Ag Trade Outlook, 2025 Tariff Effects on Agri-Supply Chain, and Net Farm Income Challenges

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Retaliatory Tariffs on U.S. Agriculture

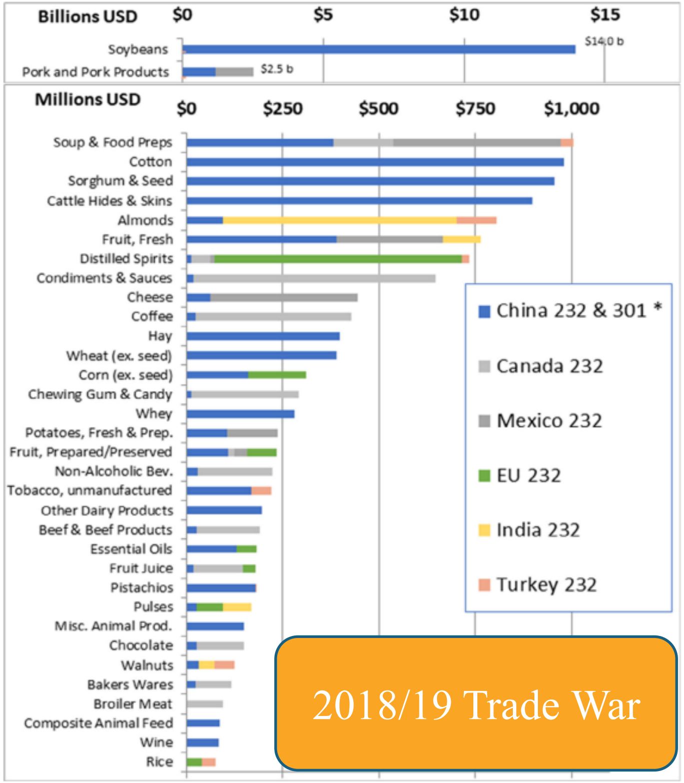


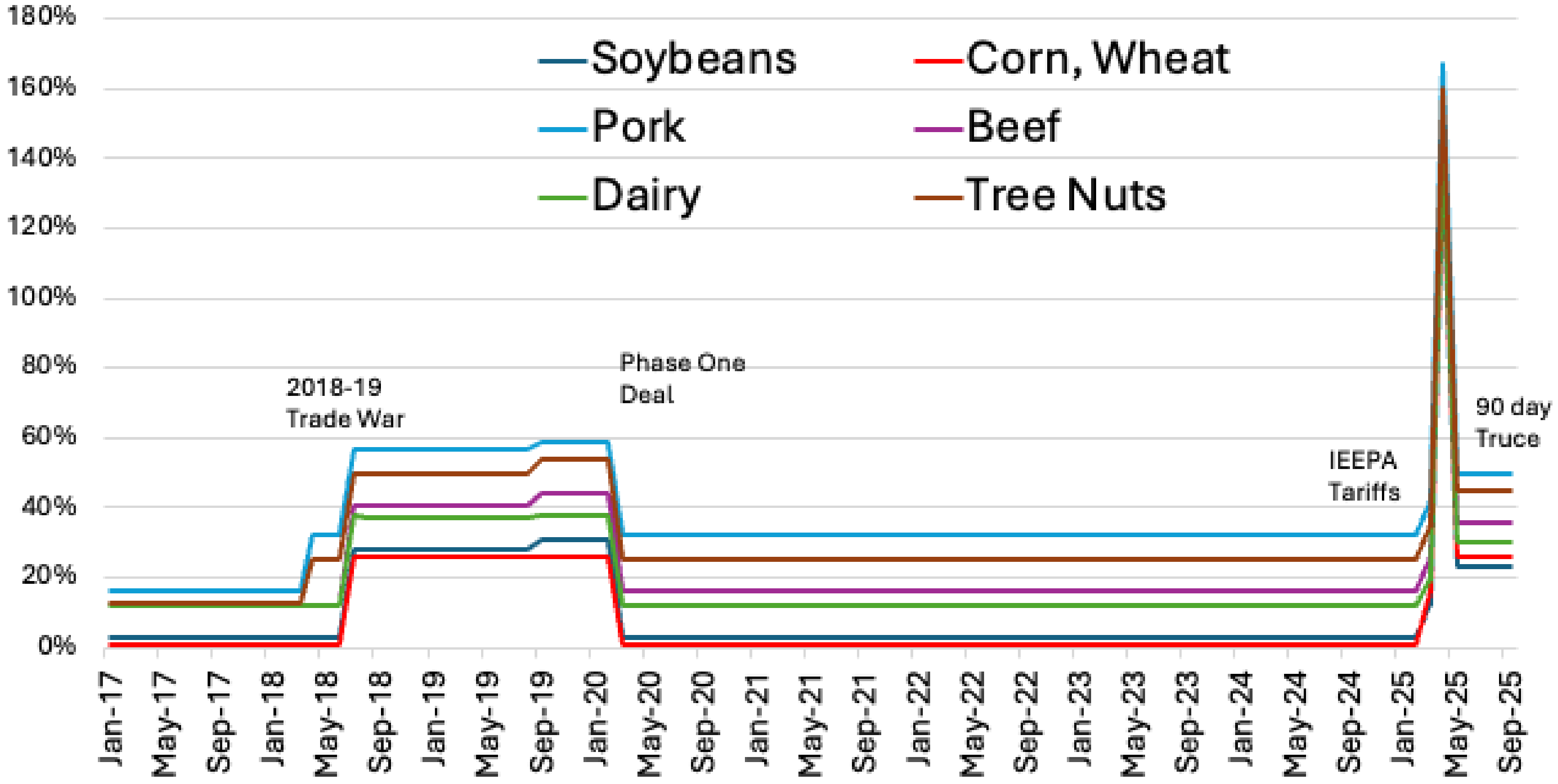
FIGURE 1 2017 Value of U.S. agricultural exports subject to Section 232 and 301 retaliatory duties. Most products covered by China Section 232 tariffs are also subject to an additional Section 301 retaliatory duty. Canadian and Mexican retaliatory duties removed in May, 2019 [Color figure can be viewed at wileyonlinelibrary.com]

Source: Grant, Arita, et al. 2021, AEPP

Data: Census, WTO-IMF tracker

Canada tariffs removed Sept 2025

Chinese Retaliatory Tariffs on Selected U.S. Agricultural Commodities



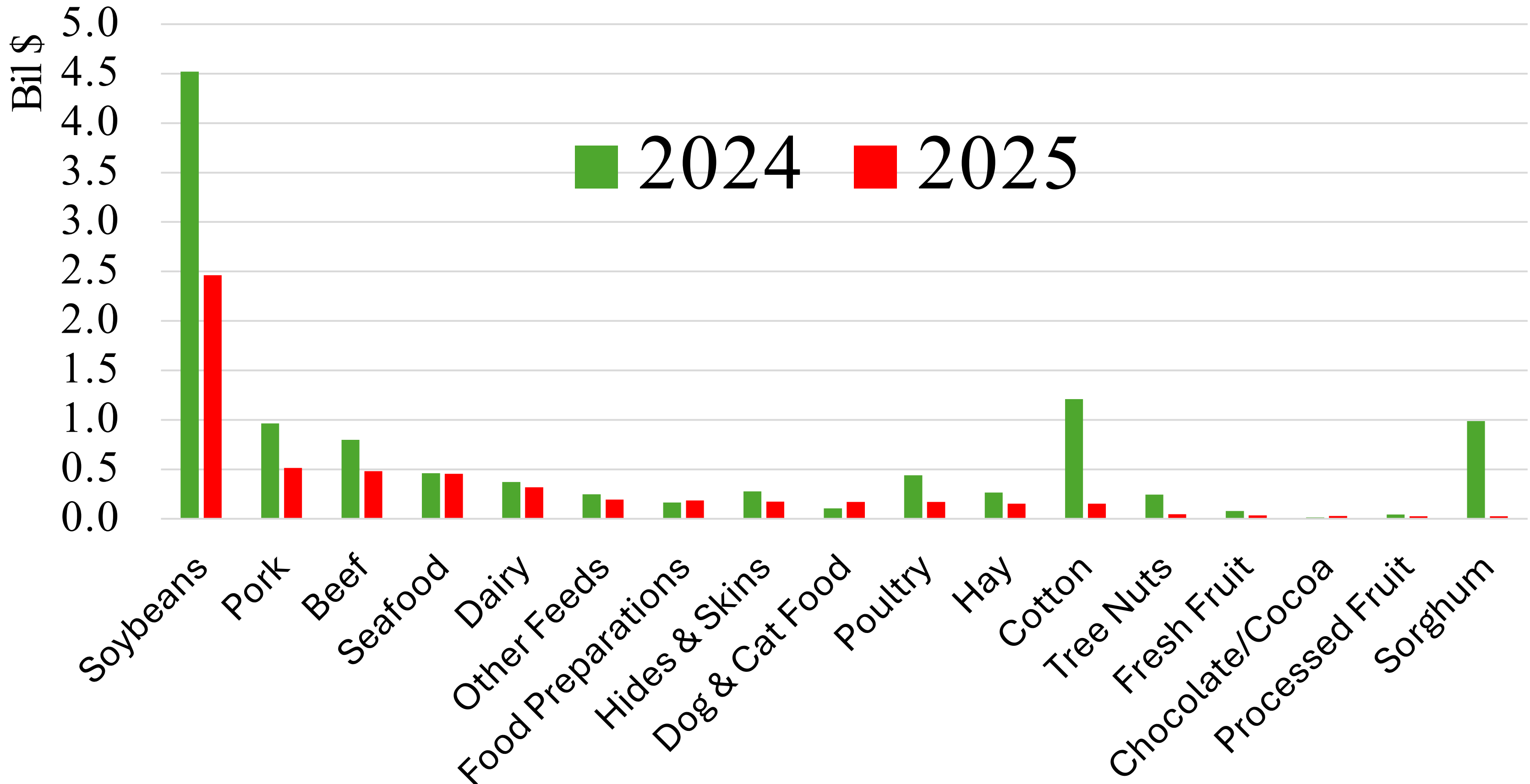
China's Stack of Retaliatory Tariffs on U.S. Agricultural Exports.

