New Farm Bill, New Safety Net

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Integrated Crop Management Conference
CCA Credit: 1 CM
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Agenda

• Overview of Farm Bill programs
• Update, Elect, Enroll
• Update : Base Reallocation & Yield Update
• Elect: PLC, ARC-CO, ARC-IC
• Price Expectations
• Risk Profile
Farm Programs

Repealed:
- Direct Payments
- Counter-Cycliclical Payments
- Supplemental Revenue Assistance Program (SURE)
- Avg. Crop Revenue Election Program (ACRE)

New:
- Agricultural Risk Coverage-County (ARC-CO)
- Agricultural Risk Coverage-Individual (ARC-IC)
- Price Loss Coverage (PLC)
- Supplemental Coverage Option (SCO)

Extension and Outreach/Department of Economics
ARC/PLC Program

Covered Commodities for ARC/PLC

<table>
<thead>
<tr>
<th>Covered Commodities</th>
<th>Barley</th>
<th>Canola</th>
<th>Corn</th>
</tr>
</thead>
<tbody>
<tr>
<td>Crambe</td>
<td>Flaxseed</td>
<td>Garbanzo, Large</td>
<td></td>
</tr>
<tr>
<td>Garbanzo, Small</td>
<td>Grain Sorghum</td>
<td>Lentils</td>
<td></td>
</tr>
<tr>
<td>Mustard Seed</td>
<td>Oats</td>
<td>Peanuts</td>
<td></td>
</tr>
<tr>
<td>Peas, Dry</td>
<td>Rapeseed</td>
<td>Rice, Long Grain</td>
<td></td>
</tr>
<tr>
<td>Rice, Medium Grain</td>
<td>Safflowers</td>
<td>Sesame Seed</td>
<td></td>
</tr>
<tr>
<td>Soybeans</td>
<td>Sunflower Seed</td>
<td>Wheat</td>
<td></td>
</tr>
</tbody>
</table>

New Farm Programs

<table>
<thead>
<tr>
<th>Programs</th>
<th>By FARM</th>
<th>By CROP</th>
</tr>
</thead>
<tbody>
<tr>
<td>PLC offers price protection</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>ARC-CO offers revenue protection at the county level</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>ARC-IC offers revenue protection at an individual farm level across all farms enrolled and covered commodities planted</td>
<td>✓</td>
<td>✗</td>
</tr>
</tbody>
</table>
**ARC PLC Decisions: The 3 Step Process**

1. **update**
   The land owner can “reallocate” base acres and/or “update” Payment Yields by FSA farm number.

2. **election**
   Once Base Acres and Yields are determined for that farm, then all current producers Elect ARC or PLC

3. **enrollment**
   Once Election has been completed then Enrollment by a producer occurs annually.

**Timeline of Decisions**

**September 9, 2014 – February 27, 2015:**
(1) Maintain or Reallocate Historic Base Acres. Total base acres remain unchanged.
(2) Retain or Update farm’s payment yields

**November 17, 2014 - March 31, 2015:**
(3) Elect ARC-CO, ARC-IC or PLC for life of Farm Bill
   If no election, then PLC for 2015 through 2018; no program in 2014.

**Early 2015 - March 15, 2015:**
(4) For acreage NOT under ARC, Buy SCO with crop insurance for 2015

**Mid-April 2015 – Summer 2015**
(5) Enroll in elected program for 2014 & 2015 simultaneously
Update Decision

“Update” Decision

1. Retain or Update Farm’s Payment Yields
2. Maintain or Reallocate Base Acres

• One-time choice (irrevocable) by FSA farm number
• Requires landowner’s signature or Power of Attorney Form 211

Source: Iowa State FSA Office
Payment Yield Update

If PLC payments triggered:

Higher Yield = Higher Payment

The owner can choose to:

1. Retain Current Counter-Cyclical Yields
   OR
2. Update Yields: simple average of years planted in 2008-2012 X 90%

Source: Iowa State FSA Office
Payment Yield Update (cont.)

A *Substitute Yield* can be used when:

1. Farm yield is below the substitute yield in any year, 2008 through 2012

OR

2. The crop was planted in a year and the owner does not have yield records available.

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Source: Iowa State FSA Office

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Payment Yield Update (cont.)

