RISK MANAGEMENT AND THE NEW 2014 FARM BILL

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Goal Today

• Overview 2014 Farm Bill changes for Commodity Support
  • Decision points will come later this year, likely mid to late summer
• Overview crop insurance practices in WI and changes in the Farm Bill
  • Farm Bill passage has not changed anything for 2014, all the changes will take effect for the 2015 season
• Quick thoughts on profitability for corn and soybeans in 2014
  • As time allows
USDA spends about $100 billion/year (~3%), mix of mandatory & discretionary
Most of the USDA budget under 2008 Farm Bill is for Nutrition Programs (SNAP/Food Stamps, WIC, School Lunch Program)

79% Nutrition
15% Farm & Commodity Programs
6% Conservation & Forestry
<1% All Other
Average Annual Outlays Under 2008 Farm Bill

- **Crop Insurance**
  - $8.3 bil
- **Risk Management** (field & specialty crops)
  - $8.4 bil
- **Commodity Programs** (field crops)
  - $5.9 bil
- **Disaster Assistance** (crops & livestock)
  - $0.8 bil
- **Supplemental Revenue Assistance Payments Program (SURE)**
- **Ad hoc disaster payments**
- **Emergency Assistance for Livestock, Honey Bees, and Farm-Raised Fish Program**

**Direct Payments (DP)** $4.9 bil
- **Counter-Cyclical Payments (CCP)** $0.559 bil
- **Average Crop Revenue Election (ACRE)** $0.311 bil
- **Marketing Assistance Loans** $0.225 bil
- **Loan Deficiency Payments (LDP)** $0.225 bil
- **Livestock Indemnity Program**
- **Livestock Forage Disaster Program**
- **Tree Assistance Program**
- **Emergency Disaster Loans**

Source: http://ncseonline.org/NLE/CRSreports/10Oct/R41317.pdf
Direct Payments $/ac in 2009

Counter-Cyclical Payments $/ac in 2009

Source: USDA-ERS Farm Program Atlas [link]

[link]
MILC Payments 2009

% Net Cash Income from Govt. Payments not including premium subsidies or indemnities
Farm Safety Net $13.4 bil (-6%)

Disaster Assistance (crops & livestock) $0.75 bil

Commodity Programs (field crops) $4.4 bil (-25%)

Risk Management (field & specialty crops) $8.4 bil

Crop Insurance $8.3 bil

Direct Payments (DP) $4.9 bil

Counter Cyclical Payments (CCP) $0.559 bil

Non-insured Disaster Assistance (NAP) $0.1 bil

Supplemental Revenue Assistance Payments Program (SURE)

Marketing Assistance Loans $0.225 bil

Loan Deficiency Payments (LDP) $0.225 bil

Direct Payments (DP) $4.9 bil

Counter Cyclical Payments (CCP) $0.559 bil

Average Crop Revenue Election (ACRE) $0.341 bil

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Source: http://ncseonline.org/NLE/CRS_reports/10Oct/R41317.pdf
Most of the USDA budget under 2014 Farm Bill is still for Nutrition Programs

Commodity Support now a 13% share (vs 15%)
New Commodity Support Programs

• Price Loss Coverage (PLC)
  • Basically counter-cyclical payments (CCP) with higher target prices
  • Can add Supplemental Coverage Option (SCO)

• Agriculture Risk Coverage (ARC)
  • New and improved ACRE program (revenue support)
  • County revenue by crop or Individual revenue for whole farm

• In 2014, farmers/land owners will have to choose PLC, County ARC by crop or Whole Farm ARC
  • Irrevocable for 2014 – 2018 crop years
  • FSA will announce signup, likely mid to late summer
Price Loss Coverage (PLC)

- Same as CCP, but higher “Reference Prices”
  - Corn $3.70, Soybeans $8.40, Wheat $5.50, Oats $2.40
- If National Marketing Year Average Price is less than the Reference Price, PLC payments made
  - PLC PaymentRate = ReferencePrice – MYAPrice
  - 85% x BaseAcres x PaymentYield x PLC PaymentRate
- Can’t increase Base Acres, but can reallocate Base Acres based on shares of covered crops planted 2009-2012
- Can update Payment Yields to 90% of the farm average yield over 2008-2012
- Eligible for Supplemental Coverage Option (SCO) [later]
Updating Base Acres

- Suppose an FSA “Farm” has 100 base acres: 50 corn, 30 soybean and 20 oats based on previous history
- Average acres planted during 2009-2012: 55 corn acres, 35 soybean and 10 oats
- Can shift PLC payments to crops have been planting the last few years: from oats to more corn and more soybeans
- Beneficial because expect higher payments with corn and/or soybeans than oats
- Note that the farm cannot increase total base acres, only the shares for corn, soybean, oats or other program crops planted during 2009-2012
Updating: Payment Yields