Commodity	3-Year avg Chinese imports (million USD)	MFN rate	Retaliation to Section 232	Retaliation to Section 301	Retaliation to IEEPA tariffs	Total tariffs as of August 2025	Tariffs without Section 301 exemptions
Soybeans	$15,066	3%	0%	28%	20%	23%	50%
Corn	$2,819	1%	0%	25%	25%	26%	51%
Cotton	$2,188	1%	0%	25%	25%	26%	51%
Coarse Grains (ex. corn)	$1,663	2%	0%	25%	20%	22%	47%
Beef & Beef Products	$1,603	12%	0%	30%	20%	32%	62%
Soup & Other Food Preparations	$1,230	0%	0%	10%	10%	10%	20%
Hay	$1,050	6%	0%	25%	10%	16%	40%
Tree Nuts	$966	7%	11%	28%	20%	37%	66%
Pork & Pork Products	$951	12%	25%	30%	20%	56%	86%
Poultry Meat & Prods. (ex. eggs)	$834	0%	0%	28%	25%	25%	53%
Dairy Products	$675	5%	0%	19%	14%	19%	37%
Hides & Skins	$499	5%	0%	5%	10%	15%	20%
Other Feeds & Fodders	$439	3%	0%	10%	10%	13%	23%
Meat Products NESOI	$406	20%	0%	29%	10%	30%	59%
Wheat	$395	1%	0%	25%	25%	26%	51%
Dog & Cat Food	$355	10%	0%	25%	10%	20%	45%
Tobacco	$230	10%	0%	25%	10%	20%	45%
Essential Oils	$163	12%	0%	7%	10%	22%	29%
Dextrins, Peptones, & Proteins	$106	6%	0%	11%	10%	16%	27%
Fresh Fruit	$105	10%	15%	30%	20%	45%	75%
Processed Fruit	$85	11%	3%	24%	20%	34%	58%
Vegetable Oils NESOI	$80	22%	0%	24%	10%	32%	55%
Peanuts	$77	15%	0%	10%	10%	25%	35%
Non-Alcoholic Bev. (ex. juices, coffee, tea)	$74	5%	0%	27%	10%	15%	42%
Chewing Gum & Candy	$62	10%	0%	25%	10%	20%	45%
Other Intermediate Products	$52	8%	0%	19%	10%	18%	37%
Wine & Related Products	$51	15%	15%	24%	10%	40%	63%
Rice	$0	1%	0%	25%	10%	11%	36%

Exhibit 10: *China's Tariffs on U.S. Agricultural Products as of August 12, 2025.*

Source: NDSU using data from the USDA FAS GAIN report CH2025-0153 and the Global Trade Atlas by S&P Global.

Value of U.S. Exports to China Year to Date (Jan-Jul)



Declines in U.S. Ag exports to China not being fully offset by Gains in other markets

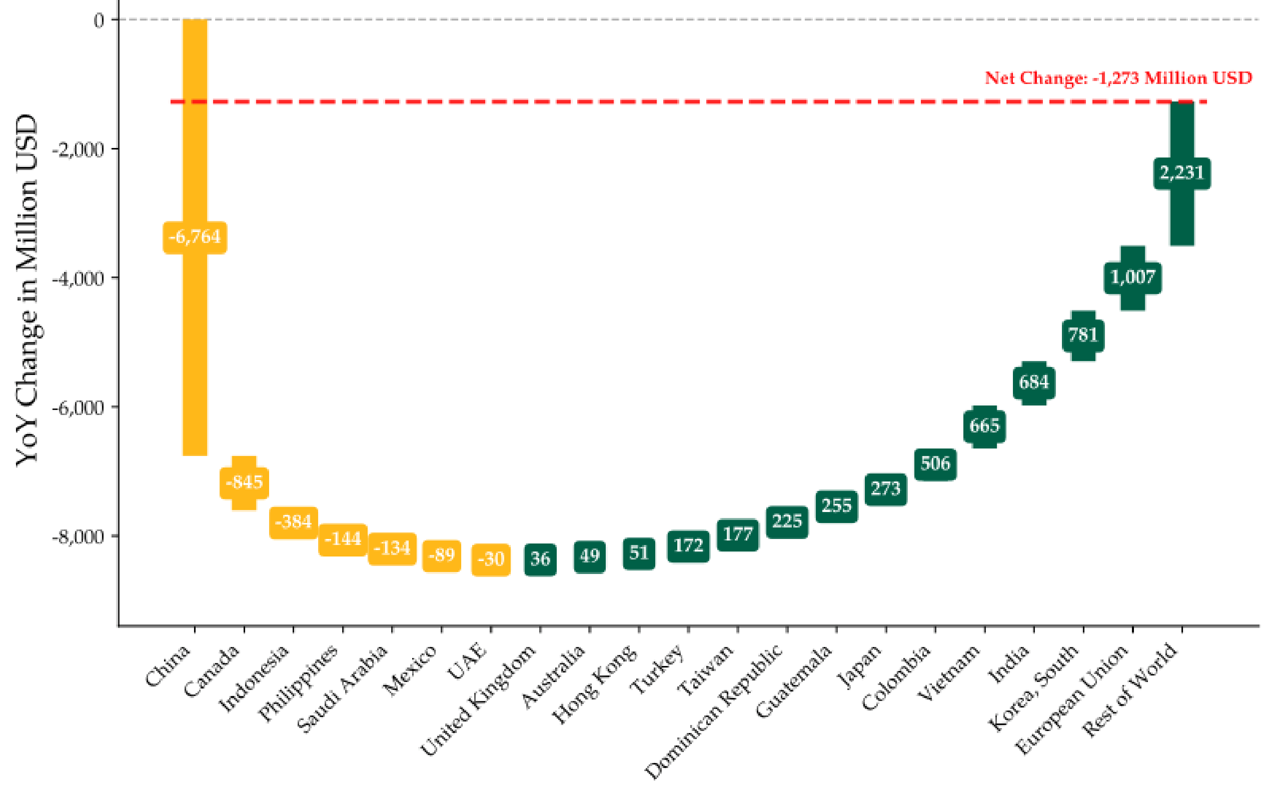
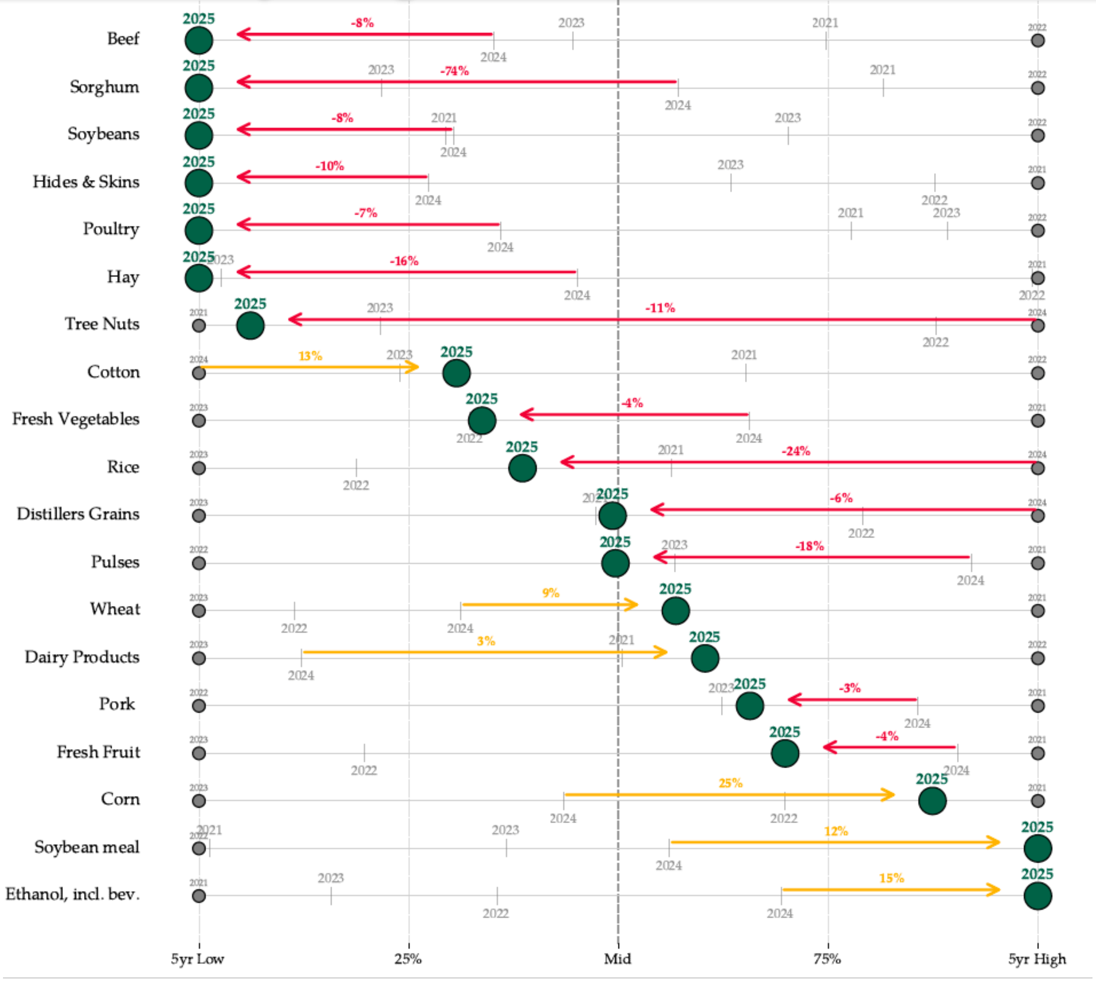


Exhibit 11: *Year-to-Date (Jan-Jul) Net Change in U.S. Agricultural Exports in Million USD.*

Source: NDSU using data from the U.S. Census Bureau.