*Substitute Yield:*

75% of the 2008 through 2012 simple *county average yield* per planted acre for the covered commodity

Available at: www.fsa.usda.gov/arc-plc
Yield Update Example 1: Fayette Co.

5 Year average of Planted acreage

<table>
<thead>
<tr>
<th>Farm #2566</th>
<th>Current Corn Yield: 142 bu/a</th>
</tr>
</thead>
<tbody>
<tr>
<td>Crop</td>
<td>2008</td>
</tr>
<tr>
<td>Corn</td>
<td>151</td>
</tr>
</tbody>
</table>

Source: Iowa State FSA Office

Average CO Yield (75%)

<table>
<thead>
<tr>
<th></th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>Avg. CO</td>
<td>122</td>
<td>122</td>
<td>122</td>
<td>122</td>
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</tr>
</tbody>
</table>

Source: Iowa State FSA Office
Yield Update Example 1: Fayette Co.

5 Year average of Planted acreage

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<th>Crop</th>
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<th>2011</th>
<th>2012</th>
<th>Total</th>
<th>Avg. Yield</th>
<th>PLC Yield (90%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Corn</td>
<td>151</td>
<td>165</td>
<td>155</td>
<td>180</td>
<td>449</td>
<td>773</td>
<td>155</td>
<td>139 bu/a</td>
</tr>
<tr>
<td>Avg. CO</td>
<td>122</td>
<td>122</td>
<td>122</td>
<td>122</td>
<td>122</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yield (75%)</td>
<td></td>
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</tr>
</tbody>
</table>

Current 142 bu > Updated 139 bu: Retain

Payment Yield Update Tools

- Iowa State University: http://www.extension.iastate.edu/agdm/info/farmbill.html
- University of Illinois: http://fsa.usapas.com/
- Texas A&M: https://usda.afpc.tamu.edu/
ISU Update Tool

ISU Tool – Example 1

2. Retain old program yields or update yields for Price Loss Coverage (PLC) program

<table>
<thead>
<tr>
<th></th>
<th>Corn</th>
<th>Soybeans</th>
<th>Oats</th>
<th>Wheat</th>
</tr>
</thead>
<tbody>
<tr>
<td>2006 act. farm yield per planted acre</td>
<td>151</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2009 act. farm yield per planted acre</td>
<td>165</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2010 act. farm yield per planted acre</td>
<td>155</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2011 act. farm yield per planted acre</td>
<td>180</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2012 act. farm yield per planted acre</td>
<td>119</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2006 act. farm yield or plug</td>
<td>151.0</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2009 act. farm yield or plug</td>
<td>165.0</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2010 act. farm yield or plug</td>
<td>155.0</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2011 act. farm yield or plug</td>
<td>180.0</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2012 act. farm yield or plug</td>
<td>122.0</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>90% of 2008-2012 average</td>
<td>139.1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Current CCP payment yields</td>
<td>142.0</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Updated payment yields for PLC</td>
<td>139.1</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Use updated payment yields for PLC?
- Com:Yes
- Soy:Yes
- Oats:Yes
- Wheat:Yes

Payment Yields for PLC: 142.0

Substitute county yield (75%) for Fayette County
Yield Update Example 2: Fayette Co.

4 Year average of Planted acreage

<table>
<thead>
<tr>
<th>Crop</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
<th>Total</th>
<th>Avg. Yield</th>
<th>PLC Yield (90%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Corn</td>
<td>175</td>
<td>185</td>
<td>176</td>
<td>658</td>
<td>165</td>
<td>148 bu/a</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Zero Plant</td>
<td>Planted No Evidence</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Avg. CO Yield (75%)</td>
<td>122</td>
<td>122</td>
<td>122</td>
<td>122</td>
<td>122</td>
<td>122</td>
<td>122</td>
<td>122</td>
</tr>
</tbody>
</table>

