Overview

- General Economy
- Input Prices
- Corn and Soybean Supply and Demand
- Old and New Crop Pricing
- Risk Management & Marketing Strategies

Source: https://vegdri.unl.edu/
Slow down in 2024?

GENERAL ECONOMY
Prime Rate and Inflation Rate, Jun 2020 to Dec 2023

Data Sources:
and
https://fred.stlouisfed.org/series/DPRIME
Unemployment and Labor Force Participation Rate, 2020 to 2023

Based on the current labor force and the difference between 63.3% and 62.5% equates to 1.82 million workers.

Data Sources:
https://fred.stlouisfed.org/series/CIVPART
https://www.bls.gov/cps/
Personal Consumption Expenditures, Monthly Seasonally Adjusted, 1980 to 2023

Data Source: https://fred.stlouisfed.org/series/PCE

**Linear Trend:**
\[ y = 0.9611x - 27883 \]
**R^2:** 0.9648

**Quadratic Trend:**
\[ y = 4.182x - 169750 \]
**R^2:** 0.9452

Billions
U.S. Receipts, Outlays, and Surplus or Deficits, 1901 to 2028 (projected)

Data Source: https://www.whitehouse.gov/omb/budget/historical-tables/
Total Debt Balance

Data Source: https://www.newyorkfed.org/microeconomics/hhdc
Non-Housing Debt Balance

Data Source: https://www.newyorkfed.org/microeconomics/hhdc
INPUT PRICES

Fertilizer, Fuel, Land
Weekly Gasoline and Diesel Prices, January 2020 to February 2024

Data Source: [https://www.eia.gov/petroleum/gasdiesel/](https://www.eia.gov/petroleum/gasdiesel/)
Producer Price Index by Commodity: Machinery and Equipment: Agricultural Machinery and Equipment

Data Source: https://fred.stlouisfed.org/series/WPU111

29% increase between 1/1/2021 and 1/1/2023
Crop Share Example

2023
- Yield 175 bu/acre
- December 2023 contract $5.26/bu
- Gross Revenue $920.50/acre
- ¼ Share = $230.13/acre

2024
- Yield 175 bu/acre
- December 2024 contract $4.63/bu
- Gross Revenue $810.25/acre
- ¼ Share = $202.56/acre

$27.57 per acre decrease.
CORN SUPPLY AND DEMAND
U.S. Corn Production, Consumption, Exports, and Ending Stocks, 2014/15 to 2023/24

Data Source: USDA PSD - https://apps.fas.usda.gov/psdonline/app/index.html#/app/advQuery
World Corn Production, Consumption, and Ending Stocks, 2014/15 to 2023/24

Data Source: USDA PSD - https://apps.fas.usda.gov/psdonline/app/index.html#/app/advQuery
U.S. Corn Stocks-to-Use and Price Relationship, 2006-2023

Data Source: USDA PSD - https://apps.fas.usda.gov/psdonline/app/index.html#/app/advQuery

y = 0.8248x - 0.767
R² = 0.6033
SOYBEAN SUPPLY AND DEMAND
World Soybean Production, Consumption, and Ending Stocks, 2014/15 to 2023/24

Data Source: USDA PSD - https://apps.fas.usda.gov/psdonline/app/index.html#/app/advQuery
World Soybean Production, 2019/20 to 2023/24

Data Source: USDA PSD - https://apps.fas.usda.gov/psdonline/app/index.html#/app/advQuery
U.S. Soybean Production, Consumption, Exports, and Ending Stocks, 2014/15 to 2023/24

Data Source: USDA PSD - https://apps.fas.usda.gov/psdonline/app/index.html#/app/advQuery
Nearby Soybean, Meal, and Oil Futures Value

Data Source: https://www.barchart.com/futures/quotes/ZS*0/futures-prices?ViewName=main
US Soybean Crush, 2000/01 to 2023/24

- Past Ten Years
  - US crush up – 22.8%
  - World crush up – 24.2%

Crush, 2014-2023

- World Crush (billion bushels)
- US Crush (billion bushels)

Source: Gordon Denny and American Soybean Association
Historical, Old, and New Crop

