Goals

• To understand how these four commodity support programs operate at the individual farm level
  • Price Loss Coverage (PLC)
  • Agricultural Risk Coverage (ARC)
  • Marketing Assistance Loans (MAL)
  • Dairy Margin Coverage (DMC)

• Briefly overview Market Facilitation Program (MFP) payments
Commodity Support Programs
USDA Farm Service Agency (FSA)

- Programs administered by the USDA Farm Service Agency (FSA)
  - PLC, ARC, MAL, DMC, MFP
- Each county has a county FSA office
- Farmers/land owners sign up each year: file specific forms for each program by specific dates
- Programs often have reporting requirements: acres of each crop planted, where planted, production (yield) reports
Eligibility for Commodity Support

- Farmer must operate **Base Acres** to be eligible for PLC/ARC (commodity support) subsidies
  - Do not need Base Acres for MAL or DMC (or MFP)
- Officially designated by FSA Farm Serial Number
  - Farms often farm more than one FSA farm
  - Registered with FSA office in each county
  - Stays with the land, not the farmer
- Each FSA farm has **Base Acres** for each **Program Crop** with **Program Yields** used for PLC
  - “40 corn base acres with 130 bu/ac yield”
Base Acres

- Average acres of each program crop historically grown on a “farm” at first enrollment in early 1980s
  - “50 base acres of corn and 30 base acres of soybean”
- Have not added Base Acres since early 1980s, but have allowed changing the mix of crops based on historical shares of crops planted on that FSA farm
  - Crops updated in 2014 using 2009-2012 averages
- Base Acres do not equal what actually plant now
- Payments are “Decoupled” – not tied to how many acres and which crops are planted now, but to historical plantings
Payment Yield (or Program Yield)

• Historical average yield for program crops grown on an FSA farm
  • Updated in 2014: 90% of 2008-2012 average
  • Previous update in 2003 using 1997-2001 yields
  • Next update in 2020 (based on 2018 Farm Bill)
• Payment Yields lower than farm’s average yields
• Final outcome for each FSA farm: Base Acres for each Program Crop and associated Payment Yield
  • Example: a 100 acre FSA farm has 50 corn base acres with a 135 bu/ac payment yield and 25 soybean base acres with a 31 bu/ac payment yield
Base Acres and Payment Yields

- Over the years, Farm Bill commodity support has used Base Acres and Payment Yields.
- The programs and acronyms have changed, but not the use of Base Acres and Payment Yields.
- Direct Payments (DP), Counter Cyclical Payments (CCP), ACRE (Average Crop Revenue Election) payments.
- 2014 Farm Bill created ARC and PLC, again using Base Acres and Payment Yields.
- Part of property characteristics now, just like soil quality, road access, etc., part of the price.
Program Crops

• Barley, Canola, Corn, Cotton, Crambe, Dry Peas, Flaxseed, Grain Sorghum, Chick Peas (Large and Small), Lentils, Mustard Seed, Oats, Peanuts, Rapeseed, Rice (Long Grain and Medium/Short Grain), Safflower, Sesame Seed, Soybeans, Sunflower Seed, Wheat

• Major WI Program Crops
  • Corn, Soybeans, Oats, Wheat (Barley, Sorghum)
  • Corn silage is a type of corn

• NOT program crops
  • Alfalfa and Hay, fruits and vegetables (Potato, Sweet Corn, Snap Beans, Green Peas, Cranberry, Ginseng)
Figure 1. Percent of Base Acres by Commodity

- **Corn**: 39%
- **Wheat**: 27%
- **Soybeans**: 22%
- **Sorghum**: 4%
- **Other Commodities**: 8%

Source: https://fas.org/sgp/crs/misc/R45165.pdf
Base Acres in 2015

273 Million Base Acres

- Wheat 68.0 M (224.8 M, 82%)
- Corn 100.8 M (29.3 M, 11%)
- Soybeans 56.0 M (19.1 M, 7%)
- Other Oilseeds
- Grain Sorghum
- Barley
- Rice
- Peanuts
- Oats
- Pulse Crops

https://www.everycrsreport.com/reports/R45730.html
Base Acres vs Planted Acres, 2014-2018

Million Acres (Annual Average for 2014-2018)

