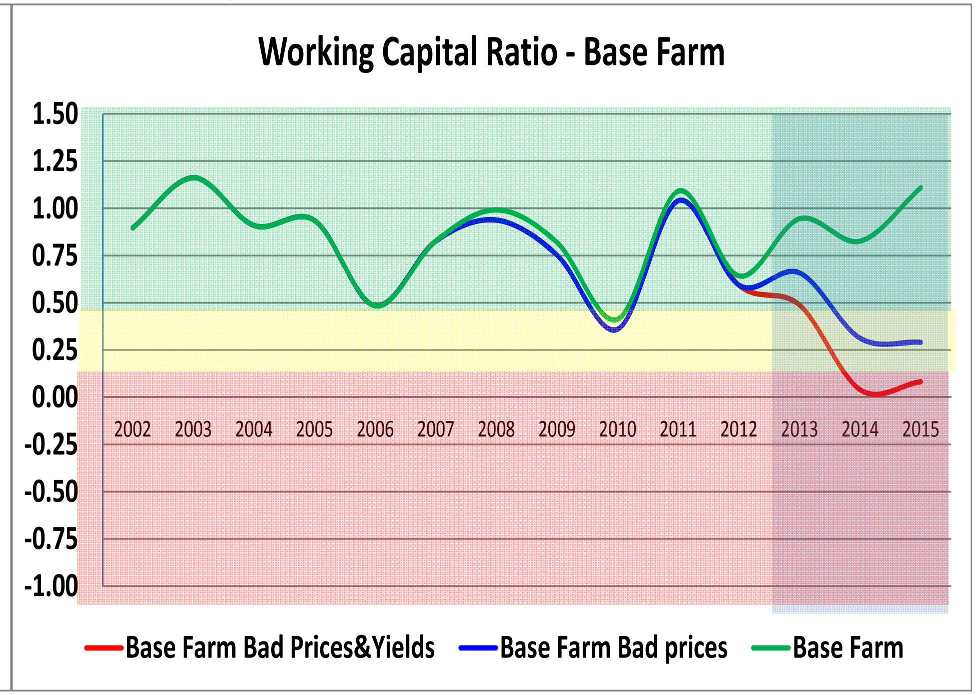
(the final set of charts)

