Farm Bill Details and Decisions

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Credits and Disclaimers

Credits
• This program is delivered in collaboration between USDA Farm Service Agency and Nebraska Extension
• This program is supporting in part by the following sponsor(s)
  • Sponsor name

Disclaimers
• This information is based on our understanding of the 2018 Farm Bill and discussions with experts.
  • Interpretation and differences in final rules and regulations are possible.
• This information is intended for educational purposes only.
  • Neither the presenter nor the Board of Regents of the University of Nebraska accept any responsibility for decisions made as a result of the use or interpretation of this material.
Commodity Program Overview

- ARC and PLC
  - Reauthorization of programs implemented in 2014 Farm Bill
  - ARC
    - Yield data
    - Expanded coverage by practice
    - Coverage by physical county
    - Trend yield adjustment
  - PLC
    - Payment yield update
    - Effective reference price
  - Decision in 2019 for 2019-2020, annually beginning in 2021

- Commodity Marketing Loan Program
  - Reauthorization of existing programs
  - Increased loan rates

- Payment limits and eligibility rules
  - Elimination of payment limits on commodity marketing loan program benefits
  - Family member definition expanded for active engagement eligibility test
ARC, PLC, and Other Issues

Overview

• PLC
  • Yield update
  • Effective reference price
  • Calculations
  • Economics

• ARC-CO
  • Trend yield adjustment
  • Irrigated/nonirrigated practice expansion
  • Calculations
  • Economics

• ARC-CO v. PLC decision

• ARC-IC
  • Details
  • Special circumstance

• Crop Insurance - SCO
  • Review under PLC enrollment

• Ad Hoc Assistance
  • Trade assistance
  • Agricultural disaster assistance
ARC and PLC Decisions

• PLC Yield Update
  • By crop by farm (FSA farm number)
  • Update available regardless of whether farm is enrolled in ARC or PLC

• ARC v. PLC
  • ARC-CO v. PLC by crop by farm (FSA farm number)

• ARC-IC by farm (FSA farm number)
  • If enrolled in ARC-IC, producer’s interest in all farms enrolled in ARC-IC counts toward single ARC-IC calculation
Price Loss Coverage (PLC)

Details

• Existing PLC program implemented in 2014 reauthorized
  • Follows model of Counter-Cyclical Payment and Deficiency Payment of programs before

• Payment on 85% of base acres

• New effective reference price based on higher of reference price or 85% of 5-year average price
  • History lagged 2 years from current year – 2019 calculation based on 2013-2017 prices

• Opportunity to update payment yields

• Impact
  • Provides income support and risk management support when price is near or below effective reference price
Price Loss Coverage (PLC)

Yield Update

- Yield update equal to
  - 90% of the 2013-2017 farm average yield
    - Substitute yield equal to 75% of the county average for low farm yields
  - Multiplied by national yield factor
    - 2008-2012 national average yield divided by 2013-2017 national average yield
    - Minimum factor of 0.9 - Maximum factor of 1.0

- Yield factor allows yield updates nationally, but detrends results based on average national yield changes
  - Yield update originally proposed just for counties with multiple years of low yields during last yield update in 2014 (based on 90% of 2008-2012 yields)
Price Loss Coverage (PLC) 
Yield Update

- Yield update originally proposed just for counties with low yields during last yield update in 2014 (based on 90% of 2008-2012 yields)

Source: farmdoc daily, October 2, 2018
Price Loss Coverage (PLC) Yield Update

PLC Payment Yield = Max of

\[
\text{Max of} \left[ 90\% \times \text{5-Year Average} \right] \left[ \text{Max of} \left[ 75\% \times \text{County Average Yield} \right] \times \frac{\text{National Yield Factor}}{\text{Existing PLC Payment Yield}} \right]
\]

where

National Yield Factor = \( \frac{2008-2012 \text{ National Average Yield}}{2013-2017 \text{ National Average Yield}} \)
## Price Loss Coverage (PLC)
### Yield Update National Factor

<table>
<thead>
<tr>
<th>Commodity</th>
<th>Factor</th>
<th>Commodity</th>
<th>Factor</th>
<th>Commodity</th>
<th>Factor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Barley</td>
<td>0.9437</td>
<td>Lentils</td>
<td>1.0000</td>
<td>Rice, Temp Japonica</td>
<td>0.9591</td>
</tr>
<tr>
<td>Canola</td>
<td>0.9634</td>
<td>Mustard Seed</td>
<td>0.9460</td>
<td>Safflower</td>
<td>1.0000</td>
</tr>
<tr>
<td>Chickpeas, Large</td>
<td>1.0000</td>
<td>Oats</td>
<td>0.9524</td>
<td>Seed Cotton</td>
<td>0.9000</td>
</tr>
<tr>
<td>Chickpeas, Small</td>
<td>0.9760</td>
<td>Peanuts</td>
<td>0.9273</td>
<td>Sesame Seed</td>
<td>0.9673</td>
</tr>
<tr>
<td>Corn</td>
<td>0.9000</td>
<td>Peas, Dry</td>
<td>0.9988</td>
<td>Soybeans</td>
<td>0.9000</td>
</tr>
<tr>
<td>Crambe</td>
<td>1.0000</td>
<td>Rapeseed</td>
<td>1.0000</td>
<td>Sunflower Seed</td>
<td>0.9396</td>
</tr>
<tr>
<td>Flaxseed</td>
<td>1.0000</td>
<td>Rice, Long</td>
<td>0.9330</td>
<td>Wheat</td>
<td>0.9545</td>
</tr>
<tr>
<td>Grain Sorghum</td>
<td>0.9077</td>
<td>Rice, Medium</td>
<td>0.9887</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
**Price Loss Coverage (PLC) Yield Update**

