

Soybean Outlook

2020 SAEA Annual Meetings
Louisville, Kentucky, February 1-4, 2020
Omni Louisville Hotel
S. Aaron Smith
Associate Professor and Extension Economist
Department of Agricultural and Resource Economics
University of Tennessee Institute of Agriculture
Email: aaron.smith@utk.edu
Website: <http://cropeconomics.tennessee.edu/>
Ph: 865-974-7476

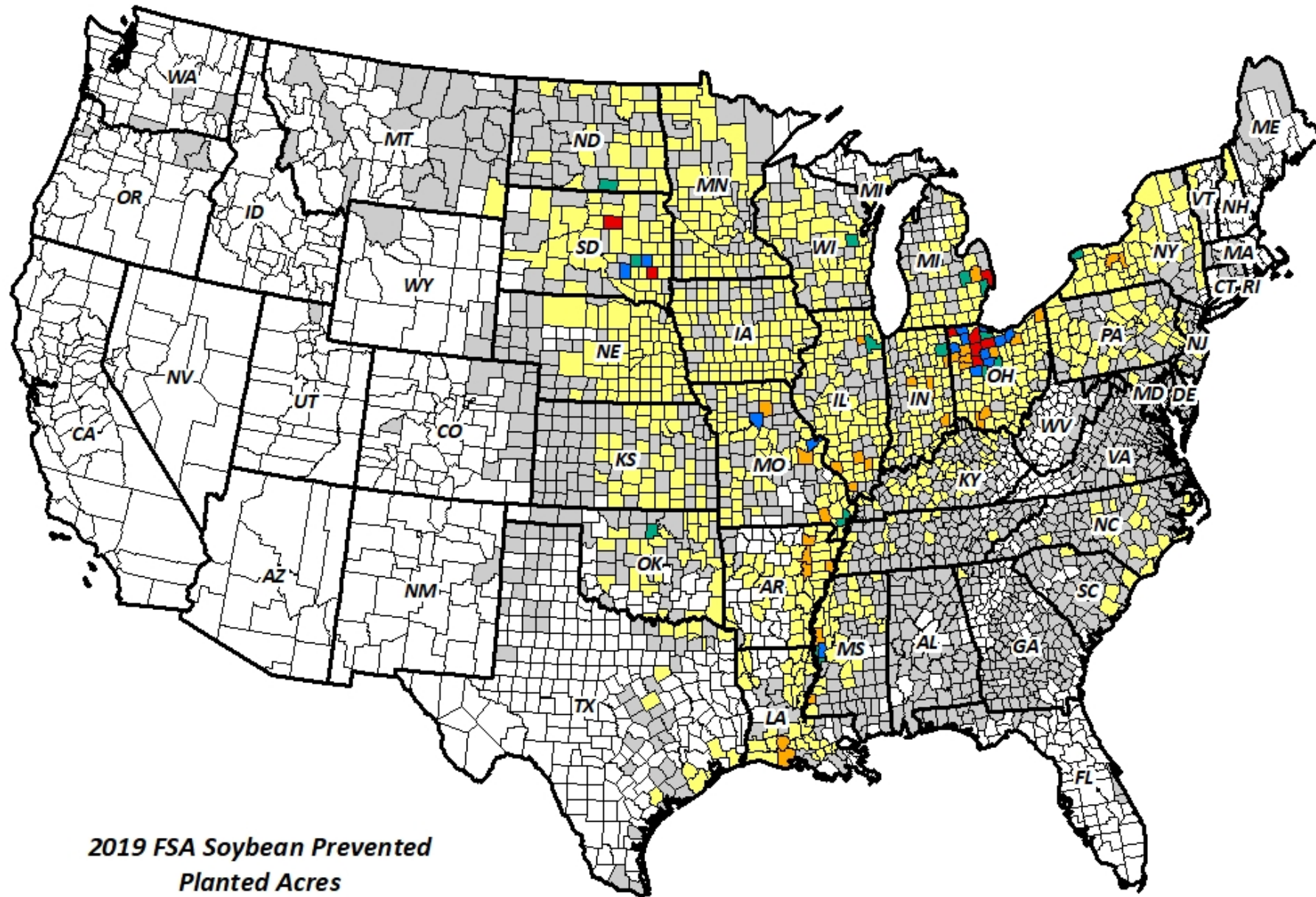
Overview

- Government Payments
- Supply and Demand
 - US
 - Global
 - Brazil
- Old and New Crop Futures
- Basis
- Cost of Production / Profitability



