

China, COVID and Confusion: Crop Market Outlook

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EXTENDING KNOWLEDGE >> CHANGING LIVES

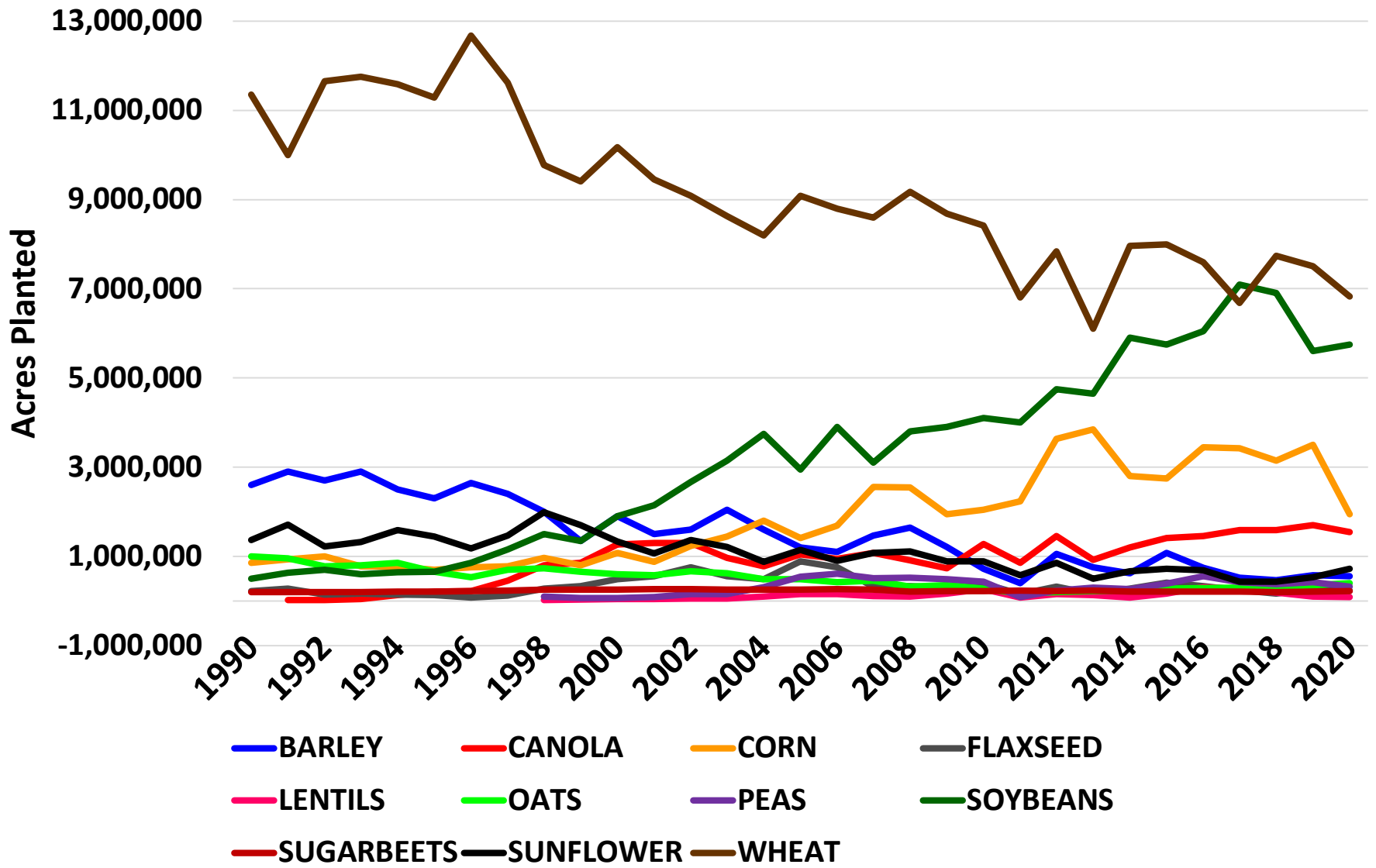
NDSU

EXTENSION

Primary Crops in North Dakota

Crop	2019 Planted Acres	2019 Value of Production (\$1,000)
Hard Red Spring Wheat	6,700,000	1,297,398
Durum Wheat	720,000	113,475
Hard Red Winter Wheat	85,000	13,356
All Wheat	7,505,000	1,424,229
Soybean	5,600,000	1,412,640
Corn	3,500,000	1,616,777
Canola	1,700,000	420,210
Dry Edible Beans (excl. Chickpea)	615,000	197,659
Barley (Malt and Feed)	580,000	132,966
Sunflower	535,000	135,747
Dry Edible Peas	425,000	85,062
Oats	355,000	24,725
Flax	275,000	44,781
Sugar Beets	212,000	N.A.
Lentils	95,000	13,689
Potato	73,000	223,445

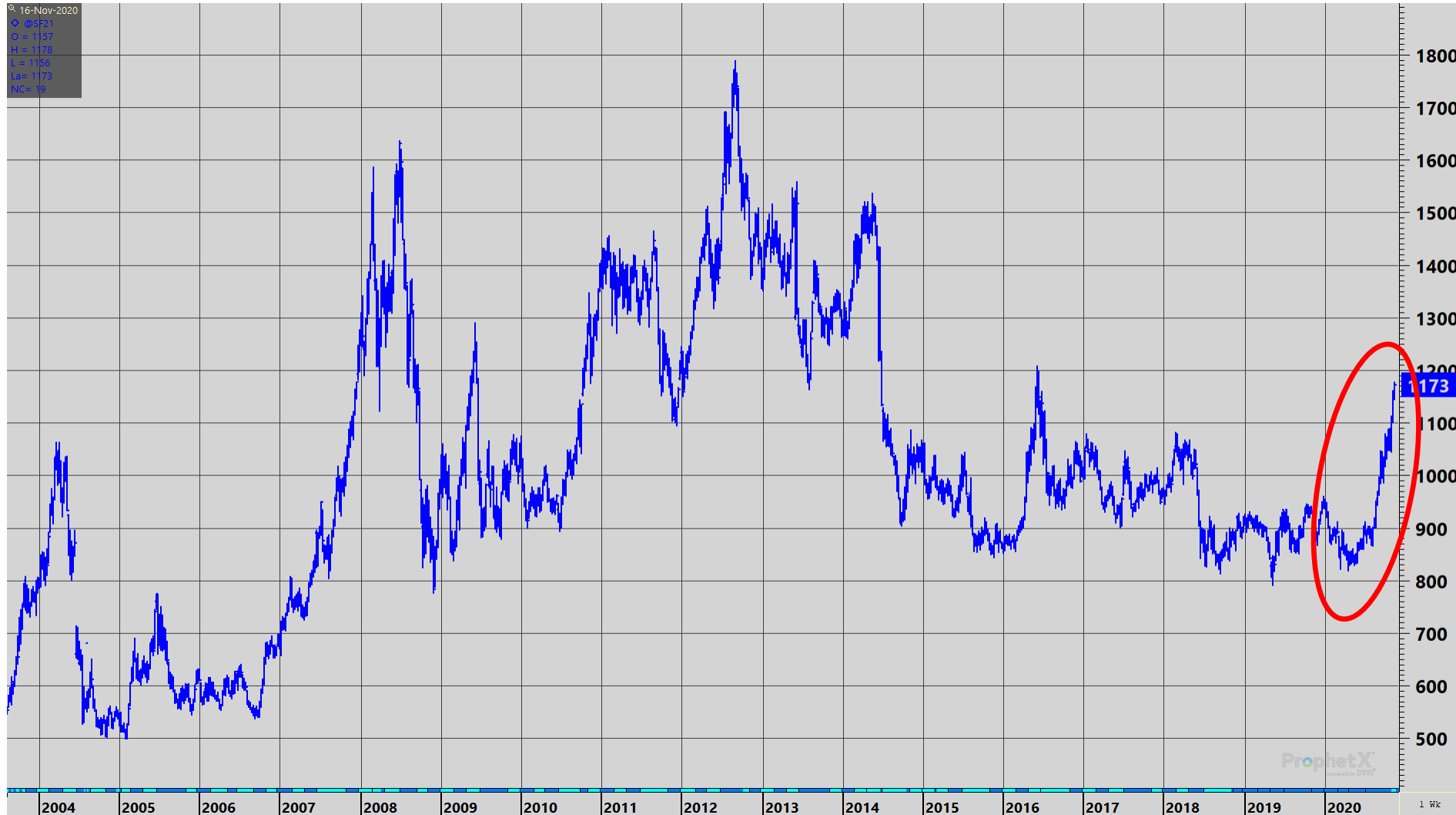
Planted Acres of Primary Crops in ND



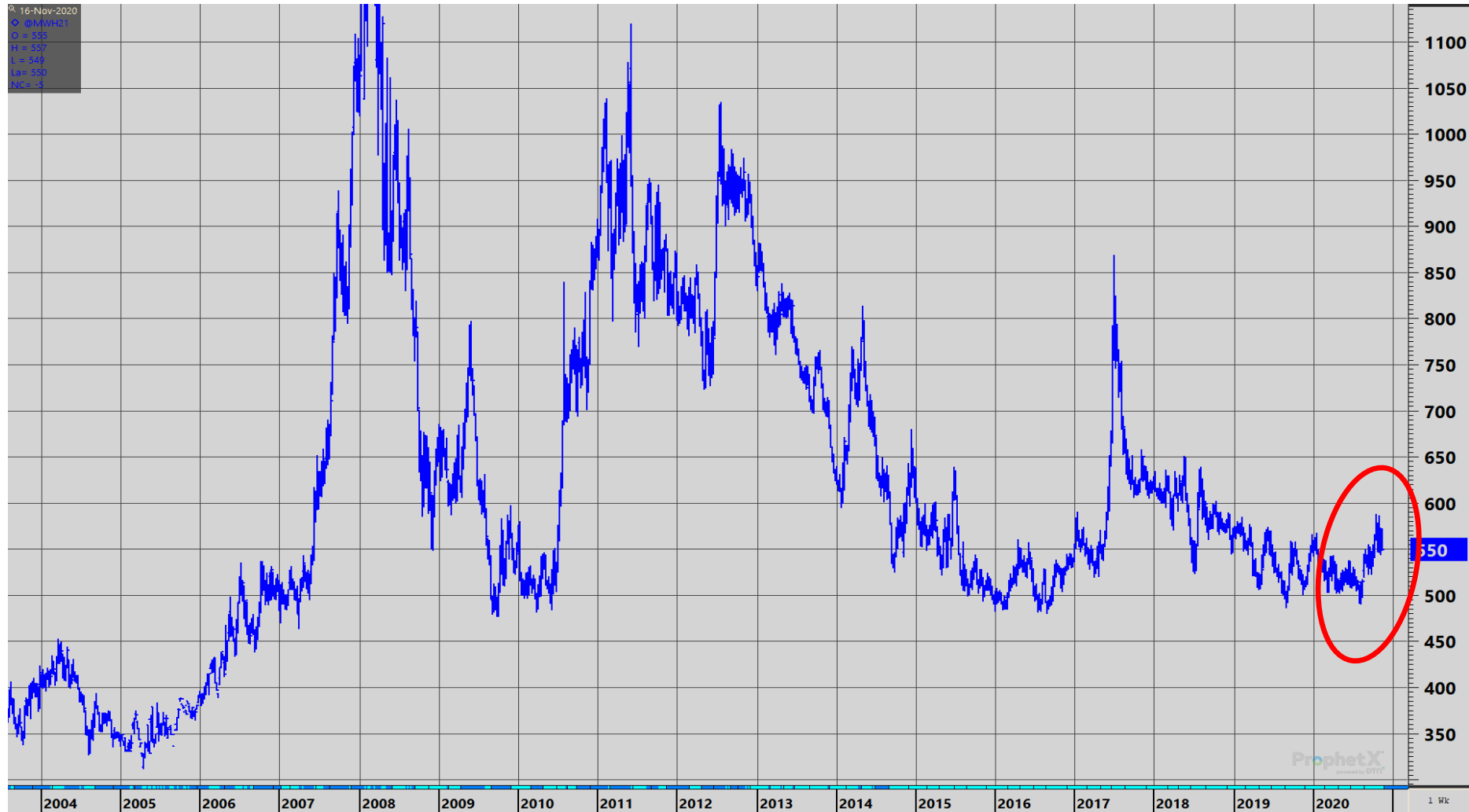
Historic CBOT Corn Futures



Historic CBOT Soybean Futures



Historic MGEX Spring Wheat Futures



Key Crop Market Factors

- Factors most difficult to forecast:
 - Weather:
 - Domestic and international production.
 - Production shortfalls can shift global trade flows.
 - Economic impact is country specific for both export competitors and import customers.
 - Politics:
 - Trade policy.
 - Changing multilateral or unilateral agreements.
 - Tariff and non-tariff barriers (sanitary and phytosanitary).
 - Economic sanctions.
 - Farm and energy policy, both domestic and international.
 - Public health (COVID-19).

