USDA’s Planting Intentions & Grain Stocks Reports Surprises

1. Corn Stocks smaller than trade expected
   - USDA’s March 1 estimate, 7.95 billion bushels
   - 184 million bushels less than average pre-release estimate
   - Likely implies size of 2019 crop overestimated

2. Corn Planting Intentions larger than expected
   - USDA estimated 97 million acres
   - 2.9 million acres more than average pre-release estimate

3. Soybean Planting Intentions smaller than expected
   - USDA estimated 83.5 million acres
   - 1.5 million acres below average pre-release estimate
2nd Largest Corn Acreage in Post WWII Era

Source: USDA WADE & Prospective Plantings

Purdue Center for Commercial Agriculture
2020 Soybean Planting Intentions
7.4 Million Acres Above 2019’s Acreage

Source: USDA

Purdue Center for Commercial Agriculture
Combined Acreage Back Near 2015-2018 Average

U.S. Crop Planted Acreage
Corn, Soybean & Wheat Acreage Combined, 2005-2020

<table>
<thead>
<tr>
<th>Harvest Year</th>
<th>Million Acres</th>
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<tbody>
<tr>
<td>2005</td>
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<td>2019</td>
<td>225</td>
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<td>2020</td>
<td>225</td>
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</tbody>
</table>

Source: USDA
Purdue Center for Commercial Agriculture
If We Reach Trend Yield in 2020
Corn Production Will Set A New Yield Record

Source: USDA WASDE
Purdue Center for Commercial Agriculture
If Soybean Yields Reach Trend It Would Be 3rd Highest Yield on Record

![U.S. Soybean Yields Graph](chart.png)

- Actual Yield
- Trend Yield (1996-2020)

Bu/Acre: 20, 25, 30, 35, 40, 45, 50, 55

Source: USDA

Purdue Center for Commercial Agriculture
Combination of Planting Intentions & Trend Yield Would Lead to Record Large Corn Production

Total U.S. Corn Production

Billion Bu.

Harvest Year

Source: USDA

Purdue Center for Commercial Agriculture
Soybean Planting Intentions & Trend Yield Would Push 2020 Soybean Production Back Above 4 Billion Bushels

![Graph showing U.S. Soybean Production from 2005 to 2020](image)

- Source: USDA
- Purdue Center for Commercial Agriculture
What About Demand for Corn?

*COVID19 Suggests Weak Demand Environment*

Key Corn Demand Issues

1. Ethanol Demand
2. Export Demand
3. Feed Demand
Declining Oil Prices & Plummeting Gasoline Usage Have Pushed Ethanol Margins Into the Red

Estimated Daily Ethanol Plant Margins
Return Over Operating Costs, $/Gallon of Ethanol
September 3, 2019-March 27, 2020

Data Source: CARD, Iowa State University
Purdue Center for Commercial Agriculture
Ethanol Demand Expected To Drop Sharply Near Term And Likely To Remain Weak Until Economy Recovers

2019 usage could drop down to 5 billion bushels, boosting carryover

Source: USDA

Purdue Center for Commercial Agriculture

Corn & Soybean Outlook Webinar, April 1, 2020
Weak Ethanol Demand Pressuring Corn Basis Levels Lower
USDA Projected 2019 Crop Exports Would Decline 16% Compared to 2018
But YTD Sales & Commitments Through Mid-March Were Down 28%

Source: USDA WASDE

Purdue Center for Commercial Agriculture
But Record Large Meat Production in 2020 Will Continue To Support Feed Demand

Annual U.S. Beef, Pork & Poultry Production 1990-2020

- Poultry
- Pork
- Beef

Source: USDA & LMIC, 2020 LMIC Forecast

Purdue Center for Commercial Agriculture
Corn Summary

Corn Production in 2020 Could Set A New Record

Near Term, Sharp Decline in Ethanol Demand

• Weak Ethanol Demand Could Linger Until Economy Shows Signs of Recovery

Exports Were Running Behind USDA Forecast Before Covid-19

• Global Recession Means Exports Unlikely to Catch Up

Weak Ethanol & Export Demand Means Carryover from ‘19 into ‘20 Will Increase

Feed Demand Arising From Record Large U.S. Meat Production Is Only Bright Spot for Corn Demand
Look for Rising Ending Stocks and Weaker Prices
2019 MYA Price of $3.55-$3.60 Likely, Down from $3.80 Projection Earlier in the Year

Corn MYA Price vs. U.S. Ending Stocks
Ending Stocks as % of Total Usage

Weak Ethanol Demand Could Push 2019 Carryover Up Near 17%

Source: USDA WASDE

Purdue Center for Commercial Agriculture
What About Demand for Soybeans?

*Uncertain International Trade Environment Is Key*

Key Soybean Demand Issues

1. Export Demand
2. Crush Demand
YTD Sales & Commitments Were 14% Below Last Years Through Mid-March
Weak World Economy Means Exports Unlikely to Catch Up To Forecast

Source: USDA

Purdue Center for Commercial Agriculture

Corn & Soybean Outlook Webinar, April 1, 2020
Soybean Summary

• Large Production Increase Likely in 2020
• Exports Running Below Pace Needed to Hit Target
• Domestic Crush Demand Supported By Large Livestock Inventories
• Carryover From 2019 Could Be Larger Than Recent Forecasts Because of Weak Exports
2019 Ending Stocks Could Be Larger Than Projected Previously
2019 MYA Price Near $8.50 Likely, Down from $8.70 Projection Earlier in the Year

Source: USDA

Purdue Center for Commercial Agriculture

Weak Export Demand Could Push 2019 Carryover Up Near 15%
Net Return Projections

Definitions

• Net Farm Income
  – Gross revenue minus cash expenses and depreciation; excludes operator and family labor, and opportunity costs

• Net Return to Land
  – Gross revenue minus cash expenses (except rent), depreciation, and opportunity costs (except opportunity cost on owned land)

• Earnings
  – Gross revenue minus cash expenses, depreciation, and opportunity costs
Net Farm Income Sources, Corn/Soybean Rotation ($ per Acre)
West Central Indiana Case Farm

- Government Payments
- Crop Insurance
- Crop Net Returns
- Net Farm Income
Difference in Earnings per Acre
West Central Indiana (Corn Minus Soybeans)
Current Prices Still Favor Soybeans Over Continuous Corn in Eastern Corn Belt

Corn Prices Required to Produce Per Acre Returns Equivalent to Soybeans

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<th>Soybean Price</th>
<th>Low Productivity (C=133; SB=44)</th>
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Soybeans Versus Rotation Corn in Eastern Corn Belt?

Corn Prices Required to Produce Per Acre Returns Equivalent to Soybeans

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Cash Rent and Net Return to Land, West Central Indiana

- Net Return to Land
- Cash Rents

07 08 09 10 11 12 13 14 15 16 17 18 19 20P
Marketing Strategies

Take advantage of spring planting rallies, if they materialize

Eastern Corn Belt benefitted from strong corn basis for much of 2019 crop year, but weak ethanol demand means basis bids unlikely to strengthen seasonally

Soybean basis remains strong, take advantage of basis strength

Little to no carry in futures for corn or soybeans provides little incentive to continue storing
Next Crop Outlook Webinar
May 15, 2020

More info & register at purdue.ag/upcoming-webinars