Program Payments

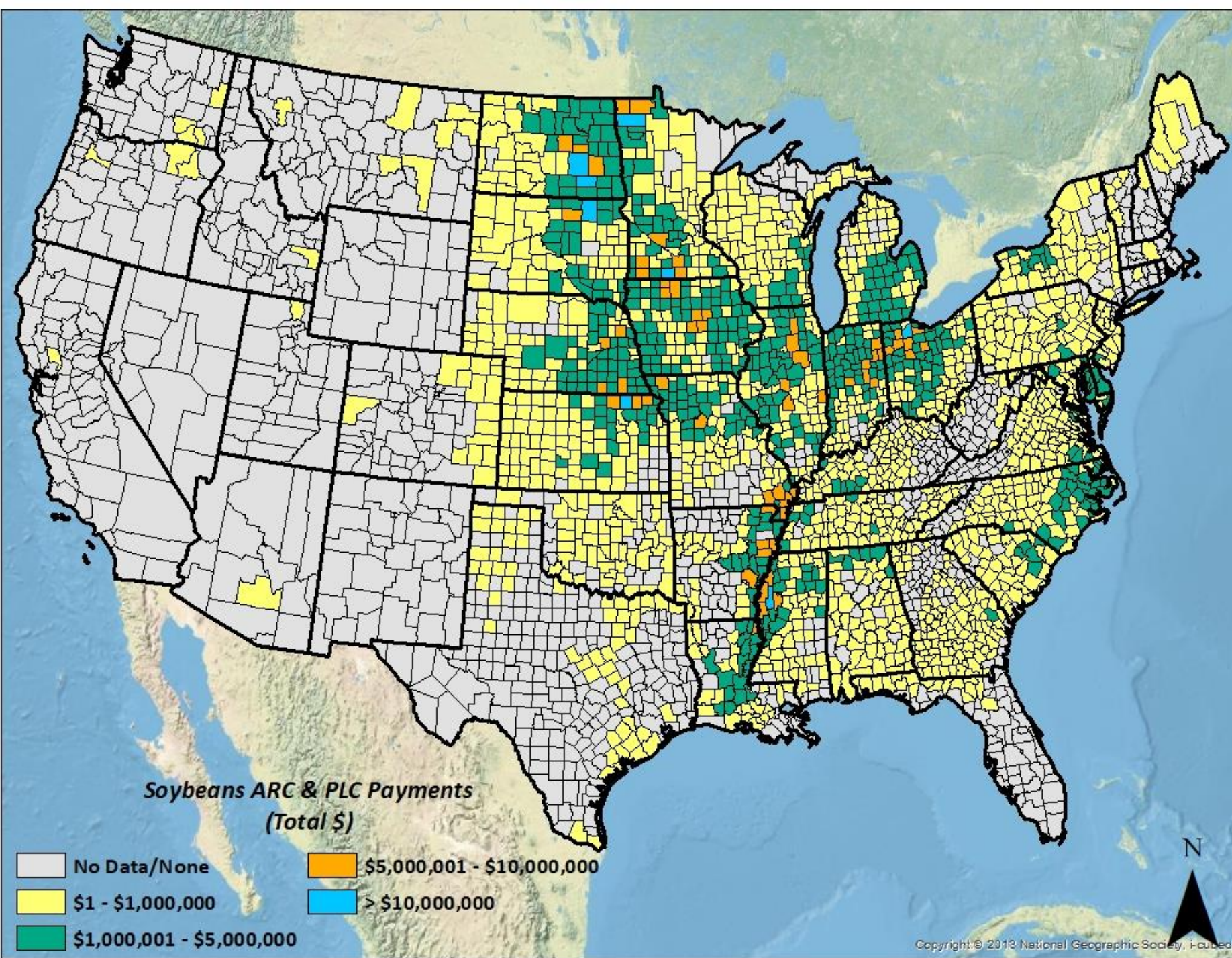
- 2019 (2018) program payments were a dominant factor in profitability (staying in business).
- Prevent Planted / Crop Insurance
- ARC /PLC
- Market Facilitation
 - 2018: \$1.65/bu
 - 2019: \$15-\$150/Acre