Comparisons: Liquidity

Expanded



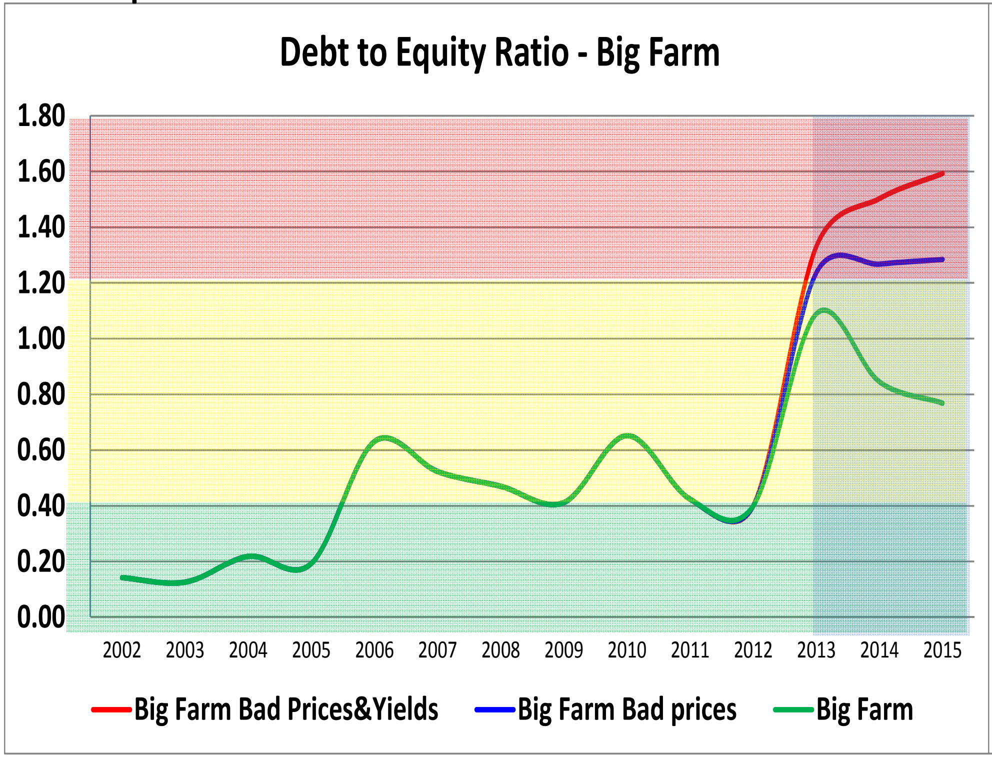
Status Quo



- Expansion challenges working capital
- Risk management is very important to protecting from a sharp drop into low price scenario