U.S. Commodity Export Performance YTD



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Zero New Crop Soybeans Booked in 2025 Year-to-Date.

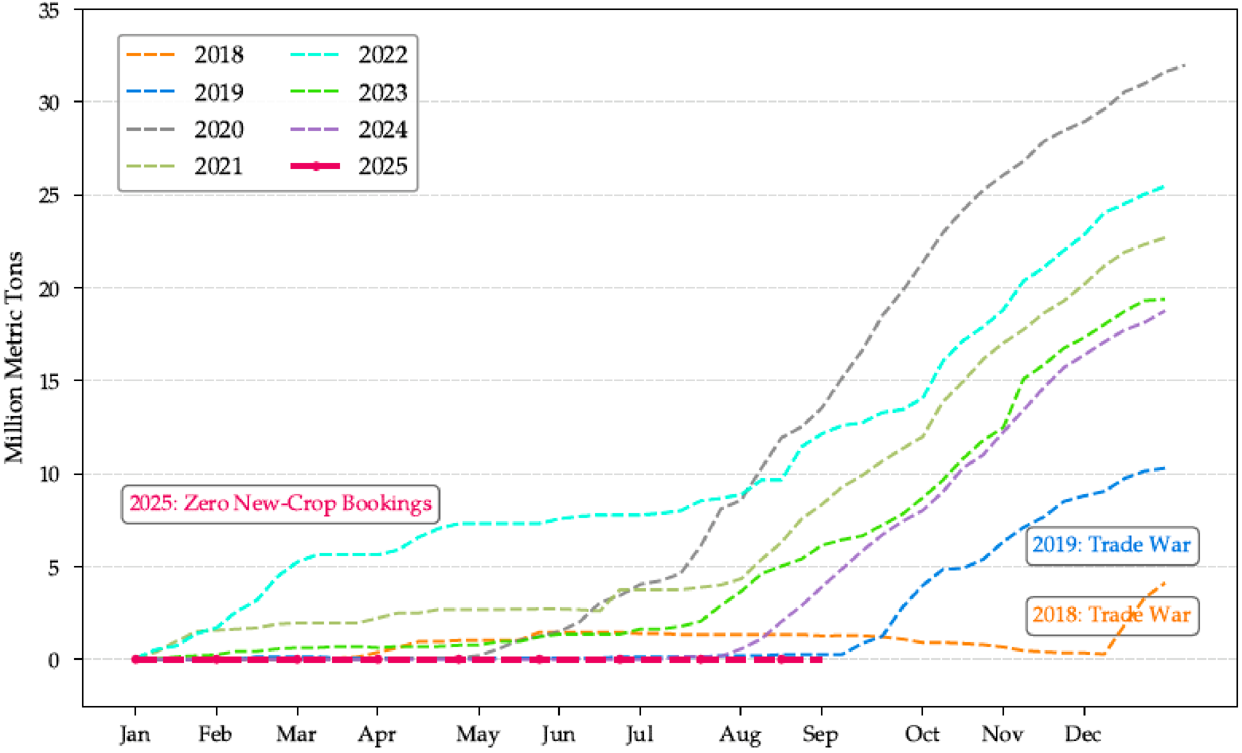
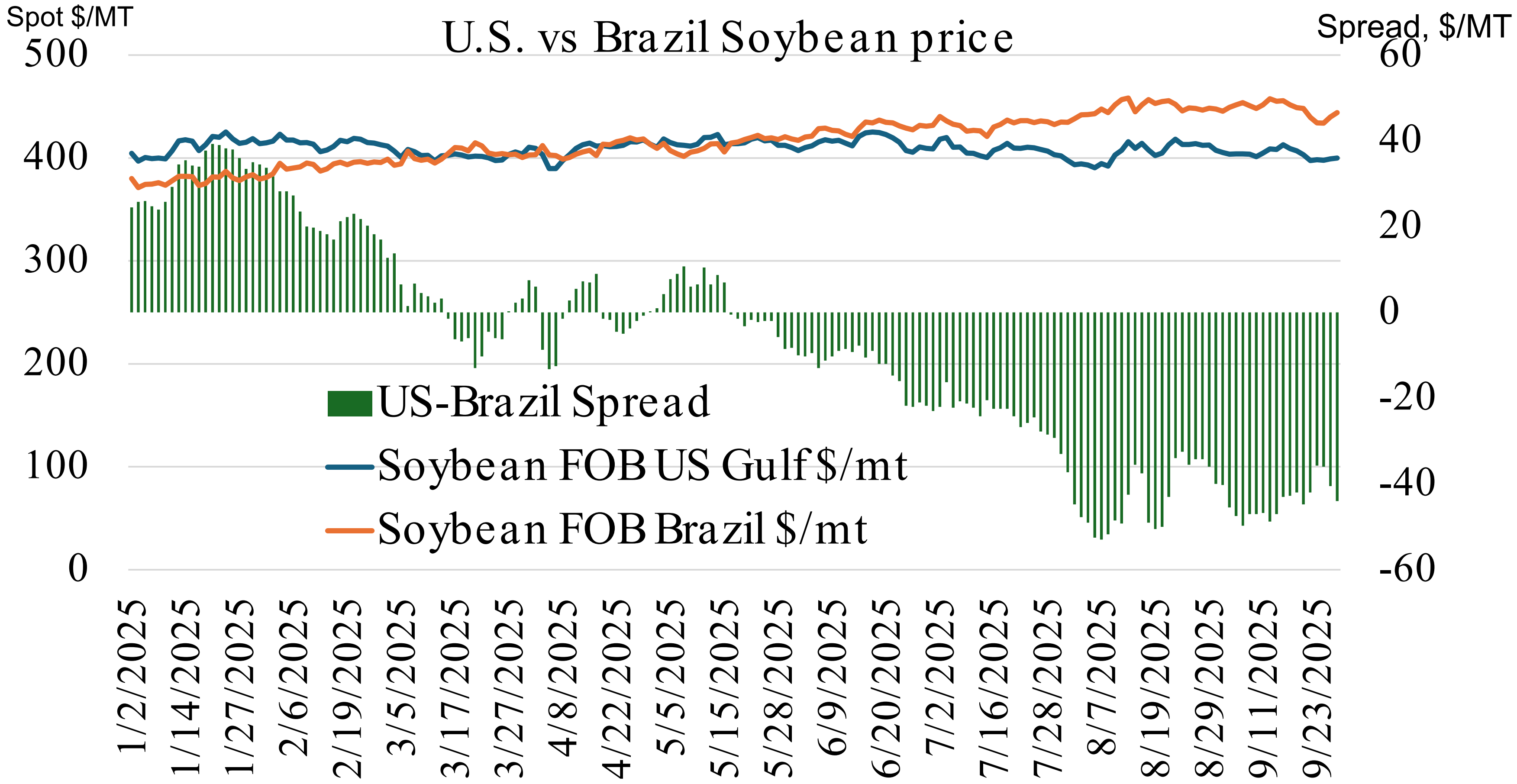


Exhibit 1: *Total Soybean Commitments (Accumulated Exports + Outstanding Sales) to China in Million Metric Tons (MMT).*

Source: NDSU using data from the USDA Foreign Agricultural Service.

U.S. Soybean selling at Discount relative to Brazil



Upper Midwest Soybean Basis Plunges with China Export Sales Collapse.

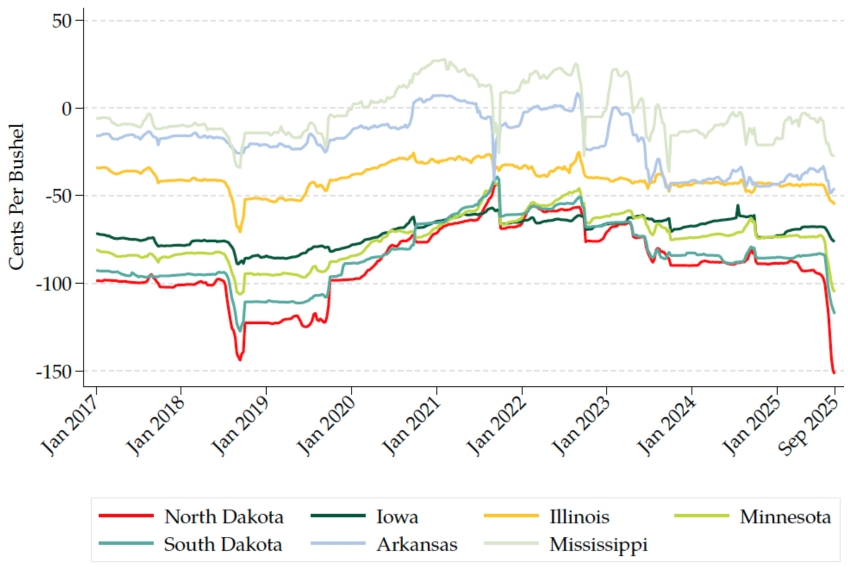


Exhibit 4: *Soybean Forward Basis in Selected States as of September 5, 2025.*

Areas Dependent Upon PNW Export Channels Suffer the Deepest Basis Discounts.