- It’s been awhile since allowed to update payment yields to reflect current yield potentials
- Payment yields have always been low relative or the farm’s expected yield
- Payment Yields now 90% of the farm average yield during 2008-2012

PLC Payments
- PLC PaymentRate = ReferencePrice – MYAPrice
- 85% x BaseAcres x PaymentYield x PLC PaymentRate
Agriculture Risk Coverage (ARC)

- **County ARC** payments made if Actual County Revenue is less than County Guarantee
- **Actual Revenue** = County Average Yield x MYA Price
- County Benchmark = 5-Year Olympic Average County Yield x 5-Year Olympic Average MYA Price
  - Use PLC Reference Price if higher than MYA Price
  - Use 70% County T Yield if higher than County Yield
- **County Guarantee** = 86% of County Benchmark
- ARC Payment Rate = County Guarantee – Actual County Revenue, up to 10% of County Benchmark
- **ARC Payment** = 85% x BaseAcres x ARC Payment Rate
## Corn 2014 Example St. Croix County

<table>
<thead>
<tr>
<th>Year</th>
<th>Yield</th>
<th>Price</th>
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</thead>
<tbody>
<tr>
<td>2013</td>
<td>85.4</td>
<td>4.50</td>
</tr>
<tr>
<td>2012</td>
<td>165.6</td>
<td>6.89</td>
</tr>
<tr>
<td>2011</td>
<td>164.6</td>
<td>6.22</td>
</tr>
<tr>
<td>2010</td>
<td>172</td>
<td>5.18</td>
</tr>
<tr>
<td>2009</td>
<td>167</td>
<td>3.55</td>
</tr>
</tbody>
</table>

- Olympic Average Yield = 165.7
- Olympic Average Price = 5.30
- ARC County Benchmark = 5.30 x 165.7 = $878.21
- ARC Guarantee = 86% x $878.21 = $755.26
- Maximum ARC Payment = 10% x $755.26 = $75.53
Agriculture Risk Coverage (ARC)

- **Individual ARC** based on revenue from all program crops as a whole for a farm, not crop by crop
- To be simple, assume 2 program crops (corn & soybeans)
- Benchmark Revenue by Crop = 5-Year Olympic Average of Yield per Planted Acre x MYA Price
- **Individual Benchmark Revenue** = 
  
  \[(\text{Corn Acres/Total Acres}) \times \text{Corn Benchmark Revenue} + (\text{Soy Acres/Total Acres}) \times \text{Soy Benchmark Revenue}\]
- **Individual Guarantee** = 86% of Farm Benchmark Revenue
Agriculture Risk Coverage (ARC)

- **Individual ARC Payment Rate** = Farm Guarantee – Actual Farm Revenue, up to 10% of County Benchmark
- **Individual ARC Payment** = 65% x Base Acres x Individual ARC Payment Rate
  - Maximum is 10% of County Benchmark
- **Actual Revenue** = (Corn Production x MYA Corn Price) + (Soy Production x MYA Soy Price) / Total Planted Acres
  - Use PLC Reference Price if higher than MYA Price
  - Use 70% County T Yield if higher than your Yield
### Corn

<table>
<thead>
<tr>
<th>Year</th>
<th>Yld</th>
<th>Price</th>
<th>Revenue</th>
</tr>
</thead>
<tbody>
<tr>
<td>2013</td>
<td>175</td>
<td>4.50</td>
<td>787.50</td>
</tr>
<tr>
<td>2012</td>
<td>150</td>
<td>6.89</td>
<td>1,033.50</td>
</tr>
<tr>
<td>2011</td>
<td>185</td>
<td>6.22</td>
<td>1,150.70</td>
</tr>
<tr>
<td>2010</td>
<td>170</td>
<td>5.18</td>
<td>880.60</td>
</tr>
<tr>
<td>2009</td>
<td>150</td>
<td>3.55</td>
<td>532.50</td>
</tr>
<tr>
<td>Crop Benchmark</td>
<td></td>
<td></td>
<td>900.53</td>
</tr>
</tbody>
</table>

