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On Your Markets, Get Set, G&O

US Long-Run G&O Prospects

RaboResearch

Food & Agribusiness
far.rabobank.com

Pablo Sherwell

Lead – F&A Data Analytics,
North America
+1 212 808 6822

Steve Nicholson

Senior Analyst Grains &
Oilseeds
+1 314 317 8278

Al Griffin

Senior Data Analyst
+1 314 317 8201

Summary

This paper presents some of the major findings of Rabobank's US long-term outlook for the three major crops: corn, soybeans, and wheat.

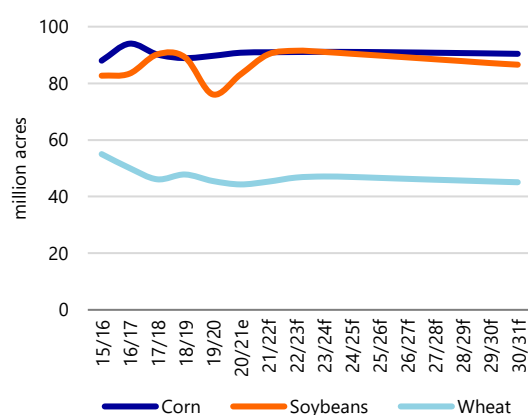
Structural changes and trends identified:

- In 2021/22, US farm cash receipts are expected to increase, driving crop margins to the positive territory, as grain & oilseed prices are projected to increase and remain well-supported.
- Total 2021 US area planted to corn, soybeans, and wheat is expected to expand by approximately 8m acres, or 3.6%, reaching a total of 226m acres.
- Due to strong prices and positive farm margins, the baseline model projects US soybean and wheat area to grow marginally from 2022 to 2025, while corn is expected to remain relatively flat. After 2025, area planted to the three major crops is expected to gradually decline toward 2030.
- Despite the expected increase in production in the coming years, the baseline anticipates US stocks to remain tight as compared to the past five years. This is due to solid demand, particularly exports, assuming no trade restrictions and other disruptive policies. In the long run, domestic feed demand will remain an important driver while other demand components, such as food and energy, remain relatively flat.
- Higher prices will have implications along the entire grain & oilseed supply chain. We will discuss some of the implications for row crop producers, processors, merchandisers, and end users.
- Our outlook assumes a gradual global and domestic economic recovery in 2021 and beyond, reflecting the positive outcome of Covid-19 vaccines and other mitigation policies.
- Finally, the analysis presented in this paper should not be interpreted as a forecast of the future. The objective of our baseline is to identify long-term trends, given certain conditions, and also to evaluate different scenarios.

Our Outlook: Farmer Prices Moving to the Upside

Near-Term Outlook

Figure 1: Area planted



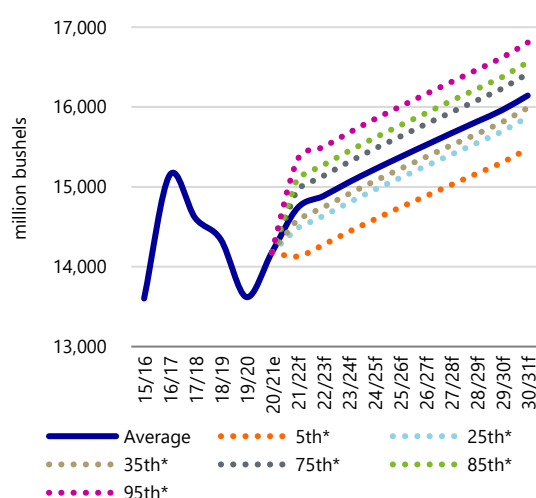
Source: USDA, Rabobank baseline 2021

As we entered 2021, the tightening of global and US inventories lifted commodity prices rapidly to multiyear highs. As a result, we estimate an expansion of the US area planted in 2021/22. Our baseline is projecting corn area planted at 91m acres (vs. 90.8m acres in 2020), soybeans at 90m acres (vs. 83.1m acres last year), and wheat at 45.2m acres (vs. 44.3m acres in 2020). The combined area increase of 8m acres represents a 3.6% year-on-year increase.

Additionally, if we assume normal weather, corn, soybean, and wheat yields are expected to increase and to converge to their historical

upward trend, driven by technology and improving cultural practices. For this coming cycle, and assuming normal weather, the average US corn yield is projected at 177.3 bu/acre, soybeans at 50.6 bu/acre, and wheat at 50.3 bu/hectare. If this holds, corn production will be increasing around 3.9%, soybeans 8.6%, and wheat 2.6%, as compared to 2020.