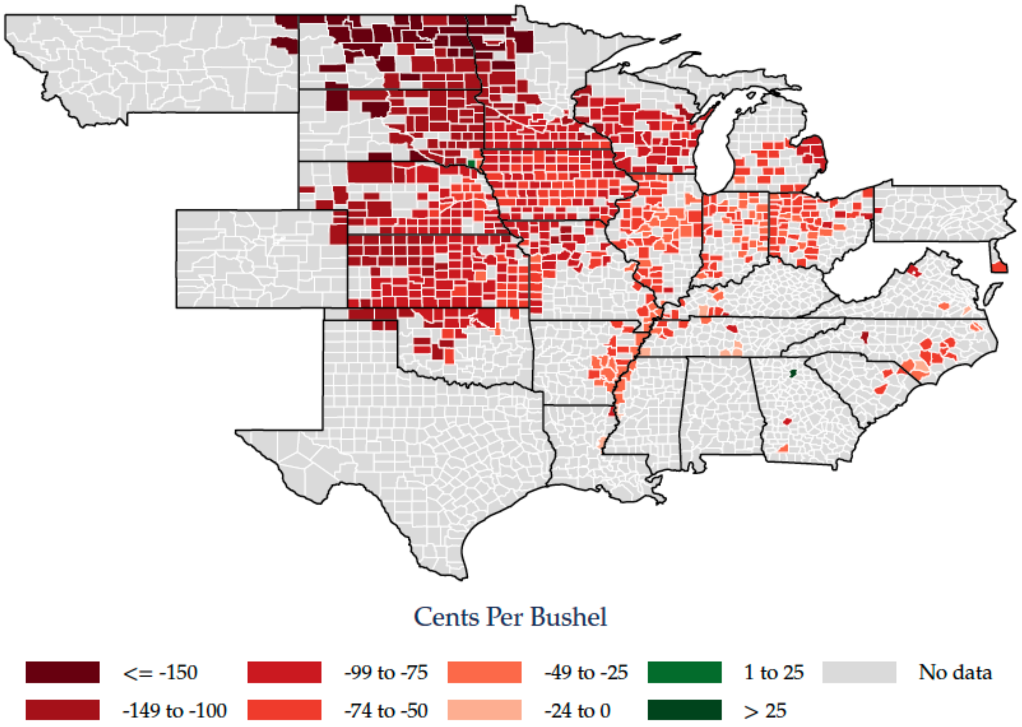
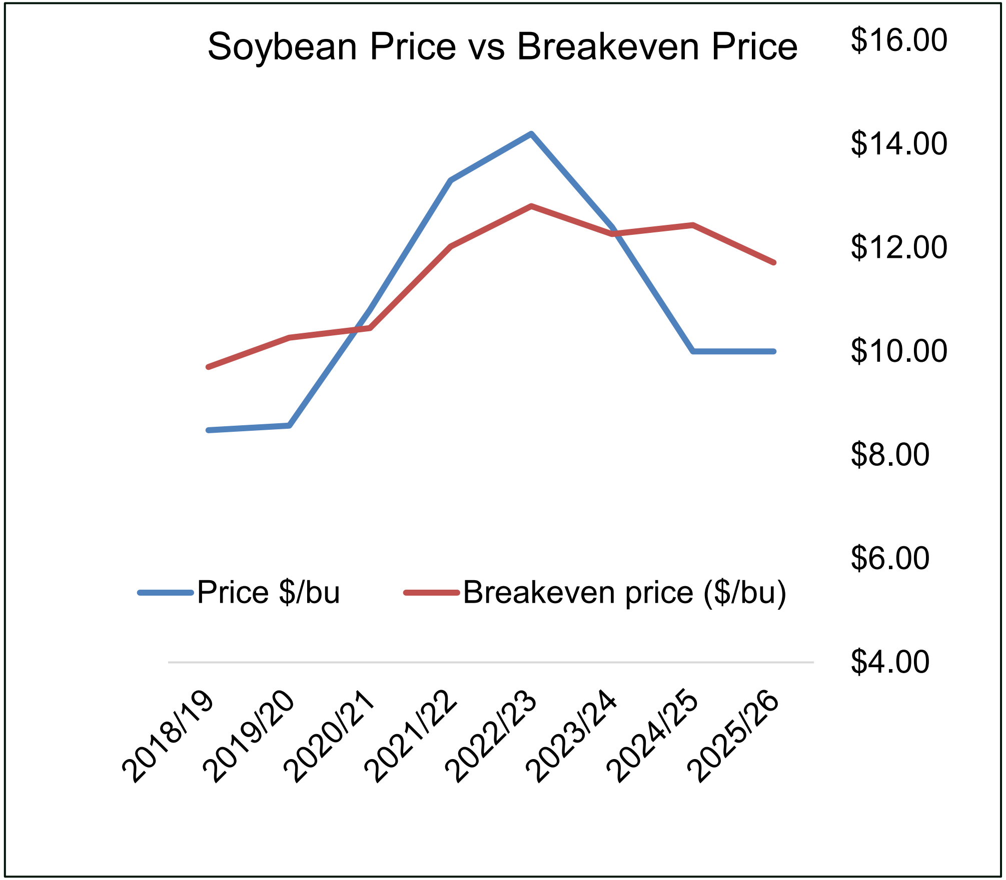


Exhibit 6: *Average Soybean Forward Basis in September 2025.*

Source: NDSU using data from DTN.

Soybean prices below breakeven costs



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Anemic Export Sales Bookings to China Across All Major Ag Commodities.

	2020	2021	2022	2023	2024	2020-2024 Avg.	2025
Soybeans	14,808,853	8,660,201	12,232,438	6,510,652	4,008,482	9,244,085	0
Corn	7,945,000	11,968,800	3,303,170	432,610	133,749	4,852,700	0
Wheat	895,765	776,727	265,579	115,447	616	310,827	0
Sorghum	1,331,754	1,097,991	68,000	1,775,409	508,575	956,346	0
Beef	14,201	27,213	41,571	20,522	20,301	24,762	196
Pork	32,973	15,920	14,298	14,395	21,783	31,594	15,168
Cotton	1,981,171	717,524	1,501,674	1,042,310	380,239	1,124,584	47,434

Exhibit 9: *Outstanding Sales to China in MMT (Cotton in Bales) at the End of August 2025*

Source: NDSU using data from the USDA Foreign Agricultural Service.

USDA Forecasts 2025/26 U.S. Ag Exports to China
to Be Lower Than During the 2018 Trade War.

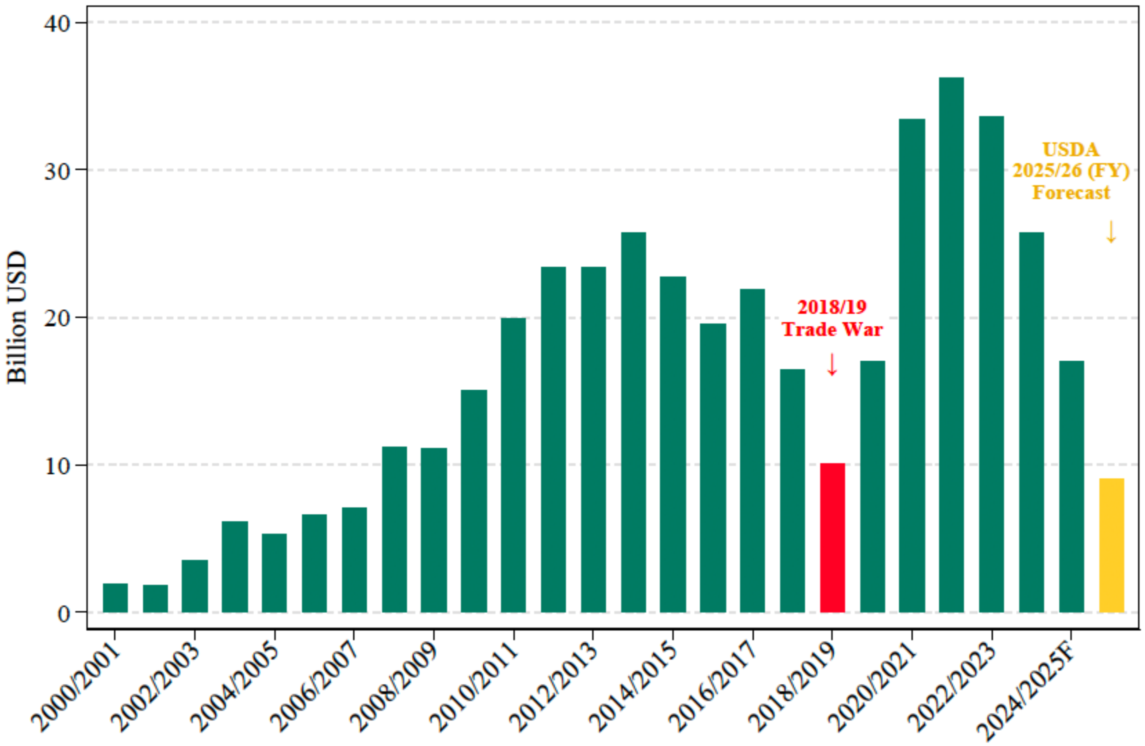


Exhibit 10: *U.S. Agricultural Exports to China (Including USDA 2025/26 Forecast) in Billion USD.*

Source: NDSU using data and forecasts from USDA-ERS and FAS.

Announced Agricultural Purchase Commitments/Pledges

Partner Country	Announced Purchase Commitment	Details and Context
Japan	$8 billion in U.S. agricultural products	Part of a U.S.-Japan trade framework (announced July 2025, implemented Sept 2025). Japan committed to import about $8 billion of American farm goods (including corn, soybeans, fertilizers, bioethanol, etc.) to give U.S. farmers immediate benefits. This came alongside other concessions (e.g., Japan agreeing to a 75% increase in imports of U.S. rice).
Indonesia	$4.5 billion in U.S. agricultural products	Part of a U.S.-Indonesia tariff agreement reached in July 2025. Indonesia agreed to eliminate 99% of its tariffs on U.S. goods and, in return, pledged major U.S. imports. This included about $4.5 billion of American farm goods (such as soybeans, wheat, and cotton).
Vietnam	$2 billion in U.S. agricultural products	in June 2025 and signed MOUs to purchase $2 billion worth of U.S. farm produce. This included multiple agreements – for example, $800 million of grain and feed purchases from the state of Iowa over three years.
Taiwan	$10 billion in U.S. agricultural products over four years (2026-2029)	Taiwan signed letters of intent during its biennial Agricultural Goodwill Mission in September 2025, committing to $2.5 billion annually in purchases. Key products include soybeans ($3.44-4.2 billion), corn and corn products ($2.12 billion), wheat (132 million bushels/$1.3 billion), and beef. State-level agreements include Indiana ($6.4 billion) and Ohio ($1+ billion).