Updated Payment Yield = Max of \[90\% \times \text{5 - Year Average} \times \text{Max of} \frac{\text{Actual Yield}}{\text{National Yield Factor}} \times \frac{75\% \times \text{County Average Yield}}{\text{Existing PLC Payment Yield}}\]

<table>
<thead>
<tr>
<th>Corn</th>
<th>Existing PLC Yield</th>
<th>2013-2017 Yield History</th>
<th>Average Yield</th>
<th>90% of Average Yield</th>
<th>National Yield Factor</th>
<th>Updated PLC Yield</th>
</tr>
</thead>
<tbody>
<tr>
<td>Saunders County</td>
<td>142 136</td>
<td>176 187 176 190 201</td>
<td>178</td>
<td>160</td>
<td>0.90</td>
<td>144</td>
</tr>
<tr>
<td>75% County Yield</td>
<td></td>
<td>136 136 136 136 136</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lincoln County</td>
<td>149 129</td>
<td>142 164 186 204 182</td>
<td>173</td>
<td>155</td>
<td>0.90</td>
<td>140</td>
</tr>
<tr>
<td>75% County Yield</td>
<td></td>
<td>129 129 129 129 129</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Price Loss Coverage (PLC)

Yield Update Analysis and Comparison

• Yield update a choice between
  • Existing PLC program payment yield
  • Farm’s 2013-2017 average yield multiplied by adjusted factor

<table>
<thead>
<tr>
<th>Crop</th>
<th>Adjusted Factor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Corn</td>
<td>81%</td>
</tr>
<tr>
<td>Soybeans</td>
<td>81%</td>
</tr>
<tr>
<td>Grain Sorghum</td>
<td>81.7%</td>
</tr>
<tr>
<td>Wheat</td>
<td>85.9%</td>
</tr>
<tr>
<td>Other Program Crops</td>
<td>Multiply national yield factor times 90%</td>
</tr>
</tbody>
</table>
Price Loss Coverage (PLC)

Effective Reference Price

- Effective Reference Price equal to the higher of
  - Reference Price
  - 85% of the 5-year Olympic average price (lagged 2 years)
- But, not higher than 115% of the reference price

\[
\text{Effective Reference Price} = \min \left[ \max \left( \frac{85\% \times 5 - \text{year Olympic Average Price}}{115\% \times \text{Reference Price}} \right) \right]
\]
# Price Loss Coverage (PLC)

## Effective Reference Price

The Effective Reference Price is calculated as the minimum of the following:

\[
\text{Effective Reference Price} = \min \left( \max \left( \begin{array}{c} 0.85 \times \text{Olympic Average Price} \\ 1.15 \times \text{Reference Price} \end{array} \right) \right)
\]

### Commodity Prices

<table>
<thead>
<tr>
<th>Commodity</th>
<th>Reference Price (MIN)</th>
<th>Marketing Year Average Price</th>
<th>Olympic Average Price</th>
<th>85% of Olympic Average Price</th>
<th>115% of Reference Price (MAX)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Corn</td>
<td>$3.70</td>
<td>$4.46 $3.70 $3.61 $3.36 $3.36</td>
<td>$3.56</td>
<td>$3.02</td>
<td>$4.26</td>
</tr>
<tr>
<td>Grain Sorghum</td>
<td>3.95</td>
<td>4.28 4.03 3.31 2.79 3.22</td>
<td>3.52</td>
<td>2.99</td>
<td>4.54</td>
</tr>
<tr>
<td>Wheat</td>
<td>5.50</td>
<td>6.87 5.99 4.89 3.89 4.72</td>
<td>5.20</td>
<td>4.42</td>
<td>6.33</td>
</tr>
</tbody>
</table>
Price Loss Coverage (PLC) Payment Rate

PLC Payment Rate = \text{Max of } \left[ \frac{\text{Effective Reference Price} - \text{Effective Price}}{0} \right]

where

Effective Price = \text{Max of } \left[ \frac{\text{National Marketing Year Average Price}}{\text{National Average Marketing Loan Rate}} \right]
# National Marketing Loan Rate Revisions

<table>
<thead>
<tr>
<th>Commodity</th>
<th>Unit</th>
<th>Existing Loan Rate</th>
<th>New Loan Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Barley</td>
<td>bushel</td>
<td>$1.95</td>
<td>$2.50</td>
</tr>
<tr>
<td>Corn</td>
<td>bushel</td>
<td>1.95</td>
<td>2.20</td>
</tr>
<tr>
<td>Grain Sorghum</td>
<td>bushel</td>
<td>1.95</td>
<td>2.20</td>
</tr>
<tr>
<td>Oats</td>
<td>bushel</td>
<td>1.39</td>
<td>2.00</td>
</tr>
<tr>
<td>Soybeans</td>
<td>bushel</td>
<td>5.00</td>
<td>6.20</td>
</tr>
<tr>
<td>Wheat</td>
<td>bushel</td>
<td>2.94</td>
<td>3.38</td>
</tr>
<tr>
<td>Other Oilseeds</td>
<td>hundredweight</td>
<td>10.09</td>
<td>10.09</td>
</tr>
<tr>
<td>Dry Peas</td>
<td>hundredweight</td>
<td>5.40</td>
<td>6.15</td>
</tr>
<tr>
<td>Lentils</td>
<td>hundredweight</td>
<td>11.28</td>
<td>13.00</td>
</tr>
<tr>
<td>Small Chickpeas</td>
<td>hundredweight</td>
<td>7.43</td>
<td>10.00</td>
</tr>
<tr>
<td>Large Chickpeas</td>
<td>hundredweight</td>
<td>11.28</td>
<td>14.00</td>
</tr>
</tbody>
</table>
# Price Loss Coverage (PLC) Payment Rate