Current 132 bu < Updated 148 bu: Update yields

ISU Tool – Example 2

2. Retain old program yields or update yields for Price Loss Coverage (PLC) program

Payment Yields for PLC

<table>
<thead>
<tr>
<th>Crop</th>
<th>Soybeans</th>
<th>Oats</th>
<th>Wheat</th>
</tr>
</thead>
<tbody>
<tr>
<td>2008 actual farm yield per planted acre</td>
<td>176</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2009 actual farm yield per planted acre</td>
<td>175</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2010 actual farm yield per planted acre</td>
<td>176</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2011 actual farm yield per planted acre</td>
<td>185</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2012 actual farm yield per planted acre</td>
<td>176</td>
<td></td>
<td></td>
</tr>
<tr>
<td>90% of 2008-2012 average</td>
<td>148.1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Current CCP payment yields</td>
<td>132.0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Updated payment yields for PLC</td>
<td>148.1</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Use updated payment yields for PLC? (i.e. Corn/Yes, Soy/Yes, Oats/Yes, Wheat/Yes)

Payment Yields for PLC

<table>
<thead>
<tr>
<th>Corn</th>
<th>Soybeans</th>
<th>Oats</th>
<th>Wheat</th>
</tr>
</thead>
<tbody>
<tr>
<td>148.1</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
</tr>
</tbody>
</table>

Source: Iowa State FSA Office

Ag Decision Maker
Payment Yield Update (cont.)

• Operators or owners can provide “Yields” for the years the crop was planted on the farm, 2008-12.

• Yields are “Certified” to the FSA County Office at the “FARM” level

• FSA County Offices are NOT accepting production records and/or calculating yields for producers

• Upon certifying yields, the OWNER makes the decision on whether to update or retain and is responsible for having the records available

Payment Yield Update (cont.)

• Yields: “self-certified”

• Subject to spot-check and OWNER responsible for providing records to verify accuracy of yields

• Acceptable records for a spot-check would include:
  1. RMA data, specific year yields used in APH records
  2. Production Evidence, sold or commercial storage
  3. On-Farm storage records
  4. FSA Loan Records
Base Acre Reallocation

Maintain or Reallocate Base Acres?

Expected Payments for Example Farm in Boone County in low revenue years using USDA projected prices
CORN: PLC+RP80%+SCO and BEANS: ARC-CO+YP80%
Base Reallocation Decision

An Owner can choose to:

1. *Maintain* Current (2014) Base Acres
OR
2. *Reallocate* Base Acres according to Planting History of covered commodities, *2009 through 2012*
   
   - No new base acres

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**Base Reallocation - Example**

Farm #2566

*Cropland*: 160.0 base acres

*Corn Base*: 70.0 acres

*Soybean Base*: 70.0 acres

*Oats Base*: 20.0 acres

**CROP HISTORY**

<table>
<thead>
<tr>
<th>CROP</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>Corn</td>
<td>80</td>
<td>70</td>
<td>80</td>
<td>70</td>
</tr>
<tr>
<td>Soybeans</td>
<td>70</td>
<td>80</td>
<td>70</td>
<td>80</td>
</tr>
<tr>
<td>Oats</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

*Source: Iowa State FSA Office*
Program Election
**Election Decision**

One-time opportunity for “All Current Producers” to

- collectively,
- unanimously, and
- irrevocably
elect programs on each FSA Farm Number

**Election Decision (cont.)**

- **Current**: person or legal entity meeting the “definition” of producer on the day that person or legal entity is signing any form or performing any action required
- **Producer**: A person or legal entity with a *share in a crop on cropland* and *shares in the risk of producing the crop* on the farm

Cash rent owners cannot **Elect**
Election Decision (cont.)

• An election will not be approved unless all current producers on a farm, at the time of election, have signed CCC-857.

• County Committees might invalid an election if not all election requirements are satisfied

Election Decision (cont.)

Failure to make an election by March 31 2015 will cause:

• the farm to be deemed as having a PLC election starting in 2015 through 2018
• and NO payments for 2014
Price Loss Coverage (PLC)

Payments made when the effective price is less than the reference price for a covered commodity.

- Effective Price is the higher of Marketing year Average Price (MYA) for the crop or the National Loan Rate for the crop.
- Payments made on 85% of base acres
- Payments made regardless of planting

Source: Iowa State FSA Office
Reference Price/National Loan Rate

The Reference Price & National Loan Rate for each crop was set by statute and remains the same for life of Farm Bill.