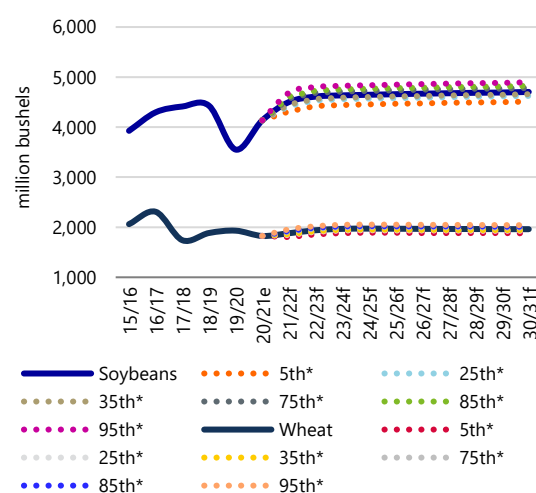
Figure 2: US corn production



Source: USDA, Rabobank baseline 2021

*probability percentile

Figure 3: US soybean and wheat production



Source: USDA, Rabobank baseline 2021

*probability percentile

However, despite the projected increase in production, farm prices are expected to remain high through most of the outlook period and above recent years because:

- inventories are extremely tight and will remain so for the months to come;
- US exports continue to be strong and domestic demand is well-supported;
- smaller crops than initial expectations in Brazil and Argentina have added upside price momentum. Also, Argentina has increased its export tax for soybeans from 30% to 33%.

Thus, our baseline price estimates for 2021/22 indicate that farm corn prices could average USD 4.40/bu, soybeans USD 13.40/bu, and wheat USD 5.30/bu.

Mid- and Long-Term Baseline Outlook

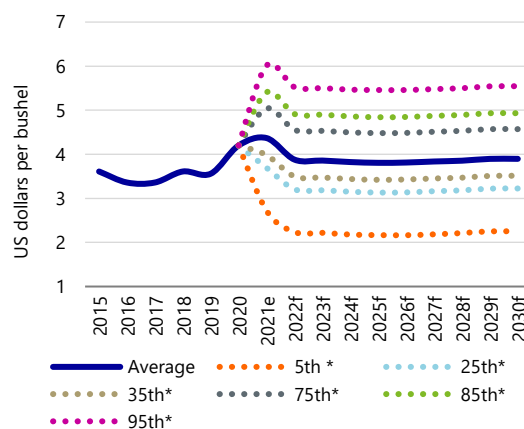
In the long run, the key factors driving the grain & oilseed (G&O) market include: positive crop margins, which will incentivize farmers to plant and increase production, the post-Covid economic recovery, and the reopening of the food industry, which will benefit several sectors, such as animal protein and with it feed markets, as well as demand for corn milling derivatives like sweeteners, starches, and ethanol. Additionally, we anticipate a relatively weak US dollar, which will provide additional support to US export expectations.

As a result of all these factors, our ten-year baseline model projects US corn area planted will remain around 91m acres, wheat around 46m, while soybeans will gradually decline from the massive projected 90m acres in 2021 toward 89m acres by 2030.

Our model expects US exports to remain elevated. China and Mexico will remain extremely important markets to the US. Both countries will continue to expand their own animal protein sectors while struggling to fulfill feed demand from domestic production. In our view, Mexico will need around 20m metric tons of yellow corn annually in the years to come to fulfill its feed corn demand. The Mexican government's proposal to switch all corn use to non-GM cannot be implemented for feed because of the lack of available non-GM corn. China, on the other hand, could import up to 30m metric tons of corn per year through 2025, while also taking measures to stimulate domestic feed grain production. For more information on China's feed demand, see our report, [Demystifying China's Ma\(i\)ze](#), from December 2020.

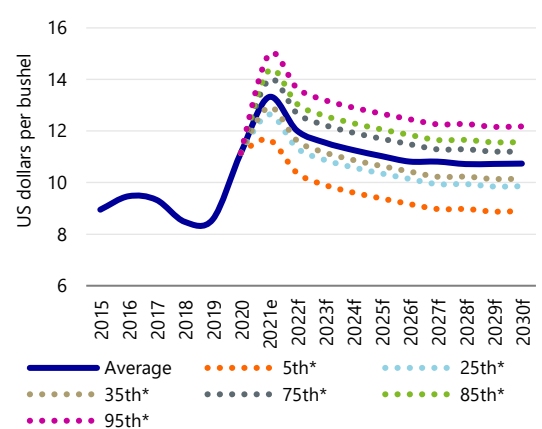
If the above holds, our baseline long-term price projection indicates national average farmer received corn prices are expected to remain supported at around USD 3.75 to USD 4.00/bu, soybean prices slightly above US 10.00/bu, and wheat prices slightly higher than USD 5.00/bu.