Comparisons: Solvency

Expanded



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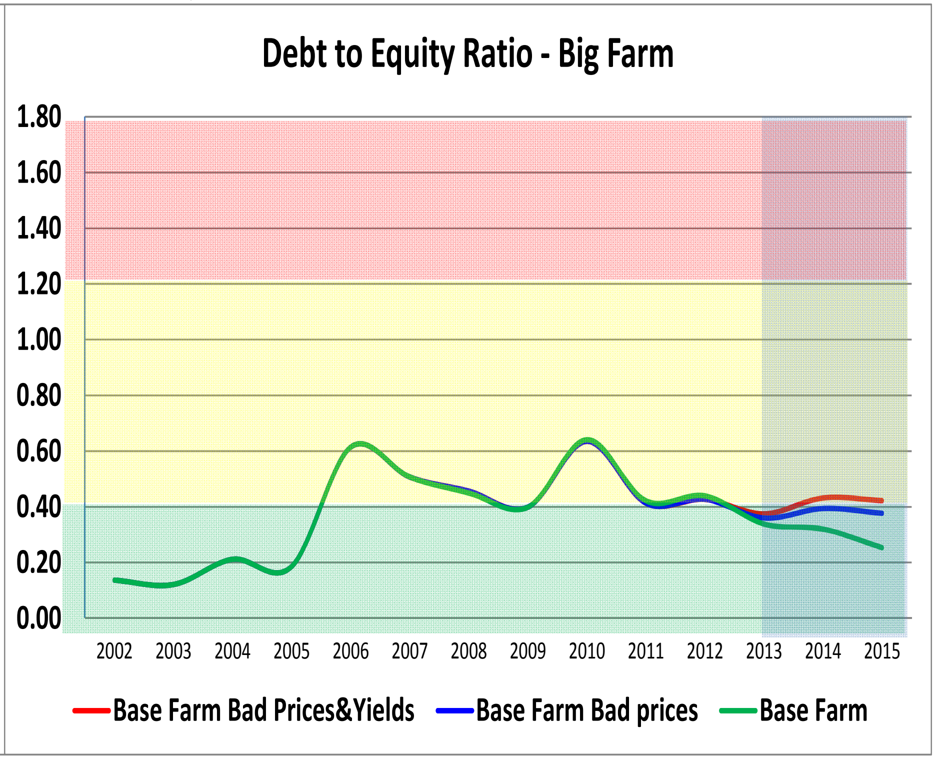
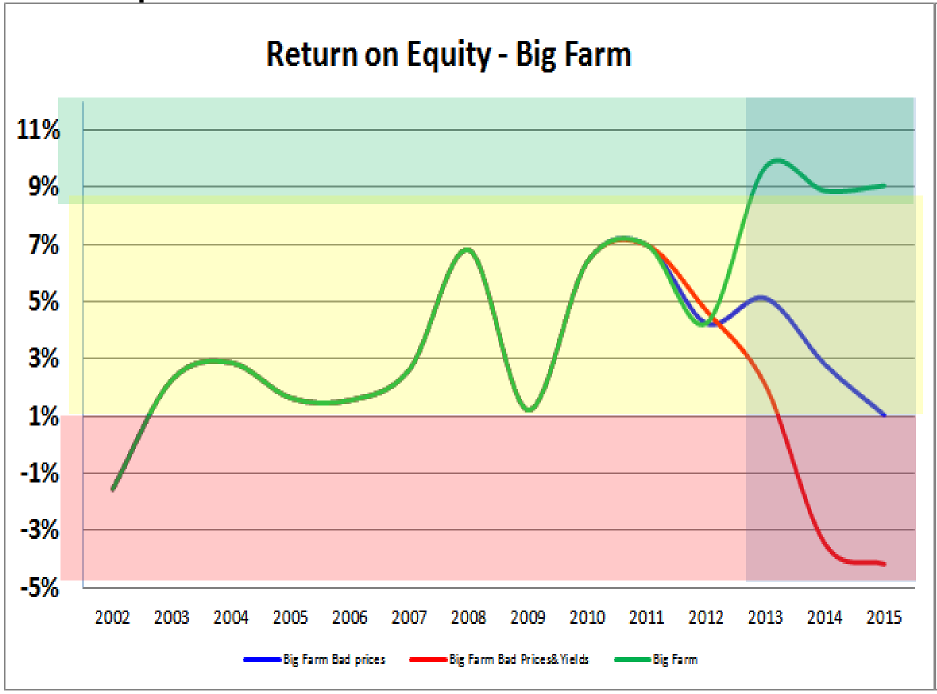