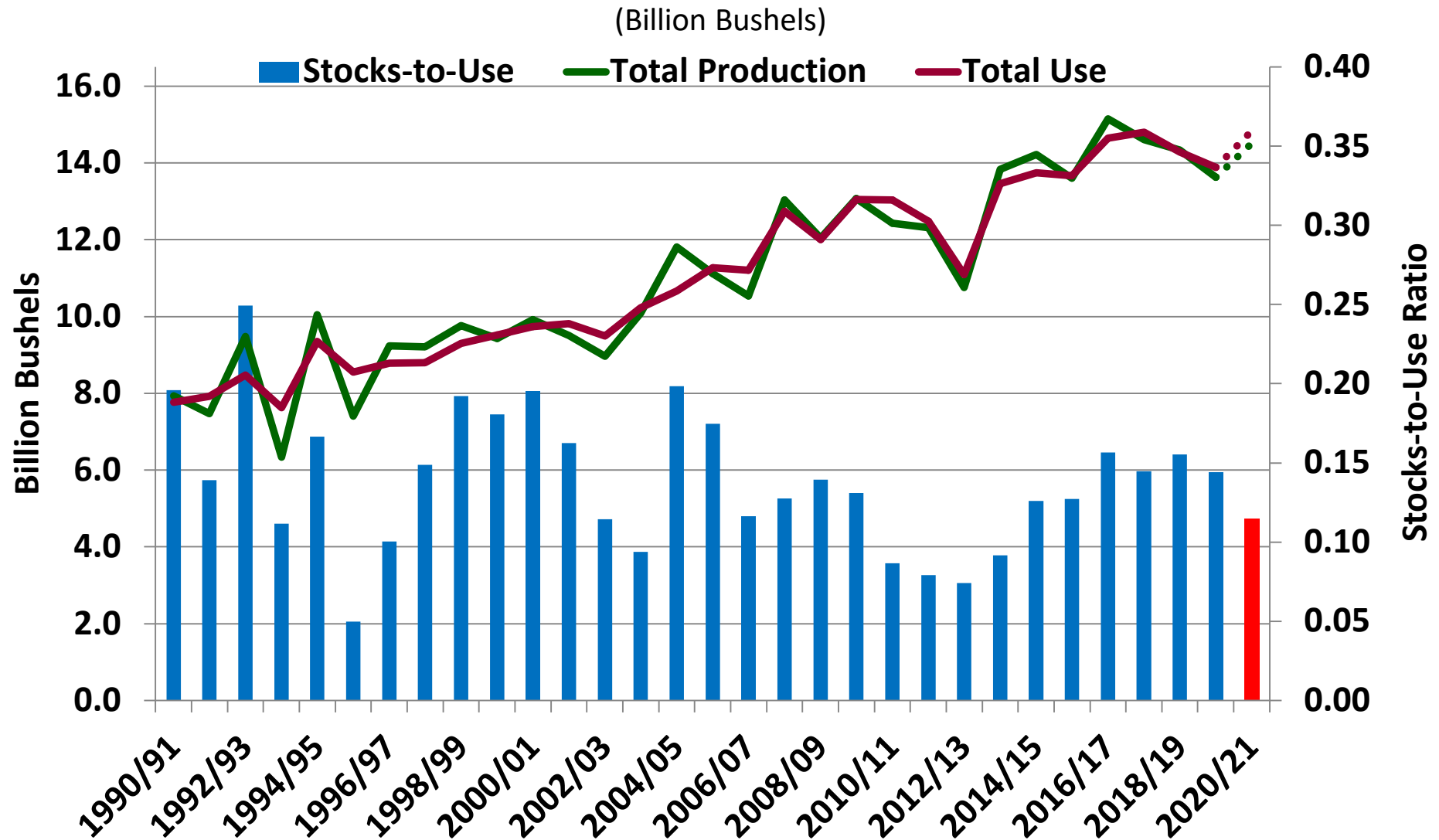
Questions?



U.S. Corn Supply & Demand Table

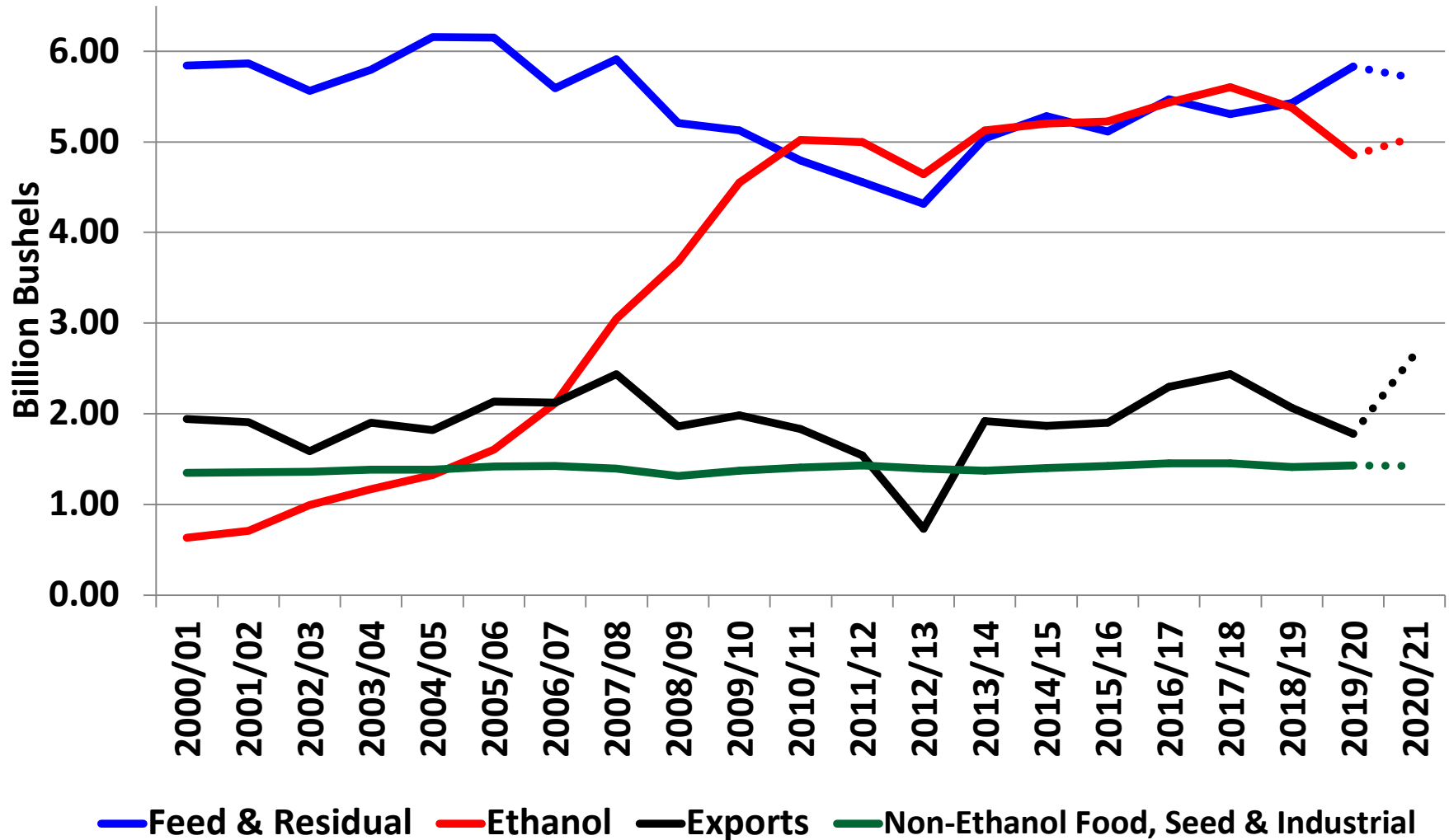
U.S. Corn	2018/2019	2019/2020 (Est.)	2020/2021 (Nov.)
Planted A.	88.9 Mill. A.	89.7 Mill. A.	91.0 Mill. A.
Harvested A.	81.3 Mill. A.	81.3 Mill. A.	82.5 Mill. A.
Yield/Harvest A.	176.4 bu.	167.4 bu.	175.8 bu.
Beginning Stocks	2,140 Mill. Bu.	2,221 Mill. Bu.	1,995 Mill. Bu.
Production	14,340 Mill. Bu.	13,620 Mill. Bu.	14,507 Mill. Bu.
Imports	28 Mill. Bu.	42 Mill. Bu.	25 Mill. Bu.
Total Supply	16,509 Mill. Bu.	15,883 Mill. Bu.	16,527 Mill. Bu.
Feed & Residual	5,429 Mill. Bu.	5,827 Mill. Bu.	5,700 Mill. Bu.
Food, Seed, Ind.	6,793 Mill. Bu.	6,282 Mill. Bu.	6,475 Mill. Bu.
Ethanol	5,378 Mill. Bu.	4,852 Mill. Bu.	5,050 Mill. Bu.
Exports	2,066 Mill. Bu.	1,778 Mill. Bu.	2,650 Mill. Bu.
Total Use	14,288 Mill. Bu.	13,887 Mill. Bu.	14,825 Mill. Bu.
Ending Stocks	2,221 Mill. Bu.	1,995 Mill. Bu.	1,702 Mill. Bu.