Figure 4: US corn farm price



Source: USDA, Rabobank baseline 2021
*probability percentile

Figure 5: US soybean farm price



Source: USDA, Rabobank baseline 2021
*probability percentile

Some Implications: Do Not Get Comfy

As the G&O sector has entered a high price environment, we have identified different implications for players along the entire G&O supply and demand chain, including related sectors and industries.

- For the row crop producer, higher prices point to profitability and better margins. This allows producers to rebuild depleted working capital, make strategic investments (e.g. precision ag, grain storage) to improve the efficiency of their operation, and invest in 'racehorse' seed to increase their potential to maximize yields. However, one of the outcomes of higher commodity prices is higher farmland values, higher cash rents, and potentially higher input costs. It will be on the producer to maintain the fiscal discipline of the past several years in order to maintain a healthy balance sheet.

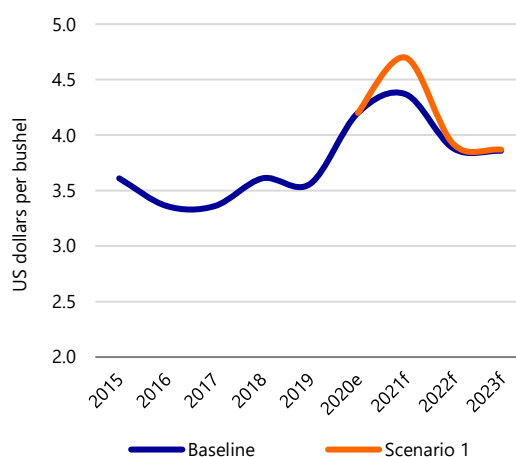
- Initially, profitability in the animal protein sector will be challenged by higher feed costs. This will result in a trimming of livestock numbers initially and/or weights, as we are currently seeing in the poultry industry. However, the industry will adjust feed rations to find the lowest cost ration and focus on feed conversions. However, improving economies and the resulting increased personal incomes will keep demand robust for animal protein products, and livestock numbers will rebound along with feed demand.
- Grain processors will also have a slightly more challenging margin environment to navigate. When analyzing flour milling, soybean crushing, or corn milling margins, the feedstock cost is the most important component. Higher feedstock prices often equate to margin pressure, as the extra costs cannot always be passed on to the final products. Current high input costs have already resulted in declines in flour milling and soybean crushing margins. In the corn milling sector, higher net corn costs are cutting into profit margins. The ethanol industry is the most reflective of this environment with its sharp decline in operating margins to near zero.
- Grain merchandisers/handlers have enjoyed increasing profitability with the rapid rise and increased volatility of commodity markets. Higher commodity prices often translate into higher volatility, which is good for the grain companies. In addition, the increase in exports and the forecast of continued strong exports and potential strong elevations are all positive for the sector. However, one caution, higher commodity prices and more volatility can result in higher margin requirements, a squeeze on working capital, and more financing requirements.

Additional Scenarios: What If?

We use our baseline model to evaluate quantitatively different scenarios. We present four.

Scenario 1: What if 2020/21 US Corn Ending Stocks Fall to 1.1m bu, Well-Below USDA Expectations?

Figure 6: Corn prices: baseline vs. scenario 1



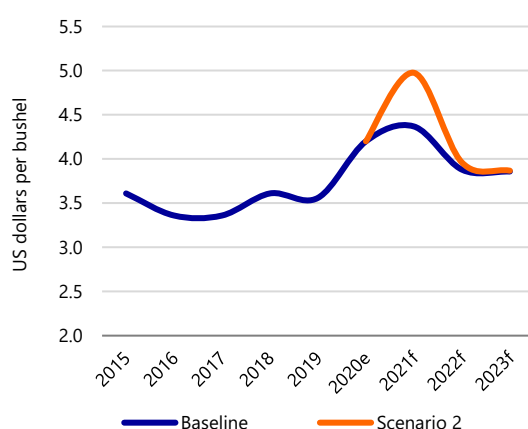
Source: USDA, Rabobank baseline 2021

This (hypothetical but plausible) scenario would add considerable support to prices. Our baseline model indicates that corn prices could increase around 7% above our baseline prices, reaching USD 4.70/bu. In addition, soybean prices will follow, increasing to closer to USD 13.50/bu.

The low stocks levels carry over into the 2021/22 crop year as do elevated prices. In this scenario, 2021/22 US corn exports are reduced approximately 112m bu from the baseline, taking them to around 2.2bn bu. Additionally, feed use and ending stocks will decline, which is supportive to prices into the 2022/23 crop year.

Scenario 2: What if 2021/22 Corn Yields Face Further Weather Issues and Stay Flat at 172.4 bu/acre Instead of Returning to 177.2 bu/acre Trend Line Yield?