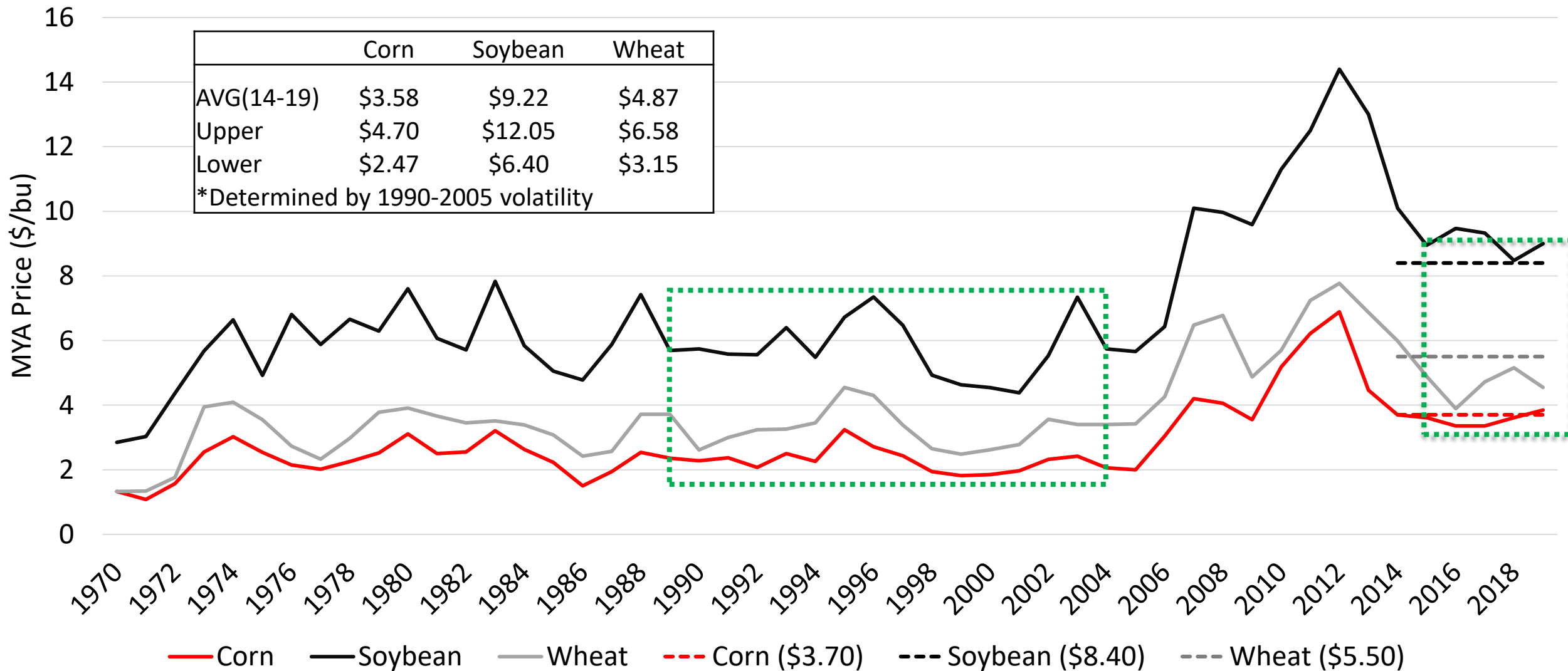
Soybean Prevent Planted Acres 2019



**Soybean
ARC and
PLC
Payments
2014-2018
(total \$ per
county)**



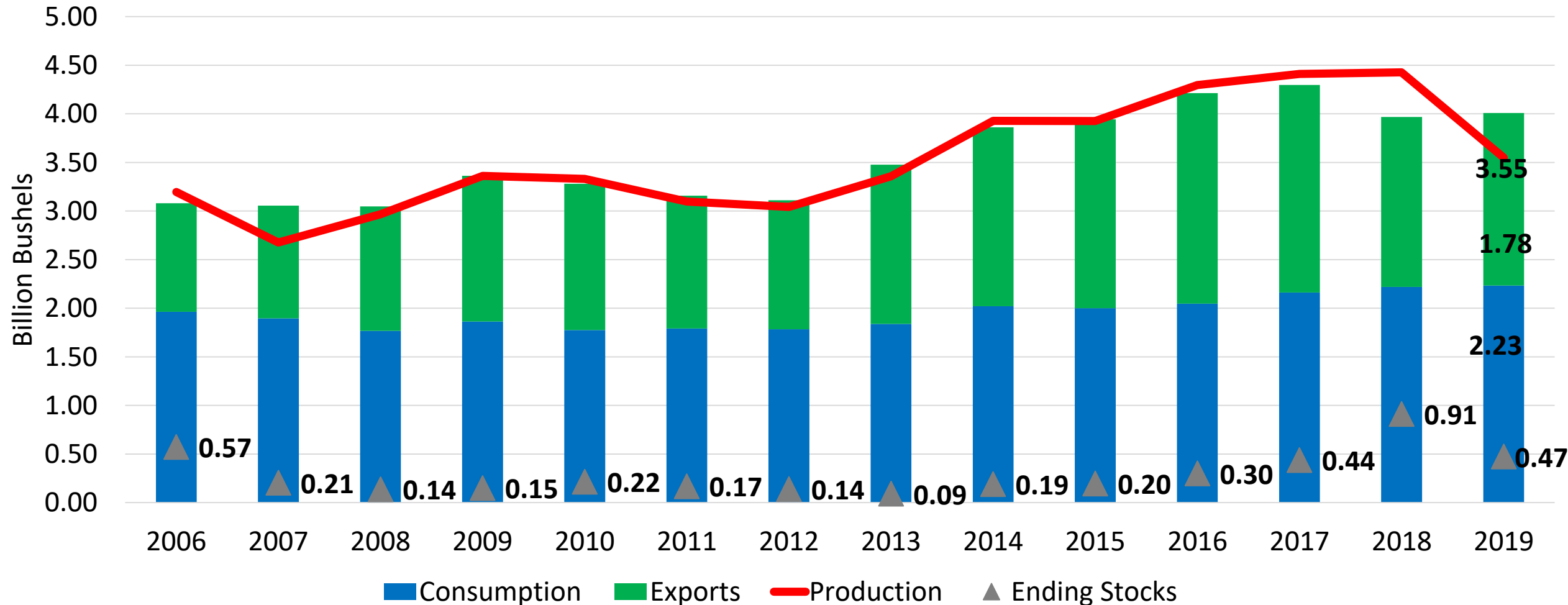
U.S. Corn, Soybean, and Wheat Marketing Year Average Price, 1970-2019*



US Supply and Demand

- Chaotic spring planting season
 - Reduced acres
 - Lower yields (sporadic)
- Late harvest
 - Some crop did not make it to the bin/market
 - Quality issues
- Production down
- Domestic crush steady
- Exports up from 2018 but below pre-trade war levels.
- US Election and Economy

U.S. Soybean Production, Consumption, Exports, and Ending Stocks, 2006-2019



January WASDE

	2015/16	2016/17	2017/18	2018/19 Est	2019/20 Projected December	2019/20 Projected January	2019/20 Change From Previous Month	Change 2018/19 to 2019/20
--	---------	---------	---------	-------------	----------------------------------	---------------------------------	--	---------------------------------