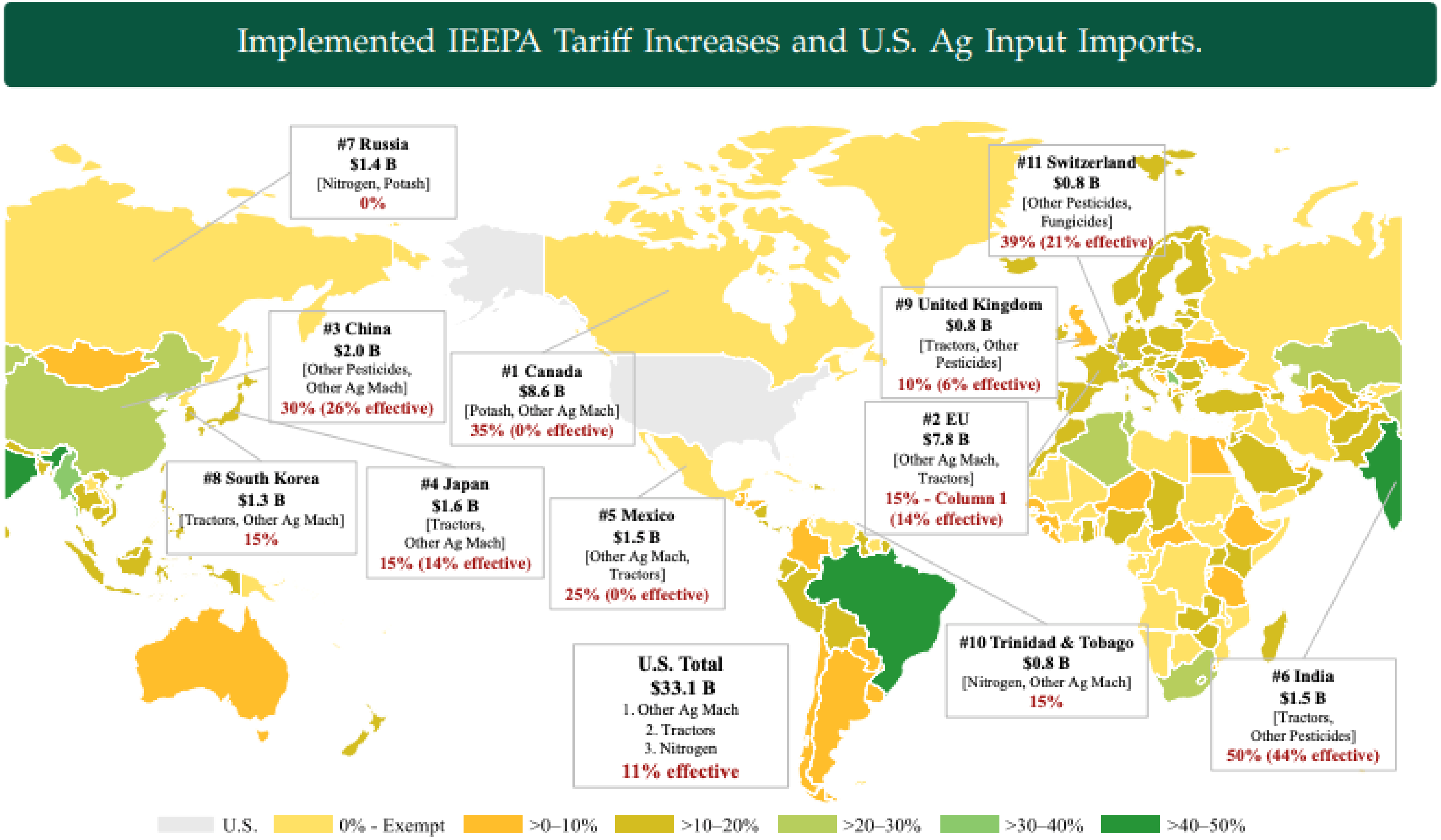


Exhibit 7: *Top Countries Supplying U.S. Agricultural Inputs.*

Effective Tariffs on Ag Inputs rise to 12%, with Pesticides facing the Highest Escalation.

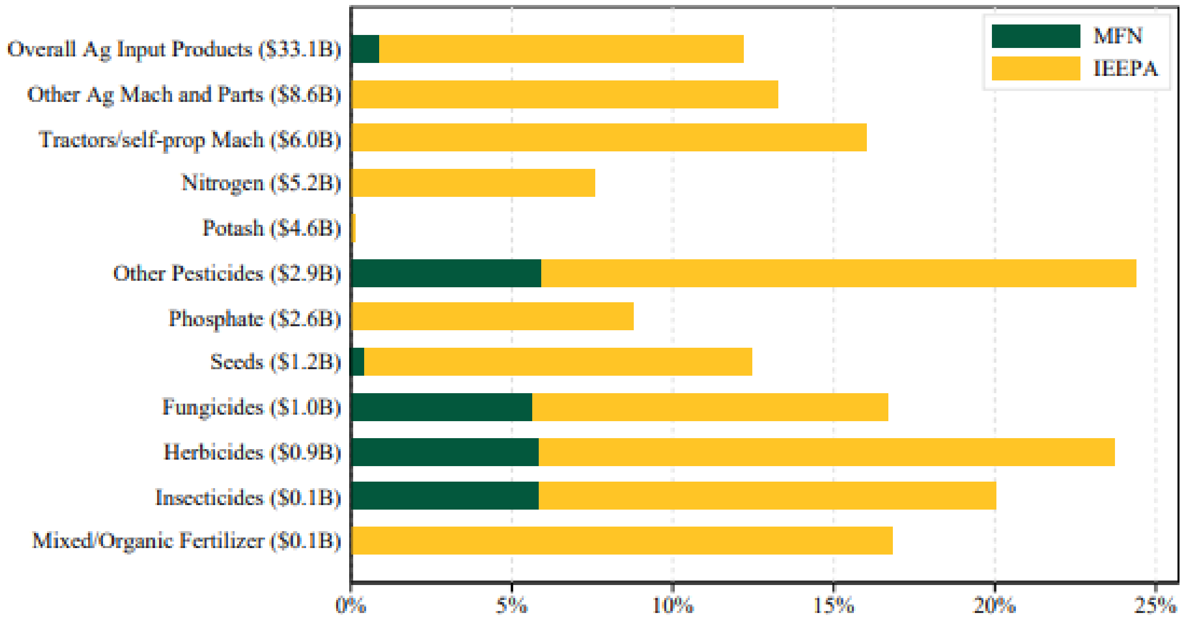
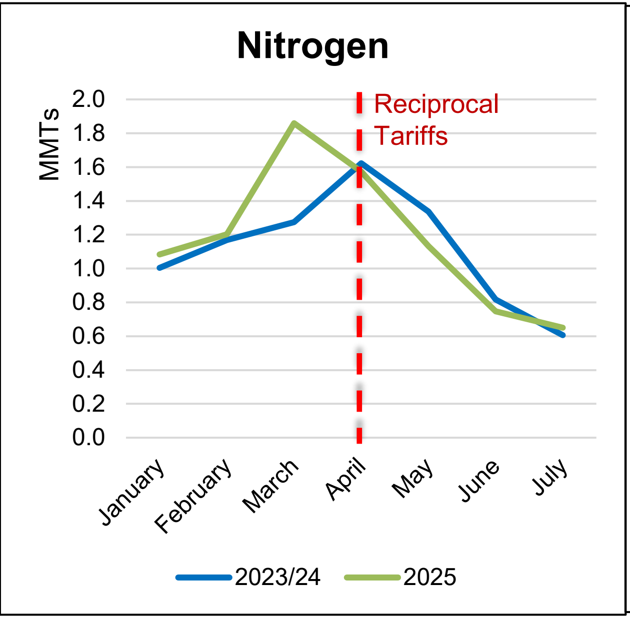


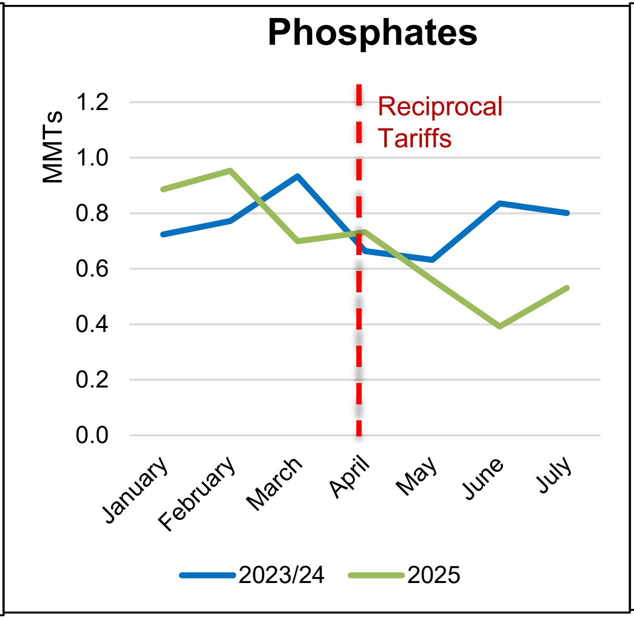
Exhibit 8: *Effective Tariff Rates (Trade Weighted) by Agricultural Inputs.*

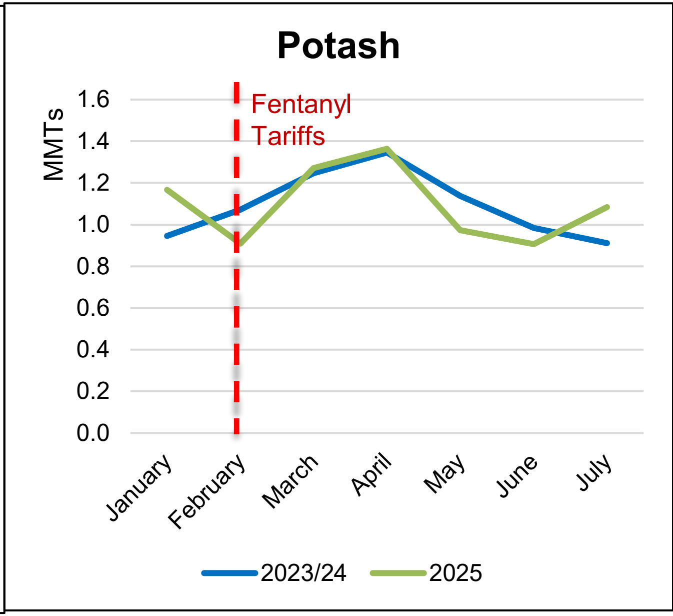
Note: Status as of August 8, 2025. Trade-weighted tariffs at the FATUS commodity level are calculated by aggregating across all tariff line codes within each commodity group using U.S. import values in 2024 at the tariff line level as weights.

