



2022 Grain and Oilseed Outlook

Zach Harding, The Andersons

About Me



- Zach Harding, The Andersons
 - Profit Center Manager, Northeast Grains
- 13 years Grain Merchandising experience, trading markets in the Northeast, Midwest, Export containers, and Ethanol
- Penn State University '09
 - M.S. Agribusiness Management
- 7th Generation of Hess Farm, small cow-calf beef operation in Central, PA
- Wife Katie(?), Daughter Ada(2), Son Hank(8mos) in Overland Park, KS

WE ARE PENN STATE!

Agenda



- "2021" Year in Review
- January WASDE Report
- South American Prospects
 - Biofuels Update
 - Wrap-Up

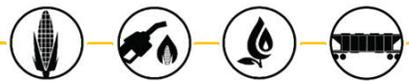
ASK QUESTIONS AT ANY TIME





2021 Year in Review

Dec 2021 Corn



November 2021 Soybeans



3 Crop Years – 3 Different Stories





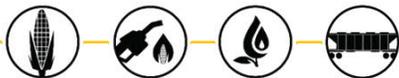
2022 January WASDE



US Corn – S&D



	2019/20	2020/21 Est.	2021/22 Proj. Dec	2021/22 Proj. Jan
CORN				
		<i>Million Acres</i>		
Area Planted	89.7	90.7	93.3	93.4
Area Harvested	81.3	82.3	85.1	85.4
		<i>Bushels</i>		
Yield per Harvested Acre	167.5	171.4	177.0	177.0
		<i>Million Bushels</i>		
Beginning Stocks	2,221	1,919	1,236	1,235
Production	13,620	14,111	15,062	15,115
Imports	42	24	25	25
Supply, Total	15,883	16,055	16,323	16,375
Feed and Residual	5,900	5,602	5,650	5,650
Food, Seed & Industrial 2/ Ethanol & by-products 3/ Domestic, Total	6,286	6,466	6,680	6,760
	4,857	5,028	5,250	5,325
Exports	1,777	2,753	2,500	2,425
Use, Total	13,963	14,821	14,830	14,835
Ending Stocks	1,919	1,235	1,493	1,540
Avg. Farm Price (\$/bu) 4/	3.56	4.53	5.45	5.45

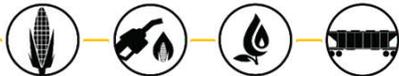


US Soybean S&D



SOYBEANS	2019/20	2020/21 Est.	2021/22 Proj. Dec	2021/22 Proj. Jan
		<i>Million Acres</i>		
Area Planted	76.1	83.4	87.2	87.2
Area Harvested	74.9	82.6	86.4	86.3
		<i>Bushels</i>		
Yield per Harvested Acre	47.4	51.0	51.2	51.4
		<i>Million Bushels</i>		
Beginning Stocks	909	525	256	257
Production	3,552	4,216	4,425	4,435
Imports	15	20	15	15
Supply, Total	4,476	4,761	4,696	4,707
Crushings	2,165	2,141	2,190	2,190
Exports	1,679	2,265	2,050	2,050
Seed	97	101	102	102
Residual	11	-4	15	16
Use, Total	3,952	4,504	4,356	4,357
Ending Stocks	525	257	340	350
Avg. Farm Price (\$/bu) 2/	8.57	10.80	12.10	12.60