U.S. Corn – Total Production & Use



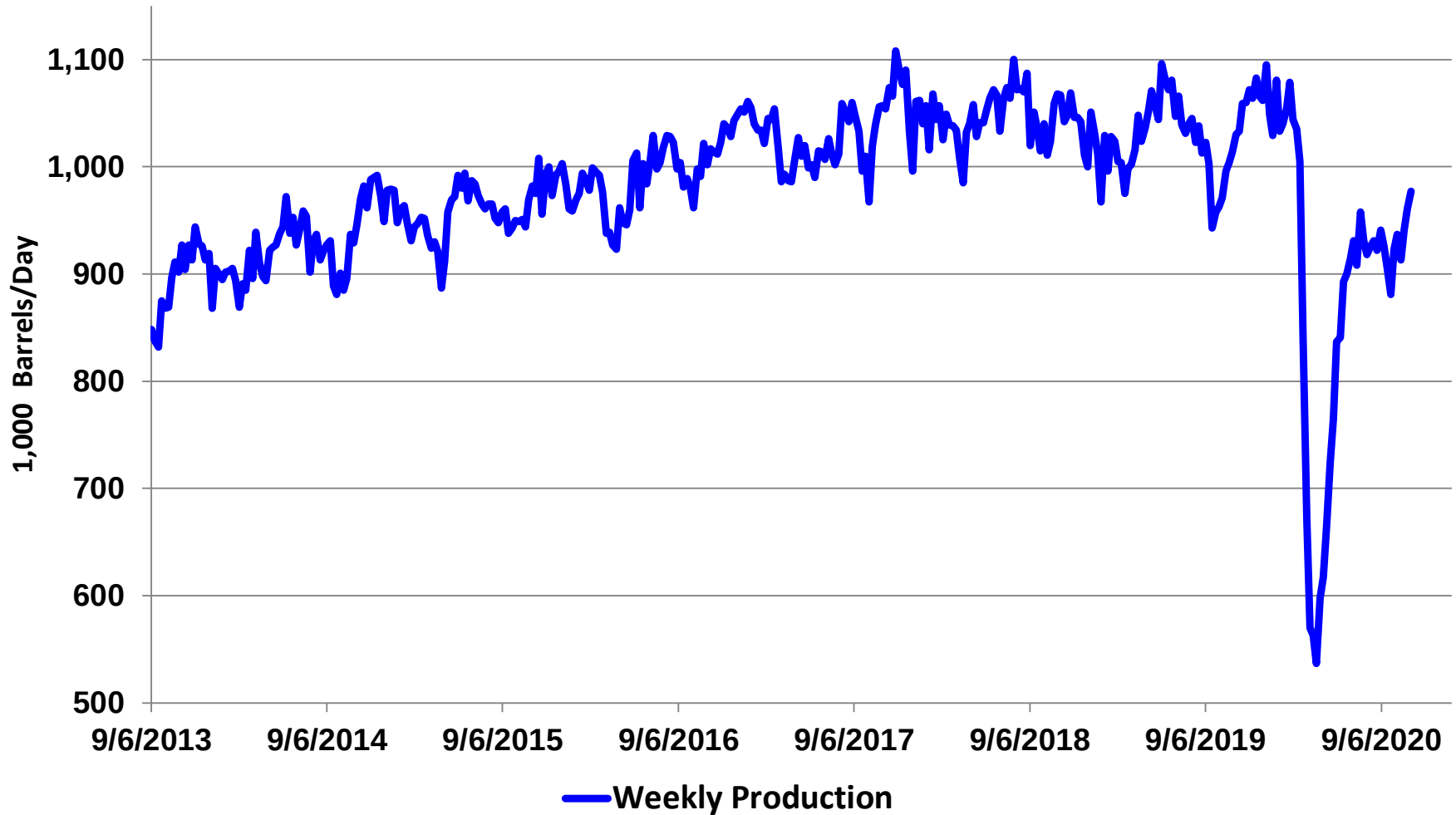
U.S. Corn - Total Use

(Billion Bushels)



Weekly Ethanol Production

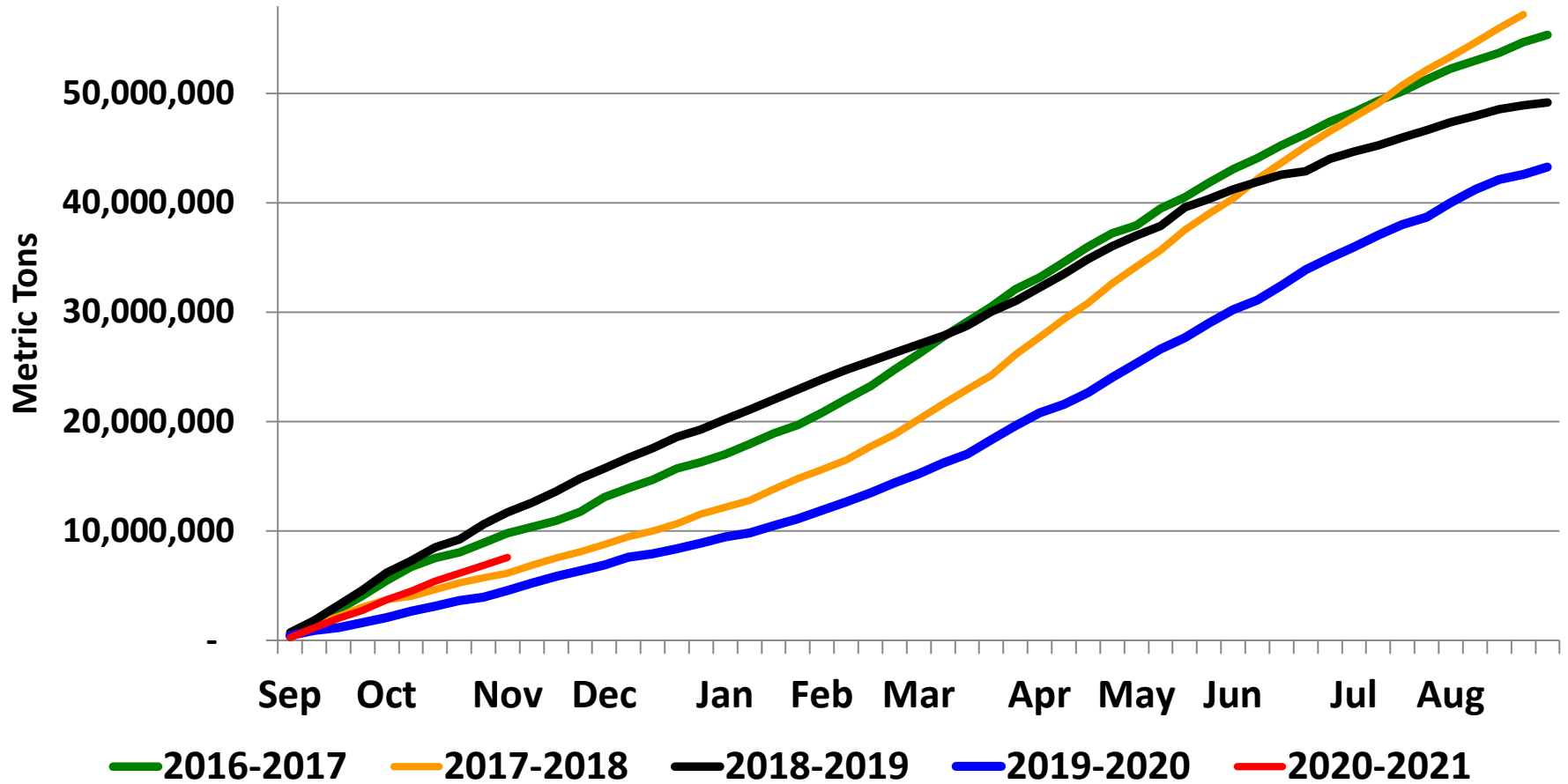
(09/06/2013 – 11/06/2020)



Weekly U.S. Corn Exports

(09/03/2015 – 11/05/2020)

Accumulated Exports



U.S. Corn Export Destinations

(1,000 Metric Ton)

Country	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21*
Mexico	12,558.6	13,539.7	14,974.7	15,461.1	14,172.0	7,077.8
Japan	10,506.6	11,983.4	11,249.8	12,631.8	9,780.7	4,591.6
Colombia	4,629.5	4,438.9	4,965.0	4,672.7	4,851.2	1,654.2
South Korea	3,021.6	5,588.5	5,651.0	3,691.3	2,690.8	599.9
China	184.8	717.9	357.5	259.6	2,110.0	10,773.9
Guatemala	897.1	1,008.9	903.8	1,210.8	1,159.0	725.1
ROW	14,885.9	18,117.5	19,371.9	11,274.8	8,510.1	8,745.0
Total	46,684.1	55,394.8	57,473.7	49,202.1	43,273.8	34,167.5

* Total export commitments as of 11/05/2020

USDA – FAS Export Sales Custom Query

Questions?