- Corn: Base 56.0, Planted 90.4
- Soybeans: Base 56.0, Planted 85.7
- Wheat: Base 68.0, Planted 85.7
- Other Feed Grains: Base 17.9, Planted 12.5
- Generic Base Cotton: Base 11.3, Planted 19.1
- Rice: Base 4.8, Planted 2.8
- Pulses: Base 0.9, Planted 3.0
- Minor Oilseeds: Base 3.5, Planted 5.6
- Peanuts: Base 2.1, Planted 1.6

https://www.everycrsreport.com/reports/R45730.html
Commodity Support Programs in 2018 Farm Bill

- **Price Loss Coverage (PLC)**
  - Establishes a price floor by crop based on the national marketing year average price

- **Agriculture Risk Coverage (ARC)**
  - County ARC: Establishes a revenue floor by crop based on county revenue
  - Individual ARC: Establishes a revenue floor for whole farm based on farm yields and national prices \(\text{rarely used}\)
Commodity Support Programs

• Farmers have 3 Options
  1) Price Loss Coverage (PLC) by crop
  2) County ARC (ARC-CO) by crop
  3) Individual ARC (ARC-IC) for whole farm

• Our Focus: PLC and County ARC (ARC-CO)
  [ARC-IC rarely used and fairly complicated]

• ARC/PLC sign up happening right now
• Started Sep 3, 2019, deadline is March 15, 2020
• Farmers & land owners choosing which program to use for 2019 and 2020 crop season payments
Price Loss Coverage (PLC)

• Each program crop has a set “Reference Price”
  • Corn $3.70, Soybeans $8.40, Wheat $5.50, Oats $2.40
• If the National Marketing Year Average Price is less than the Reference Price, PLC payments are made
  • PLC PaymentRate = ReferencePrice – MYAPrice
  • PLC Payment =
    \[ 85\% \times \text{BaseAcres} \times \text{PaymentYield} \times \text{PLC PaymentRate} \]
• Corn/Soy marketing year: Sept 1 - Aug 31
• Wheat/Oats marketing year: June 1 - May 31
Simple PLC Example

• Suppose USDA announced 2018 National Marketing Year Average Price of corn was $3.61.
• The corn Reference Price is $3.70, so PLC Payment Rate = $3.70 – $3.61 = $0.09/bu.
• If you have 100 corn Base Acres with a Payment Yield of 140 bu/ac, then your PLC payment would be
• 85% x 100 ac x 140 bu/ac x $0.09/bu = $1,071.
• USDA Announces MYA prices in Sep, payments Oct.

<table>
<thead>
<tr>
<th>Crop</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>Corn</td>
<td>$3.70</td>
<td>$3.61</td>
<td>$3.36</td>
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<tr>
<td>Soybean</td>
<td>$10.10</td>
<td>$8.95</td>
<td>$9.47</td>
<td>$9.33</td>
<td>$8.48</td>
</tr>
</tbody>
</table>
Think Break #15

• You have a farm with
  a) 30 corn base acres with a 130 bu/ac payment rate
  b) 20 soybean base acres with a 30 bu/ac payment rate
• You signed up for PLC and the national marketing year average price is $3.55 for corn and $8.50 for soybeans
• What is your PLC payment?

• Reference Prices: Corn=$3.70, Soybeans=$8.40
• PLC PaymentRate = ReferencePrice – MYAPrice
• PLC Payment = 85% x BaseAcres x PaymentYield x PLC PaymentRate
PLC Comment: Decoupling

- Notice: PLC payments based on national marketing year average price, base acres, payments yields.
- Not on your actual price, your acres planted or your yields.
- Farmer could sell corn for $4.00/bu, but would still get a corn PLC payment using the national prices of $3.55/bu.
- Farmer could sell corn for $3.00/bu, but would still get a corn PLC payment using the national prices of $3.55/bu.
- Farmer could harvest 200 bu/ac (or 100 bu/ac), but would still get PLC payment using 130 bu/ac Payment Yield.
- Farmer could plant 50 acres (or 10 acres) of corn, but would still get PLC payment using 30 corn Base Acres.
- Payments are decoupled to reduce market distortions.
2018 Farm Bill Changes