- Large differences in debt to equity ratio
- The big farm is more sensitive to availability and cost of financing

Comparisons: Profitability

Expanded



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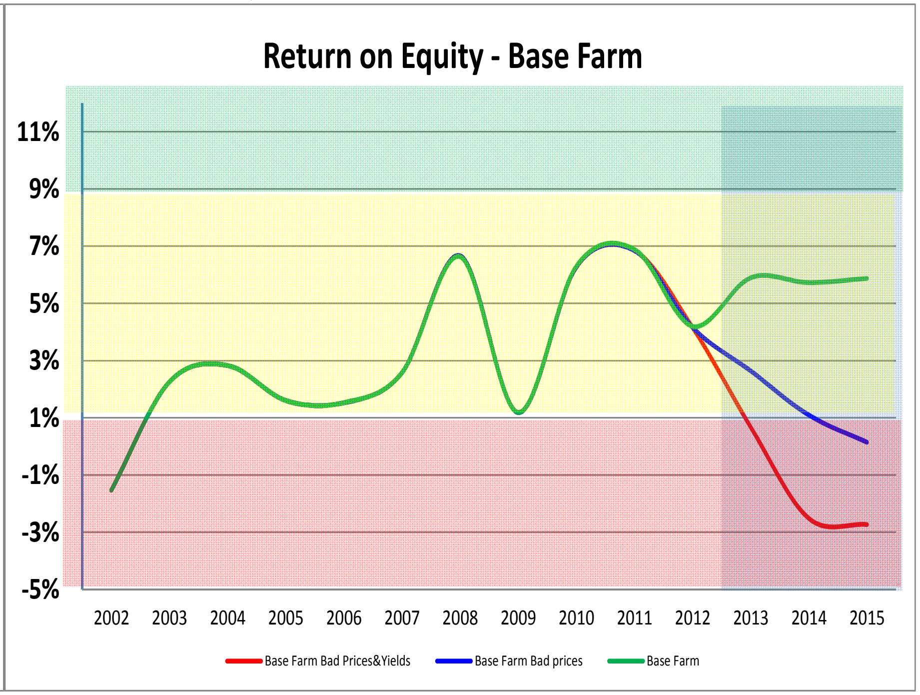
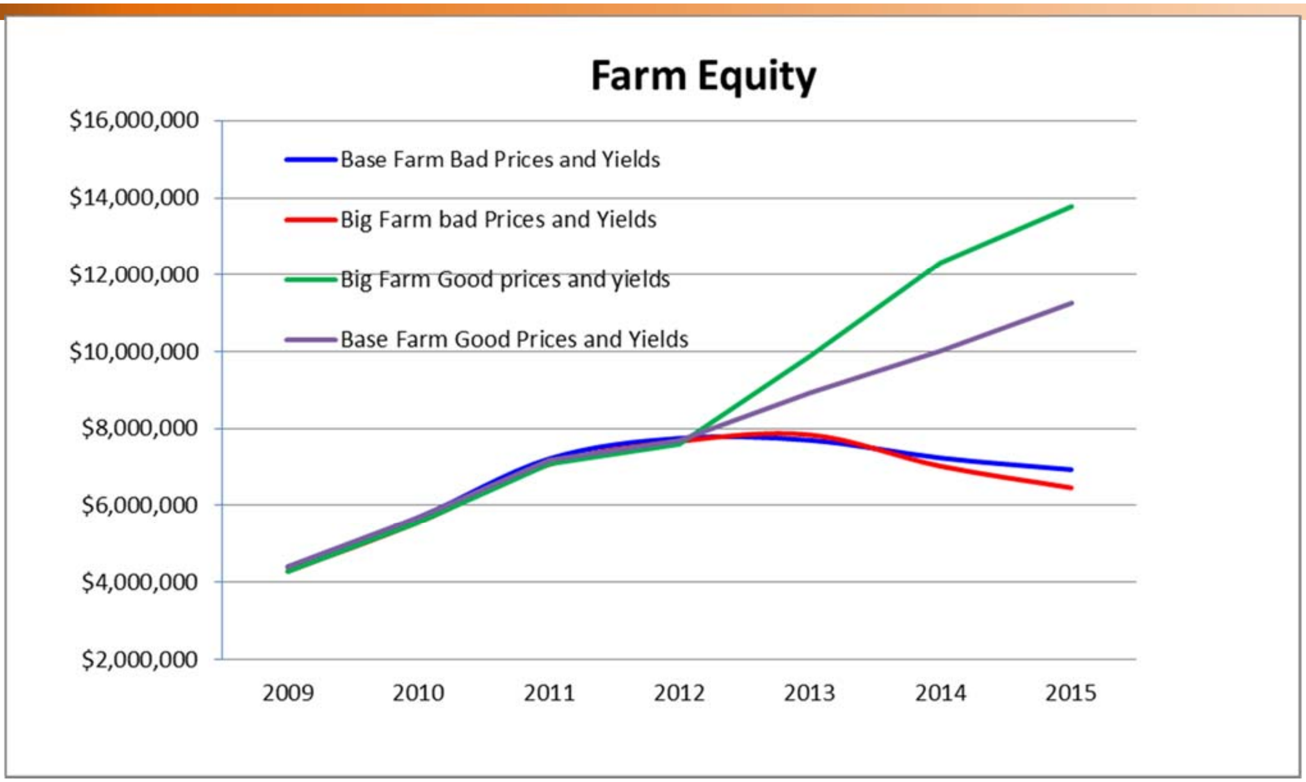