PLC Payment Rate = Max of \[
\frac{\text{Effective Reference Price} - \text{Effective Price}}{0}
\]

PLC Payment = PLC Payment Rate × PLC Payment Yield × Base Acres × 85%

<table>
<thead>
<tr>
<th>Commodity</th>
<th>Effective Reference Price</th>
<th>Marketing Loan Rate</th>
<th>Marketing Year Average Price*</th>
<th>PLC Payment Rate</th>
<th>PLC Payment Yield*</th>
<th>PLC Payment per Paid Acre***</th>
<th>PLC Payment per Base Acre***</th>
</tr>
</thead>
<tbody>
<tr>
<td>Corn</td>
<td>$3.70</td>
<td>$2.20</td>
<td>$3.85</td>
<td>$0.00</td>
<td>150</td>
<td>$0.00</td>
<td>$0.00</td>
</tr>
<tr>
<td>Grain Sorghum</td>
<td>3.95</td>
<td>2.20</td>
<td>3.40</td>
<td>0.55</td>
<td>77</td>
<td>42.35</td>
<td>36.00</td>
</tr>
<tr>
<td>Soybean</td>
<td>8.40</td>
<td>6.20</td>
<td>9.00</td>
<td>0.00</td>
<td>45</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>Wheat</td>
<td>5.50</td>
<td>3.38</td>
<td>4.60</td>
<td>0.90</td>
<td>41</td>
<td>36.90</td>
<td>31.37</td>
</tr>
</tbody>
</table>

* Price forecast from USDA-WAOB as of November 2019 for illustration only. ** Average PLC payment yield in Nebraska (before yield update). *** Payment per paid acre and payment per base acre (accounting for 85% paid acre factor) subject to budget sequestration and payment limits.
# Price Loss Coverage (PLC) Payment Rate over Range of Corn Prices

The PLC Payment Rate is calculated as:

\[
\text{PLC Payment Rate} = \max \left( \frac{\text{Effective Reference Price} - \text{Effective Price}}{0} \right)
\]

The PLC Payment is:

\[
\text{PLC Payment} = \text{PLC Payment Rate} \times \text{PLC Payment Yield} \times \text{Base Acres} \times 85\%
\]

<table>
<thead>
<tr>
<th>Commodity</th>
<th>Effective Reference Price</th>
<th>Marketing Loan Rate</th>
<th>Marketing Year Average Price*</th>
<th>PLC Payment Rate</th>
<th>PLC Payment Yield*</th>
<th>PLC Payment per Paid Acre***</th>
<th>PLC Payment per Base Acre***</th>
</tr>
</thead>
<tbody>
<tr>
<td>Corn</td>
<td>$3.70</td>
<td>$2.20</td>
<td>$3.85</td>
<td>$0.00</td>
<td>150</td>
<td>$0.00</td>
<td>$0.00</td>
</tr>
<tr>
<td></td>
<td>3.70</td>
<td>2.20</td>
<td>3.75</td>
<td>0.00</td>
<td>150</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td></td>
<td>3.70</td>
<td>2.20</td>
<td>3.65</td>
<td>0.05</td>
<td>150</td>
<td>7.50</td>
<td>6.38</td>
</tr>
<tr>
<td></td>
<td>3.70</td>
<td>2.20</td>
<td>3.55</td>
<td>0.15</td>
<td>150</td>
<td>22.50</td>
<td>19.13</td>
</tr>
</tbody>
</table>

* Price forecast from USDA-WAOB as of November 2019 and range below for illustration only. ** Average PLC payment yield in Nebraska (before yield update). *** Payment per paid acre and payment per base acre (accounting for 85% paid acre factor) subject to budget sequestration and payment limits.
Price Loss Coverage (PLC) Outlook

Corn Prices and the Safety Net

$/Bushel

* Price projections for 2019 from USDA-WAOB and USDA-FSA as of November 2019. Price projections for 2020-2023 from USDA-OCE as of November 2019. 85% of 5-year Olympic average price shown to illustrate where effective reference price could move (if higher than legislated reference price).
Price Loss Coverage (PLC) Outlook

Sorghum Prices and the Safety Net

$/Bushel

<table>
<thead>
<tr>
<th>Year</th>
<th>Loan Rate</th>
<th>Target/Reference Price</th>
<th>Market Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>2004</td>
<td>2.00</td>
<td>3.00</td>
<td>4.00</td>
</tr>
<tr>
<td>2006</td>
<td>2.50</td>
<td>3.50</td>
<td>4.50</td>
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<tr>
<td>2008</td>
<td>3.00</td>
<td>4.00</td>
<td>5.00</td>
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<tr>
<td>2010</td>
<td>3.50</td>
<td>4.50</td>
<td>5.50</td>
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<tr>
<td>2012</td>
<td>4.00</td>
<td>5.00</td>
<td>6.00</td>
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<tr>
<td>2014</td>
<td>4.50</td>
<td>5.50</td>
<td>6.50</td>
</tr>
<tr>
<td>2016</td>
<td>5.00</td>
<td>6.00</td>
<td>7.00</td>
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<tr>
<td>2018</td>
<td>5.50</td>
<td>6.50</td>
<td>7.50</td>
</tr>
<tr>
<td>2020</td>
<td>6.00</td>
<td>7.00</td>
<td>8.00</td>
</tr>
<tr>
<td>2022</td>
<td>6.50</td>
<td>7.50</td>
<td>8.50</td>
</tr>
</tbody>
</table>