<table>
<thead>
<tr>
<th>Crop</th>
<th>Reference Price</th>
<th>National Loan Rate</th>
<th>Max PLC Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Corn</td>
<td>$3.70</td>
<td>$1.95</td>
<td>$1.75</td>
</tr>
<tr>
<td>Soybeans</td>
<td>$8.40</td>
<td>$5.00</td>
<td>$3.40</td>
</tr>
<tr>
<td>Oats</td>
<td>$2.40</td>
<td>$1.39</td>
<td>$1.00</td>
</tr>
<tr>
<td>Wheat</td>
<td>$5.50</td>
<td>$2.94</td>
<td>$2.56</td>
</tr>
<tr>
<td>Grain Sorghum</td>
<td>$3.95</td>
<td>$1.95</td>
<td>$2.00</td>
</tr>
<tr>
<td>Barley</td>
<td>$4.95</td>
<td>$1.95</td>
<td>$3.00</td>
</tr>
</tbody>
</table>

Source: Iowa State FSA Office

PLC Example

Farm #1:
- Corn Base: 100 acres
- PLC Yield: 142 bu/a
- Reference price for Corn: $3.70/bu
- Marketing year average price: $3.50/bu
- PLC payment rate: $0.20/bu ($3.70 - $3.50).
- PLC payment: 
  \[ \text{PLC payment} = 0.20/\text{bu} \times 142 \text{ bu/a} \times 100 \text{ acres} \times 85\% = \$2,414 \]
- Max Payment = $1.75 x 142 x 100 x 85% = $22,123

Source: Iowa State FSA Office
Agricultural Risk Coverage at County Level (ARC-CO)

ARC-CO Program

Payments made when the ARC-CO Actual Revenue is less than the ARC-CO Guarantee for a covered commodity.

*County “Yield” data is used, not individual farm data*

- ARC-CO Guarantee = 86% Benchmark Revenue
- Max payment = 10% Benchmark Revenue
- Payments made on 85% of base acres
- Payments are made regardless of planting

Source: Iowa State FSA Office
ARC-CO Benchmark Revenue Calculation

ARC-CO Benchmark Revenue calculated by multiplying:

- 5 Year Olympic Average Yield: higher of:
  - County Yield for the crop
  - 70% of the county transitional yield (70%T)

- 5 Year Olympic Average Price: higher of:
  - Market Year Average (MYA) price
  - Reference Price for the covered commodity.

ARC-CO Example – Step 1 / 7

Farm #1:
Corn Base: 100 acres
County: Boone
70% of Corn T-Yields in Boone County: 122.5 bu/a

<table>
<thead>
<tr>
<th>CORN</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
<th>Olympic Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>County Yield</td>
<td>184</td>
<td>162</td>
<td>182</td>
<td>147</td>
<td>154</td>
<td></td>
</tr>
<tr>
<td>70% of T-Yield</td>
<td>122.5</td>
<td>122.5</td>
<td>122.5</td>
<td>122.5</td>
<td>122.5</td>
<td></td>
</tr>
<tr>
<td>MYA Price</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reference Price</td>
<td></td>
<td></td>
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</table>
## ARC-CO Example – Step 1

Farm #1:
Corn Base: 100 acres
County: Boone
70% of Corn T-Yields in Boone County: 122.5 bu/a

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Source: Iowa State FSA Office

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## ARC-CO Example – Step 1

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County: Boone
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Source: Iowa State FSA Office
**ARC-CO Example – Step 1**

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County: Boone
70% of Corn T-Yields in Boone County: 122.5 bu/a

<table>
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<tr>
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<td>122.5</td>
<td>122.5</td>
<td>122.5</td>
<td></td>
</tr>
<tr>
<td>MYA Price</td>
<td>$3.55</td>
<td>$5.18</td>
<td>$6.22</td>
<td>$6.89</td>
<td>$4.46</td>
<td></td>
</tr>
<tr>
<td>Reference Price</td>
<td>$3.70</td>
<td>$3.70</td>
<td>$3.70</td>
<td>$3.70</td>
<td>$3.70</td>
<td></td>
</tr>
</tbody>
</table>