Figure 7: Corn prices: baseline vs. scenario 2



Source: USDA, Rabobank baseline 2021

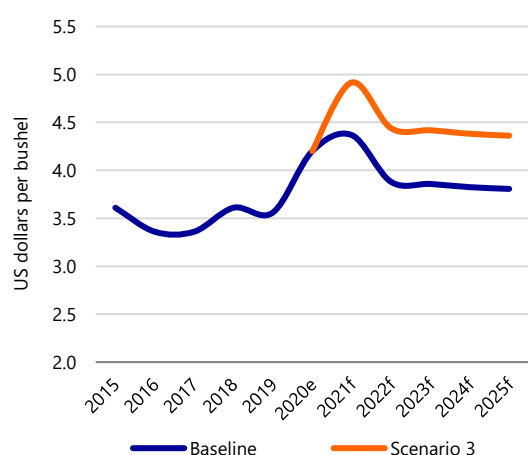
In this scenario, 2021/22 US corn yields do not return to the expected trend line (177.2 bu/acre) and remain similar to the 2020 national average yield of 172.4 bu. All else being equal, our model indicates that 2021/22 corn prices will move higher. The national average farmer received price is USD 4.98/bu, up 13.9% from the USD 4.4/bu projected in the baseline.

This increase in corn prices (due to lower production and resulting tighter stocks) will trim US corn demand. Exports will decline to below 168m bushels; likewise, feed demand will be reduced.

An increase in corn prices has impacts beyond just the corn supply and demand situation; soybean prices would follow corn higher. The national average farmer received soybean price for the 2021/22 crop year would move to USD 13.60/bu, up 2.5% from the baseline.

Scenario 3: What if US Corn Exports Stay Significantly Elevated?

Figure 8: Corn prices: baseline vs. scenario 3



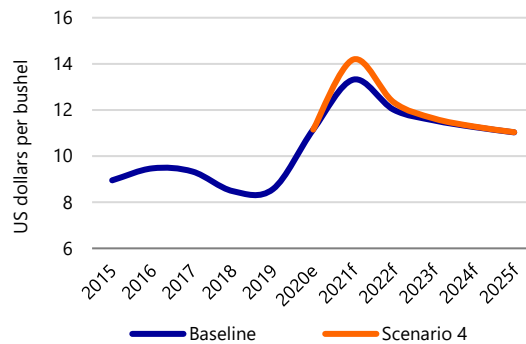
Source: USDA, Rabobank baseline 2021

In this likely scenario, due to China's growing appetite for feed grains, 2021/22 US corn exports are increased 300m bu above the baseline, reaching 2.55bn bu (all else being equal). The national average farmgate corn price increases to USD 4.92/bu. Under this scenario, the model shows a decrease in domestic use, particularly feed, as livestock producers react to higher corn prices in the feed ration.

This increase in prices during 2021 would encourage an increase in 2022 planted corn acres to 91.2m acres, resulting in a decline in the 2022/23 crop year national average farmer received price to USD 4.40/bu.

Scenario 4: What if 2021 Soybean Area Planted Is 2.5m Acres Lower Than the 90m Expected?

Figure 9: Soybean prices: baseline vs. scenario 4



Source: USDA, Rabobank baseline 2021

Due to constraints on available acres, the analysis was done with just 87.5m planted acres of soybean in 2021, 2.5m acres below the baseline expectations of 90m acres. The 2021/22 national average farmer received soybean price increases to USD 14.20/bu, 6.6% above our baseline. At this higher price level and lower-than-expected production, soybean exports could drop approximately 4%, while crush could decline around 1% vs. the levels projected in the baseline in order to maintain pipeline stock levels.

Final Thoughts

Our baseline is not intended to generate forecast points about the market. Rather, it helps identify long-term trends under certain conditions and assumptions. We used information as of January 2021. However, given the information we have at the moment, we feel the probability of improved prices in the mid to long term, as compared to the past five years, is high. The case for a bearish scenario would require several shocks to our baseline, which could come from another severe demand shock (e.g. a severe setback in Chinese imports or a significant production gain related to record US yields and/or large-scale global production improvements well above trend). Rabobank will be publishing follow-up papers and articles with additional and deeper insights.

Imprint

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far.rabobank.com

Pablo Sherwell	Lead – F&A Data Analytics, North America	pablo.sherwell@rabobank.com +1 212 808 6822
Steve Nicholson	Senior Analyst Grains & Oilseeds	stephen.nicholson@raboag.com +1 314 317 8278
Al Griffin	Senior Data Analyst	al.griffin@raboag.com +1 314 317 8201

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