2021 ARC AND PLC SIGNUP
RECOMMENDATIONS FOR WISCONSIN FARMERS

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https://aae.wisc.edu/pdmitchell/extension/arc-plc-signup/
Topics Covered

• Recommendations for ARC-CO and PLC for corn, soybeans, wheat and oats, with logic for each recommendation
• Types of farms that may find ARC-IC a useful option

• Not Covered: How PLC and ARC work
• How to use the FarmDOC Payment Simulator Tool
• For those interested, see videos and slides from last year
ARC and PLC Signup: Oct 13, 2020 to March 15, 2021

- Eligibility: any FSA farm with a Farm Serial Number has base acres for program crops and associated PLC payment yields
- Farmers choosing PLC, ARC-CO, or ARC-IC for their base acres
- Can mix and match across farms and crops
  - Use PLC for your corn base and ARC-CO for your soybean base
  - Use PLC for corn on one farm, ARC-IC for corn and soybeans on another
- Signup is only for the 2021 crop season
  - Already made decision for 2019 & 2020 last year
  - Will choose for 2022 and 2023 in subsequent years
- Payments based on marketing year average prices, so Sep 1, 2021 until Aug 31, 2022, with payments made, if triggered, in Sep/Oct of 2022
### Reference Prices and USDA Farm Price Projections

<table>
<thead>
<tr>
<th>Crop</th>
<th>Reference Price</th>
<th>Projected 2020 Price</th>
<th>Projected 2021 Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>Corn</td>
<td>$3.70</td>
<td>$4.00</td>
<td>$3.65</td>
</tr>
<tr>
<td>Soybeans</td>
<td>$8.40</td>
<td>$10.55</td>
<td>$10.00</td>
</tr>
<tr>
<td>Wheat</td>
<td>$5.50</td>
<td>$4.70</td>
<td>$4.90</td>
</tr>
<tr>
<td>Oats</td>
<td>$2.40</td>
<td>$2.70</td>
<td>$2.70</td>
</tr>
</tbody>
</table>

- These projections are different than the FarmDOC Payment Simulator prices
- Projected 2020 Price: USDA-WASDE (Dec 10, 2020)
- Projected 2021 Price: USDA Agricultural Projections (Nov 20, 2020)
  [https://usda.library.cornell.edu/concern/publications/qn59q396v](https://usda.library.cornell.edu/concern/publications/qn59q396v)
Corn Prices and its Reference Price

- $2.00
- $2.50
- $3.00
- $3.50
- $4.00
- $4.50
- $5.00

2013 2015 2017 2019 2021

MYA Price  Reference Price
Recommendations for Corn base acres

**Short Answer: Sign up for PLC**
- The PLC $3.70 price floor provides better safety net than ARC
- Even with higher expected prices for 2021, markets can still drop due to disruptions (post-covid economy, trade and policy)
- Even with an expected price over $3.70, uncertainty creates a reasonable likelihood of a price below the $3.70 Reference Price
- ARC-CO has lower average payments because its guarantee, based on 2014-2019 yields and prices, requires a 14% loss in actual revenue using 2021 yields and prices to trigger payments
- ARC-CO best when prices are falling relative to 2+ years ago
Corn Payment Simulator Results for 2021

<table>
<thead>
<tr>
<th>Expected Price</th>
<th>Scenario Name</th>
<th>Expected Payment PLC</th>
<th>Expected Payment ARC</th>
<th>Likelihood of Payment PLC</th>
<th>Likelihood of Payment ARC</th>
</tr>
</thead>
<tbody>
<tr>
<td>$3.20</td>
<td>Low</td>
<td>$74.05</td>
<td>$30.38</td>
<td>79%</td>
<td>61%</td>
</tr>
<tr>
<td>$3.40</td>
<td>Mid/COVID</td>
<td>$55.24</td>
<td>$22.39</td>
<td>71%</td>
<td>46%</td>
</tr>
<tr>
<td>$3.60</td>
<td>Pre-COVID</td>
<td>$38.61</td>
<td>$15.00</td>
<td>60%</td>
<td>35%</td>
</tr>
<tr>
<td>$3.73</td>
<td>CBO</td>
<td>$29.59</td>
<td>$10.56</td>
<td>50%</td>
<td>26%</td>
</tr>
<tr>
<td>$3.90</td>
<td>High</td>
<td>$20.03</td>
<td>$6.04</td>
<td>39%</td>
<td>16%</td>
</tr>
</tbody>
</table>