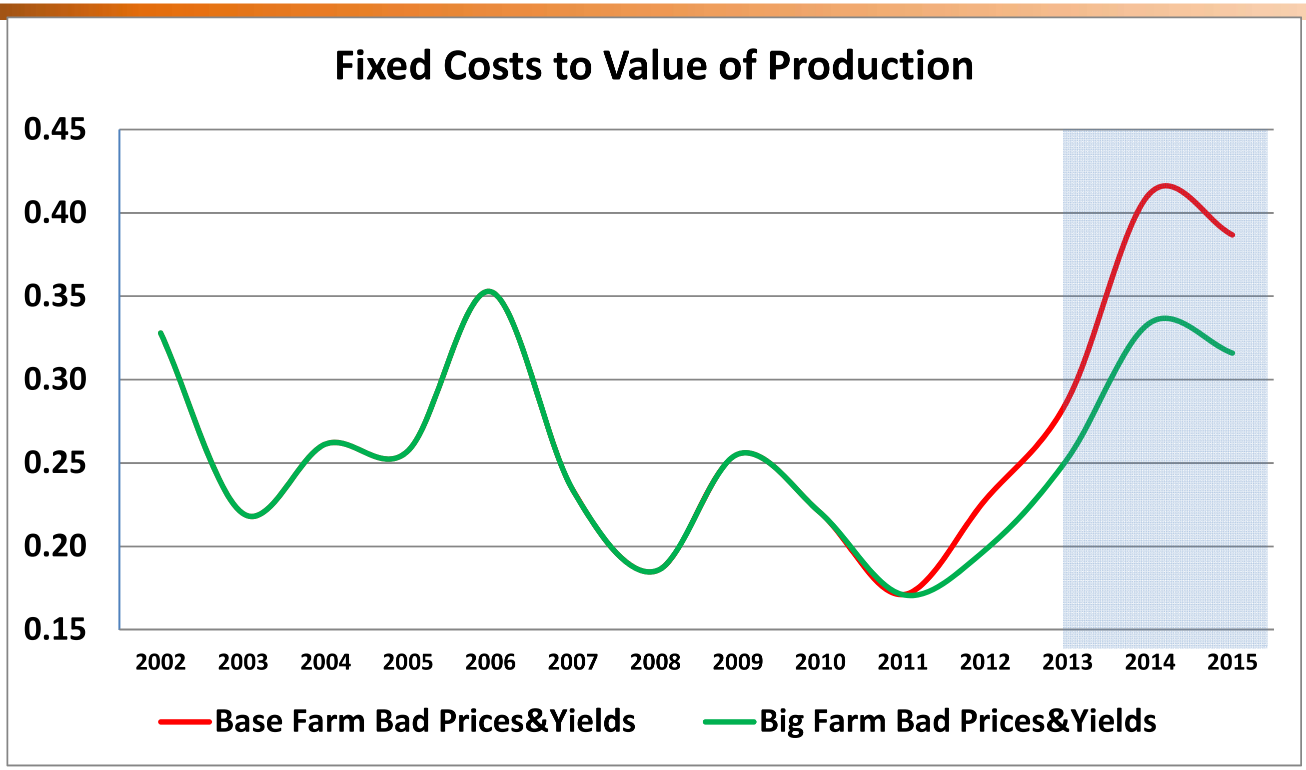
- Return on equity will change with expansion due to leverage
- Even without expansion, low price/low yield scenarios are challenging

Comparisons: Wealth



- Way more equity by expanding, at least with favorable prices
- Even with bad prices equity stays above the status quo scenario
- Why is this possible?

Comparisons: Efficiency



- Spread fixed cost over more acres is a key benefit
- Helps explain why net income drops were not allot different

So where's the risk to expansion?

The danger is in what we can't see

Key Messages

- Expansion carries big potential rewards……and risks
  - Farms are generally in good shape to sustain a downturn
- Efficiency gains are critical to buffer return risk
  - Efficient use of equipment labour and capital
- Working capital and Cash Flow are key
  - Must keep the bills paid during expansion phase
- Must monitor **Profitability** and **Solvency**
  - regardless of whether or not expansion is in your plans
- **Effective marketing, risk management and strategic planning is critical !**

? Questions ?

Thank You

Livestock and Farm Business Branch

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