Source: Iowa State FSA Office

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**ARC-CO Example – Step 1**

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</thead>
<tbody>
<tr>
<td>County Yield</td>
<td>184</td>
<td>162</td>
<td>182</td>
<td>147</td>
<td>154</td>
<td>166</td>
</tr>
<tr>
<td>70% of T-Yield</td>
<td>122.5</td>
<td>122.5</td>
<td>122.5</td>
<td>122.5</td>
<td>122.5</td>
<td></td>
</tr>
<tr>
<td>MYA Price</td>
<td>$3.55</td>
<td>$5.18</td>
<td>$6.22</td>
<td>$6.89</td>
<td>$4.46</td>
<td>$5.29</td>
</tr>
<tr>
<td>Reference Price</td>
<td>$3.70</td>
<td>$3.70</td>
<td>$3.70</td>
<td>$3.70</td>
<td>$3.70</td>
<td></td>
</tr>
</tbody>
</table>

Source: Iowa State FSA Office
ARC-CO Example (cont.)

Step 2. Corn ARC-CO Benchmark Revenue Calculation:
   Benchmark Yield = 166/bu
   Benchmark Price = $5.29
   Benchmark Revenue = $878 (166 X $5.29)

Step 3: Corn ARC-CO Guarantee Calculation:
   Benchmark Revenue ($878) X 86% = $755

Step 4: Corn ARC-CO Actual Revenue in 2014:
   2014 Boone County yield: 160 bu/a
   2014 MYA Price: $3.50/bu
   Actual Revenue: $560 (160 X $3.50)

ARC-CO Example (cont.)

Step 5. Corn ARC-CO Revenue Loss Calculation:
   Benchmark Revenue ($878) X 86% = $755
   Actual Revenue= $560
   Revenue Loss= $195

Step 6: Maximum Payment:
   10% Benchmark Revenue = $87.81 (<$195)

Step 7: ARC-CO Payment:
   $87.81/acre X 100 base acres X 85 % = $7,464
Agricultural Risk Coverage at Individual Level (ARC-IC)

ARC-IC Program

Payments are made when the ARC-IC Actual Revenue is less than the ARC-IC Guarantee for ALL covered commodities on ALL farms enrolled in ARC-IC in the state for the producer.

- ARC-IC Guarantee = 86% ARC-IC Benchmark Revenue
- Max Payment = 10% ARC-IC Benchmark Revenue
- Payments made on 65% of base acres

Source: Iowa State FSA Office
ARC-IC Program (cont.)

Participation in ARC-IC requires:
- *Election & Enrollment*
- *Planting* of covered commodities that will be used to calculate Revenues across ALL covered commodities planted.
- *Production* reports of covered commodities for the current and previous 5 years

ARC-IC benchmarks, guarantees and actual revenues are calculated at the farm level and *WEIGHTED* to the producer’s share of the covered commodities planted across all enrolled ARC-IC farm(s).
- Weighting to the producer share, is the “Producer Bucket Concept”
- ARC-IC Benchmark Revenues:
  5 Year Olympic Average of the “Revenues”
ARC-IC Example

Farm # 2 (only one farm enrolled in ARC-IC)
Corn Base: 100 acres
Soybean Base: 50 acres

2014 Planted Acres:
Corn: 110 acres
Soybeans: 50 acres

Producer share is 100% of both crops planted

ARC-IC Example – Step 1 / 8

Step 1: Percentage of covered commodities planted for each crop is the P&CP acres divided by the total acres of covered commodities on the ARC-IC farm:

<table>
<thead>
<tr>
<th>CROP</th>
<th>PLANTED ACRES</th>
<th>% Of Covered Commodity Planted</th>
<th>Calculations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Corn</td>
<td>110</td>
<td>68.75%</td>
<td>(110 / 160)</td>
</tr>
<tr>
<td>Soybeans</td>
<td>50</td>
<td>31.25%</td>
<td>(50 / 160)</td>
</tr>
<tr>
<td>Total</td>
<td>160</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

NOTE: These percentages are used in "weighting" the producer’s revenues

Source: Iowa State FSA Office

Ag Decision Maker

Extension and Outreach/Department of Economics

Iowa State University

12/5/2014
ARC-IC Example – Step 2

Step 2: Calculate Benchmark Revenues for each covered commodity planted.