Source: NDSU using information from the White House Executive Orders and the Global Trade Atlas by S&P Global.

Changes in U.S. fertilizer imports under IEEPA tariffs







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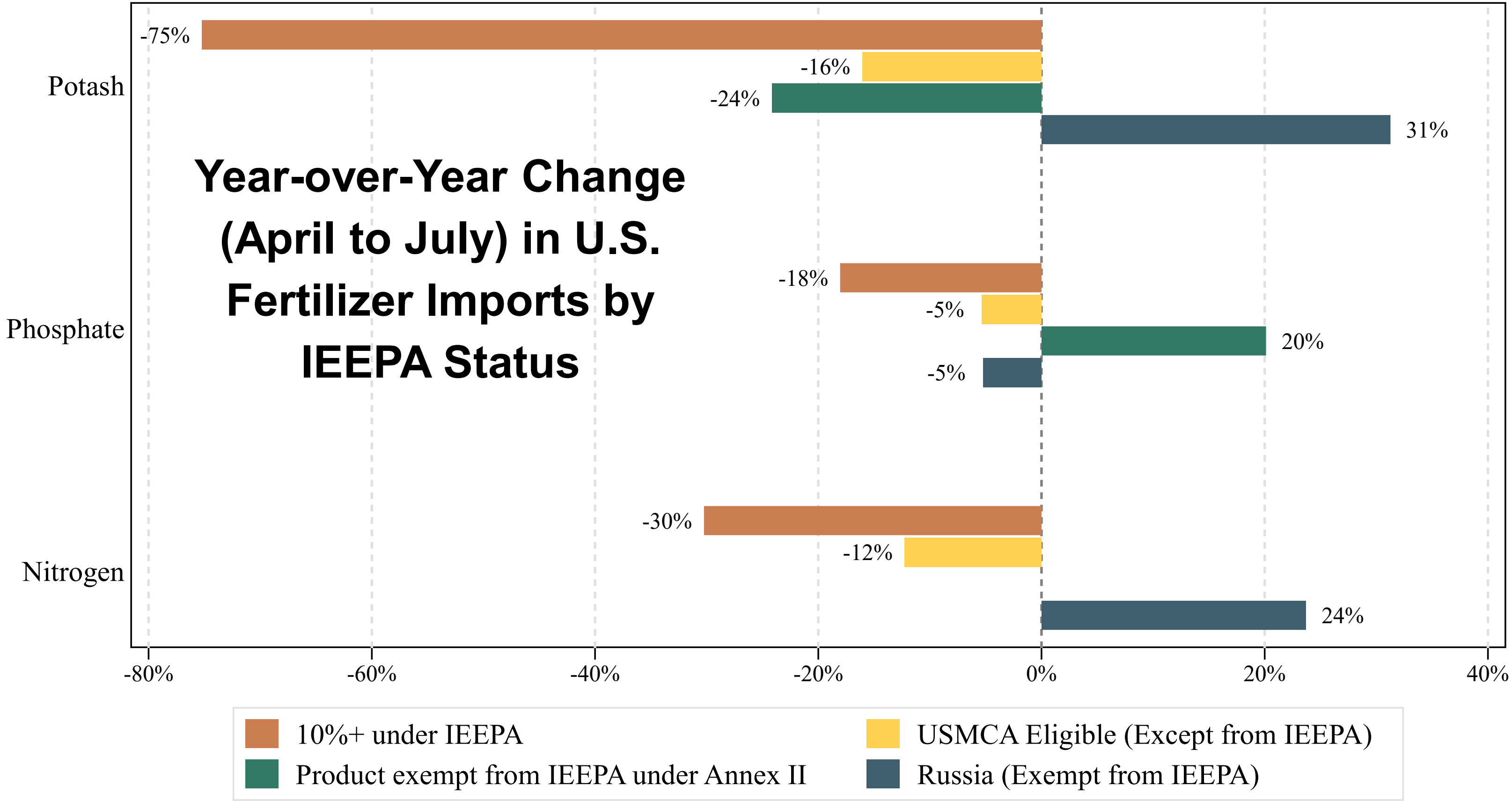
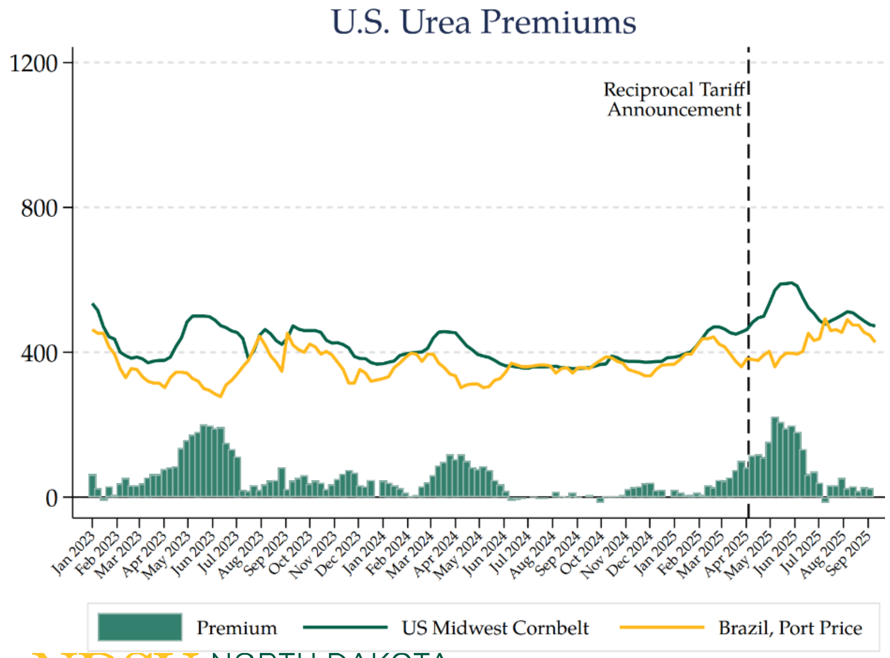
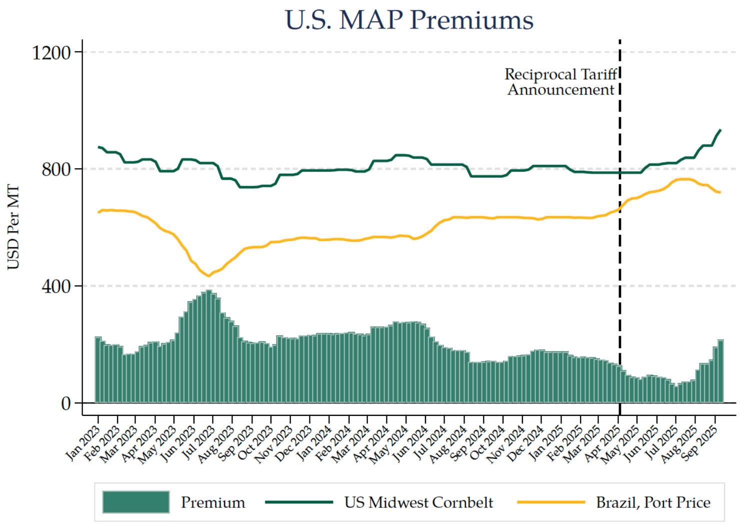
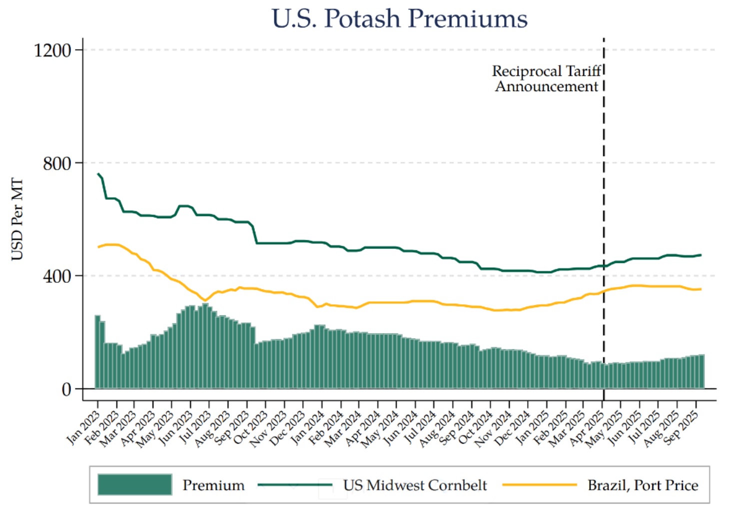
U.S. fertilizer imports hit by IEEPA tariffs down, exempt fertilizers up



How have IEEPA tariffs increased U.S. fertilizer prices?