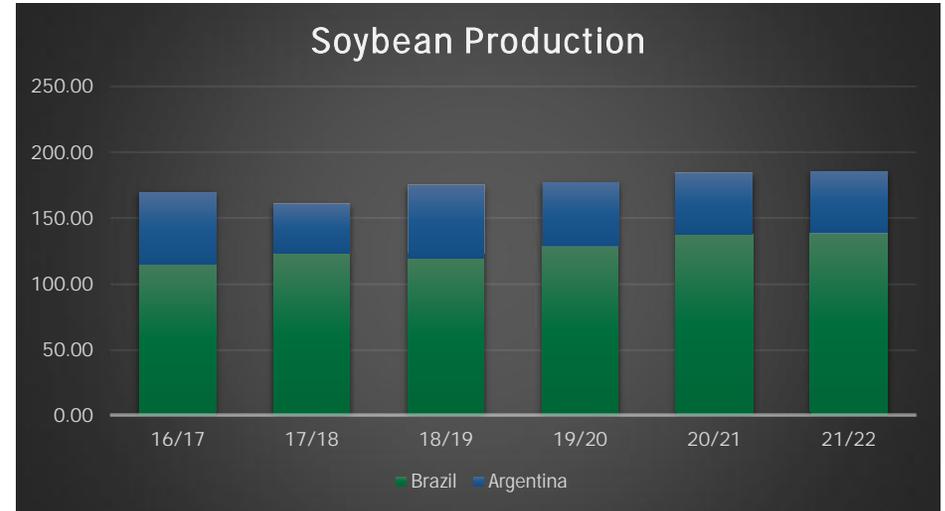
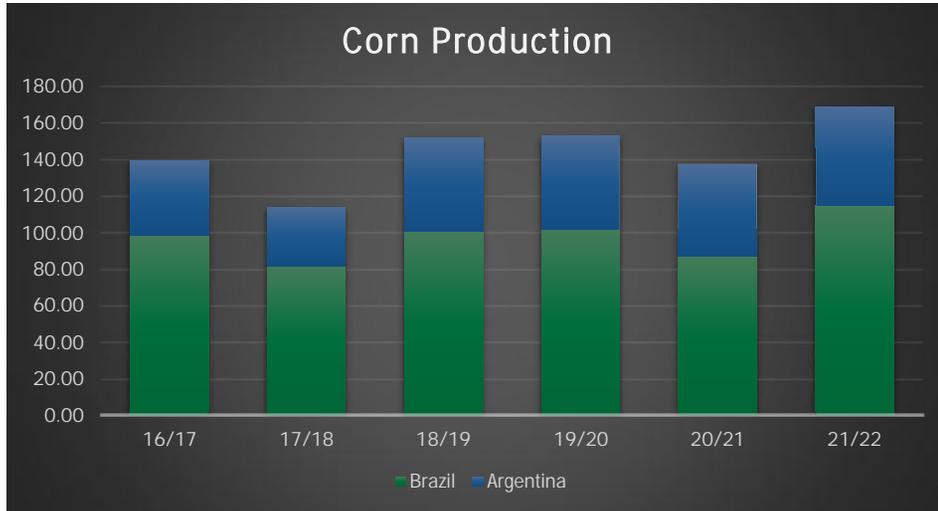
Exports only exceeded domestic crush 3 times in last 10 years





South America Update

5 Year History – Brazil + Argentina



Corn Yields (bu/ac)

	17/18	18/19	19/20	20/21	21/22	5 Yr. Avg
Brazil	78.7	91.9	87.8	69.6	88.1	83.2
Argentina	98.0	133.2	129.0	125.7	126.5	122.5

Soybean Yields (bu/ac)

	17/18	18/19	19/20	20/21	21/22	5 Yr. Avg
Brazil	52.2	49.5	51.7	52.8	51.2	51.5
Argentina	34.5	49.5	43.4	41.8	42.7	42.4

Chinese Soybean Imports



WASDE EFFECT



Corn Production (MMT)

	20/21	21/22 Dec. Est.	21/22 Jan. Est.	▲ Dec	▲ 20/21
Brazil	87.00	118.00	115.00	-3.00	28.00
Argentina	54.50	54.00	54.12	0.12	-0.38
World	1122.83	1208.73	1206.96	-1.77	84.13

World C/O	292.23	305.54	303.07	-2.47	10.84
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Soybean Production (MMT)

	20/21	21/22 Dec. Est.	21/22 Jan. Est.	▲ Dec	▲ 20/21
Brazil	138.00	144.00	139.00	-5.00	1.00
Argentina	46.20	49.50	46.50	-3.00	0.30
World	366.23	381.78	372.56	-9.22	6.33

World C/O	99.88	102.00	95.20	-6.80	-4.68
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South America - Key Takeaways



- South America and USA experience virtually identical demand pulls
 - Veg oils
 - China
- Long term production upside via yield/tech
- Brazil has become China's exporter of choice
- 21/22 balance sheets extremely sensitive to short term weather
- Supply scare real, may be overdone with US to plant