### Corn

<table>
<thead>
<tr>
<th>Commodity</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
<th>5-Year Olympic Average Revenue</th>
<th>% Covered Commodity planted</th>
<th>Weighted 5-Year Olympic Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>Farm Yield</td>
<td>186</td>
<td>162</td>
<td>182</td>
<td>147</td>
<td>154</td>
<td>154</td>
<td>70% of T</td>
<td></td>
</tr>
<tr>
<td>Reference Price</td>
<td>$3.55</td>
<td>$5.18</td>
<td>$6.22</td>
<td>$6.89</td>
<td>$4.46</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Revenue</td>
<td>$688.20</td>
<td>$839.16</td>
<td>$1132.04</td>
<td>$1012.83</td>
<td>$686.84</td>
<td>$846.73</td>
<td>68.75%</td>
<td>$582</td>
</tr>
</tbody>
</table>

### Soybean

<table>
<thead>
<tr>
<th>Commodity</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
<th>5-Year Olympic Average Revenue</th>
<th>% Covered Commodity planted</th>
<th>Weighted 5-Year Olympic Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>Farm Yield</td>
<td>52</td>
<td>47</td>
<td>50</td>
<td>45</td>
<td>41</td>
<td>41</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reference Price</td>
<td>$8.40</td>
<td>$8.40</td>
<td>$8.40</td>
<td>$8.40</td>
<td>$8.40</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Revenue</td>
<td>$498.68</td>
<td>$531.10</td>
<td>$625.00</td>
<td>$648.00</td>
<td>$533.00</td>
<td>$563.03</td>
<td>31.25%</td>
<td>$176</td>
</tr>
</tbody>
</table>

Source: Iowa State FSA Office
ARC-IC Example – Steps 3-4

Step 3: Calculation of the “Weighted” Benchmark Revenue:

Corn Benchmark Revenue: ($846.73 \times 68.75\%) = $582
Soybean Benchmark Revenue: ($563.03 \times 31.25\%) = $176

Step 4: Calculate the ARC-IC Guarantee:

$758.08 \times 86\% = $652

ARC-IC Example – Step 5

Step 5: Calculate the ARC-IC Actual Revenue across ALL Covered Commodities planted:

<table>
<thead>
<tr>
<th>CROP</th>
<th>2014 Production</th>
<th>2014 MYA Price</th>
<th>National Loan Rate</th>
<th>% Of Covered Commodity Planted</th>
<th>ARC-IC Producer Revenue</th>
</tr>
</thead>
<tbody>
<tr>
<td>Corn</td>
<td>180 bu/ac</td>
<td>$3.50</td>
<td>$1.95</td>
<td>68.75%</td>
<td>$433</td>
</tr>
<tr>
<td>Soybeans</td>
<td>48 bu/ac</td>
<td>$10.00</td>
<td>$5.00</td>
<td>31.25%</td>
<td>$150</td>
</tr>
</tbody>
</table>

$583/ac
ARC-IC Example (cont.)

Step 6: ARC-IC Payment Rate Calculation:
ARC-IC Guarantee = $652 ($758.08 X 86%)  
ARC-IC Actual Revenue = $583  
$ 69 revenue loss

Step 7: Maximum payment:
10% ARC-IC Benchmark Revenue = $75.81

Step 8: ARC-IC Payment for Farm#2:

Total Base Acres 150 X 65% X $69 = $6,727

New Farm Programs

<table>
<thead>
<tr>
<th>Program</th>
<th>Trigger</th>
<th>Trigger Value</th>
<th>Payment based on:</th>
</tr>
</thead>
<tbody>
<tr>
<td>PLC</td>
<td>Marketing Year Average Price</td>
<td>Effective Price &lt; $3.70 corn $8.40 bean</td>
<td>85% Base Acres by crop and farm #</td>
</tr>
<tr>
<td>ARC-CO</td>
<td>County Revenue</td>
<td>86% (5-yr OA County Yields x 5-yr OA MYA Price)</td>
<td>85% Base Acres by crop and farm #</td>
</tr>
<tr>
<td>ARC-IC</td>
<td>Total Farm Revenue</td>
<td>86% 5-yr OA Farm Revenue</td>
<td>65% Base Acres summed across farms under ARC-IC</td>
</tr>
</tbody>
</table>
Supplemental Coverage Option (SCO)