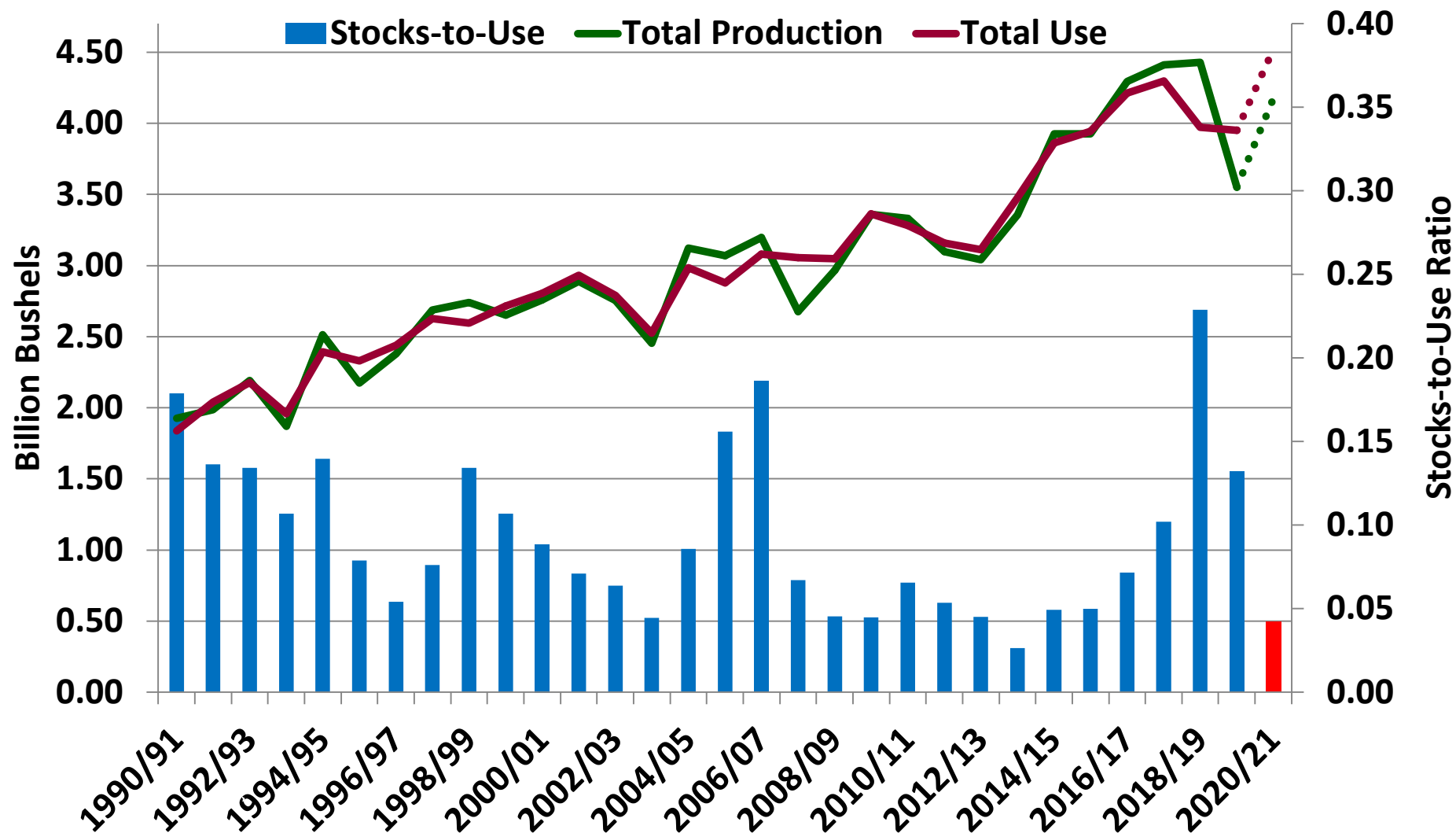


U.S. Soybean Supply & Demand Table

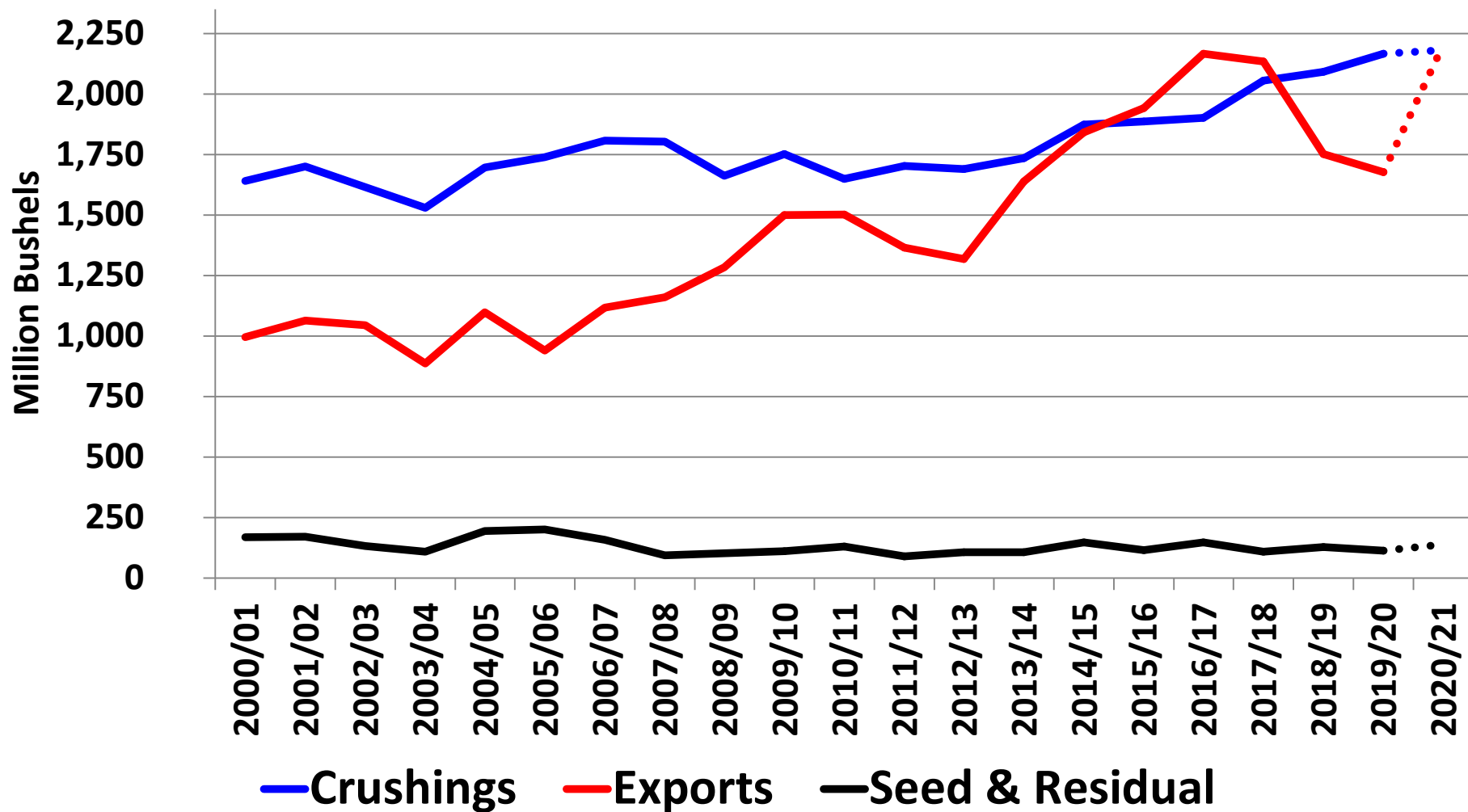
U.S. Soybean	2018/2019	2019/2020 (Est.)	2020/2021 (Nov.)
Planted A.	89.2 Mill. A.	76.1 Mill. A.	83.1 Mill. A.
Harvested A.	87.6 Mill. A.	74.9 Mill. A.	82.3 Mill. A.
Yield/Harvest A.	50.6 bu.	47.4 bu.	50.7 bu.
Beginning Stocks	438 Mill. Bu.	909 Mill. Bu.	523 Mill. Bu.
Production	4,428 Mill. Bu.	3,552 Mill. Bu.	4,170 Mill. Bu.
Imports	14 Mill. Bu.	15 Mill. Bu.	15 Mill. Bu.
Total Supply	4,880 Mill. Bu.	4,476 Mill. Bu.	4,709 Mill. Bu.
Crushings	2,092 Mill. Bu.	2,165 Mill. Bu.	2,180 Mill. Bu.
Exports	1,752 Mill. Bu.	1,676 Mill. Bu.	2,200 Mill. Bu.
Seed	88 Mill. Bu.	96 Mill. Bu.	103 Mill. Bu.
Residual	39 Mill. Bu.	16 Mill. Bu.	35 Mill. Bu.
Total Use	3,971 Mill. Bu.	3,953 Mill. Bu.	4,519 Mill. Bu.
Ending Stocks	909 Mill. Bu.	523 Mill. Bu.	190 Mill. Bu.

U.S. Soybean – Total Prod. & Use

(Billion Bushels)

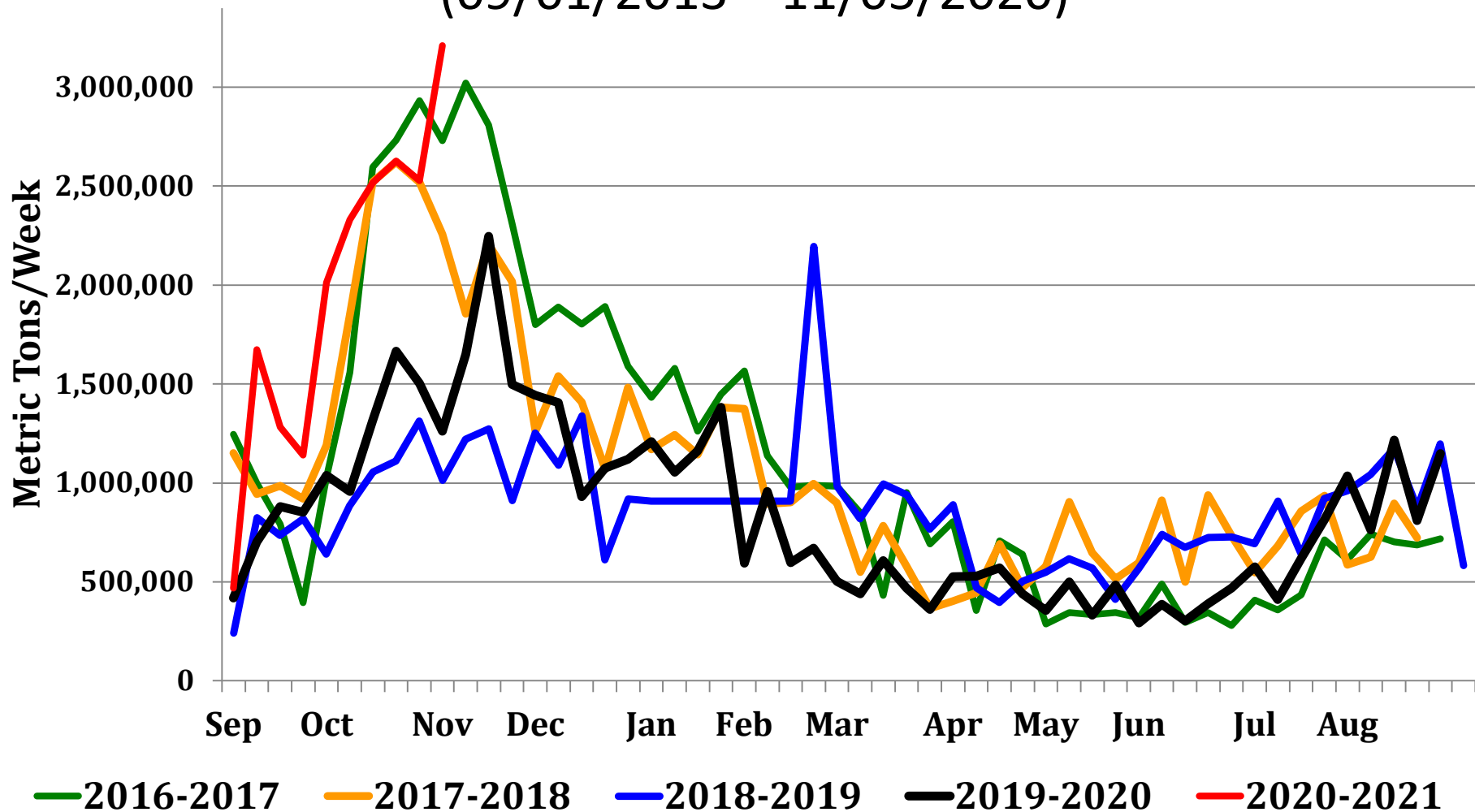


U.S. Soybean Use



Weekly U.S. Soybean Exports

(09/01/2013 – 11/05/2020)



U.S. Soybean Export Destinations

(1,000 Metric Ton)

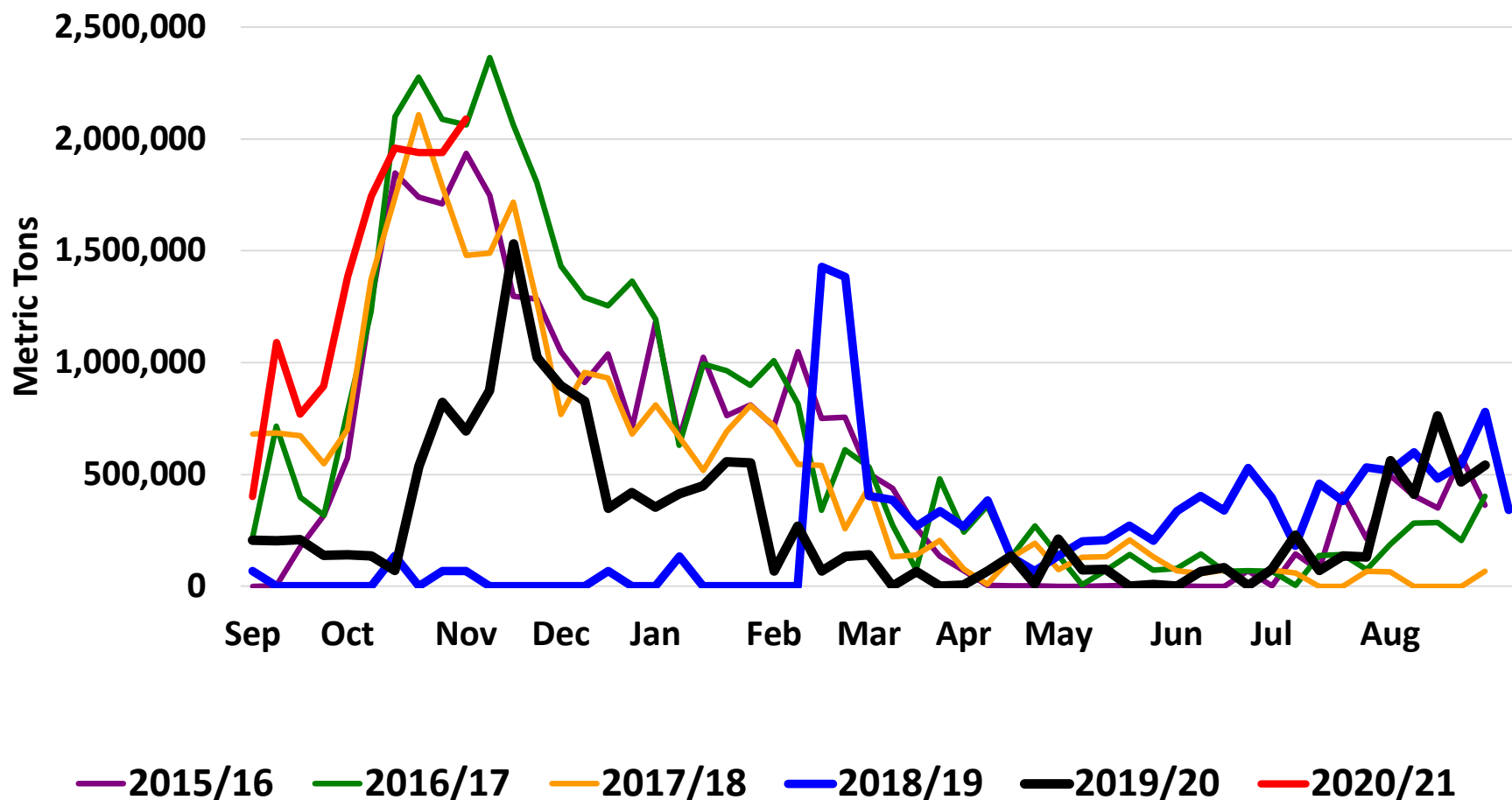
Country	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21*
China	29,855.0	36,148.3	27,681.8	13,369.9	16,266.2	27,552.5
EU-27	5,804.9	4,759.6	5,701.1	7,898.1	5,389.4	1,529.9
Mexico	3,252.6	3,665.0	4,231.1	4,918.1	4,622.4	2,721.0
Egypt	295.4	807.2	2,436.5	2,704.7	3,798.2	1,332.0
Japan	2,145.6	2,137.2	2,153.5	2,437.1	2,272.7	837.3
Indonesia	2,028.6	2,296.9	2,424.8	2,435.7	2,219.8	773.0
Taiwan	1,232.9	1,292.7	1,812.0	1,572.0	1,748.6	1,017.2
ROW	6,224.2	7,010.8	9,909.2	11,434.1	8,617.2	14,137.4
Total	50,839.2	58,117.7	56,350.0	46,770.3	44,934.5	49,900.3