* Price projections for 2019 from USDA-WAOB and USDA-FSA as of November 2019. Price projections for 2020-2023 from USDA-OCE as of November 2019. 85% of 5-year Olympic average price shown to illustrate where effective reference price could move (if higher than legislated reference price).
Price Loss Coverage (PLC) Outlook

Soybean Prices and the Safety Net


85% of 5-year Olympic average price shown to illustrate where effective reference price could move (if higher than legislated reference price).
Price Loss Coverage (PLC) Outlook

Wheat Prices and the Safety Net

* Price projections for 2019 from USDA-WAOB and USDA-FSA as of November 2019. Price projections for 2020-2023 from USDA-OCE as of November 2019. 85% of 5-year Olympic average price shown to illustrate where effective reference price could move (if higher than legislated reference price).
Agriculture Risk Coverage (ARC)

Details

- Existing ARC program implemented in 2014 reauthorized
  - Follows model of Agricultural Risk Coverage Election (state-level guarantee) program of 2008 Farm Bill with county or farm-level protection

- Support
  - County-level coverage (ARC-CO) choice by crop by farm
    - Payments by crop paid on 85% of base acres
  - Individual (farm-level) coverage (ARC-IC) choice by farm
    - Payments across all of a producer’s farm interests enrolled in ARC-IC paid on 65% of base acres

- Impact
  - Provides income support and risk management support when price is near or below effective Olympic average price and/or yield is below trend-adjusted Olympic average yield
Agriculture Risk Coverage – ARC-CO
Details
• Yield data based first on RMA yield data, then NASS and other sources
• Benchmark calculations
  • History lagged 2 years from current year – 2019 benchmark based on 2013-2017 yields and prices
  • Benchmark yields for each year of yield history adjusted for trend
  • Benchmark price for each year equal to higher of national marketing year average price or new effective reference price
Agriculture Risk Coverage – ARC-CO
Trend-Adjusted Olympic Average Yield

• Trend yield adjustment
  • Yield history adjusted by same factor used for crop insurance trend yield adjusted APH
Agriculture Risk Coverage – ARC-CO
Trend-Adjusted Olympic Average Yield Comparison

Saunders County Irrigated Corn - 2019

2019 Yield Adjustment Factor = 2.2

<table>
<thead>
<tr>
<th>Year</th>
<th>Actual Yield</th>
<th>Trend Yield Adjustment</th>
<th>5-Year Olympic Average</th>
<th>5-Year Trend-Adjusted Olympic Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>2013</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2014</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2015</td>
<td></td>
<td></td>
<td>219.1</td>
<td>211.0</td>
</tr>
<tr>
<td>2016</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2017</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Agriculture Risk Coverage – ARC-CO
Trend-Adjusted Olympic Average Yield Comparison

Lincoln County Irrigated Corn - 2019

<table>
<thead>
<tr>
<th>Year</th>
<th>Actual Yield</th>
<th>Trend Yield Adjustment</th>
<th>5-Year Olympic Average</th>
<th>5-Year Trend-Adjusted Olympic Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>2013</td>
<td>160</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2014</td>
<td>170</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2015</td>
<td>180</td>
<td>202.7</td>
<td>194.2</td>
<td></td>
</tr>
<tr>
<td>2016</td>
<td>190</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2017</td>
<td>200</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

2019 Yield Adjustment Factor = 1.9
Agriculture Risk Coverage – ARC-CO Benchmark

\[
\text{ARC – CO Benchmark} = 5 - \text{Year Olympic Average}\left[\text{Max of}\ [\text{Trend – Adjusted County Yield}]ight] \\
\text{5 - Year Olympic Average}\left[\text{Max of}\ [80\% \times \text{County Average Yield}]ight]
\]

\[
\text{ARC – CO Benchmark} = 5 - \text{Year Olympic Average}\left[\text{Max of}\ [\text{National Marketing Year Average Price}]ight] \\
\text{5 - Year Olympic Average}\left[\text{Max of}\ [\text{Effective Reference Price}]ight]
\]
# Agriculture Risk Coverage – ARC-CO Benchmark

\[
\text{ARC – CO Benchmark} = \text{5 – Year Olympic Average} \left[ \max \left( \frac{\text{Trend – Adjusted County Yield}}{80\% \times \text{County Average Yield}} \right) \right]
\]

<table>
<thead>
<tr>
<th>Irrigated Corn</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
<th>Olympic Average Yield</th>
</tr>
</thead>
<tbody>
<tr>
<td>Saunders County</td>
<td>229.94</td>
<td>224.41</td>
<td>212.00</td>
<td>208.23</td>
<td>220.90</td>
<td>219.10</td>
</tr>
<tr>
<td>80% County Yield</td>
<td>142.4</td>
<td>142.4</td>
<td>142.4</td>
<td>142.4</td>
<td>153.6</td>
<td></td>
</tr>
<tr>
<td>Lincoln County</td>
<td>198.42</td>
<td>200.76</td>
<td>208.86</td>
<td>195.66</td>
<td>211.36</td>
<td>202.68</td>
</tr>
<tr>
<td>80% County Yield</td>
<td>140.8</td>
<td>140.8</td>
<td>140.8</td>
<td>140.8</td>
<td>144.0</td>
<td></td>
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</tbody>
</table>
Agriculture Risk Coverage – ARC-CO Benchmark

\[
\text{ARC – CO Benchmark} = 5 \text{ – Year Olympic Average} \left\{ \text{Max of } \begin{array}{c}
\text{National Marketing Year Average Price} \\
\text{Effective Reference Price}
\end{array} \right\}
\]

