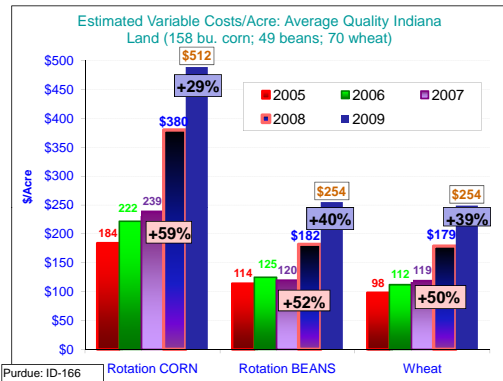
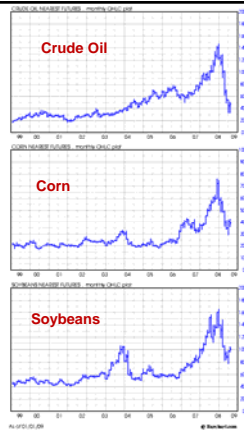


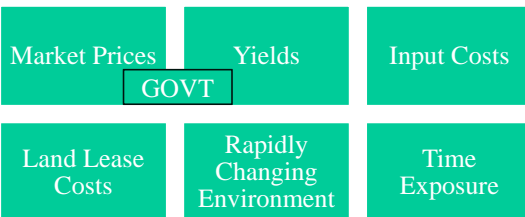
Managing Margin Risk



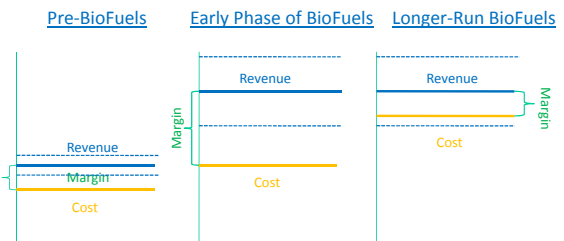
What is Margin Risk?

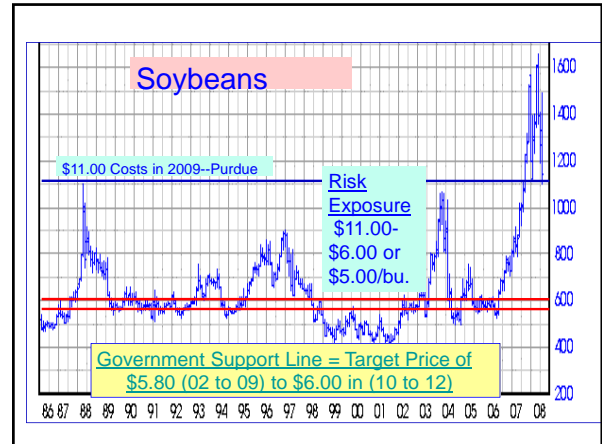
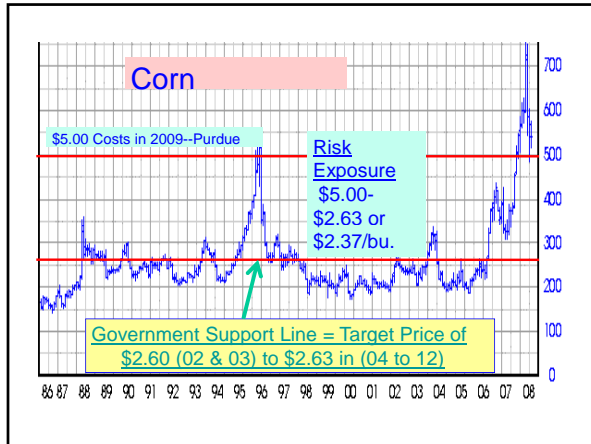


Margin Exposure: Unprecedented \$ of Uncertainty Per Acre: Why?



Tenant's View of Margin Adjustment in BioFuels Era





Breakeven Analysis

- ### Breakeven Analysis
- Price needed to pay all costs once all other income sources are accounted for
 - Variable costs
 - Fertilizer, seeds, storage...
 - Costs that would not be encountered if the crop was not planted/raised.
 - Fixed costs
 - Interest on machinery loans, machinery ownership costs, utilities, buildings...
 - Costs encountered even if the crops was not planted/raised

- ### Variable Costs
- Fertilizer
 - Pesticides (herbicides, fungicides...)
 - Seeds
 - Custom work
 - Machinery repairs
 - Fuel (drying and machinery)
 - Hauling
 - Storage
 - Crop insurance
 - Interest on variable cost

- ### Fixed Costs
- Machinery ownership cost
 - Labor cost
 - Building
 - Utilities (Electricity, gas, telephone...)
 - Land use cost (land ownership cost/rent)

Example Variable Costs (corn)

• Fertilizer \$/Acre	\$215.00
• Seed \$/Acre	\$ 111.00
• Pesticides \$/Acre	\$ 41.00
• Machinery fuel & repairs \$/Acre	\$ 42.00
• Custom work & seasonal hired labor \$/Acre	\$ -
• Crop insurance \$/Acre	\$ 27.00
• Interest and other expenses \$/Acre	\$ 20.00
• Drying charge \$/Acre	\$ 32.00
• Storage handling charge \$/Acre	\$ 24.00
• Total variable cost \$/Acre	\$ 512.00

Example Fixed Costs (corn)

• Machinery/building ownership cost (\$/year)	\$150,000
• Labor cost (unpaid and hired labor) (\$/year)	\$ 80,000
• Utilities (Electricity, gas, telephone...) (\$/year)	\$ 3,600
• Total fixed cost (2,000 Acre) (\$/Acre)	\$ 117
• Land use cost (\$/Acre)	\$ 170
• TOTAL COST (variable + fixed) (\$/Acre)	\$ 799