• “Effective” Reference Price used to calculate payments, not the Reference Price
• Allowed to go higher, based on historical average prices
• Use 85% of the 5-year Olympic average of marketing year average price, but with a floor and cap
  • Floor: current Reference Price
  • Cap: 115% of Reference Price
• Olympic Average: drop the high and the low
• To increase, the 5-year Olympic average has to exceed $3.70 / 85% = $4.35 and $8.40 / 85% = $9.88/bu
5-Year Olympic Average of Prices

<table>
<thead>
<tr>
<th>Crop</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>Corn</td>
<td>$3.70</td>
<td>$3.61</td>
<td>$3.36</td>
<td>$3.36</td>
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<td>$10.10</td>
<td>$8.95</td>
<td>$9.47</td>
<td>$9.33</td>
<td>$8.48</td>
</tr>
</tbody>
</table>

- Corn: Drop $3.70 (hi) and $3.36 (lo)
  - Average ($3.61, $3.36, $3.61) = $3.53
  - 85% of $3.53 = $3.00
  - Corn Effective Reference price stays at $3.70
- Soybean: Drop $10.10 (hi) and $8.48 (lo)
  - Average ($8.95, $9.47, $9.33) = $9.25
  - 85% of $9.25 = $7.86
  - Soybean Effective Reference price stays at $8.40
Agriculture Risk Coverage (ARC)

- **County ARC** payments made if Actual County Revenue is less than the County Guarantee
- County Benchmark = 5-Year Olympic Average County Yield x 5-Year Olympic Average national MYA Price
  - Use Effective Reference Price if higher than MYA Price
  - Use 70% County T Yield if higher than County Yield
- **County Guarantee** = 86% of County Benchmark
- Actual Revenue = County Average Yield x MYA Price
- ARC Payment Rate = County Guarantee – Actual County Revenue, up to 10% of County Benchmark
- **ARC Payment** = 85% x Base Acres x ARC Payment Rate
Farmer Perspective

• Your county has county revenue guarantee for each crop
  • Complicated process to get county guarantee, based on 5-year Olympic averages of county yields with caps and cups and national MYA prices, times 86%
  • If actual county revenue falls below this guarantee, you receive payments = 85% x Base Acres x Revenue Loss, where the Revenue Loss = Guarantee – Actual
• Actual also uses county yield and national price
• Maximum ARC payment based on % of county guarantee
<table>
<thead>
<tr>
<th>Year</th>
<th>Yield</th>
<th>Price</th>
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<tr>
<td>2018</td>
<td>188.9</td>
<td>3.61</td>
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<td>2017</td>
<td>191.4</td>
<td>3.36</td>
</tr>
<tr>
<td>2016</td>
<td>192.5</td>
<td>3.36</td>
</tr>
<tr>
<td>2015</td>
<td>183.7</td>
<td>3.61</td>
</tr>
<tr>
<td>2014</td>
<td>180.7</td>
<td>3.70</td>
</tr>
</tbody>
</table>

• Notice the years used, we do not have 2019 yields yet
• Olympic Average Yield = 188.0
• Olympic Average Price = $3.53
• ARC County Benchmark = $3.53 x 188.0 = $663.64
• ARC Guarantee = 86% x $663.64 = $570.73
• Maximum ARC Payment = 10% x $663.64 = $66.36
Unofficial Corn 2020 Example for Dane County

- Hypothetical Example: Suppose 2020 County ARC Guarantee is $570.73 for corn in Dane County
- Suppose 2020 actual USDA yield in Dane County is 165 bu/ac and 2020 MYA corn price is $3.40
- Actual revenue = 165 x 3.40 = $561/ac, triggers payment
- ARC Payment Rate = 570.73 – 561.00 = $9.73/ac, well below max payment, so ARC Payment Rate = $9.73
- ARC Payment = 85% x BaseAcres x ARC Payment Rate
- ARC Payment = 85% x $9.73 = $8.27 per corn base acre
- Decoupled ARC Payments: Farmer paid regardless of how much they sell their corn for, what their yields are and how much corn they plant
Farmers have to choose: ARC or PLC?