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
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</thead>
<tbody>
<tr>
<td>National Marketing Year Average Price</td>
<td>4.46</td>
<td>3.70</td>
<td>3.61</td>
<td>3.36</td>
<td>3.36</td>
<td></td>
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<tr>
<td>Effective Reference Price</td>
<td>3.70</td>
<td>3.70</td>
<td>3.70</td>
<td>3.70</td>
<td>3.70</td>
<td>3.70</td>
</tr>
</tbody>
</table>
Agriculture Risk Coverage – ARC-CO
Benchmark and Guarantee

\[
\text{ARC – CO Benchmark Revenue} = \text{ARC – CO Benchmark Yield} \times \text{ARC – CO Benchmark Price}
\]

\[
\text{ARC – CO Guarantee} = \text{ARC – CO Benchmark Revenue} \times 86\%
\]
### Agriculture Risk Coverage – ARC-CO Benchmark and Guarantee

\[
\text{ARC–CO Benchmark Revenue} = \text{ARC–CO Benchmark Yield} \times \text{ARC–CO Benchmark Price}
\]

\[
\text{ARC–CO Guarantee} = \text{ARC–CO Benchmark Revenue} \times 86\%
\]

<table>
<thead>
<tr>
<th>Irrigated Corn</th>
<th>Benchmark Yield</th>
<th>Benchmark Price</th>
<th>Benchmark Revenue</th>
<th>Guarantee</th>
<th>MAX Payment Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Saunders County</td>
<td>219.10</td>
<td>$3.70</td>
<td>$810.67</td>
<td>$697.18</td>
<td>$81.07</td>
</tr>
<tr>
<td>Lincoln County</td>
<td>202.68</td>
<td>3.70</td>
<td>749.92</td>
<td>644.93</td>
<td>75.00</td>
</tr>
</tbody>
</table>
Agriculture Risk Coverage – ARC-CO

Revenue and Payment

\[
\text{ARC – CO Actual Revenue} = \text{Actual County Yield} \times \text{Max of} \left[ \text{National Marketing Year Average Price} \right] \left[ \text{National Average Marketing Loan Rate} \right]
\]

\[
\text{ARC – CO Payment Rate} = \text{Actual County Yield} \times \text{Min of} \left[ \text{Max of} \left[ \begin{array}{l}
\text{ARC – CO Guarantee} \text{ – ARC – CO Actual Revenue} \\
0
\end{array} \right]
\right]
\left[ \text{ARC – CO Benchmark Revenue} \times 10\% \right]
\]

\[
\text{ARC – CO Payment} = \text{ARC – CO Payment Rate} \times \text{Base Acres} \times 85\%
\]
### Agriculture Risk Coverage – ARC-CO

**Revenue and Payment**

<table>
<thead>
<tr>
<th>Irrigated Corn</th>
<th>Benchmark Revenue</th>
<th>Guarantee</th>
<th>MAX Payment Rate</th>
<th>Actual Yield*</th>
<th>Effective Price**</th>
<th>Actual Revenue</th>
<th>ARC-CO Payment Per Paid Acre***</th>
<th>ARC-CO Payment Per Base Acre***</th>
</tr>
</thead>
<tbody>
<tr>
<td>Saunders County</td>
<td>$810.67</td>
<td>$697.18</td>
<td>$81.07</td>
<td>180</td>
<td>$3.85</td>
<td>$693.00</td>
<td>$4.18</td>
<td>$3.55</td>
</tr>
<tr>
<td>Lincoln County</td>
<td>749.92</td>
<td>644.93</td>
<td>75.00</td>
<td>160</td>
<td>3.85</td>
<td>616.00</td>
<td>28.93</td>
<td>24.59</td>
</tr>
</tbody>
</table>

* Assumed actual yield for illustration only. ** Price forecast from USDA-WAOB as of October 2019 for illustration only. *** Payment per paid acre and payment per base acre (accounting for 85% paid acre factor) subject to budget sequestration and payment limits.
Agriculture Risk Coverage – ARC-CO Outlook


ARC 5-year effective Olympic average price based on 86% of ARC 5-Year Olympic average price for illustration only as ARC protection is tied to revenue.
Agriculture Risk Coverage – ARC-CO Outlook

Sorghum Prices and the Safety Net

* Price projections for 2019 from USDA-WAOB and USDA-FSA as of November 2019. Price projections for 2020-2023 from USDA-OCE as of November 2019. ARC 5-year effective Olympic average price based on 86% of ARC 5-Year Olympic average price for illustration only as ARC protection is tied to revenue.
Agriculture Risk Coverage – ARC-CO Outlook

Soybean Prices and the Safety Net

- Loan Rate
- Target/Reference Price
- Market Price
- ARC 5-Year Oly Avg Price
- ARC 5-Year Eff Oly Avg Price

* Price projections for 2019 from USDA-WAOB and USDA-FSA as of November 2019. Price projections for 2020-2023 from USDA-OCE as of November 2019. ARC 5-year effective Olympic average price based on 86% of ARC 5-Year Olympic average price for illustration only as ARC protection is tied to revenue.
Agriculture Risk Coverage – ARC-CO Outlook

Wheat Prices and the Safety Net

* Price projections for 2019 from USDA-WAOB and USDA-FSA as of November 2019. Price projections for 2020-2023 from USDA-OCE as of November 2019. ARC 5-year effective Olympic average price based on 86% of ARC 5-Year Olympic average price for illustration only as ARC protection is tied to revenue.
Agriculture Risk Coverage – ARC-IC Details