PRICES
## Old Crop

### Corn

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<th>Futures</th>
<th>Contract Month</th>
<th>Price</th>
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<td>ZCH24</td>
<td>Mar '24</td>
<td>399-6s</td>
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<td>ZCK24</td>
<td>May '24</td>
<td>413-4s</td>
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<tr>
<td>ZCN24</td>
<td>Jul '24</td>
<td>426-2s</td>
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<tr>
<td>ZCU24</td>
<td>Sep '24</td>
<td>435-2s</td>
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<tr>
<td>ZCZ24</td>
<td>Dec '24</td>
<td>449-4s</td>
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<td>ZCH25</td>
<td>Mar '25</td>
<td>463-4s</td>
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### Soybean

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<td>ZSH24</td>
<td>Mar '24</td>
<td>1133-0s</td>
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<td>ZSK24</td>
<td>May '24</td>
<td>1141-6s</td>
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<td>ZSN24</td>
<td>Jul '24</td>
<td>1151-2s</td>
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<td>ZSQ24</td>
<td>Aug '24</td>
<td>1149-2s</td>
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<td>ZSU24</td>
<td>Sep '24</td>
<td>1135-4s</td>
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<td>ZSX24</td>
<td>Nov '24</td>
<td>1130-2s</td>
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<td>ZSF25</td>
<td>Jan '25</td>
<td>1140-4s</td>
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<td>Corn Price</td>
<td>Months</td>
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<td>------------</td>
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<tr>
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<td>$ 4.00</td>
<td>$0.03</td>
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<td>$ 4.75</td>
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<td>$ 5.75</td>
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<td>$ 6.75</td>
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<td>$ 7.00</td>
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* Does not include other storage costs (~ 10 – 20 cents)
December Corn Futures Contract, Jan 1 to Expiration, 2010-2024*

<table>
<thead>
<tr>
<th>Year</th>
<th>Min</th>
<th>Max</th>
<th>Average</th>
<th>Price $/bu</th>
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<tr>
<td>2010</td>
<td>$2.33</td>
<td>$2.46</td>
<td>$2.40</td>
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<td>2011</td>
<td>$1.82</td>
<td>$3.34</td>
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<td>2012</td>
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<td>$1.92</td>
<td>$1.63</td>
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<td>2013</td>
<td>$0.79</td>
<td>$1.33</td>
<td>$1.06</td>
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<td>2014</td>
<td>$0.83</td>
<td>$1.14</td>
<td>$1.00</td>
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<tr>
<td>2015</td>
<td>$0.83</td>
<td>$1.14</td>
<td>$1.00</td>
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<tr>
<td>2016</td>
<td>$0.83</td>
<td>$1.14</td>
<td>$1.00</td>
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<tr>
<td>2017</td>
<td>$0.83</td>
<td>$1.14</td>
<td>$1.00</td>
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<tr>
<td>2018</td>
<td>$0.83</td>
<td>$1.14</td>
<td>$1.00</td>
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</tr>
<tr>
<td>2019</td>
<td>$0.83</td>
<td>$1.14</td>
<td>$1.00</td>
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<tr>
<td>2020</td>
<td>$0.83</td>
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<tr>
<td>2021</td>
<td>$0.83</td>
<td>$1.14</td>
<td>$1.00</td>
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<tr>
<td>2022</td>
<td>$0.83</td>
<td>$1.14</td>
<td>$1.00</td>
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<tr>
<td>2023</td>
<td>$0.83</td>
<td>$1.14</td>
<td>$1.00</td>
<td>$2.00</td>
</tr>
<tr>
<td>2024</td>
<td>$0.83</td>
<td>$1.14</td>
<td>$1.00</td>
<td>$2.00</td>
</tr>
</tbody>
</table>

Range (max-min): $4.77

Average: $2.00

Min: $0.43

Max: $2.46

Year 2010 to 2024

Price $/bu: $0.00 to $9.00

Graph showing price trends from 2010 to 2024.
December Corn Closing Futures Price Frequency, 12/1/09 to 1/26/24

- Frequency: The bar chart shows the frequency of price ranges in cents for December corn closing futures from 12/1/09 to 1/26/24.
- Cumulative Frequency: The line graph illustrates the cumulative frequency of these price ranges, showing how the frequency accumulates over the price range.