Planted and Harvested Acres & Yield

Planted (Million)	82.7	83.5	90.2	89.2	76.5	76.1	-0.4	-13.1
Harvested (Million)	81.7	82.7	89.5	87.6	75.6	75	-0.6	-12.6
U.S. Avg. Yield (Bu/Acre)	48	51.9	49.3	50.6	46.9	47.4	0.5	-3.2

Supply (Million Bushels)

Beg. Stocks	191	197	302	438	913	909	-4	471
Production	3,926	4,296	4,412	4,428	3,550	3,558	8	-870
Imports	24	22	22	14	20	15	-5	1
Total Supply	4,140	4,516	4,735	4,880	4,483	4,482	-1	-398

Use & Ending Stocks (Million Bushels)

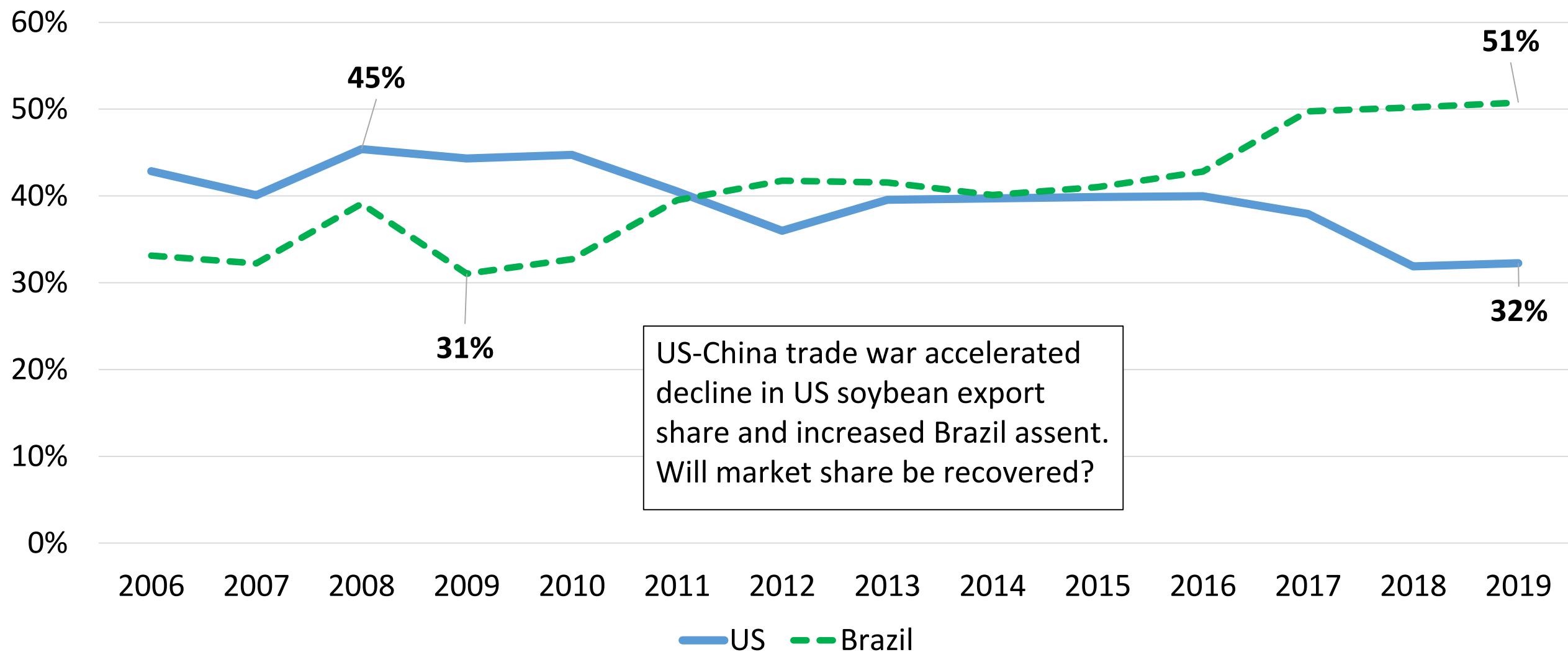
Crushing	1,886	1,901	2,055	2,092	2,105	2,105	0	13
Exports	1,942	2,166	2,134	1,748	1,775	1,775	0	27
Seed and Residual	115	147	109	131	128	128	0	-3
Total Use	3,944	4,214	4,297	3,971	4,008	4,008	0	37
U.S. Ending Stocks	197	302	438	909	475	475	0	-434
Foreign Stocks	2,687	3,213	3,196	3,143	3,067	3,078	11	-65