**SCO**

- Endorsement to Crop Insurance Contract to cover part of the deductible
- Crop CANNOT be enrolled in ARC
- Buy from insurance agent
- Producer Premium: 65% subsidy
- Maximum Supplemental Protection $ = (86% - COMBO coverage level) \times \text{underlying liability}
SCO (cont.)

- Payments triggered when:
  1. county yield < 86% normal county yields (YP)
  2. county revenue < 86% normal county revenue (RP, RPHPE)
- Actual payment depends on Area Performance (not farm performance):
  Actual / Normal Yield or Revenue

Is this too complex?

Consider:
- Calculations for 5 years instead of 1
- Farm and County Yield Projections
- MYA, Projected, Harvest Price Projections
- SCO depends on type and level of coverage of COMBO product
- Reallocate or use FSA base acres?
- Maximize payments or minimize risks?
ISU Farm Bill Analyzer (Excel file)

• Designed for Iowa corn and soybean farmers
• **Identify the optimal combination of program(s) for 2014-2018**
• 18 data points by crop and 6 data points for whole farm (42 total)
• 3 sets of Price Projections: USDA, FAPRI, futures-based
• Futures prices update automatically when file is opened

ISU Farm Bill Analyzer (cont.)

• 3 Volatility scenarios (high, average, low)
• COMBO insurance and coverage level
• Can manually adjust yield and price projections
• 2 sets of reports of expected payments:
  • Calculated across 500 simulations in each year.
  • Calculated across the bottom 10% of simulated crop revenues in each year (loss years)

http://www.extension.iastate.edu/agdm/info/farmbill.html
ISU Farm Bill Analyzer - Example

Farm #4 in Boone County

After reallocation:
  – 100 corn base acres
  – 100 soybean base acres

Updated PLC payment yields:
  – 147.5 bu/a corn
  – 44.3 bu/a soybean

Alfalfa is also planted (not covered)

ISU Farm Bill Analyzer - Example

• The land owner plans to plant 100 acres to corn and 100 acres to soybeans in 2014-2018

• Will consider buying Revenue Protection at the 85% coverage level for corn and at the 80% coverage level for soybeans.
ISU Farm Bill Analyzer – Example (cont.)

1. Choose a set of Marketing Year Average (MYA) Price Projections: USDA

2. Choose a price volatility scenario for each crop for 2014-2018

### Volatility Scenario

<table>
<thead>
<tr>
<th>Expected price volatility in 2014-2018</th>
<th>Average</th>
<th>Average</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>USDA Projected Prices (Nov 10 2014)</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>CORN</td>
<td>SOYBEANS</td>
<td></td>
</tr>
<tr>
<td>2014</td>
<td>$3.50</td>
<td>$10.00</td>
</tr>
<tr>
<td>2015</td>
<td>$3.30</td>
<td>$8.85</td>
</tr>
<tr>
<td>2016</td>
<td>$3.35</td>
<td>$8.90</td>
</tr>
<tr>
<td>2017</td>
<td>$3.45</td>
<td>$9.05</td>
</tr>
<tr>
<td>2018</td>
<td>$3.60</td>
<td>$9.25</td>
</tr>
</tbody>
</table>
NPV Expected Payments under USDA price projections

- ARC-IC + COMBO INSURANCE
  (Corn:RP 0.85, Soy:RP 0.8)

- CORN & SOYBEAN: PLC + COMBO INS. + SCO
  (Corn:RP 0.85, Soy:RP 0.8)

- CORN & SOYBEAN: ARC-CO + COMBO INS.
  (Corn:RP 0.85, Soy:RP 0.8)

- CORN: PLC + COMBO INS. (RP) + SCO & SOYBEANS: ARC-CO + COMBO INS. (RP)