Key Observations:
- The highest frequency is in the price range of 375-400 cents, with 48.4%.
- The cumulative frequency reaches 72.6% in the price range of 425-450 cents.

These statistics are useful for understanding the distribution of corn prices during the specified period.
December 2024 Corn Futures

Prices have broken out of the trading range and are looking to establish a new range.
November Soybean Closing Futures Price Frequency, 11/1/09 to 1/26/24

% of Daily Closes

Frequency
Cumulative Frequency

Price Range (cents/bu)

<850
850-900
900-950
950-1000
1000-1050
1050-1100
1100-1150
1150-1200
1200-1250
1250-1300
1300-1350
1350-1400
1400-1450
1450-1500
1500-1550
1550-1600
1600-1650
1650-1700
1700-1750
>1750

0.0%
2.0%
4.0%
6.0%
8.0%
10.0%
12.0%
14.0%
16.0%

0%
10%
20%
30%
40%
50%
60%
70%
80%
90%
100%

94.8%
54.0%
November 2024 Soybean Futures

South American production will continue to strongly influence price direction. $12.40 price gap will provide resistance.
Supply and Demand Summary

• General economy
  – Labor markets remain tight / GDP growth exceeded expectations last quarter
  – Increased consumer debt, inflation, and high interest rates create cautionary notes

• Inputs and commodity prices are down
  – Margins will be tighter in 2024.

• Prices are forecast to continue to move lower.

• Develop and execute a risk management and marketing plan.
Timing is everything.

RISK MANAGEMENT
Marketing Steps

• Understand your market
• Identify risks and timing
• Determine cost of production
• Identify available tools
• Develop a plan
• Execute and evaluate
Understand Your Market

• Local, regional, national, and global influences will influence futures and cash prices received for your commodities.

• Disaggregate cash prices
  – Cash = Futures + Basis
  – Typically, 90%+ of price risk is in the futures market.
  – Timing – Low basis levels the past three years do to the Mississippi river.
Monthly Real and Nominal Nearby Corn Futures Prices, 1980-2023 (Base = November 2023)
Identifying Risk and Timing

- When does production risk occur?
- When does risk decrease?
- When are prices typically highest?
- Are markets near the top of the cycle or bottom?
2024 Crop Marketing Cycle

- January, February, and March
  - Crop Insurance and ARC/PLC selection

- April, May, June, July, August
  - Futures, contracts, options

- September, October, and November
  - Harvest sales and storage decisions

- December through July 2025
  - Storage sales/contract

- November and December 2023
  - Bridge Price Risk Gap to Crop Insurance
Example: Bridging the price risk gap until crop insurance prices are determined – put option

- On November 14, a $5.20 December 2024 Corn Put Option cost $0.44, setting a $4.76 futures floor.
  - If December 2024 corn <$4.76, in the money
    - February 9 $5.20 put option was at $0.71.

- After crop insurance prices are determined:
  - Out-of-the money: exit options position recoup premium.
  - In-the-money: maintain the position as price protection.
## Corn MYA and Crop Insurance Prices, 2011-2023

<table>
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<tr>
<th></th>
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<tbody>
<tr>
<td>MYA</td>
<td>$6.22</td>
<td>$6.89</td>
<td>$4.46</td>
<td>$3.70</td>
<td>$3.61</td>
<td>$3.36</td>
<td>$3.36</td>
<td>$3.36</td>
<td>$4.53</td>
<td>$6.00</td>
<td>$6.54</td>
<td>$4.80</td>
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<tr>
<td>Projected</td>
<td>$6.01</td>
<td>$5.68</td>
<td>$5.65</td>
<td>$4.62</td>
<td>$4.15</td>
<td>$3.86</td>
<td>$3.96</td>
<td>$4.00</td>
<td>$3.88</td>
<td>$4.58</td>
<td>$5.90</td>
<td>$5.91</td>
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<tr>
<td>Harvest</td>
<td>$6.32</td>
<td>$7.50</td>
<td>$4.39</td>
<td>$3.49</td>
<td>$3.83</td>
<td>$3.49</td>
<td>$3.49</td>
<td>$3.49</td>
<td>$3.68</td>
<td>$3.90</td>
<td>$5.37</td>
<td>$6.86</td>
<td>$4.88</td>
</tr>
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</table>

February 23, December corn at $4.50; November Soybeans at $11.30.