- 2014 Farm Bill required farms to make an irrevocable choice, ARC or PLC, by crop for 5 years (2014-2018)
  - We will look at choice and payment data

- 2018 Farm Bill: again, farmers have to choose ARC or PLC, by crop for 2 years (2019 and 2020)
- 2021, 2022, 2023: Annual choice by crop
- ARC/PLC signup for 2019 & 2020, started Sep 3, 2019 and have to decide by Mar 15, 2020

- Major outreach (and media) efforts: guidance on how to decide, what to decide
ARC vs PLC: 2014 Farm Bill

- Farmers and landowners had to choose ARC or PLC at signup in 2014 – **One program for all 5 years**
  - Could differ by crop, e.g., ARC for Corn, PLC for Wheat
  - 95%+ farmers chose ARC for Corn and Soybean
  - About 1/3 farmers chose PLC for Wheat

Source: https://fas.org/sgp/crs/misc/R45165.pdf
## Total ARC and PLC Payments ($ Billion)

<table>
<thead>
<tr>
<th>Crop Year</th>
<th>Corn ARC</th>
<th>Corn PLC</th>
<th>Soybean ARC</th>
<th>Soybean PLC</th>
<th>Wheat ARC</th>
<th>Wheat PLC</th>
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<tbody>
<tr>
<td>2014</td>
<td>3.745</td>
<td>---</td>
<td>0.325</td>
<td>---</td>
<td>0.353</td>
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<tr>
<td>2015</td>
<td>4.066</td>
<td>0.053</td>
<td>1.093</td>
<td>---</td>
<td>0.642</td>
<td>0.500</td>
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<tr>
<td>2016</td>
<td>2.801</td>
<td>0.208</td>
<td>0.201</td>
<td>---</td>
<td>0.651</td>
<td>1.273</td>
</tr>
<tr>
<td>2017</td>
<td>0.382</td>
<td>0.199</td>
<td>0.216</td>
<td>---</td>
<td>0.345</td>
<td>0.618</td>
</tr>
<tr>
<td>2018</td>
<td>0.200</td>
<td>0.053</td>
<td>0.147</td>
<td>---</td>
<td>0.180</td>
<td>0.270</td>
</tr>
</tbody>
</table>
ARC and PLC Payments by Crop and Year

Payments ($ Billion)

- Corn
- Soybean
- Wheat

2014 | 2015 | 2016 | 2017 | 2018
ARC and PLC Payments by Year in Wisconsin

$318 million total over 5 years
Figure 2. 2014 ARC-CO County Payments for Corn Per Base Acre

For counties with irrigated and non-irrigated yields series, the above map shows the irrigated yields series. Sequester reduction of 6.8% taken into consideration when calculating payments.

$3.745 Billion

Figure 1. 2015 ARC-CO County Payments for Corn, $ per Base Acre

$4.066 Billion

http://farmdocdaily.illinois.edu/2016/10/2015-arc-co-payments-for-corn-soybeans-wheat.html
Figure 1. 2016 ARC-CO Payments for Corn

For counties with irrigated and non-irrigated yield series, the above map shows payments for irrigated farmland. Sequester reduction of 6.8% taken into consideration when calculating.

https://farmdocdaily.illinois.edu/2017/10/2016-arc-co-payments.html
For counties with irrigated and non-irrigated yields series, the above map shows the irrigated yields series. Sequester reduction of 6.8% taken into consideration when calculating payments.

Figure 1. Estimated 2018 ARC-CO County Payments for Corn, $ Per Base Acre ($3.55 MYA Price)

For counties with irrigated and non-irrigated yields series, the above map shows the irrigated yields series. Sequester reduction of 6.8% taken into consideration when calculating payments.

Figure 2. 2015 ARC-CO County Payments for Soybeans, $ Per Base Acre

$1.093 Billion

http://farmdocdaily.illinois.edu/2016/10/2015-arc-co-payments-for-corn-soybeans-wheat.html
Figure 2. 2016 ARC-CO Payments for Soybeans

https://farmdocdaily.illinois.edu/2017/10/2016-arc-co-payments.html
Figure 4. Estimated 2017 ARC-CO County Payments for Soybeans, $ Per Base Acre ($9.33 MYA Price)

$0.216 Billion

For counties with irrigated and non-irrigated yields series, the above map shows the irrigated yields series. Sequester reduction of 6.8% taken into consideration when calculating payments.