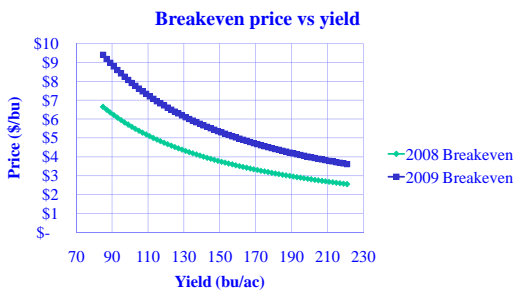
Calculating Breakeven Price

• Crop value (yield*price) (\$/Acre)	\$ 799
• Government payment (\$/Acre)	\$ 20
• Crop insurance (\$/Acre)	\$ -
• Variable cost (\$/Acre)	\$ 512
• Fixed cost (\$/Acre)	\$ 117
• Land use cost (\$/Acre)	\$ 170
	<hr/>
	\$ 0

Calculating Breakeven Price

• Crop value (180 * 4.44) (\$/Acre)	\$ 799
• Government payment (\$/Acre)	\$ 20
• Crop insurance (\$/Acre)	\$ -
• Variable cost (\$/Acre)	\$ 512
• Fixed cost (\$/Acre)	\$ 117
• Land use cost (\$/Acre)	\$ 170
	<hr/>
• Net Margin	\$ 0

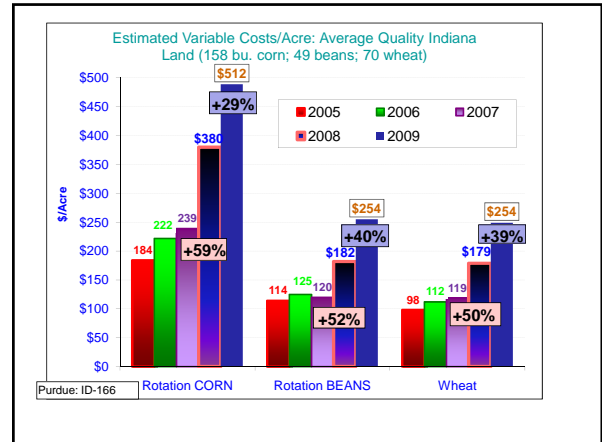
Graphical representation



Soybeans Breakeven

- Variable cost for soybeans are \$254 per acre, fixed cost \$117 and land \$170 per acre. Government payment \$20 per acre.
- If yield is 50, breakeven price is \$10.42 per bushel
- If yield is 55, breakeven price is \$9.47 per bushel
- If yield is 60, breakeven price is \$8.68 per bushel

Input Costs



Major Inputs for Crop Production

Fertilizers:

N up 25% to 75% (NH₃ \$950 to \$1300/ton)

P up 50% to 100% (DAP \$1100 to \$1400)

K up 70% to 150% (\$900 to \$1250/ton)

Seeds:

Corn 15% to 35%

Soybeans 15% to 25%

Wheat 15% to 40%

Pesticides: 5% to 30%

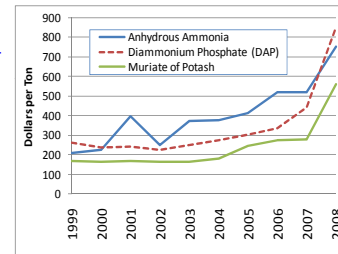
Machinery: Up 4% to 6%

Insurance: -Change with crop prices



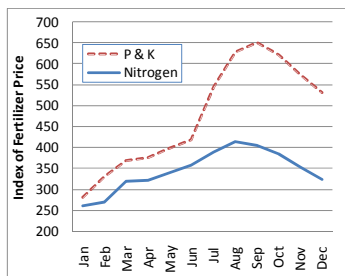
Fertilizer Prices Estimated by Industry Representatives Last Summer

- Anhydrous Ammonia \$950-1300/ton
- DAP \$1100-1400
- K \$900-1250
- UAN Solution, 28% \$400-800



Prices paid by farmers, April, USDA National Ag Statistics

Retail Markets Adjusting to Sharp Declines in Wholesale Prices of Certain Fertilizers

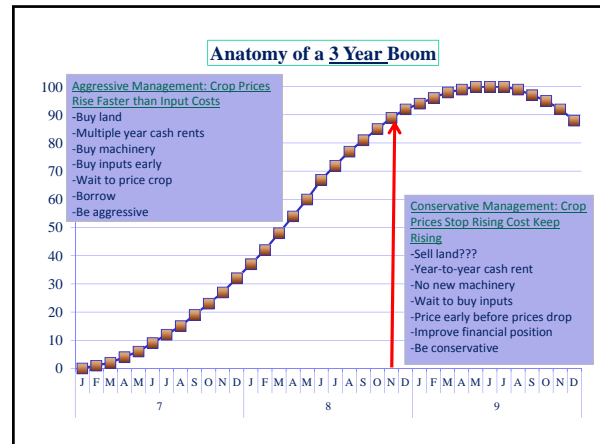


USDA National Ag Statistics

Now What?

Management Responses to Uncertainty

- -Margin-Margin-Margin
- -Increase financial strength
 - Reduce debt/enhance equity to deal with a downturn.
- -Diversification
- -Reduce time exposure
- -Turn from Aggressive management to Conservative management
- -Timing-Timing-Timing



Basic Diversified Pricing Strategy

1. Break the Pricing Window into 4 to 5 periods
2. Price $\frac{1}{4}$ to $\frac{1}{5}$ of your crop during each of these periods

Pricing Window, 4 periods