* Total export commitments as of 11/05/2020

USDA – FAS Export Sales Custom Query

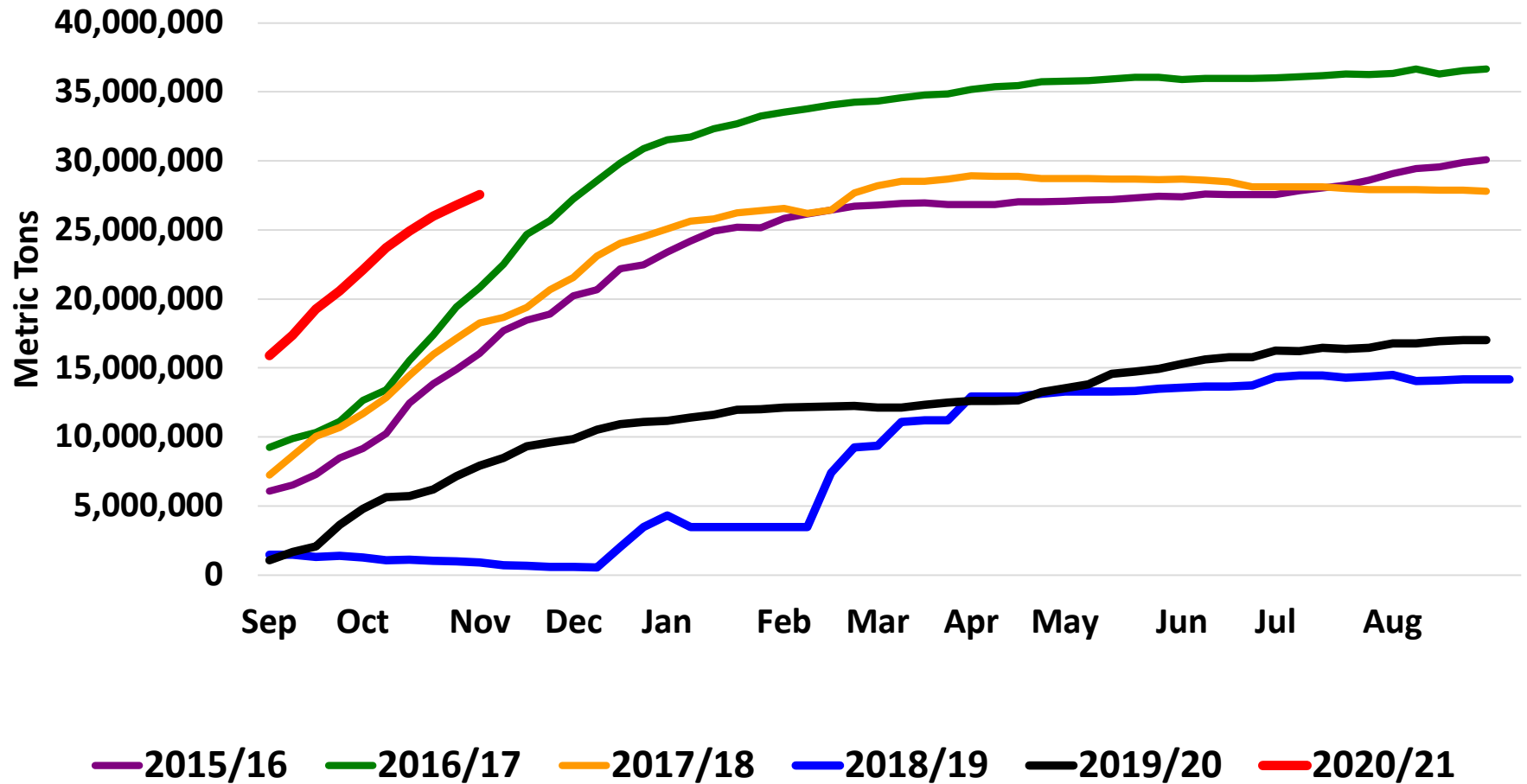
Weekly U.S. Soybean Exports to China

(09/01/2014 – 11/05/2020)



Weekly U.S. Soybean Total Commitments by China

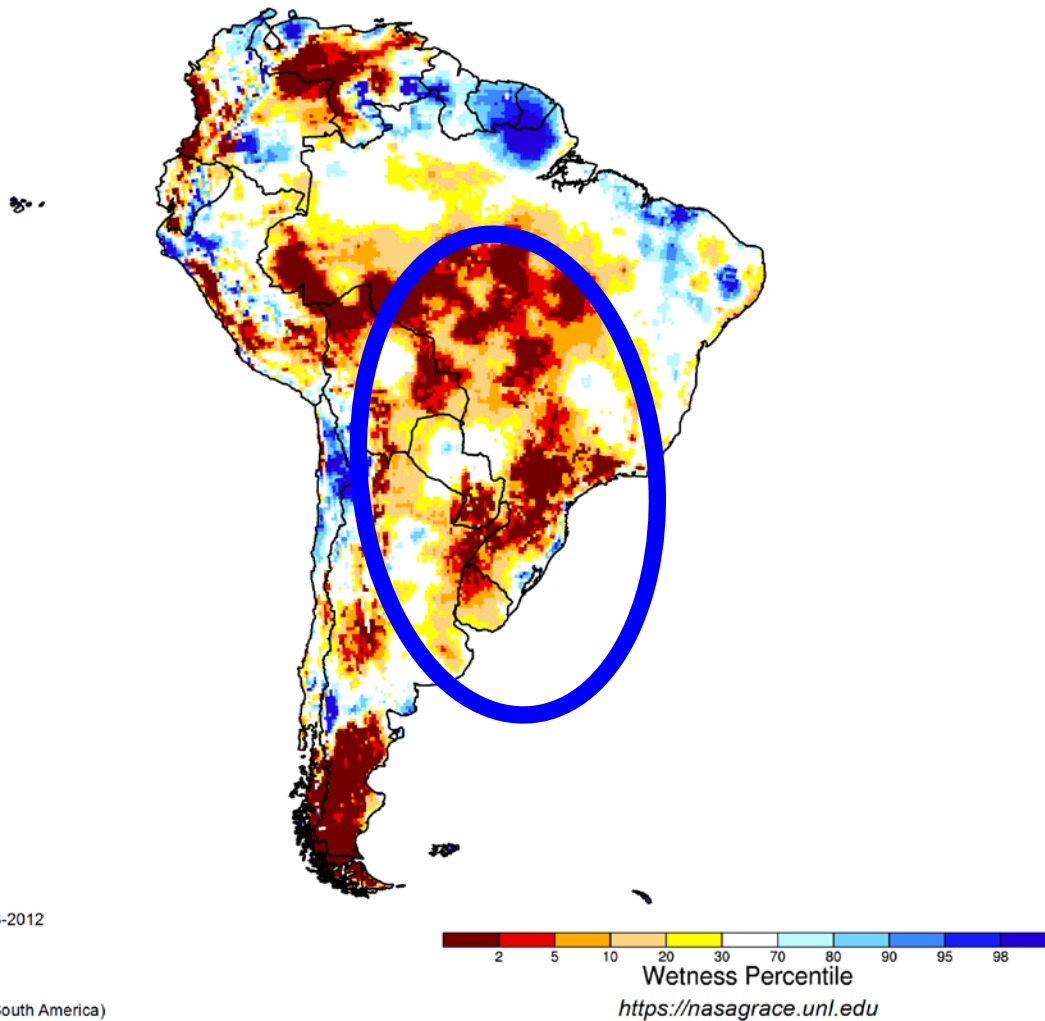
(09/01/2014 – 11/05/2020)





GRACE-Based Root Zone Soil Moisture Drought Indicator

November 16, 2020



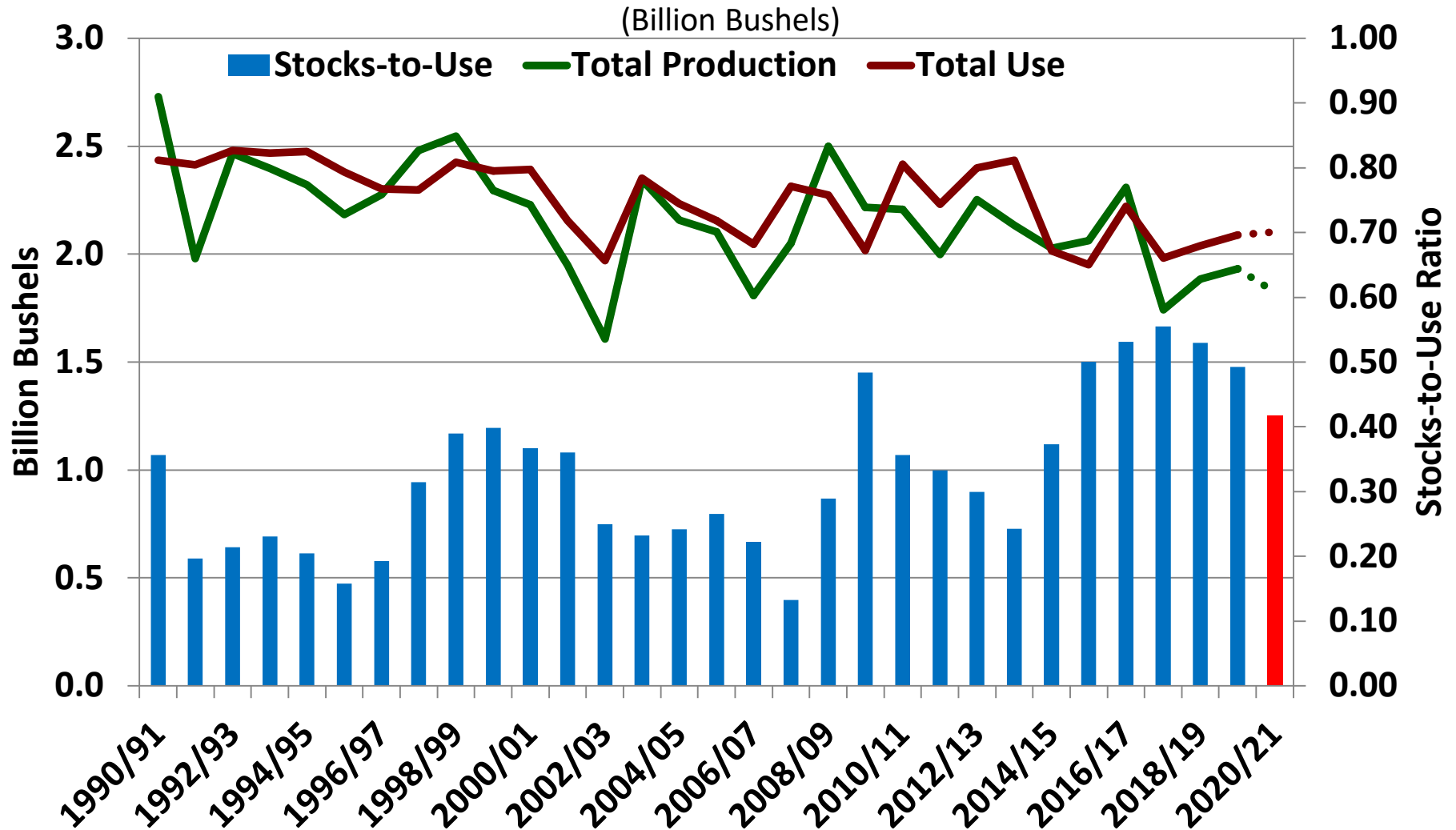
Questions?