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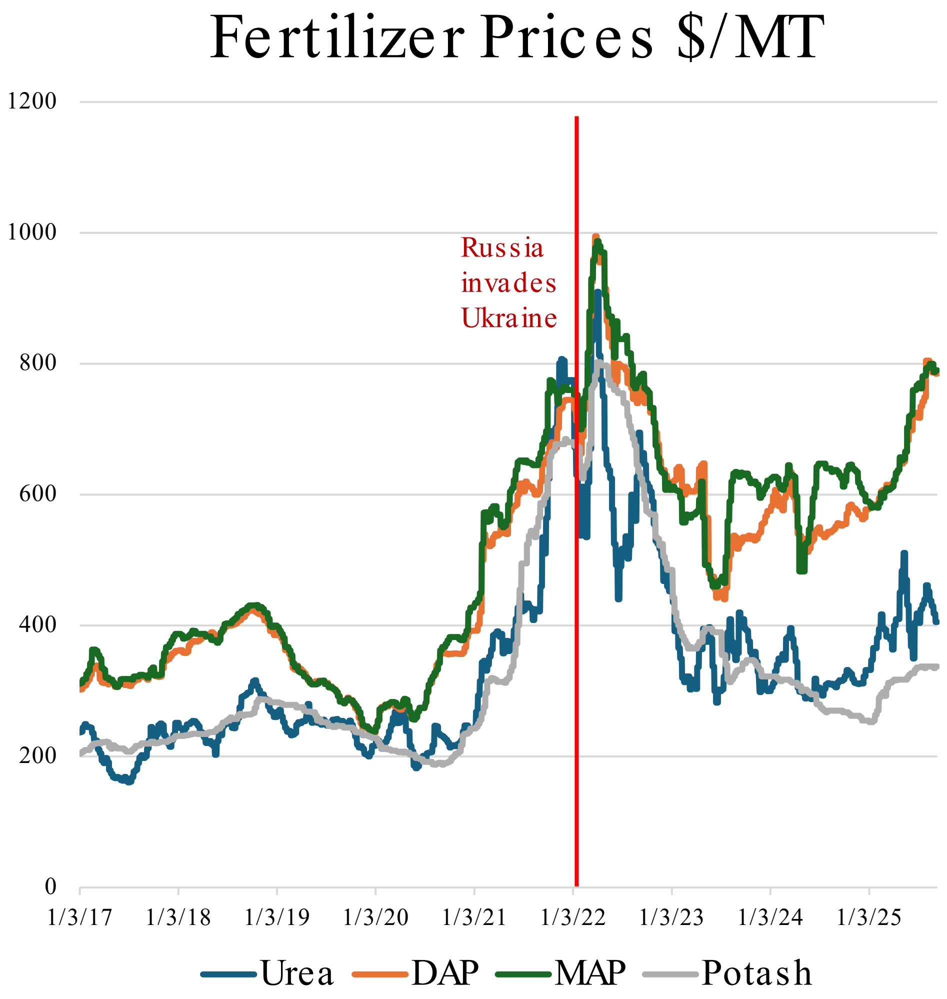
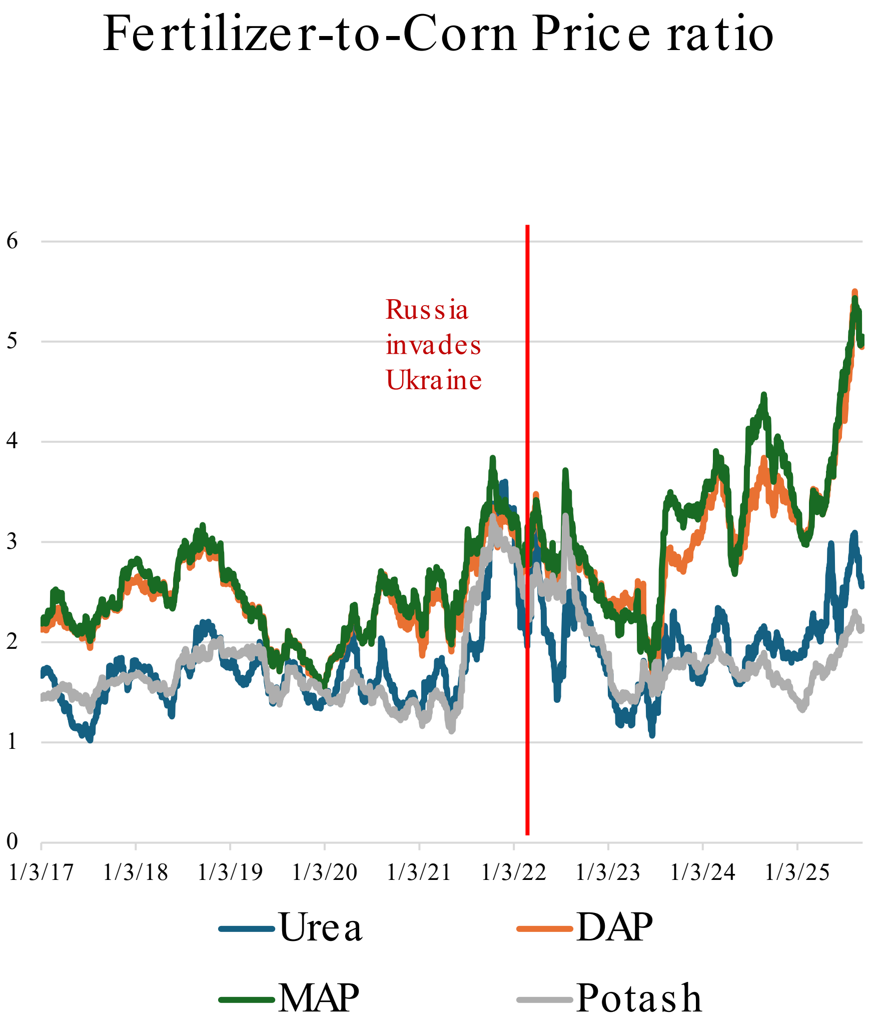

Fertilizer Prices $/MT
1200
1000
800
600
400
200
0
Russia invades Ukraine
1/3/17
1/3/18
1/3/19
1/3/20
1/3/21
1/3/22
1/3/23
1/3/24
1/3/25
Urea
DAP
MAP
Potash


Fertilizer-to-Corn Price ratio
6
5
4
3
2
1
0
Russia invades Ukraine
1/3/17
1/3/18
1/3/19
1/3/20
1/3/21
1/3/22
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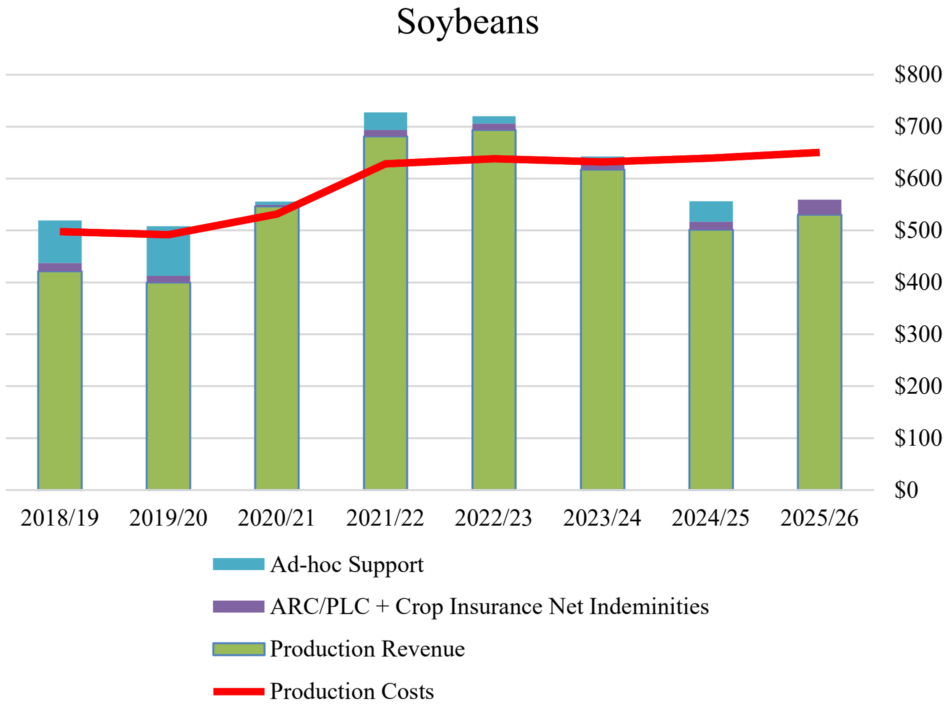
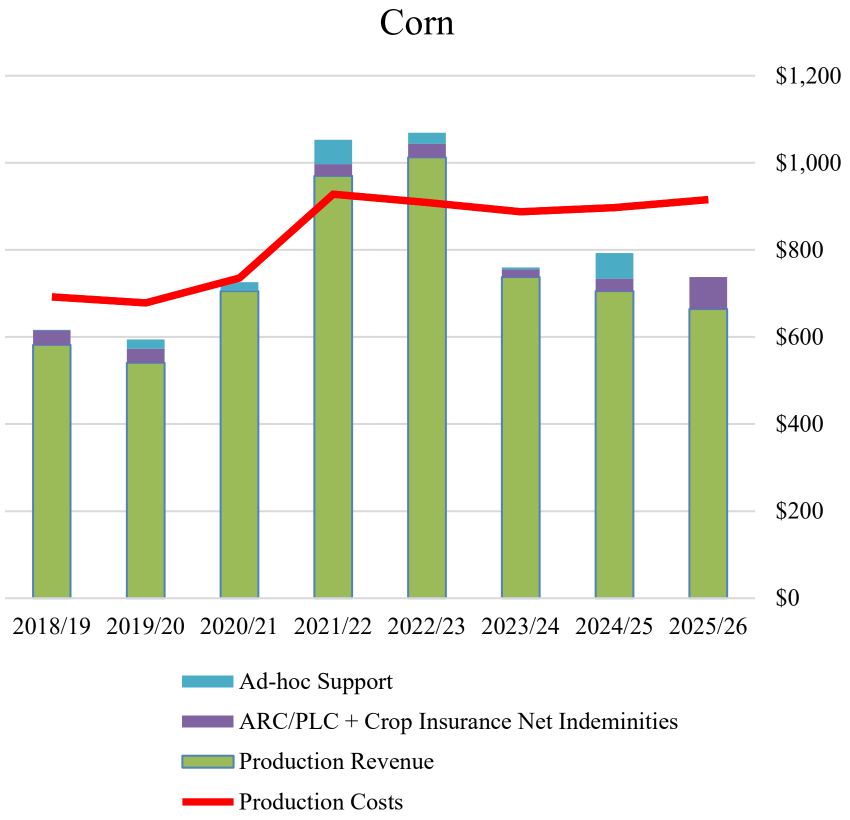
1/3/24
1/3/25
Urea
DAP
MAP
Potash