Figure 2. Estimated 2018 ARC-CO County Payments for Soybeans, $ Per Base Acre ($8.60 MYA Price)

$0.147 Billion

Figure 4. 2014 ARC-CO County Payments for Wheat Per Base Acre

$0.353 Billion

Figure 3. 2015 ARC-CO County Payments for Wheat, $ Per Base Acre

$0.642 Billion

http://farmdocdaily.illinois.edu/2016/10/2015-arc-co-payments-for-corn-soybeans-wheat.html
For counties with irrigated and non-irrigated yield series, the above map shows payments for irrigated farmland. Sequester reduction of 6.8% taken into consideration when calculating payments.

https://farmdocdaily.illinois.edu/2017/10/2016-arc-co-payments.html
Figure 6. 2017 ARC-CO County Payments for Wheat, $ Per Base Acre ($4.72 MYA Price)

$0.345 Billion

Figure 3. Estimated 2018 ARC-CO County Payments for Wheat, $ Per Base Acre
dollar $5.55 MYA Price

$0.180 Billion

For counties with irrigated and non-irrigated yields series, the above map shows the irrigated yields series. Sequester reduction of 6.8% taken into consideration when calculating payments.

Main Point

• County ARC payments vary by county and year
• Main idea: like county-level revenue insurance with an 86% coverage level
• Differences from Crop Insurance
  • Uses 5-Year Olympic Average prices and yield to determine guarantee
  • Uses national marketing year average price as the actual price
Agriculture Risk Coverage (ARC)

- **Individual ARC** based on revenue from all program crops as a whole for an FSA farm, not crop by crop
- For a simple hypothetical example, assume 2 program crops: corn and soybeans
- Benchmark Revenue by Crop = 5-Year Olympic Average of (Yield per Planted Acre x MYA Price)
- **Individual Benchmark Revenue** =
  
  \[
  \text{(Corn Acres/Total Acres) x Corn Benchmark Revenue} + \text{(Soy Acres/Total Acres) x Soy Benchmark Revenue}
  \]
- **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
- Almost no one signed up for ARC-IC for Corn & Soybeans
Marketing Assistance Loans (MAL) & Loan Deficiency Payments (LDP)
Marketing Assistance Loans (MAL) & Loan Deficiency Payments (LDP)

- MAL: loans to help farmers manage cash flow (pay off operating loans), so can wait to sell grain when prices are higher
- LDP: Payments that give farmers a price floor equal to the Loan Rate
  - Price support for prices below the Loan Rate
  - Where counter cyclical payments (CCP) used to stop (though CCP eliminated now)
- MAL-LDP programs meant to work together
- Not tied to Base Ares or Program Yields
Marketing Assistance Loans

• Farmers receive a marketing assistance loan (MAL) from the Commodity Credit Corporation (CCC), using their harvested grain as collateral
  • Your harvested grain, no matter acres grown on
  • Receive $/bu in loan equal to the Loan Rate
  • National Loan Rates
    • Corn $1.95, Soybeans $5.00, Wheat $2.94
    • Count loan rates will likely differ from these by a few cents, WI tends to be lower than these
• Have to grow the grain yourself, can’t buy from someone else and then enroll in MAL
• MAL is for up to 9 months
MAL Payback

- Farmer picks a day to “sell” and payoff loan
  - Actual physical sale may occur later, but not earlier
- Each day, there is a Posted County Price (PCP) for each commodity, official FSA estimate of local price
- If PCP > Loan Rate, farmer pays back MAL in full, plus small interest payment
- If PCP < Loan Rate, farmer pays back MAL at Marketing Loan Repayment Rate \( \approx \) PCP
- Loan Deficiency Payment (LDP) = Loan Rate – PCP
- Simplification: Don’t take loan and pay it back, but receive LDP = Loan Rate – PCP, if PCP < Loan Rate
- Program used to be used a lot when lower prices
Think Break #16

• Suppose planted and harvested 5,000 bu of soybeans and enroll all 5,000 bu for a Marketing Assistance Loan.
• Soybeans has a $5.00/bu loan rate, so how much will your MAL be?
• Suppose you pay back the MAL on Feb 1st when the posted county price for soybean is $6.00/bu,
• What is your Loan Deficiency Payment?
• How much will you pay back?
• Suppose instead you pay back the MAL on Feb 1st when the posted county price for soybean is $4.50/bu,
• How much will you pay back?
• What is your Loan Deficiency Payment?
Marketing Assistance Loans (MAL) & Loan Deficiency Payments (LDP)