## Soybean MYA and Crop Insurance Prices, 2011-2023

|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
Farm Bill

• Extended to September 30, 2024.
• Budget, narrow majorities in both chambers, and an election cycle will make negotiations challenging and likely necessitate another extension.
• Price Loss Coverage (PLC) effective reference prices
  – Corn: +31 cents @ $4.01
  – Soybeans: +86 cents @ $9.26
  – Seed cotton ($0.367) and wheat ($5.50) unchanged
## Determine Cost of Production

- Estimate the cost for the production cycle
  - Cash expenses
  - Non-cash expenses
- Sensitivity to changes in cost categories
- Determine breakeven
- Identify price points

### 2024 Soybean Budget

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<thead>
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<th>Revenue</th>
<th>Quantity</th>
<th>Price ($/Unit)</th>
<th>Total</th>
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<tbody>
<tr>
<td>Soybeans</td>
<td>Bu/acre</td>
<td>$12.20</td>
<td>$610.00</td>
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<table>
<thead>
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<th>Quantity</th>
<th>Price ($/Unit)</th>
<th>Total</th>
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<td>Seed</td>
<td>Thous.</td>
<td>$0.45</td>
<td>$63.00</td>
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<tr>
<td>Fertilizer &amp; Lime</td>
<td>Acre</td>
<td>$60.00</td>
<td>$60.00</td>
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<td>Chemical</td>
<td>Acre</td>
<td>$86.73</td>
<td>$80.00</td>
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<td>Crop Scout or Consultant</td>
<td>Acre</td>
<td>$10.00</td>
<td>$10.00</td>
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<tr>
<td>Repair &amp; Maintenance</td>
<td>Acre</td>
<td>$33.13</td>
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<td>Fuel, Oil &amp; Filter</td>
<td>Acre</td>
<td>$17.37</td>
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<td>Operator Labor</td>
<td>Acre</td>
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<td>Operating Interest</td>
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**Total Variable Expenses**: $302.33

**Return Above Variable Expenses**: $307.68

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<td>Cash Rent</td>
<td>Acre</td>
<td>$113.00</td>
<td>$150.00</td>
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**Total Fixed Expenses**: $285.00

**Total Expenses**: $587.33

**Return Above Specified Expenses**: $22.68
Identify Available Tools

- Crop Insurance / Commodity Programs
- Managed Products
- Cash Sales
- Contracts
- Futures / Options
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<th>Pricing Alternatives</th>
<th>Price Trend Effects</th>
<th>Areas of Risk Exposure</th>
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<td>Wider Cash Basis</td>
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<td>Options Volatility</td>
<td>Production Risk if Preharvest</td>
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<td>(+)</td>
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<td>(non-rolling)</td>
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<td>(+)</td>
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<td>(+)</td>
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<td>(Sell futures, owning cash grain)</td>
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<td>Buy Put Options</td>
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<td>(-)</td>
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<td>(LDP: Loan Deficiency Payment)</td>
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</table>
Market Expectations

What is happening with prices? Trend and volatility.

What is happening globally, domestically, and locally with supply and demand?

Is there a greater likelihood of futures and basis strengthening or weakening?
December corn currently at $4.50.

- Buy a $4.20 December Put option for $0.21.
- Sell a $5.50 December Call Option for $0.10.

Futures price range established between $4.20 to $5.50 for $0.11 premium.

- Set basis during the production year.
Short Option Straddle

- Speculative position

<table>
<thead>
<tr>
<th>Action</th>
<th>Strike</th>
<th>Premium</th>
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<tbody>
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<td>Call</td>
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<td>1420</td>
</tr>
<tr>
<td>Put</td>
<td>Sell</td>
<td>1020</td>
</tr>
</tbody>
</table>
Execute and Evaluate

• Make all decisions based on well thought analysis and risk preferences.
  – Wishing and hoping ruin good marketing and risk management plans.

• Execute the strategy – be comfortable with the potential range of outcomes.

• Examine successes and failures from the strategy employed
  – Was the result what you expected?
  – Why or why not?
THANK YOU

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