• Calculations based on farm-level yields and national prices
  • Weighted for current year plantings

• Revenue calculations based on planted acres
  • Exception in the case of 100% prevent plant acres on a farm (FSA farm number)

• Payments
  • Based on producer’s interest in all farms enrolled in ARC-IC
  • Paid on 65% of base acres
2018 Farm Bill Program Decisions
Crop Insurance/Risk Management Considerations

• ARC provides shallow-loss revenue protection that may substitute for higher levels of crop insurance coverage
  • ARC protects revenue risk from 86% down to 76% of the ARC benchmark that may be in the producer’s crop insurance deductible range, but...
    • ARC-CO protection is tied to county-level risk of crops in the farm’s base and pays on just 85% of base acres
    • ARC-IC protection is tied to farm-level risk of planted crops on the farm, but pays on just 65% of base acres
2018 Farm Bill Program Decisions
Crop Insurance/Risk Management Considerations

• PLC provides price protection that may substitute for price risk management at price levels near or below reference prices
  • PLC may complement crop insurance purchases, particularly YP, but PLC protection is limited to program yields and base acres
  • PLC enrollment (technically, not enrolling in ARC) allows the producer to also consider the Supplemental Coverage Option (SCO)
Crop Insurance
Supplemental Coverage Option (SCO)

- County-based crop insurance policy
  - Available to cover gap between 86% and insurance protection level selected
  - Coverage tied to type of personal coverage selected (YP, RP, RP-HPE, etc.)

- Available if farm/crop not enrolled in ARC
  - May be more relevant given potential shift in enrollment toward PLC
  - Separate from the farm program decision – contact crop insurance agent

- Analysis to be weighed between purchasing SCO and lower levels of crop insurance vs. higher levels of crop insurance
  - SCO may reduce premium cost relative to higher levels of individual coverage, but also shifts protection to county-level results as opposed to farm-level results
2018 Farm Bill Program Decisions

ARC v. PLC Decisions

• Under stable, lower price levels, PLC support will kick in before ARC support for downward price movement

• Under modestly increasing price levels, ARC and PLC support may quickly disappear

• Under substantially higher prices, moving average price in ARC benchmark and moving average price in PLC effective reference price could ratchet up support to near equivalent levels

• On a year-by-year basis, ARC-IC may be an important consideration

• Any analysis of potential payments based on price projections must consider risk and uncertainty
Decisions and Outlook
Prices and Long-Run Projections

Corn Prices and Baseline Projections

ARC-CO/PLC Decision Tools

www.fsa.usda.gov/programs-and-services/arcplc_program/index

Agriculture Loss Coverage-County (ARC-CO)
The ARC-CO program provides income support tied to historical base acres, not current production, of covered commodities. ARC-CO payments are issued when the actual county crop revenue of a covered commodity is less than the ARC-CO guarantee for the covered commodity.

Price Loss Coverage (PLC)
PLC program payments are issued when the effective price of a covered commodity is less than the respective reference price for that commodity. The effective price equals the higher of the market year average price (MYA) or the national average loan rate for the covered commodity.

About the Program
What's Changed
Resources
Program Data
Program Definitions
Frequently Asked Questions
Web Tools
The Agricultural and Food Policy Center (AFPC) at Texas A&M University, in conjunction with the Food and Agricultural Policy Institute (FAPRI) at the University of Missouri. https://www.afpc.tamu.edu/tools/famlit/2016/
National Coalition for Producer Education (NCPE), led by the University of Illinois. Id-tools.ncsia.illinois.edu
ARC-CO/PLC Decision Tools

www.afpc.tamu.edu/tools/farm/farmbill/2018/ fd-tools.ncsa.illinois.edu/

2018 Farm Bill Decision Aid

To retrieve your saved farms, you must first

Login

Welcome to the Gardner Program Payment Calculator

The Gardner Program Payment Calculator provides farmers, researchers and policymakers with a web-based analysis tool for farm program payments. The Payment Calculator will help improve the understanding of farm programs administered by Congress through the Agricultural Improvement Act of 2018 (the Farm Bill), as well as dozen programs with program-levels. The initial version of the tool will generate estimated program payments for individual farms from the Agriculture in the Economy Database (AEI) and the Farm Bill). The results are then based on the farm’s historical data and model prices and yield forecasts.

Funding for this project has been provided by the Gardner Agricultural Policy Program and by a cooperative agreement with the Office of the Chief Economist at the U.S. Department of Agriculture. It is operated in cooperation with the farmer’s project in the Department of Agricultural and Consumer Economics (ACE) and funded by the National Center for Supercomputing Applications (NCSA) at the University of Illinois at Urbana-Champaign.

How does the simulation work?

<table>
<thead>
<tr>
<th>Field</th>
<th>Value</th>
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</thead>
<tbody>
<tr>
<td>Base from</td>
<td>1.01</td>
</tr>
<tr>
<td>Farming Year</td>
<td>2018</td>
</tr>
<tr>
<td>Commodity</td>
<td>Soybean</td>
</tr>
<tr>
<td>Forecast</td>
<td>1.00</td>
</tr>
<tr>
<td>Payment Factor</td>
<td>1.10</td>
</tr>
<tr>
<td>IRS</td>
<td>1.10</td>
</tr>
<tr>
<td>Depreciation</td>
<td>0.90</td>
</tr>
<tr>
<td>ARCCLUDCE</td>
<td>0.90</td>
</tr>
<tr>
<td>ARC-CMP</td>
<td>0.90</td>
</tr>
<tr>
<td>Payment Base</td>
<td>1.00</td>
</tr>
</tbody>
</table>