Cost and Returns per acre





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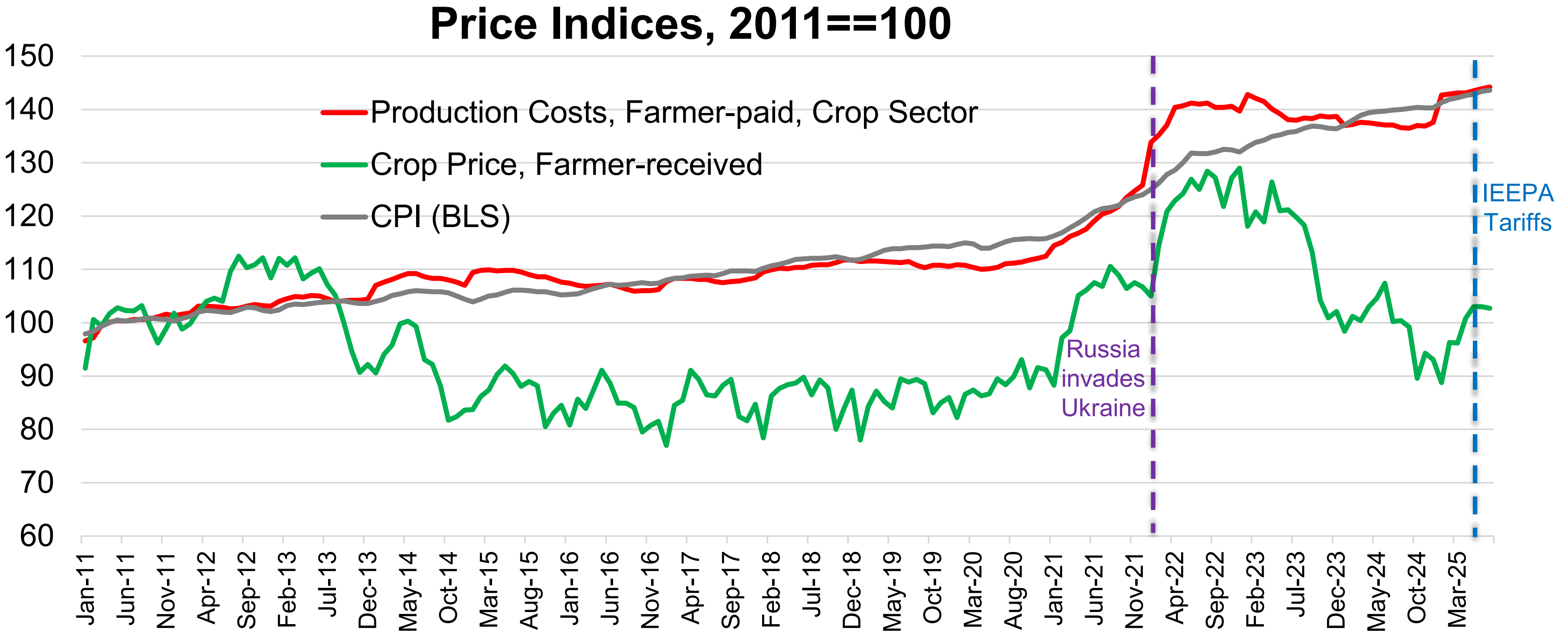
Projected Net Cash Income Losses in 2025/26 Crops

Commodity	Revenue in Bil$	Cost of Production in Bil$	Net losses in Bil$	Planted Acres (M)	Net losses in $/Acre	2025 ARC/PLC in in Bil $
Corn	65.79	86.15	-20.33	97.03	-209.48	6.39
Soybeans	41.42	51.35	-9.93	80.24	-123.75	1.65
Wheat	10.32	18.98	-8.55	48.35	-176.75	2.57
Peanuts	1.78	2.24	-0.44	1.94	-229.31	0.43
Cotton	3.33	6.79	-3.13	8.33	-375.58	1.3
Barley	0.58	1.08	-0.50	2.19	-226.37	0.09
Oats	0.34	0.90	-0.55	2.07	-266.42	0.01
Grain Sorghum	2.04	2.54	-0.50	5.77	-86.07	0.41
Rice	2.84	3.77	-0.86	2.76	-311.59	1
9 Crop Total	128.43	173.78	-44.78	248.68	-180.07	13.85

Production Cost remain elevated over Crop Price Weakening



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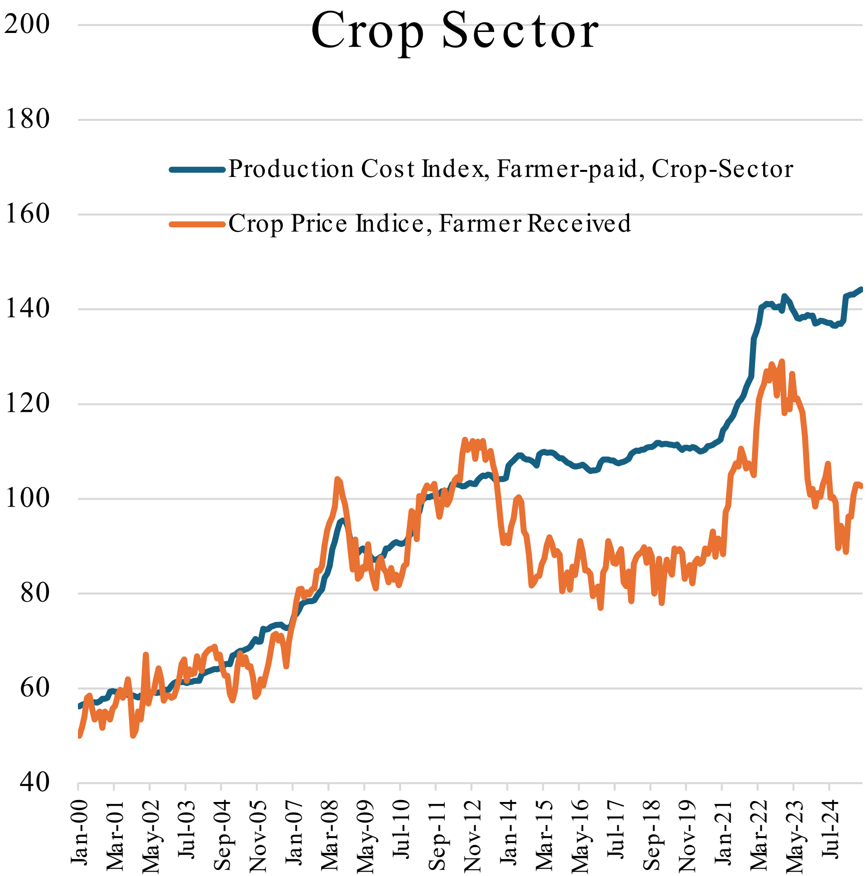
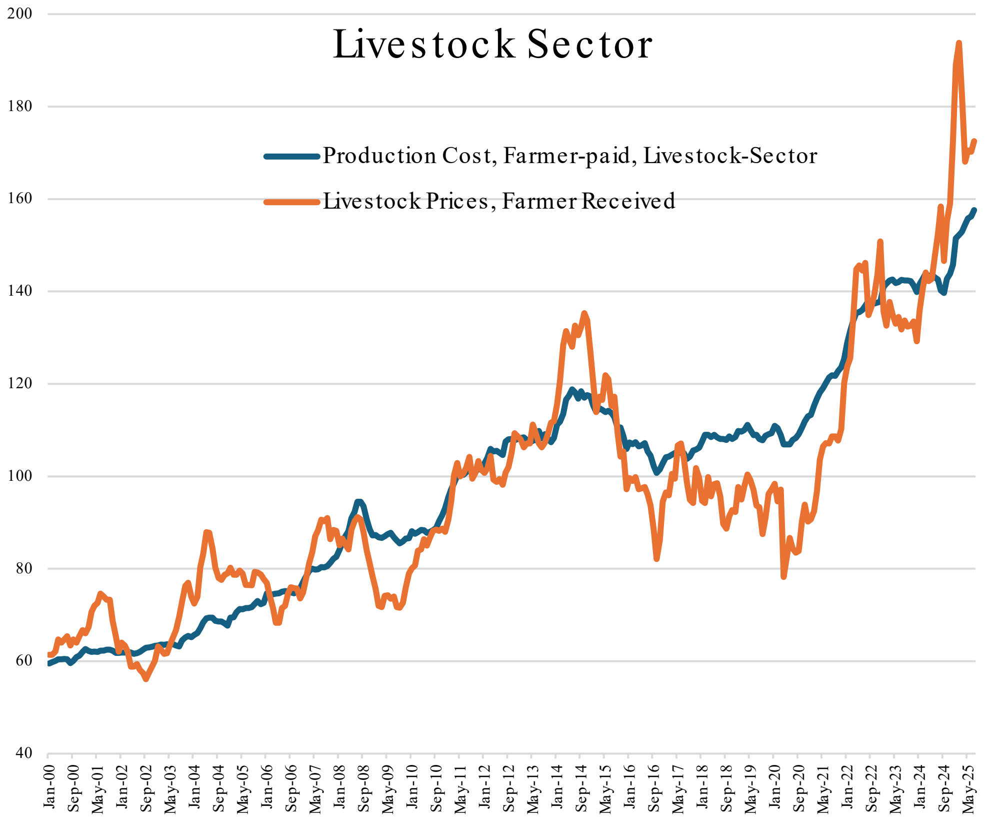
Production vs Output Price Indices, 2011==100





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