### Soy

<table>
<thead>
<tr>
<th>Year</th>
<th>Yld</th>
<th>Price</th>
<th>Revenue</th>
</tr>
</thead>
<tbody>
<tr>
<td>2013</td>
<td>43</td>
<td>12.70</td>
<td>546.10</td>
</tr>
<tr>
<td>2012</td>
<td>45</td>
<td>14.40</td>
<td>648.00</td>
</tr>
<tr>
<td>2011</td>
<td>51</td>
<td>12.50</td>
<td>637.50</td>
</tr>
<tr>
<td>2010</td>
<td>43</td>
<td>11.30</td>
<td>485.90</td>
</tr>
<tr>
<td>2009</td>
<td>35</td>
<td>9.59</td>
<td>335.65</td>
</tr>
<tr>
<td>Crop Benchmark</td>
<td></td>
<td></td>
<td>556.50</td>
</tr>
</tbody>
</table>

### Hypothetical Example

- **Individual Benchmark** = \((300/500) \times 900.53 + (200/500) \times 556.50 = \$762.92\)
- **Individual Guarantee** = 86% \times \$762.92 = \$656.11
- **“Actual” 2013 Corn** = \((300 \times 160 \times \$4.62) + (200 \times 40 \times \$11.36) /500 = \$625.28/acre\)
- **Payment Rate** = 656.11 – 625.28 = \$30.83
- **ARC Payment** = 65% \times Base Acres \times \$30.83
Commodity Crop Support Summary

- All producers for a farm will have to choose one of these if they have base acres (PLC is the default)

1. **PLC**: Same as CCP, but higher reference prices
   - $3.70 for corn and $8.40 for soybeans
   - Have the option to buy SCO

2. **County ARC**: Basis risk for your farm versus county

3. **Individual ARC**: Tied to farm revenue, but crops can offset each other

- Wait for USDA-FSA to announce sign-up deadlines
- **All** producers for each FSA farm will have to sign the form
- **Note**: no Direct Payments will come fall of 2014

- If PLC/ARC payments are due to you for 2014, will be paid in fall of 2015 after 2014 Marketing Year
Questions?
Crop Insurance: What’s New for 2014?

- Premiums will be lower
  - Lower crop prices: Corn $4.62 and Soybeans $11.36
    - Last year $5.65 and $12.87, so 18% and 12% lower
  - Lower volatilities: even lower prices for RP
- Enterprise Units becoming more popular because of larger premium discounts: more cost effective
  - Insure all of your corn in a county as a single unit
  - Great if have homogenous acres
- Introduced new area yield insurance policies
  - AYP and ARP, same as the old GRP and GRIP
### WI Crop Insurance Policies: Corn & Soybeans

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<th>Area-Wide (County)</th>
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<tr>
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<td>YP Yield Protection</td>
<td>Area Risk Protection Insurance (ARPI)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Area Yield Protection AYP</td>
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<tr>
<td><strong>Revenue</strong></td>
<td>RP Revenue Protection</td>
<td>ARPI</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Area Revenue Protection ARP</td>
</tr>
<tr>
<td></td>
<td>RP-HPE: Harvest Price Exclusion</td>
<td>ARP-HPE w/ Harvest Price Exclusion</td>
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- **Catastrophic coverage (CAT):** For YP, ARPI
- **AGR-Lite:** Insure Schedule F income
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<td>Revenue</td>
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<td>ARPI Area Revenue Protection ARP</td>
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- **Catastrophic coverage (CAT):** For YP, ARPI
- **AGR-Lite:** Insure Schedule F income
### CORN: % insured acres under each policy

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<th>Year</th>
<th>RP</th>
<th>YP</th>
<th>Other</th>
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<tbody>
<tr>
<td>2009</td>
<td>69%</td>
<td>22%</td>
<td>9%</td>
</tr>
<tr>
<td>2010</td>
<td>71%</td>
<td>21%</td>
<td>8%</td>
</tr>
<tr>
<td>2011</td>
<td>76%</td>
<td>16%</td>
<td>7%</td>
</tr>
<tr>
<td>2012</td>
<td>81%</td>
<td>14%</td>
<td>4%</td>
</tr>
<tr>
<td>2013</td>
<td>84%</td>
<td>11%</td>
<td>6%</td>
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### SOYBEAN: % insured acres under each policy