RUN MODEL
ARC-CO/PLC Decision Tools
Texas A&M AFPC 2018 Farm Bill Decision Aid

Details
Corn PLC 2019
Mean Payment $19
10th percentile $0
25th percentile $0
50th percentile $0
75th percentile $26
90th percentile $75

Details
Corn ARC 2019
Expected Yield 169 bu/ac
Mean Payment $7
10th percentile $0
25th percentile $0
50th percentile $0
75th percentile $0
90th percentile $37
ARC-CO/PLC Decision Tools
University of Illinois Gardner Program Payment Calculator
Agricultural Policies and Programs

Other Issues

• Ad Hoc Trade Assistance

• Ad Hoc Agricultural Disaster Assistance
Trade Assistance
Market Facilitation Program (MFP)

- $14.5 billion in MFP payments
- Single payment rate per county per planted acre of MFP eligible commodity
  - $15-150 per acre nationally
  - $15-74 per acre in Nebraska
  - $15 per acre on prevented planting acres planted to approved cover crop by August 1
- Signup began July 29 and runs through December 6
- 1st installment equal to higher of 50% of payment rate or $15 per acre
- 2nd installment announced on November 15
  - Additional 25% payment (75% of total payment rate less first installment)*
- 3rd installment could come in January depending on trade situation
- Additional MFP payments
  - $0.20/hundredweight for milk (1st)
  - $0.10/hundredweight for milk (2nd)*
  - $11.00/head for pork (1st)
  - $5.50/head for pork (2nd)*
  - Additional payment rates for selected specialty crops
- Additional trade aid
  - $1.4 billion for commodity purchases
  - $100 million for trade promotion

* Assumed 2nd installment payment details based on USDA announcement of November 15, 2019.
Trade Assistance
MFP Payment Rates*

* Payment rate per planted acre of MFP eligible commodity. Prevented planting acres eligible for minimum $15 per acre if planted to approved cover crop by August 1. First installment equal to higher of 50% of payment rate or $15 per acre. Source: USDA-FSA.
**Trade Assistance**

**MFP Payment Rates – 2nd Installment**

*Payment rate per planted acre of MFP eligible commodity. Second installment equal to 75% of total announced payment rate less initial payment rate. Source: USDA-FSA.*

---

*Source: USDA-FSA.*
Trade Assistance
MFP Payment Rates

- 2018 MFP rates
  - Calculated from estimated damages from retaliatory tariffs against 2017 base period by commodity

- 2019 MFP rates
  - Same approach as 2018 but against 2009-2018 base period
  - Rates by commodity based on 2015-2017 production

- County level payment rates
  - Rates by commodity multiplied by historical average acres and yields
  - Total losses by county based on sum of commodity-specific losses
  - County payment rate based on total losses divided by total acreage in the county

### Market Facilitation Program Payment

<table>
<thead>
<tr>
<th>Commodity</th>
<th>2018</th>
<th>2019</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alfalfa</td>
<td>--</td>
<td>$2.81/ton</td>
</tr>
<tr>
<td>Chickpeas</td>
<td>--</td>
<td>$1.48/cwt</td>
</tr>
<tr>
<td>Corn</td>
<td>$0.01/bu</td>
<td>$0.14/bu</td>
</tr>
<tr>
<td>Cotton</td>
<td>$0.06/lb</td>
<td>$0.26/lb</td>
</tr>
<tr>
<td>Cranberries</td>
<td>--</td>
<td>$0.03/lb</td>
</tr>
<tr>
<td>Dairy</td>
<td>$0.12/cwt</td>
<td>$0.20/cwt</td>
</tr>
<tr>
<td>Dried Beans</td>
<td>--</td>
<td>$8.22/cwt</td>
</tr>
<tr>
<td>Ginseng</td>
<td>--</td>
<td>$2.85/lb</td>
</tr>
<tr>
<td>Grapes (fresh)</td>
<td>--</td>
<td>$0.03/lb</td>
</tr>
<tr>
<td>Lentils</td>
<td>--</td>
<td>$3.99/cwt</td>
</tr>
<tr>
<td>Peanuts</td>
<td>--</td>
<td>$0.01/lb</td>
</tr>
<tr>
<td>Peas</td>
<td>--</td>
<td>$0.85/cwt</td>
</tr>
<tr>
<td>Pork</td>
<td>$8.00/head</td>
<td>$11.00/head</td>
</tr>
<tr>
<td>Rice</td>
<td>--</td>
<td>$0.63/cwt</td>
</tr>
<tr>
<td>Sorghum</td>
<td>$0.86/bu</td>
<td>$1.69/bu</td>
</tr>
<tr>
<td>Soybeans</td>
<td>$1.65/bu</td>
<td>$2.05/bu</td>
</tr>
<tr>
<td>Sweet Cherries (fresh)</td>
<td>--</td>
<td>$0.17/lb</td>
</tr>
<tr>
<td>Tree Nuts*</td>
<td>--</td>
<td>146.00/acre</td>
</tr>
<tr>
<td>Wheat</td>
<td>$0.14/bu</td>
<td>$0.41/bu</td>
</tr>
</tbody>
</table>

*Pistachios, Almonds, Walnuts, Pecans, Hazelnuts, Macadamia Nuts

Source: USDA-OCE data reported by Agri-Pulse
Agricultural Disaster Assistance
2018-2019 (WHIP+)