- **Dane County, 150 bu/ac PLC Payment Yield**
- **USDA Projected 2021 Price $3.65**
- **PLC: higher average payments, better safety net than ARC**
Recommendations for Soybean base acres

**Short Answer: Sign up for ARC**
- We have never had a PLC payment for Soybeans, even in 2020 with COVID: the $8.40 price floor seems irrelevant for soybeans
- What makes ARC more valuable? Higher expected prices, Lower farm PLC payment yields, Located in counties along Lake Michigan or Western WI
- Neither ARC nor PLC likely to pay much
  - $10.00 projected 2021 price in Nov 2020, probably higher now
    - Will China keep buying soybeans? Will farmers over supply the market?
  - ARC guarantees are calculated using $8.95 Olympic average price
    - If price anywhere near the $10.00 level, ARC payments will only be triggered if low county yields
Alternatives for Developing Soybean Recommendations

1. What’s a bigger risk for you: low county yields or a national soybean price collapse?
   - If low county yields, choose ARC
   - If national soybean price collapse, choose PLC

2. Run the FarmDOC payment simulator for your county and your payment yields, pick the option with the highest average payments
   - Tool seems slow to update price projections (June 2020)

3. Wait for expert price projections in Feb/March and then decide
   - Feb 2021 USDA publishes updated long-run price projections ([https://usda.library.cornell.edu/concern/publications/qn59q396v](https://usda.library.cornell.edu/concern/publications/qn59q396v))
   - Average futures prices for contracts over 2021 marketing year
# Soybean Payment Simulator Results for 2021

<table>
<thead>
<tr>
<th>Expected Price</th>
<th>Scenario Name</th>
<th>Expected Payment PLC</th>
<th>Expected Payment ARC</th>
<th>Likelihood of Payment PLC</th>
<th>Likelihood of Payment ARC</th>
</tr>
</thead>
<tbody>
<tr>
<td>$8.10</td>
<td>Low</td>
<td>$23.28</td>
<td>$21.32</td>
<td>64%</td>
<td>68%</td>
</tr>
<tr>
<td>$8.30</td>
<td>COVID</td>
<td>$18.75</td>
<td>$19.34</td>
<td>55%</td>
<td>62%</td>
</tr>
<tr>
<td>$8.50</td>
<td>Mid</td>
<td>$14.81</td>
<td>$17.16</td>
<td>48%</td>
<td>58%</td>
</tr>
<tr>
<td>$8.70</td>
<td>Pre-COVID</td>
<td>$11.44</td>
<td>$15.61</td>
<td>41%</td>
<td>53%</td>
</tr>
<tr>
<td>$8.90</td>
<td>High</td>
<td>$8.57</td>
<td>$13.26</td>
<td>35%</td>
<td>46%</td>
</tr>
<tr>
<td>$9.12</td>
<td>CBO</td>
<td>$6.00</td>
<td>$11.34</td>
<td>26%</td>
<td>41%</td>
</tr>
</tbody>
</table>

- **St. Croix** County, **45 bu/ac** PLC Payment Yield
- USDA Projected 2021 Price **$10.00**
Wheat Prices and its Reference Price

![Graph showing wheat prices from 2013 to 2021, with prices ranging from $2.00 to $7.00. The graph includes two lines: one for the MYA Price and another for the Reference Price.](image-url)
Recommendations for Wheat base acres

• **Short Answer: Sign up for PLC**
  - The PLC $5.50 floor provides a better safety net than ARC
  - 2021 expected price of $4.90 is well below the $5.50 Reference Price, implying that relatively large PLC payments are likely
  - ARC-CO has lower average payments because its guarantee, based on yields and prices from 2014-2019, requires 14% loss in actual revenue using 2021 county yields and prices
    - PLC just needs price below $5.50
  - ARC-CO best when prices are falling relative to 2+ years ago
Wheat Payment Simulator Results for 2021