ISU Analyzer – Projected Revenue with USDA Price Projections

Payments: 9% of total crop revenue

- CORN: PLC + COMBO INS. (RP) + SCO & SOYBEANS: ARC-CO + COMBO INS. (RP)
- SOYBEANS
- CORN

IOWA STATE UNIVERSITY
Extension and Outreach/Department of Economics
Ag Decision Maker
ISU Farm Bill Analyzer – Futures Prices

1. Choose a set of Marketing Year Average (MYA) Price Projections: Futures Market

2. Choose a price volatility scenario for each crop for 2014-2018

<table>
<thead>
<tr>
<th>Volatility Scenario</th>
</tr>
</thead>
<tbody>
<tr>
<td>Corn</td>
</tr>
<tr>
<td>Soybeans</td>
</tr>
</tbody>
</table>

Expected price volatility in 2014-2018

<table>
<thead>
<tr>
<th>Futures Contracts (Dec 3 2014)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CORN</td>
</tr>
<tr>
<td>2014</td>
</tr>
<tr>
<td>2015</td>
</tr>
<tr>
<td>2016</td>
</tr>
<tr>
<td>2017</td>
</tr>
<tr>
<td>2018</td>
</tr>
</tbody>
</table>

NPV Expected Payments under Futures-based projections

- ARC-IC + COMBO INSURANCE (Corn:RP 0.85, Soy:RP 0.8)
- CORN & SOYBEAN: PLC + COMBO INS. + SCO (Corn:RP 0.85, Soy:RP 0.8)
- CORN & SOYBEAN: ARC-CO + COMBO INS. (Corn:RP 0.85, Soy:RP 0.8)
- CORN: ARC-CO + COMBO INS. (RP)
- SOYBEAN: ARC-CO

$0 $10,000 $20,000 $30,000 $40,000 $50,000
ISU Analyzer – Projected Revenue with Futures-based Projections

Payments: 5% of total crop revenue

- CORN
- SOYBEANS
- CORN: ARC-CO + COMBO INS. (RP) & SOYBEANS: ARC-CO

ISU Farm Bill Analyzer - Examples

Price expectations affect program election:

<table>
<thead>
<tr>
<th></th>
<th>USDA Prices</th>
<th>FUTURES-BASED Prices</th>
</tr>
</thead>
<tbody>
<tr>
<td>CORN</td>
<td>PLC + RP 85% + SCO</td>
<td>ARC-CO + RP 85%</td>
</tr>
<tr>
<td>SOYBEAN</td>
<td>ARC-CO + RP 80%</td>
<td>ARC-CO ONLY</td>
</tr>
</tbody>
</table>
NPV Expected Payments in Loss Years, futures-based projections

- ARC-IC + COMBO INSURANCE (Corn:RP 0.85, Soy:RP 0.8)
- CORN & SOYBEAN: PLC + COMBO INS. + SCO (Corn:RP 0.85, Soy:RP 0.8)
- CORN & SOYBEAN: ARC-CO + COMBO INS. (Corn:RP 0.85, Soy:RP 0.8)
- CORN: PLC + COMBO INS. (RP) + SCO & SOYBEANS: ARC-CO

ISU Analyzer – Projected Revenue in Loss Years, Futures-based Projections

Payments: 28% of total crop revenue
ISU Farm Bill Analyzer - Examples

Producer’s Risk Profile also affects program election (same expected yields and prices):

<table>
<thead>
<tr>
<th>Crop</th>
<th>Maximize Expected Payments</th>
<th>Minimize Risk</th>
</tr>
</thead>
<tbody>
<tr>
<td>CORN</td>
<td>ARC-CO + RP 85%</td>
<td>PLC + RP 85% + SCO</td>
</tr>
<tr>
<td>SOYBEANS</td>
<td>ARC-CO ONLY</td>
<td>ARC-CO ONLY</td>
</tr>
</tbody>
</table>

Conclusion

Program choices are dependent on:

• production system in each farm
• producer’s expectations about future yields
• producer’s expectations about future prices
• producer’s risk profile

No quick rule of thumb
Contact your Field Specialist for more details

Thank you for your attention

Questions?
Comments?

plastina@iastate.edu
515-294-6160