U.S. All Wheat Supply & Demand Table

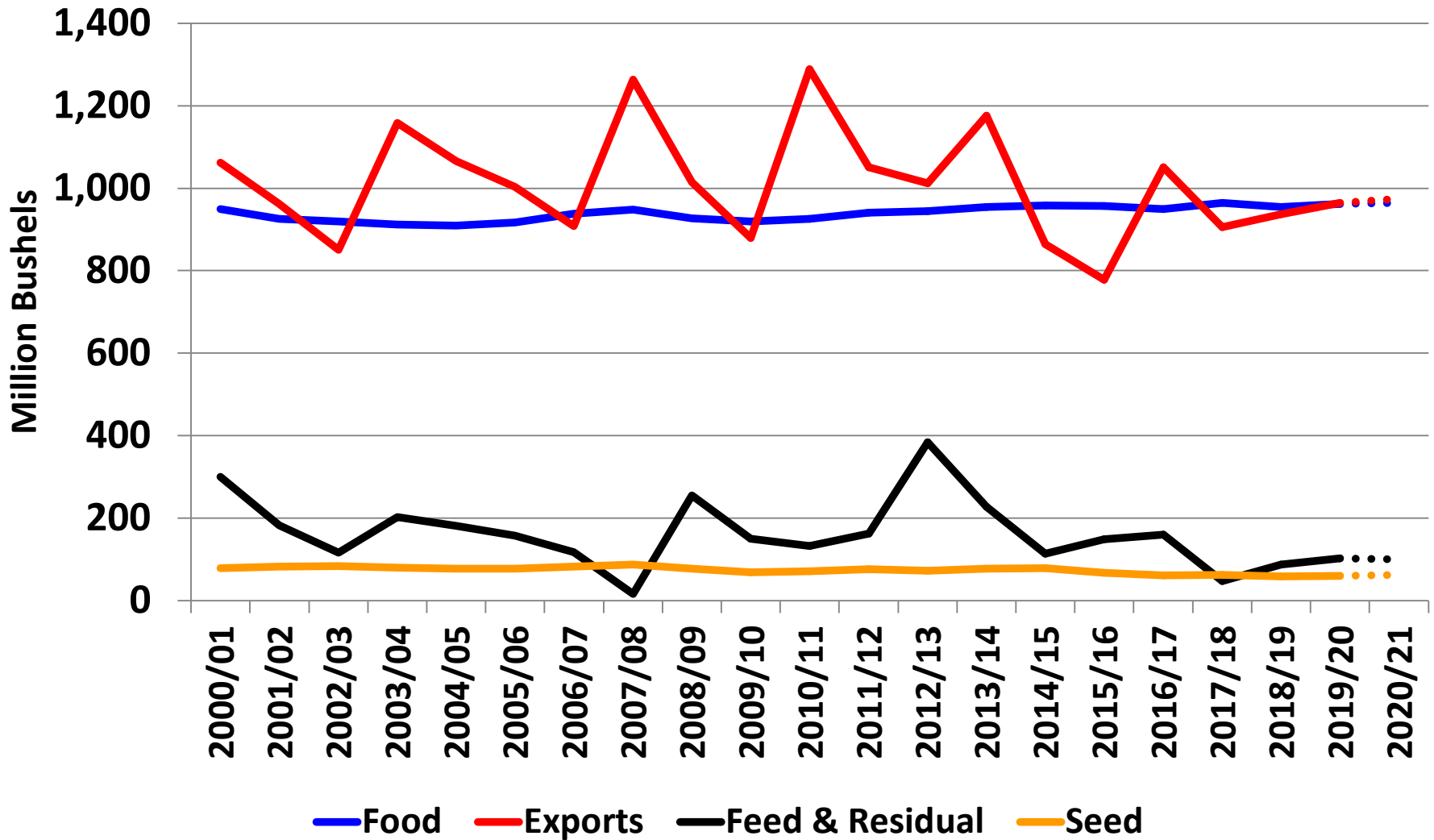
U.S. All Wheat	2018/2019	2019/2020 (Est.)	2020/2021 (Nov.)
Planted A.	47.8 Mill. A.	45.5 Mill. A.	44.3 Mill. A.
Harvested A.	39.6 Mill. A.	37.4 Mill. A.	36.7 Mill. A.
Yield/Harvest A.	47.6 bu.	51.7 bu.	49.7 bu.
Begin Stocks	1,099 Mill. Bu.	1,080 Mill. Bu.	1,028 Mill. Bu.
Production	1,885 Mill. Bu.	1,932 Mill. Bu.	1,826 Mill. Bu.
Imports	135 Mill. Bu.	105 Mill. Bu.	125 Mill. Bu.
Total Supply	3,119 Mill. Bu.	3,117 Mill. Bu.	2,979 Mill. Bu.
Food	955 Mill. Bu.	962 Mill. Bu.	965 Mill. Bu.
Seed	59 Mill. Bu.	60 Mill. Bu.	62 Mill. Bu.
Feed & Residual	88 Mill. Bu.	102 Mill. Bu.	100 Mill. Bu.
Exports	1,102 Mill. Bu.	965 Mill. Bu.	975 Mill. Bu.
Total Use	2,039 Mill. Bu.	2,089 Mill. Bu.	2,102 Mill. Bu.
Ending Stocks	1,080 Mill. Bu.	1,028 Mill. Bu.	877 Mill. Bu.

U.S. All Wheat – Total Prod. & Use



U.S. All Wheat Use

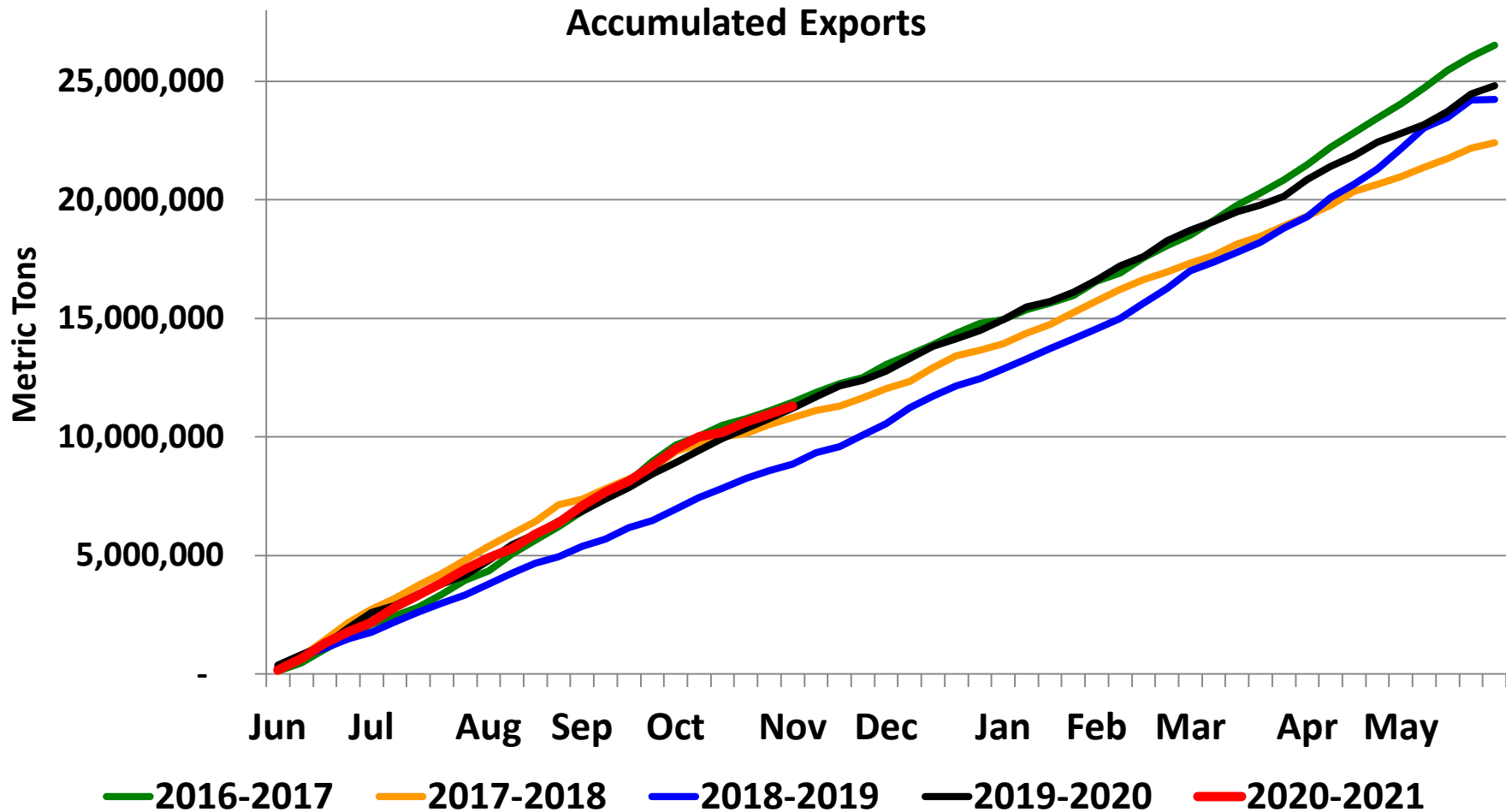
(Million Bushels)



Weekly U.S. All Wheat Exports

(06/04/2015 – 11/05/2020)