<table>
<thead>
<tr>
<th>Expected Price</th>
<th>Scenario Name</th>
<th>Expected Payment</th>
<th>Likelihood of Payment</th>
</tr>
</thead>
<tbody>
<tr>
<td>$4.60</td>
<td>Low</td>
<td>$40.37</td>
<td>$13.45</td>
</tr>
<tr>
<td>$4.70</td>
<td>Mid</td>
<td>$36.72</td>
<td>$12.04</td>
</tr>
<tr>
<td>$5.00</td>
<td>(Pre-)COVID</td>
<td>$26.34</td>
<td>$8.26</td>
</tr>
<tr>
<td>$5.09</td>
<td>CBO</td>
<td>$23.49</td>
<td>$7.23</td>
</tr>
<tr>
<td>$5.25</td>
<td>High</td>
<td>$18.80</td>
<td>$5.64</td>
</tr>
</tbody>
</table>

- **Kewaunee County**, 50 bu/ac PLC Payment Yield
- USDA Projected 2021 Price **$4.90**
- PLC: higher average payments, better safety net
Oat Prices and its Reference Price


MYA Price
Reference Price
Recommendations for Oat base acres

- **Short Answer: Signup for ARC**
  - Low county yields more likely to trigger ARC payments than low national prices to trigger PLC payments
  - Historical prices have given a relatively high county guarantee for ARC that may trigger payments if low yields or prices occur
    - Olympic average price is $2.55 for 2021
  - PLC Reference Price = $2.40, USDA 2021 Projection = $2.70
    - PLC unlikely to pay in 2021 for oats
  - Neither ARC nor PLC likely to pay much for Oats
  - In Feb, use USDA long-run price and CME futures
Recommendations for Minor Crops

- Choose PLC
- Reference Price is good relative to market expectations
Summary of Recommendations for 2021

- **Corn**: Choose PLC: Reference Price is good relative to market expectations
- **Soybeans**: Choose ARC-CO, more likely to generate payments than PLC, but will be small if paid
- **Wheat**: Choose PLC: Reference Price is good relative to market expectations
- **Oats**: Choose ARC-CO, more likely to generate payments than PLC, but will be small if paid
- **Sorghum, Barley, Sunflower Seeds**: Choose PLC: Reference Price is good relative to market expectations
ARC-IC for 2021?

- Each FSA farm can sign up for a different program by crop
  - One FSA farm can have PLC for corn and ARC-CO for soybeans and another of FSA farm can have ARC-IC for corn and soybeans jointly
- Previous signup was for 2019 and 2020 crop years when farms knew their 2019 yields (year with lots of prevented plant)
- Could use ARC-IC to receive large payments for 2019
  - Nationally, about 6% corn and soybean base chose ARC-IC
- Adapted from FarmDoc article “The Case for Looking at the ARC-IC (ARC-Individual) Program Option” Zulauf et al. Oct 29, 2019
  - [https://farmdocdaily.illinois.edu/2019/10/the-case-for-looking-at-the-arc-ic-arc-individualprogram-option.html](https://farmdocdaily.illinois.edu/2019/10/the-case-for-looking-at-the-arc-ic-arc-individualprogram-option.html)
Which FSA farms should look at ARC-IC?

• 2021 signup is not like 2019-2020 signup
• You won’t know if you will have lots of prevented plant or low yields in 2021, but some farmers may still find ARC-IC a valuable option
• 1) FSA farm with highly variable yields from year to year
• 2) Your ARC-IC benchmark yield is much higher than ARC-CO county yield and your PLC payment yield
• 3) Acres of vegetables (or fruit) are more than 15% of base acres
Which farms should look at ARC-IC?

1) FSA farm with highly variable yields year to year
   - Often small FSA farms with only a few acres, often a single crop
2) ARC-IC benchmark yield is much higher than ARC-CO county yield and PLC payment yield (unlikely for most Wisconsin farms)
   - Possibly if an FSA farm is one of the few irrigated farms in a county and there is no irrigated option for ARC-CO?
3) Acres of vegetables (or fruit) more than 15% of base acres
   - ARC-CO & PLC pay on 85% of base acres, 15% “non-payment acres”
   - ARC-IC pays on 65% of base acres, 35% “non-payment acres”
   - Farm with 40 base acres can plant up to 40 x 15% = 6 acres of processing vegetables and not reduce ARC-CO or PLC payment acres
   - If enrolled in ARC-IC, same farm can plant up to 35% x 40 = 14 acres
 Counties with Irrigated Options for ARC-CO

Corn

Soybean
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