Price and Stocks to Use Ratio

U.S. Average Season Price (\$/Bu)	\$8.95	\$9.47	\$9.33	\$8.48	\$8.85	\$9.00	\$0.15	\$0.52
U.S. Stocks/Use	4.99%	7.17%	10.19%	22.89%	11.85%	11.85%	0.00%	-11.04%

Real. Life. Solutions.

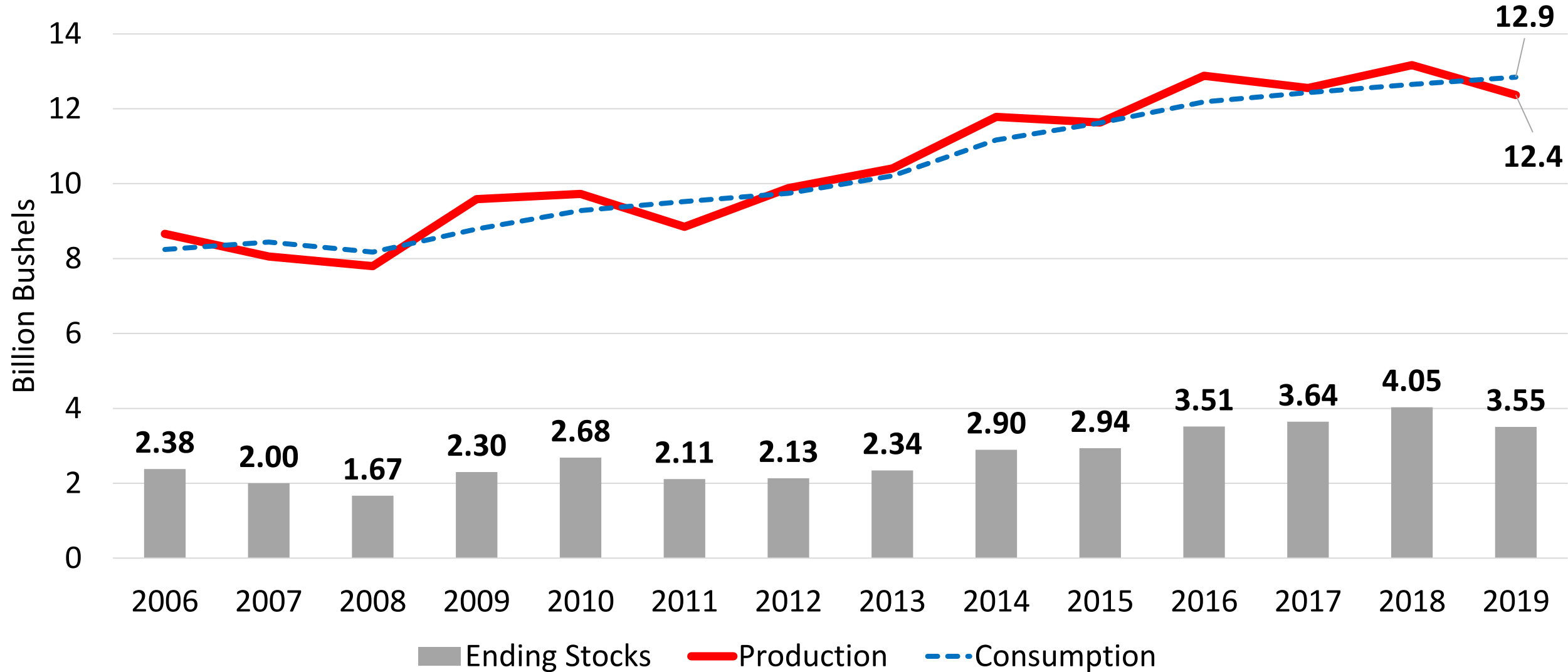
U.S. Share of Global Soybean Exports, 2006-2019