Accumulated Exports



U.S. All Wheat Export Destinations

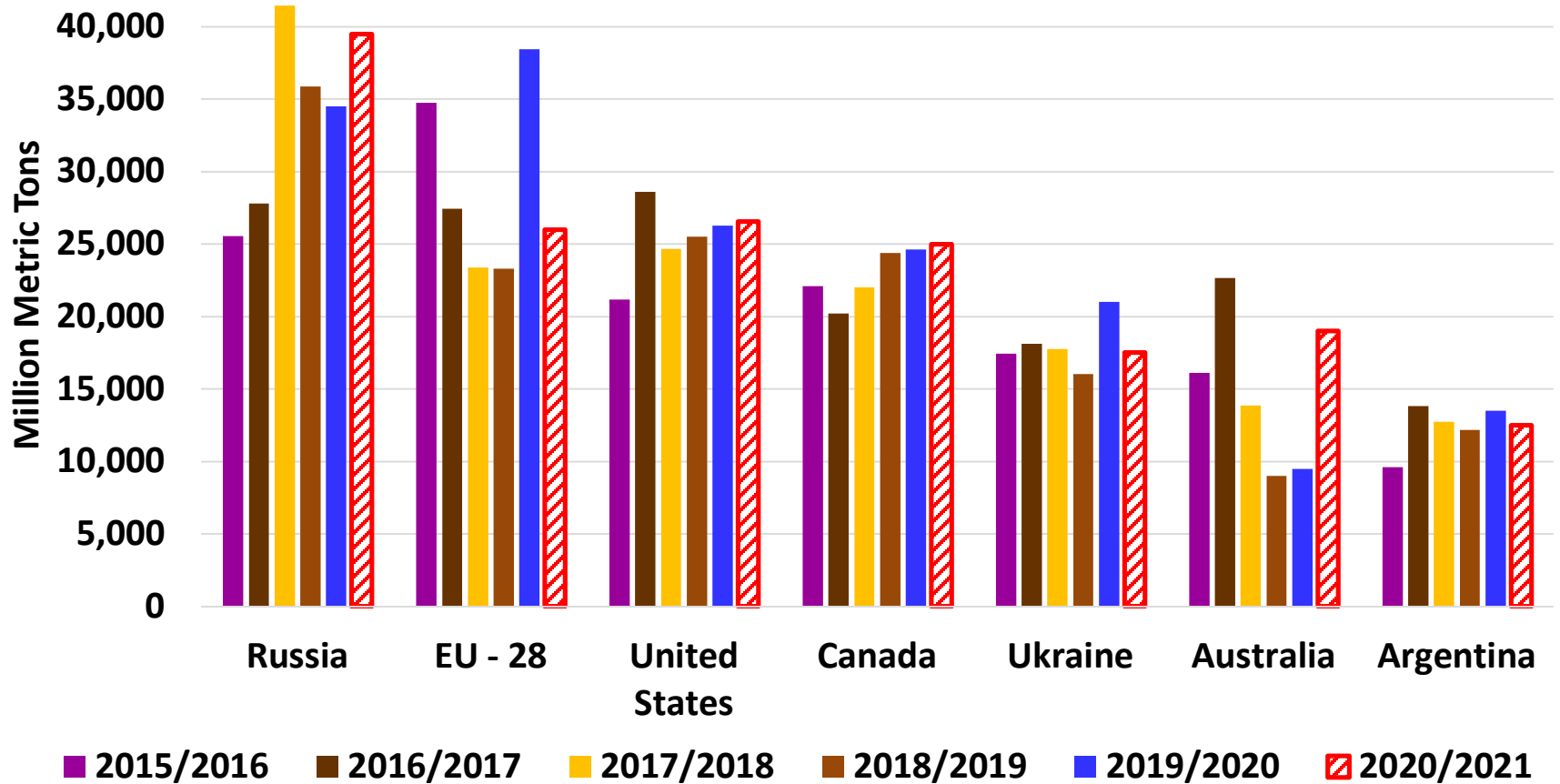
(1,000 Metric Ton)

Country	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21*
Mexico	2,318.1	3,089.7	2,935.0	3,033.6	3,670.0	2,249.4
Philippines	2,118.4	2,729.2	2,474.2	3,046.7	3,141.9	2,372.6
Japan	2,434.0	2,819.7	2,692.7	2,695.4	2,575.4	1,570.5
Nigeria	1,401.2	1,540.4	1,170.7	1,563.9	1,564.4	790.9
South Korea	1,073.7	1,275.5	1,420.4	1,355.3	1,340.8	1,166.1
Taiwan	1,033.7	1,049.1	1,114.4	1,163.9	1,246.4	768.9
Indonesia	607.8	1,083.5	1,141.0	1,381.7	1,061.9	609.4
China	763.5	1,562.7	902.4	42.0	549.5	1,597.7
ROW	7,722.7	11,363.0	8,568.4	9,949.1	9,661.9	5,932.0
Total	19,473.1	26,512.8	22,419.2	24,231.6	24,812.2	17,057.5

* Total export commitments as of 11/05/2020

USDA – FAS Export Sales Custom Query

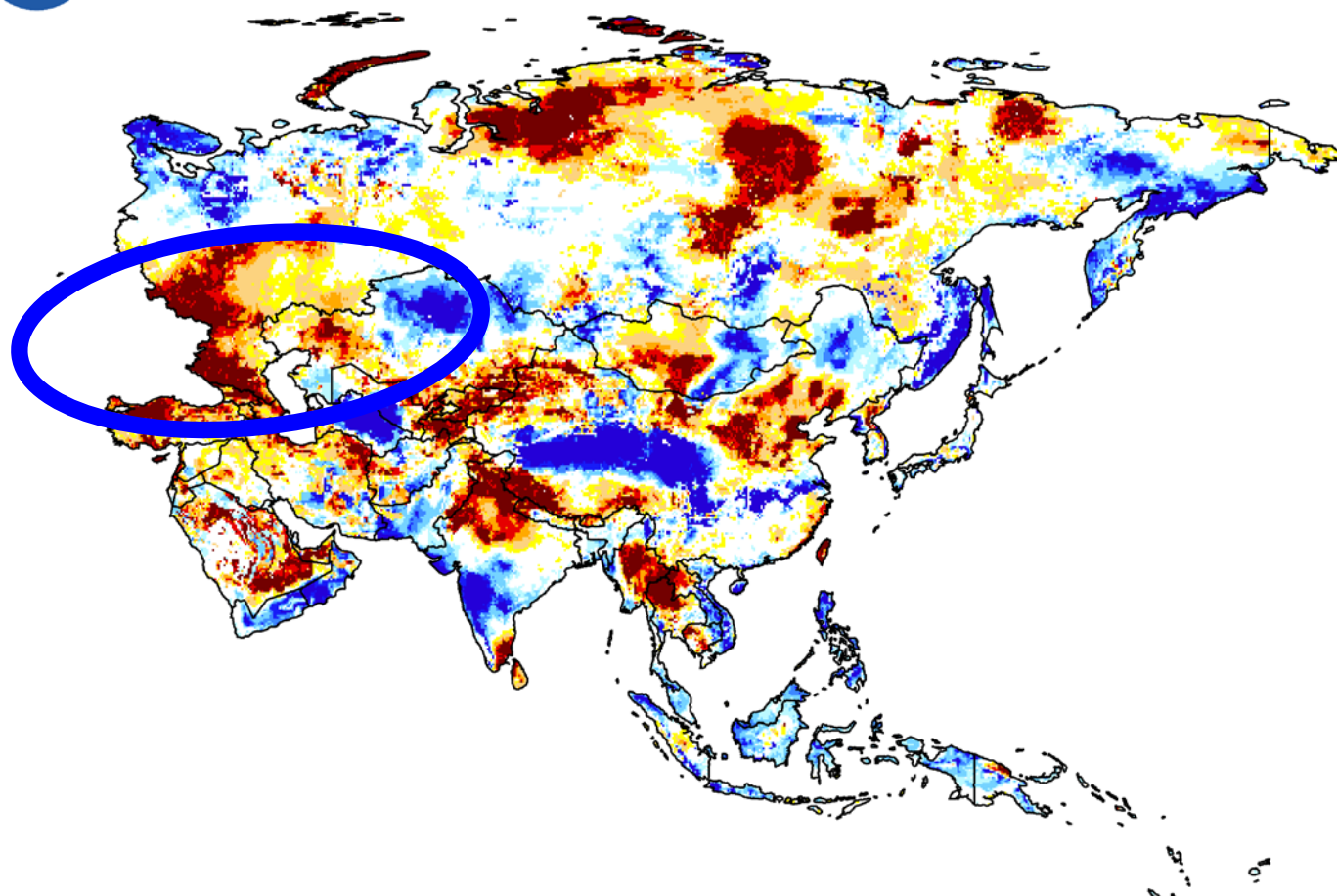
Major World Wheat Exporters





GRACE-Based Shallow Groundwater Drought Indicator

November 16, 2020



Wetness percentiles are relative to the period 1948-2012

Cell Resolution 0.25 degrees

Projection of this document is Patterson (World)