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<tr>
<td>2009</td>
<td>77%</td>
<td>16%</td>
<td>8%</td>
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<td>2010</td>
<td>82%</td>
<td>13%</td>
<td>5%</td>
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<tr>
<td>2011</td>
<td>84%</td>
<td>11%</td>
<td>4%</td>
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<tr>
<td>2012</td>
<td>88%</td>
<td>10%</td>
<td>1%</td>
</tr>
<tr>
<td>2013</td>
<td>91%</td>
<td>8%</td>
<td>1%</td>
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<td>---</td>
<td>---</td>
<td>43%</td>
<td>40%</td>
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<tr>
<td>50%</td>
<td>1%</td>
<td>1%</td>
<td>7%</td>
<td>7%</td>
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<td>55%</td>
<td>0%</td>
<td>0%</td>
<td>1%</td>
<td>2%</td>
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<td>60%</td>
<td>3%</td>
<td>2%</td>
<td>6%</td>
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<td>65%</td>
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<td>5%</td>
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<td>15%</td>
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<td>70%</td>
<td>28%</td>
<td>24%</td>
<td>22%</td>
<td>21%</td>
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<td>75%</td>
<td>38%</td>
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<td>80%</td>
<td>20%</td>
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<tr>
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<tr>
<td>75%</td>
<td>38%</td>
<td>43%</td>
<td>6%</td>
<td>8%</td>
</tr>
<tr>
<td>80%</td>
<td>20%</td>
<td>21%</td>
<td>1%</td>
<td>2%</td>
</tr>
<tr>
<td>85%</td>
<td>4%</td>
<td>4%</td>
<td>0%</td>
<td>0%</td>
</tr>
</tbody>
</table>

56% of WI corn and 66% of WI soybeans use RP with 70% to 80% coverage level.
## % of Fair Premium Paid by Government

<table>
<thead>
<tr>
<th>Coverage Level</th>
<th>Basic &amp; Optional</th>
<th>Enterprise</th>
<th>Whole Farm</th>
</tr>
</thead>
<tbody>
<tr>
<td>50%</td>
<td>67%</td>
<td>80%</td>
<td>80%</td>
</tr>
<tr>
<td>55%</td>
<td>64%</td>
<td>80%</td>
<td>80%</td>
</tr>
<tr>
<td>60%</td>
<td>64%</td>
<td>80%</td>
<td>80%</td>
</tr>
<tr>
<td>65%</td>
<td>59%</td>
<td>80%</td>
<td>80%</td>
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<tr>
<td>70%</td>
<td>59%</td>
<td>80%</td>
<td>80%</td>
</tr>
<tr>
<td><strong>75%</strong></td>
<td><strong>55%</strong></td>
<td><strong>77%</strong></td>
<td><strong>80%</strong></td>
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<tr>
<td>80%</td>
<td>48%</td>
<td>68%</td>
<td>71%</td>
</tr>
<tr>
<td>85%</td>
<td>38%</td>
<td>53%</td>
<td>56%</td>
</tr>
</tbody>
</table>
Impact of Enterprise Units on Premiums

- FarmDOC (U of IL) Crop Insurance Premium Calculator
- Pick a state, county and crop, and the yield potential (low, average, high)
- Dane, High Yield Potential (182 bu/ac insurance average)
- 75% RP, Premiums ($/acres) by unit size
  - Optional $22.86 Basic $20.48
  - Enterprise, 250 A $8.52 Enterprise, 450 A $7.79
- See the large cost reductions with enterprise units
- Can you afford higher coverage (protect your margin)?
Summary

• Most WI corn and soybean acres are insured and use Revenue Protection (RP), 70%-80% Coverage Level
  • Likely more Optional Units
  • Consider Enterprise Units for 2014 to lower cost and then use a higher coverage level
• Smaller group of insured corn and soybean farmers use
  • Yield Protection (YP), Catastrophic policy (CAT)
  • Likely more Basic Units

• If you are doing something different than this for crop insurance, you should be sure you have thought about it and have a good reason why
Crop Insurance in the 2014 Farm Bill

• Several (mostly minor) changes, none implemented until 2015 crop year
1. **Supplemental Coverage Option (SCO)**
2. **Conservation compliance for premium subsidies**
3. Lower premium subsidies if break native sod
4. Choose different coverage levels for irrigated vs dryland
5. Enterprise unit discounts made permanent
6. Increasing county yield plugs for yield history
7. Focus on underserved commodities: rice margin insurance, peanut RP, sorghum irrigation, livestock catastrophic disease, organic price elections, …
Supplemental Coverage Option (SCO)

- SCO: allows you to insure part of your RP/YP deductible with a county policy
  - Layer individual & county coverage
  - Can’t exceed 86% total coverage if using RP
- Add SCO to RP policy to increase coverage up to 86% maximum
  - SCO will not pay until county loss exceeds 14%
  - SCO premium subsidy is 65%
- SCO available in 2015, only if choose PLC
  - If choose ARC, cannot buy SCO
Figure 1. Illustration of SCO Coverage when Coupled with Individual Insurance

Revenue or Yield

86% of Guarantee

SCO Coverage

Insurance Guarantee

Coverage Level x Guarantee

Individual Insurance Deductible

Individual Insurance Coverage

County

Farm

Source: Nick Paulson, U of IL ACE: http://farmdocdaily.illinois.edu/2014/02/2014-farm-bill-the-supplementa.html
Supplemental Coverage Option (SCO)