• Main idea: Program works to give farmers a price floor equal to the Loan Rate
  • Reality is that loan rates are so low for corn soybeans and wheat that no one expects LDPs, just use MAL as a cheap loan program
• LDPs have been paid in recent years for some classes of wheat and “Southern” crops (peanuts, cotton, rice)
• Based on actual farmer harvested production and local prices (but not actual price you sell for)
  • MAL/LDPs do not use National MYA prices, Base Acres or Program Yields
Summary of Loan Deficiency Payments (LDP)

• LDP ($/harvested bushel)
  • LDP = Loan Rate – PCP, if PCP < Loan Rate
• Depends on local Posted County Price when you “sell” the crop (may not be price actually receive when physical sale occurs)
• Depends on how many bushels harvested, not acres harvested
• Gives farmers the Loan Rate as minimum price on all bushels enrolled
  • Corn $1.95, Soybeans $5.00, Wheat $2.94
MAL Used for ~1 Billion bu in 2017 (about 7% of total production)

Figure 5. Program Outlays Under the 2014 Farm Bill
(billions of dollars)

Source: https://fas.org/sgp/crs/misc/R45165.pdf
Market Facilitation Program (MFP)
Market Facilitation Program (MFP)

- In 2018, trade wars led to tariffs on US ag exports and large price declines for several ag commodities
  - Already low prices and low farm income
- Administration created the Market Facilitation Program
  - Outside of Farm Bill and usual legislative process
- Rules were developed and payments announced
- MFP payments announced in 2019, different rules
- MFP is broader than just payments to farmers:
  - Food Purchase and Distribution Program buying surplus of affected commodities
  - Trade Promotion Program to restore lost markets and develop new export markets
Payments to Farmers

Form of Direct Farm Payments

MFP Covered Commodities

- MFP provides payments to eligible producers of:
- **Non-Specialty Crops**: alfalfa hay, barley, canola, corn, crambe, **dried beans**, dry peas, extra-long staple cotton, flaxseed, lentils, long grain and medium grain rice, millet, mustard seed, oats, peanuts, rapeseed, rye, safflower, sesame seed, small and large chickpeas, sorghum, **soybeans**, sunflower seed, temperate japonica rice, triticale, upland cotton, and **wheat**
- **Specialty Crops**: almonds, **cranberries**, cultivated ginseng, fresh grapes, fresh sweet cherries, hazelnuts, macadamia nuts, pecans, pistachios, and walnuts.
- **Livestock**: dairy and hogs.
MFP Eligibility

• Produce one or more of these commodities, and must either:
  • 1) Have an average adjusted gross income for tax years 2015, 2016, and 2017 of less than $900,000; or
  • 2) Derive at least 75% of adjusted gross income from farming or ranching

• Producers also must:
  • Comply with the provisions of the “Highly Erodible Land and Wetland Conservation” regulations, often called the conservation compliance provisions
  • Have a farm number with USDA's Farm Service Agency
MFP Payments

- 2018: MFP made payments based on farmer’s production of affected commodities: Soybeans = $1.62/bu, Wheat = $0.14/bu, Dairy = $0.12/cwt, Corn = $0.01/bu
- 2019: MFP made payments based on total acres of affected commodities a farmer planted, each county had a different rate
  - Acres instead of production: To be decoupled?
- Specialty crops were also paid on per acre basis
  - Cranberry and Ginseng the major WI crops
2018 MFP payments exceeded $200 Million in WI: Soybeans $166 Million, Dairy $28 Million, Corn $5 Million

https://www.fb.org/market-intel/mapping-8.5-billion-in-trade-assistance
MFP Payment Rates for 2019

2019 MFP Payment Rates in WI

https://renk.aae.wisc.edu/2019/08/05/market-facilitation-program-what-it-means-for-wisconsin-producers/
2019 MFP Payment Rates in WI