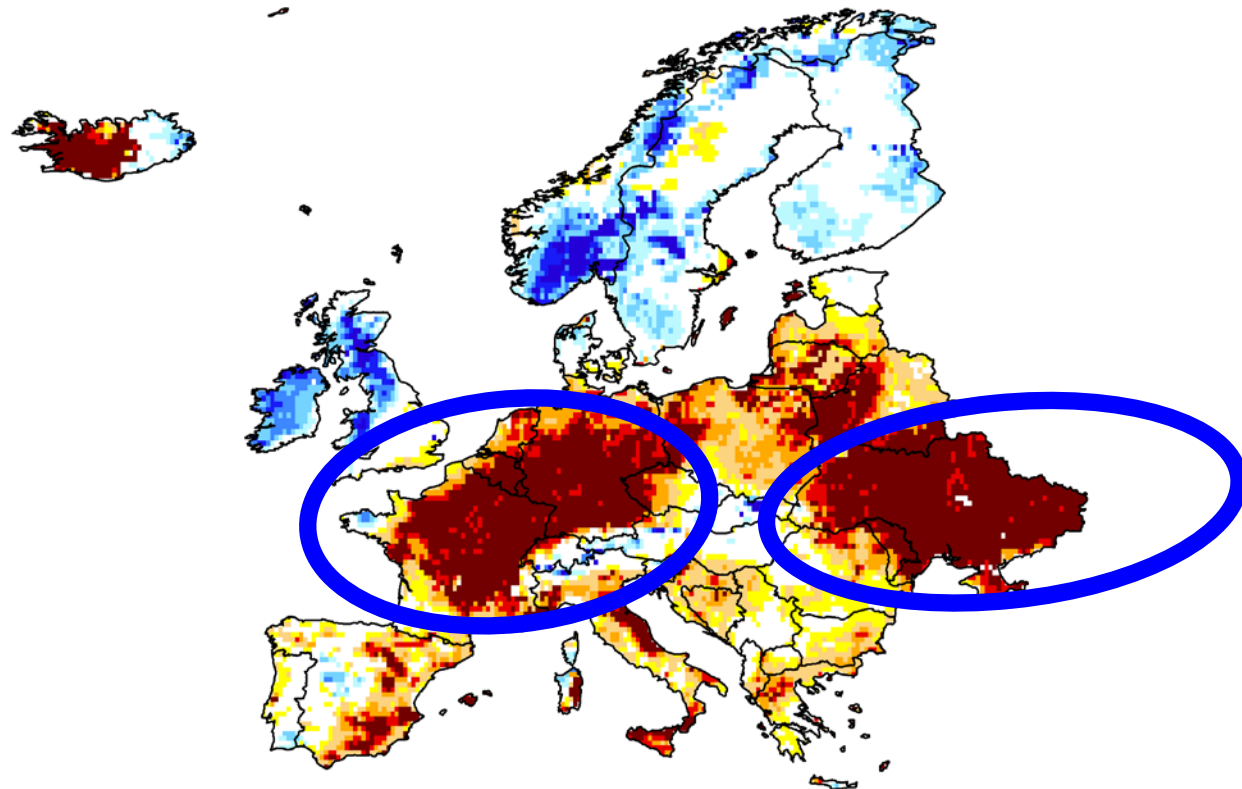


<https://nasagrace.unl.edu>



GRACE-Based Shallow Groundwater Drought Indicator

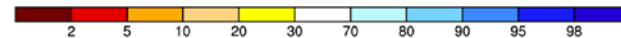
November 16, 2020



Wetness percentiles are relative to the period 1948-2012

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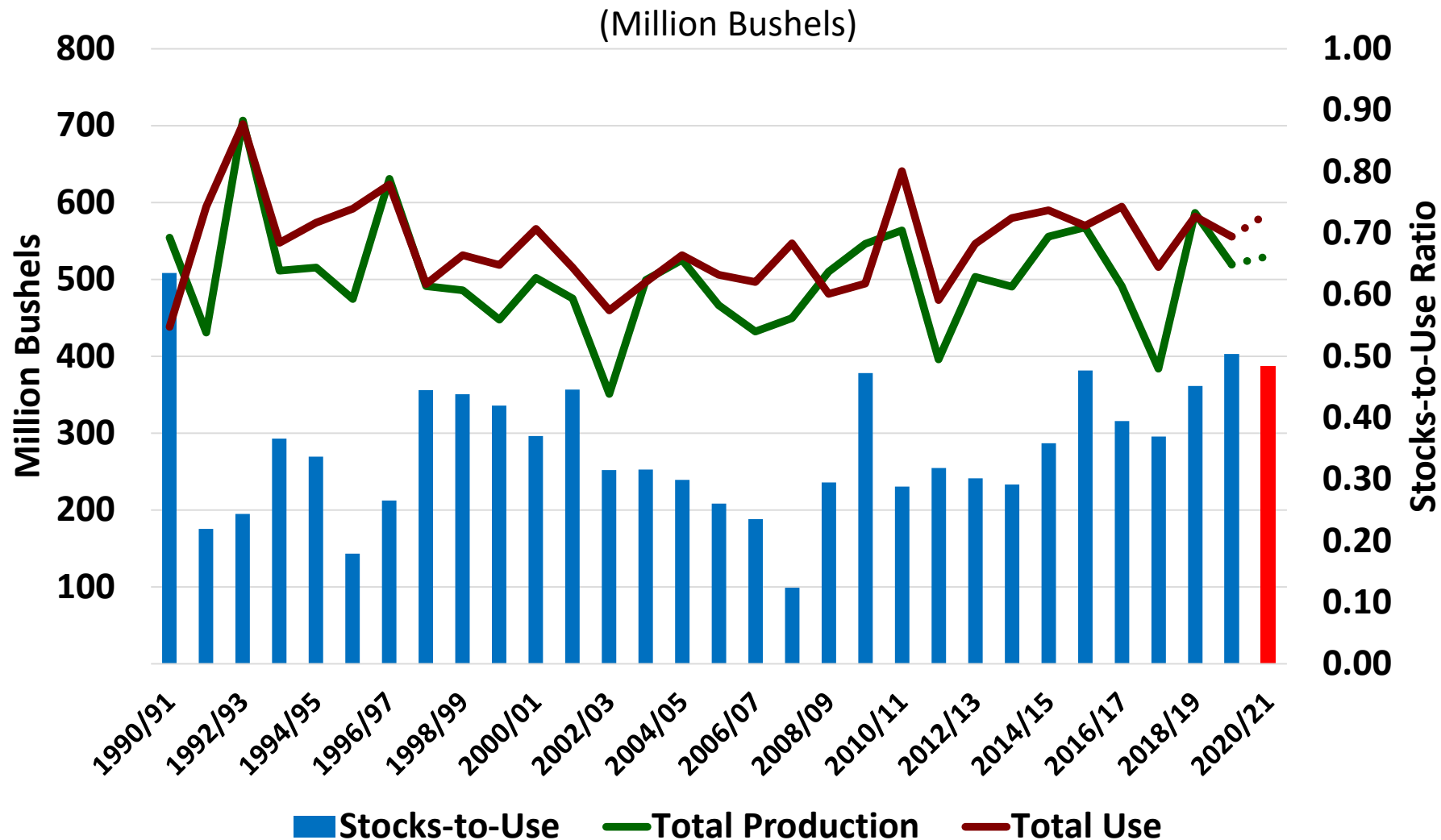
Projection of this document is Patterson (World)



Wetness Percentile

<https://nasagrace.unl.edu>

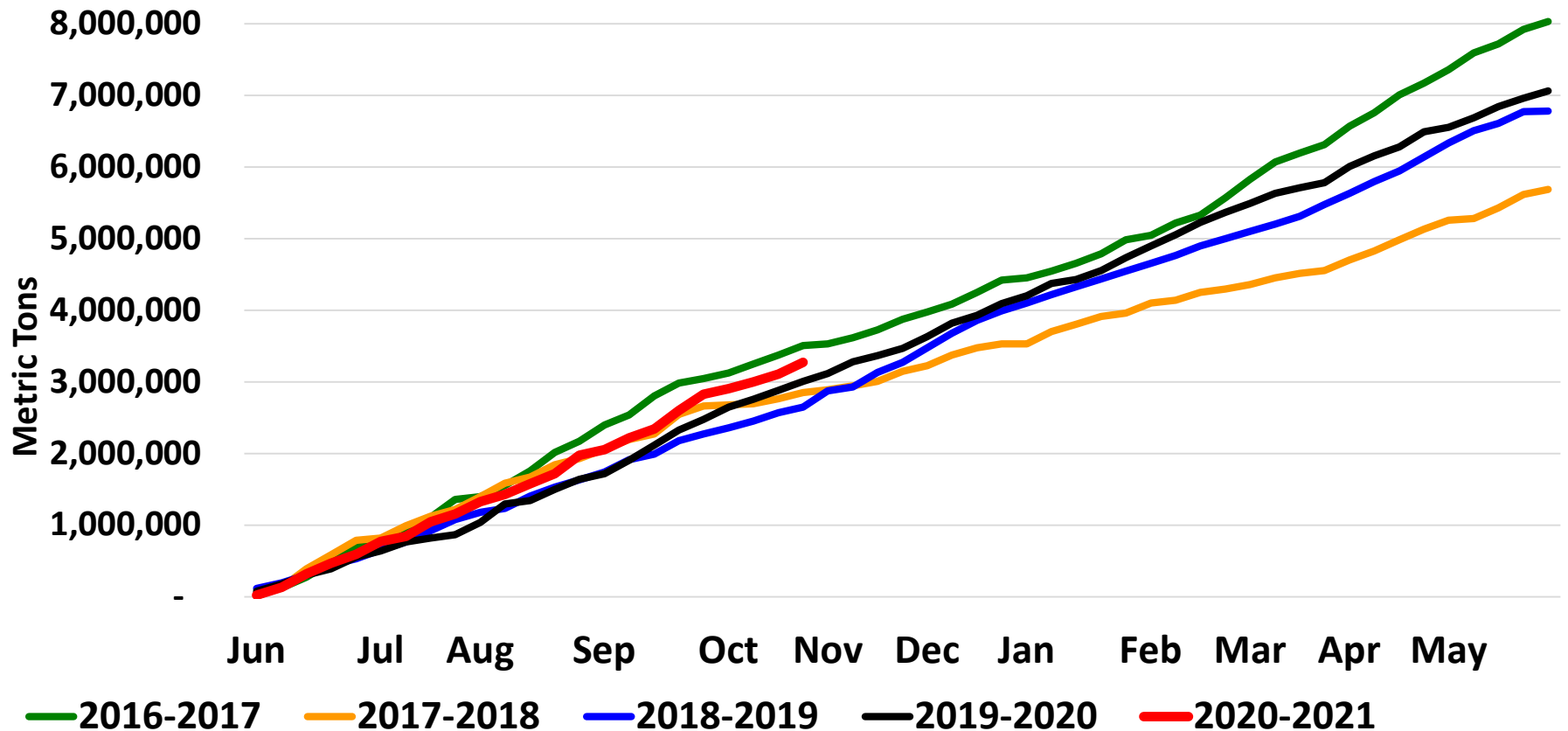
U.S. HRSW – Total Prod. & Use



Weekly U.S. HRSW Exports

(06/04/2015 – 11/05/2020)

Accumulated Exports



U.S. Hard Red Spring Wheat Export Destinations

(1,000 Metric Ton)

Country	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21*
Philippines	1,138.5	1,657.3	1,247.6	1,760.4	1,732.1	1,318.4
Japan	850.6	1,048.3	995.9	863.7	987.8	583.1
Taiwan	593.0	568.0	626.0	624.5	658.2	433.0
South Korea	353.0	393.6	399.7	450.2	446.3	307.1
Bangladesh	0.0	110.5	0.0	391.7	380.6	0.0
Thailand	261.1	331.7	256.8	360.8	347.1	233.6
China	629.6	1,042.6	542.9	33.6	116.3	382.2
ROW	2,605.8	2,880.5	1,619.7	2,293.5	2,393.9	1,571.0
Total	6,431.6	8,032.5	5,688.6	6,778.4	7,062.3	4,828.4

* Total export commitments as of 11/05/2020

USDA – FAS Export Sales Custom Query

Questions?



Motivation for Chinese Buying: My Assessment

- Demand for livestock feed is growing.
 - Pork (herd rebuilding), poultry and eggs, dairy, aquaculture.
 - Chinese corn production is good, not great.
 - Government continues to auction corn from reserves with strong buying interest.
 - Chinese imports of other feed grains (sorghum and barley) is also strong.
 - More reports of low quality wheat and rice being used in livestock rations.
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Motivation for Chinese Buying: My Assessment

- Private and government owned grain buyers are building inventories due to:
 - Ongoing political, economic and trade tensions between U.S. and China.
 - Production concerns in Brazil and Argentina.
- Phase One trade agreement.
 - Phase One trade agreement is helping reduce hurdles to trade, but it is unlikely 2020 total purchasing targets will be met.

U.S. – China Phase One Review

- Six chapters, with two directly impacting agriculture.
 - *Chapter 3 – Trade in Food and Agricultural Productions* reduces non-tariff trade barriers.
 - *Chapter 6 – Expanding Trade* describes additional purchases of U.S. products.
- Additional \$32 billion in agricultural products over two years.
 - Additional \$12.5 billion in 2020.
 - Additional \$19.5 billion in 2021.
 - Over 2017 levels, but value is not specified.
 - U.S. records or China records?

U.S. – China Phase One Review

- Sub-category minimums are also specified but not released to public.
 - Soybean, meat, cereals, cotton, other agricultural commodities and seafood.
- What does Chinese buying strategy look like?
 - China is value buyer.
 - Price is important, but not the only factor.
 - Chinese government influences ag import levels and timing by issuing tax exempt import permits.
 - Market has underestimated demand growth for animal feed.

U.S. – China Phase One Review

- What happens if U.S. and China can't agree on value of purchase?
 - “Parties shall engage in consultations.”
 - What happens if China does not meet the agreed upon purchase levels?
 - Unknown.
 - U.S. and Chinese trade officials are meeting on a monthly basis to monitor progress and discuss implementation issues.
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Value of U.S. Ag. Exports to China

Product	2017		Product	2020
	Jan. – Sep. Total (\$1,000)	Annual Total (\$1,000)		Jan. – Sep. Total (\$1,000)
Soybean	5,586,299	12,224,802	Soybean	4,328,259
Cotton	738,417	972,554	Meat of Swine	1,300,358
Raw Hides – Bovine	646,468	876,715	Cotton	1,172,568
Grain Sorghum	611,241	839,459	Grain Sorghum	708,742
Whole Frozen Fish	666,385	821,879	Poultry Meat	507,196
Animal Fodder	300,717	388,818	Corn	489,887
Total All 217 Products	12,052,340	20,836,706	Total All 217 Products	12,625,222

Questions?



Impacts of COVID-19

- Shifting consumer demand and supply chains:
 - “Effective Demand” is defined as a consumer want or need supported by an ability to pay.
 - Consumers have changing priorities (wants and needs).
 - Consumers have changing budget constraints.
 - Applies to both U.S. and international consumers.
 - Global economic recession is a significant concern.
 - I am watching [Mexico](#), [Japan](#), [Philippines](#) and [EU](#).
 - Economic impacts have not been uniform.
 - Restaurants, hotels, airlines and recreation have suffered.
 - Computers/Tech., custom delivery (UPS, FedEx, Amazon), home office furniture have benefited.
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Impacts of COVID-19

- Shifting U.S. consumer demand:
 - More meals eaten at home and fewer away from home.
 - Home prepared meals often contain basic food components.
 - Drive-through, take-out, ready-to-eat (deli), etc.
 - Restaurants buy large package sizes, consumers buy small package sizes.
 - Will shifts in consumer demand be permanent?
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Impacts of COVID-19

- Shifting international consumer demand:
 - More grains/legumes and less animal protein?
 - Meat, dairy, eggs, etc.
 - More basic foods and less discretionary foods?
 - Cookies/cakes, prepared foods, etc.
 - Changing exchange rates have an impact.
 - Will shifts in consumer demand be permanent?
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Impacts of COVID-19

- Living with the coronavirus:
 - Widespread supply chain disruptions in the crop sector are unlikely.
 - Individual company disruptions are very likely to occur.
 - Two vaccines with release likely in December (Moderna and Pfizer), with others coming.
 - Vaccine distribution?
 - Health care workers and high risk individuals will take priority.
 - Widespread access likely by mid-summer.
 - This is a global pandemic.
 - Impact on international trade?

Questions?



Thank You!