- Suppose have 75% RP on corn (25% deductible)
- Suppose added 86% SCO (max)
- Suppose county revenue is 80% of average
- Suppose your revenue is 65% of guarantee
- Receive SCO indemnity for a 6% loss
- Receive RP indemnity for a 10% loss
- Can receive SCO and no RP indemnity, or an RP and no SCO indemnity, or no indemnity at all
- Will buy from crop insurance agent
- First available in 2015
Questions?
Farm Income: 2013 versus 2014

- Record farm income in 2013
- USDA projects 27% drop in 2014
Profitability for Corn & Soy in 2014

• $7 corn and $15 soybeans has hidden a lot of management problems!!
• Being profitable in 2014 will require better management than in the last few years
  • Tighter margins ahead
• My opinion: Controlling costs will be important this year
• First take a quick look at budgets
• Then some thoughts on controlling costs in 2014
Iowa State University Estimated Costs for Corn and Soybeans 2005-2014

Source: http://www.extension.iastate.edu/agdm/crops/html/a1-20.html
Non-land Cost for Corn and Soybean Production in Illinois for the past 30+ years

Source: http://farmdocdaily.illinois.edu/2014/01/controlling-costs-with-lower-crop-revenues.html
UWEX’s FARM Team

- Crop budgets for farmers to use: Non-Land Costs
  - [http://www.uwex.edu/ces/farmteam/budgets/fieldcrop.cfm](http://www.uwex.edu/ces/farmteam/budgets/fieldcrop.cfm)
- Corn slight increase, soybeans slight decrease

<table>
<thead>
<tr>
<th>Year</th>
<th>Corn</th>
<th>Soybeans</th>
</tr>
</thead>
<tbody>
<tr>
<td>2013</td>
<td>$557.96</td>
<td>$408.65</td>
</tr>
<tr>
<td>2014</td>
<td>$563.52</td>
<td>$393.77</td>
</tr>
</tbody>
</table>
Comparing Numbers: Non-Land Costs

- Budgets are averages and guesses
- In reality, there is a lot of variation among farmers
- An average cost of production does not really matter to you, what you need to know is your cost of production, not the state average, and only you can answer that

<table>
<thead>
<tr>
<th>State</th>
<th>Corn</th>
<th>Soybeans</th>
</tr>
</thead>
<tbody>
<tr>
<td>IA</td>
<td>$484.88</td>
<td>$269.60</td>
</tr>
<tr>
<td>IL</td>
<td>$565.00</td>
<td>$335.00</td>
</tr>
<tr>
<td>WI</td>
<td>$563.52</td>
<td>$393.77</td>
</tr>
</tbody>
</table>
1996 Data for about 250 Minnesota Corn and Soybean Farmers

Source: Southeastern and Southwestern Minnesota Farm Business Management Associations
Illinois Data for 2006

Operator and Land Return by Percent of Land in Corn, 2006

Controlling Costs: Suggestions

• With high costs, tight margins, a short crop is the biggest risk faced
• Re-evaluate your crop insurance
  • Enterprise units to cut costs and then use a higher coverage level (80% or 85%) to insure a higher margin
• Do a good job marketing: hire help if you need it
  • A few extra cents a bushel can mean the difference between breaking even and making money
• If uncomfortable with marketing company, give them a smaller part of your crop to see what they can do
Controlling Costs: Suggestions

- Control input costs
  - Use tools to optimize seeding rates and nutrients that respond to prices
  - Cost effectively protect your yield potential
  - Scout and only apply when you need inputs
- Negotiate lower rents
- Use machinery to its capacity, sell excess
Controlling Costs: Machinery

- A lot of machinery bought in recent years to avoid taxes on large incomes: High machinery demand, high prices
- Farmers will be paying high depreciation on machinery for years
- U of IL shows machinery costs doubled (100% increase) from 2006 to 2012
  - 61% of this increase due to increased depreciation
- Maintain equipment properly
- Use equipment fully/over right amount of acres
  - Tractors that sit around too much?
  - Combine needs 3000-4000 acres/year
  - Reduce tillage passes?
Crop Budget Help

• UWEX’s FARM Team & Center for Dairy Profitability
  http://www.uwex.edu/ces/farmteam/budgets/fieldcrop.cfm

• U of IL:
  http://farmdoc.illinois.edu/manage/2014_crop_budgets.pdf

• Iowa State University:
  http://www.extension.iastate.edu/agdm/crops/html/a1-20.html
Thanks for Your Attention!

Questions?

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