<table>
<thead>
<tr>
<th>County</th>
<th>MFP Payment Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adams</td>
<td>$37</td>
</tr>
<tr>
<td>Ashland</td>
<td>$15</td>
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<tr>
<td>Barron</td>
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<td>Brown</td>
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<tr>
<td>Wood</td>
<td>$32</td>
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https://renk.aae.wisc.edu/2019/08/05/market-facilitation-program-what-it-means-for-wisconsin-producers/
Market Facilitation Program (MFP)

• MFP was a temporary program outside of the Farm Bill that gave farmers a major influx of money when needed
• Key is temporary: the budgetary authority used is almost consumed ($30 Billion) and trade war is hopefully ending
• Example of a new program, another acronym, and new set of rules to learn
• All part of being a farmer
Dairy Margin Coverage (DMC)
Dairy Margin Coverage (DMC)

• 2018 Farm Bill included a new dairy program: Dairy Margin Coverage (DMC)
  • Replaced the unpopular Dairy Margin Protection Program (MPP) that started with the 2014 Farm Bill, which replaced the Milk Income Loss Coverage (MILC)
  • DMC is very much like the MPP, but tweaked the program parameters and changed the name
  • PLC did the same for CCP on crop side
Dairy Margin Protection Program (MPP) from the 2014 Farm Bill

- USDA-FSA program that makes payments when the margin between milk price and feed costs is too small
  - Margin used to pay fixed costs, overhead, management
- Specifics: Makes payments when the difference between the USDA’s average national All-Milk price and a program-defined fixed feed ration valued at U.S. average prices falls below producer chosen Income Over Feed Costs (IOFC)
Why Dairy Margins? Because they have become more volatile!

Estimated MPP Bi-Month IOFC's: 1980-2014 ($/cwt)

<table>
<thead>
<tr>
<th>IOFC</th>
<th>Average</th>
<th>St Dev</th>
</tr>
</thead>
<tbody>
<tr>
<td>1980-89</td>
<td>8.03</td>
<td>0.96</td>
</tr>
<tr>
<td>1990-99</td>
<td>8.32</td>
<td>1.51</td>
</tr>
<tr>
<td>2000-09</td>
<td>8.60</td>
<td>2.47</td>
</tr>
<tr>
<td>2010-</td>
<td>8.22</td>
<td>2.75</td>
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</table>
Dairy Margin Protection Program (2014)

- Producers choose a milk margin, get $4/cwt margin for free, buy higher coverage
- Program pays when Actual Dairy Production Margin falls below selected Coverage Level Threshold
- Actual Dairy Production Margin = All-Milk Price minus Average Feed Cost (cost index)
  - Feed Cost = 1.0728 x Corn Price + 0.00735 x Soybean Meal Price + 0.0137 x Alfalfa Price
- Payments = 1/6 x Actual Dairy Production History x Payment Rate x (Margin Guarantee – Actual Dairy Production Margin)
Dairy Margin Protection Program (2014)

• Margin Guarantee (Coverage Level Threshold)
  • $4.00/cwt to $8.00/cwt in 50¢ increments

• Payment Rate (Percentage of Coverage)
  • 25% to 90% in 5% increments
  • Payment rate for each $ Actual Margin < Guarantee

• Voluntary program with annual coverage decisions

• Uses pre-set 2 month periods (JF, MA, MJ, JA, SO, ND)

• Farmer gets $4/cwt margin for free, pay for higher margin, with higher premium for production over 4 million pounds

• Cannot enroll in Dairy MPP and buy LGM Dairy insurance or Dairy Revenue Protection insurance
What Have Been Historical MPP Margins?

Margin Protection Available from $4.00 - $8.00/cwt

2014 IOFC Forecast Margin

Historical IOFC Margins
Hypothetical Example

- Produce 3 million pounds/year (= 30,000 cwt)
- Chose $4.00/cwt margin (free)
- Chose 90% Coverage Percentage
- Suppose Actual Margin is $3.50 for Jan-Feb of 2015
  - Low milk prices relative to feed costs
- $4.00 < $3.50 = so trigger a payment of $0.50/cwt
- Payments = 1/6 x Actual Dairy Production History x Payment Rate x (Margin Guarantee – Actual Dairy Production Margin)
- Payment = 1/6 x 30,000 cwt x 90% x $0.50 = $2,250, or $0.45/cwt for the two-month period
## Premium Costs ($/cwt) for Dairy Margin Protection