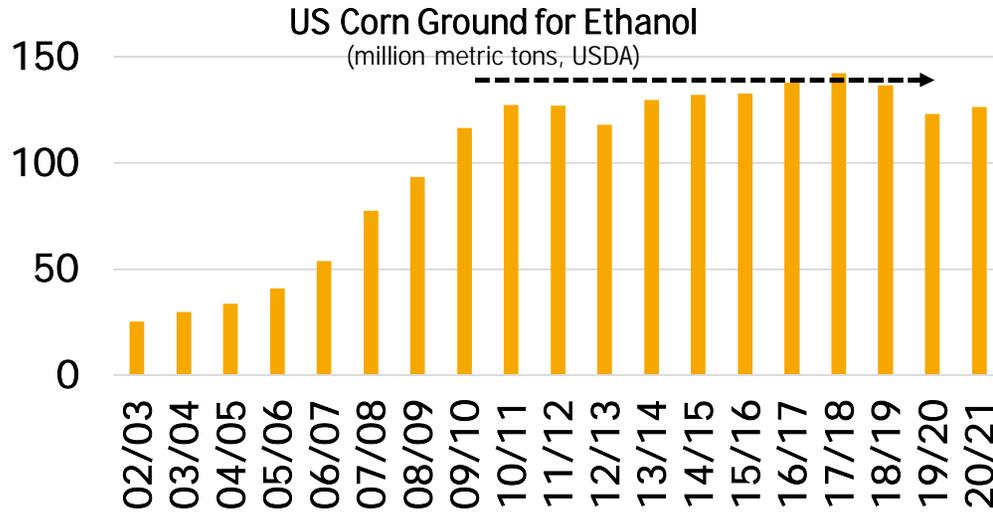




Biofuel Update



Ethanol Demand

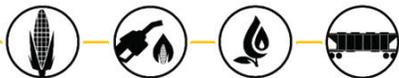
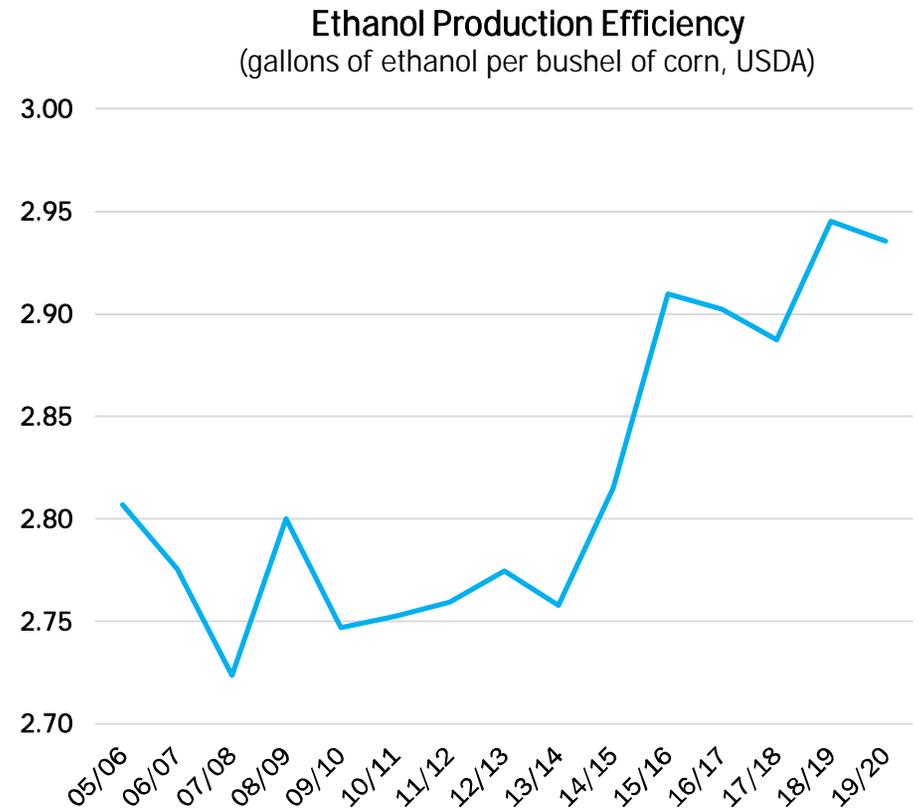


Corn Use Has Plateaued

Efficiency Continues to Increase

What About Crude Oil?

What About **Corn** Oil??



Ethanol Board Crush



Big Margins Encourage Production!



Renewable Diesel vs Biodiesel



- Similar feedstocks – Oils, Fats, Greases
- Less Capital Intensive Process
- Lower Cloud Point, better cold weather handling properties
- Transported via existing pipelines/infrastructure (vs. handled and stored independently)
- 21/22 Projected Use @ 365mbu vs 197mbu last year (up 185%)



Soybean Board Crush



Out of Capacity? Build More.



Biofuels – Key Takeaways



- Biofuels an Obvious Benefactor of High Crude Oil Price Environment
- High Margins Encourage Production
- Renewable Diesel is a Game Changer
- Sustainable Aviation Fuel Gaining Traction





Wrap-Up

2022 Corn and Soybean Focus



- Acres
 - Corn Estimates: **88m–94m***
 - Soybeans Estimates: **82m–90m***
 - February Ag Forum, March WASDE
 - Input prices, labor
- South American Production
 - US exports based on early production estimates, output continuing to drop
 - Implications for 2022/23 US balance sheets - HUGE
- Biofuel Demand
 - Domestic Ethanol and Soy crush margins remain strong
 - Renewable Diesel emergence, high demand for vegetable oils (corn oil/soybean oil)
- Volatile Basis Swings
 - Freight Volatility
 - Origin vs. Destination markets
 - New crop bids – historically high



30 Year – Corn



30 Year Soybeans



The Andersons





Question & Answer

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