• Assistance for producers in disaster counties
  • Crop losses
    • Losses below expected revenue x payment factor (70-95%)
    • Adjustment for limited disaster budget
      • 100% on 2018 losses
      • Initial 50% payment on 2019 losses
  • Prevented planting losses – top up payment for crop insurance prevented planting coverage
  • Stored commodities (75% factor) – coverage for lost commodities in private storage facilities
• Additional ag assistance

<table>
<thead>
<tr>
<th>Insurance Coverage Level Purchased</th>
<th>WHIP+ Payment Factor (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>No Crop Insurance</td>
<td>70</td>
</tr>
<tr>
<td>CAT/NAP Basic 50/55</td>
<td>75</td>
</tr>
<tr>
<td>50% ≤ Coverage &lt; 55%</td>
<td>77.5</td>
</tr>
<tr>
<td>55% ≤ Coverage &lt; 60%</td>
<td>80</td>
</tr>
<tr>
<td>60% ≤ Coverage &lt; 65%</td>
<td>82.5</td>
</tr>
<tr>
<td>65% ≤ Coverage &lt; 70%</td>
<td>85</td>
</tr>
<tr>
<td>70% ≤ Coverage &lt; 75%</td>
<td>87.5</td>
</tr>
<tr>
<td>75% ≤ Coverage &lt; 80%</td>
<td>92.5</td>
</tr>
<tr>
<td>80% ≤ Coverage</td>
<td>95</td>
</tr>
</tbody>
</table>
Agricultural Disaster Assistance
Nebraska Disaster Counties
## Agricultural Disaster Assistance
### WHIP+ Coverage for Stored Grain

<table>
<thead>
<tr>
<th>Commodity</th>
<th>Unit</th>
<th>FSA Price</th>
<th>75% Factored Payment Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Barley</td>
<td>Bushel</td>
<td>$4.62</td>
<td>$3.465</td>
</tr>
<tr>
<td>Canola</td>
<td>Pound</td>
<td>0.158</td>
<td>0.1185</td>
</tr>
<tr>
<td>Corn</td>
<td>Bushel</td>
<td>3.6</td>
<td>2.70</td>
</tr>
<tr>
<td>Crambe</td>
<td>Pound</td>
<td>0.221</td>
<td>0.16575</td>
</tr>
<tr>
<td>Dry Peas</td>
<td>Pound</td>
<td>0.105</td>
<td>0.07875</td>
</tr>
<tr>
<td>Flaxseed</td>
<td>Bushel</td>
<td>9.81</td>
<td>7.3575</td>
</tr>
<tr>
<td>Grain Sorghum</td>
<td>Bushel</td>
<td>3.2</td>
<td>2.40</td>
</tr>
<tr>
<td>Large Chickpeas</td>
<td>Pound</td>
<td>0.21</td>
<td>0.1575</td>
</tr>
<tr>
<td>Lentils</td>
<td>Pound</td>
<td>0.178</td>
<td>0.1335</td>
</tr>
<tr>
<td>Mustard Seed</td>
<td>Pound</td>
<td>0.286</td>
<td>0.2145</td>
</tr>
<tr>
<td>Oats</td>
<td>Pound</td>
<td>2.66</td>
<td>1.995</td>
</tr>
<tr>
<td>Peanuts</td>
<td>Pound</td>
<td>0.215</td>
<td>0.16125</td>
</tr>
<tr>
<td>Rapeseed</td>
<td>Pound</td>
<td>0.184</td>
<td>0.138</td>
</tr>
<tr>
<td>Rice (long grain)</td>
<td>Pound</td>
<td>0.108</td>
<td>0.081</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Commodity</th>
<th>Unit</th>
<th>FSA Price</th>
<th>75% Factored Payment Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rice (med/short grain)</td>
<td>Pound</td>
<td>$0.122</td>
<td>$0.0915</td>
</tr>
<tr>
<td>Safflower</td>
<td>Pound</td>
<td>0.203</td>
<td>0.15225</td>
</tr>
<tr>
<td>Seed Cotton (all types)</td>
<td>Pound</td>
<td>0.3432</td>
<td>0.25737</td>
</tr>
<tr>
<td>Sesame Seed</td>
<td>Pound</td>
<td>0.35</td>
<td>0.2625</td>
</tr>
<tr>
<td>Small Chickpeas</td>
<td>Pound</td>
<td>0.215</td>
<td>0.16125</td>
</tr>
<tr>
<td>Soybeans</td>
<td>Bushel</td>
<td>8.5</td>
<td>6.375</td>
</tr>
<tr>
<td>Sunflower Seed/Oil</td>
<td>Pound</td>
<td>0.1665</td>
<td>0.129</td>
</tr>
<tr>
<td>Sunflower Seed/Non-oil</td>
<td>Pound</td>
<td>0.0224</td>
<td>0.168</td>
</tr>
<tr>
<td>Wheat: Durum</td>
<td>Bushel</td>
<td>5.33</td>
<td>3.9975</td>
</tr>
<tr>
<td>Hard Red Spring</td>
<td>Bushel</td>
<td>5.32</td>
<td>3.99</td>
</tr>
<tr>
<td>Hard White Wheat</td>
<td>Bushel</td>
<td>5.35</td>
<td>4.0125</td>
</tr>
<tr>
<td>Soft Red Winter</td>
<td>Bushel</td>
<td>4.9</td>
<td>3.675</td>
</tr>
<tr>
<td>Soft White Spring</td>
<td>Bushel</td>
<td>5.35</td>
<td>4.0125</td>
</tr>
<tr>
<td>Hay – All Hay</td>
<td>Ton</td>
<td>166</td>
<td>124.50</td>
</tr>
</tbody>
</table>
Questions?

For further information, please visit:

farmbill.unl.edu
and
fsa.usda.gov/ne