<table>
<thead>
<tr>
<th>Margin ($/cwt)</th>
<th>First 4 million pounds</th>
<th>Above 4 million pounds</th>
</tr>
</thead>
<tbody>
<tr>
<td>$4.00</td>
<td>0.000 Free</td>
<td>0.000 Free</td>
</tr>
<tr>
<td>$4.50</td>
<td>0.010</td>
<td>0.020</td>
</tr>
<tr>
<td>$5.00</td>
<td>0.025</td>
<td>0.040</td>
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<tr>
<td>$5.50</td>
<td>0.040</td>
<td>0.100</td>
</tr>
<tr>
<td>$6.00</td>
<td>0.055</td>
<td>0.155</td>
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<tr>
<td>$6.50</td>
<td>0.090</td>
<td>0.290</td>
</tr>
<tr>
<td>$7.00</td>
<td>0.217</td>
<td>0.830</td>
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<tr>
<td>$7.50</td>
<td>0.300</td>
<td>1.060</td>
</tr>
<tr>
<td>$8.00</td>
<td>0.475</td>
<td>1.360</td>
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</table>
MPP participation started out high, but declined (rarely paid), so changes in 2018

Figure 1. Dairy Operations Enrolled in Margin Protection Program and Percent of Operations With Buy-Up Coverage

Source: USDA FSA, USDA Information Request, * As of July

Source: https://www.fb.org/market-intel/dairy-mpp-is-delivering-in-2018
Monthly period (vs bi-monthly), 5 million free, lower premiums for buy-up
WI farmers received almost $37 million as of July 2018

Source: https://www.fb.org/market-intel/dairy-mpp-is-delivering-in-2018
DMC vs MPP with 2018 Farm Bill

- Made many 2018 MPP changes permanent
  - Tier 1 coverage: DMC = 5 million pounds, MPP 4 million
  - Monthly, not bi-monthly
- Broader range of Payment Rates (production covered)
  - DMC: 5% to 95%  MPP: 25% to 90%
- Program premiums for buy-up coverage are lower
- Allowed higher Margin Guarantees
  - DMC up to $9.50/cwt  MPP: up to $8.00/cwt
- Payments = \( \frac{1}{12} \times \text{Actual Dairy Production History} \times \text{Payment Rate} \times (\text{Margin Guarantee} - \text{Actual Dairy Production Margin}) \)
<table>
<thead>
<tr>
<th>Coverage Level Threshold</th>
<th>Tier 1 MPP-Dairy, 2016 to 2017</th>
<th>Tier 1 MPP-Dairy, 2018</th>
<th>Tier 2 MPP-Dairy</th>
<th>Tier 1 DMC</th>
<th>Tier 2 DMC</th>
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</thead>
<tbody>
<tr>
<td>Qualifying Production</td>
<td>4 M lbs. or less</td>
<td>5 M lbs. or less</td>
<td>above 5 M lbs.</td>
<td>5 M lbs. or less</td>
<td>above 5 M lbs.</td>
</tr>
<tr>
<td>$4.00</td>
<td>$-</td>
<td>$-</td>
<td>$-</td>
<td>$-</td>
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<tr>
<td>$4.50</td>
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<td>n.a.</td>
<td>n.a.</td>
<td>$0.1500</td>
<td>n.a.</td>
</tr>
</tbody>
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DMC premiums discounted 25% lower if lock in margin guarantee and payment rate for 5 years

Courtesy of Dr. Mark Stephenson UW CDP
MPP/DMC Margins since 2016

MPP/DMC Monthly Margins, Actual and Forecast

Source: USDA/FSA, based on September 26, 2019 CME futures settlement prices.

DMC Signup at USDA-FSA Office

- 2019 Signup was June 17, 2019 to Sep 27, 2019
- 2020 Signup is Oct 7, 2019 to Dec 13, 2019
- First signup ended between problem sets #1 and #2
- 2020 signup deadline is the day before our final
Summary of USDA-FSA Programs

- Overview of commodity support programs
- Administered by USDA-Farm Service Agency (FSA) in each county
  - Price Loss Coverage (PLC)
  - Agricultural Risk Coverage (ARC)
  - Marketing Assistance Loans (MAL)
  - Market Facilitation Program (MFP)
  - Dairy Margin Coverage (DMC)