Global Supply and Demand

- Consumption to exceed production (?)
- South American production up
- China demand issues creates uncertainty
 - Phase 1
 - ASF
 - Coronavirus
- Global economy (Europe post Brexit)

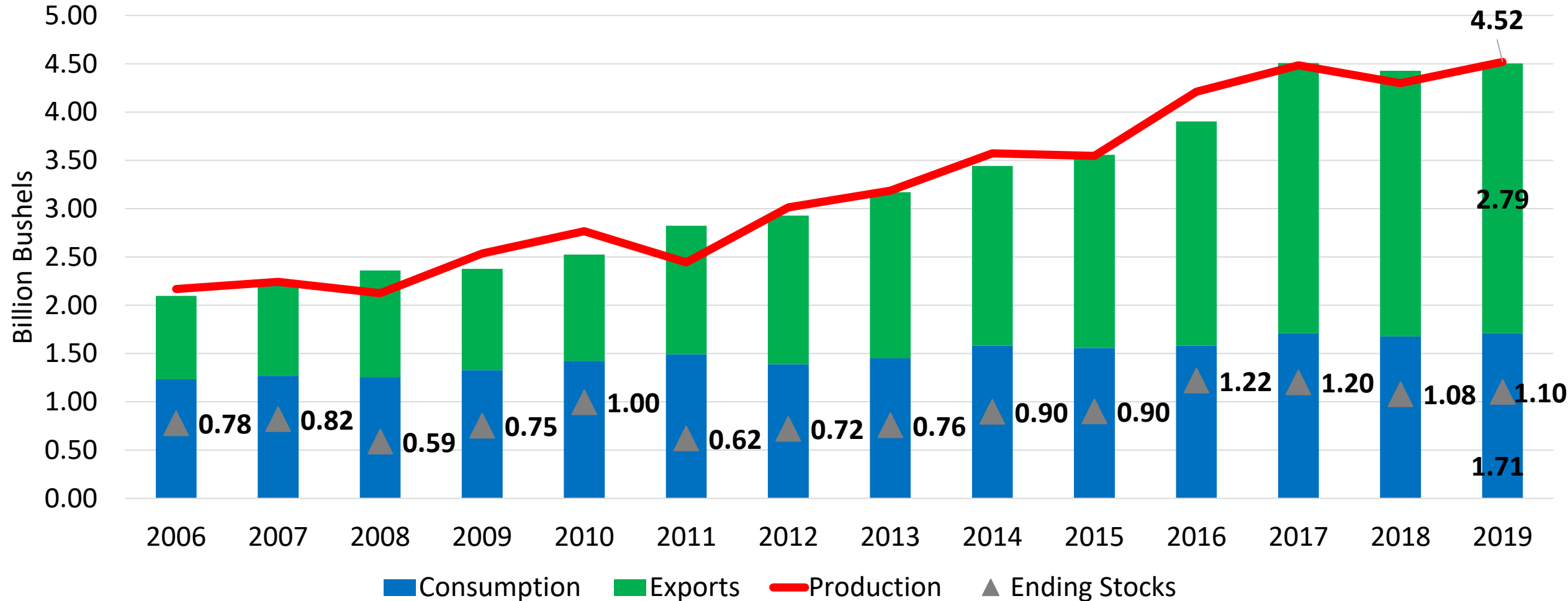
World Soybean Production, Consumption, and Ending Stocks, 2006-2019



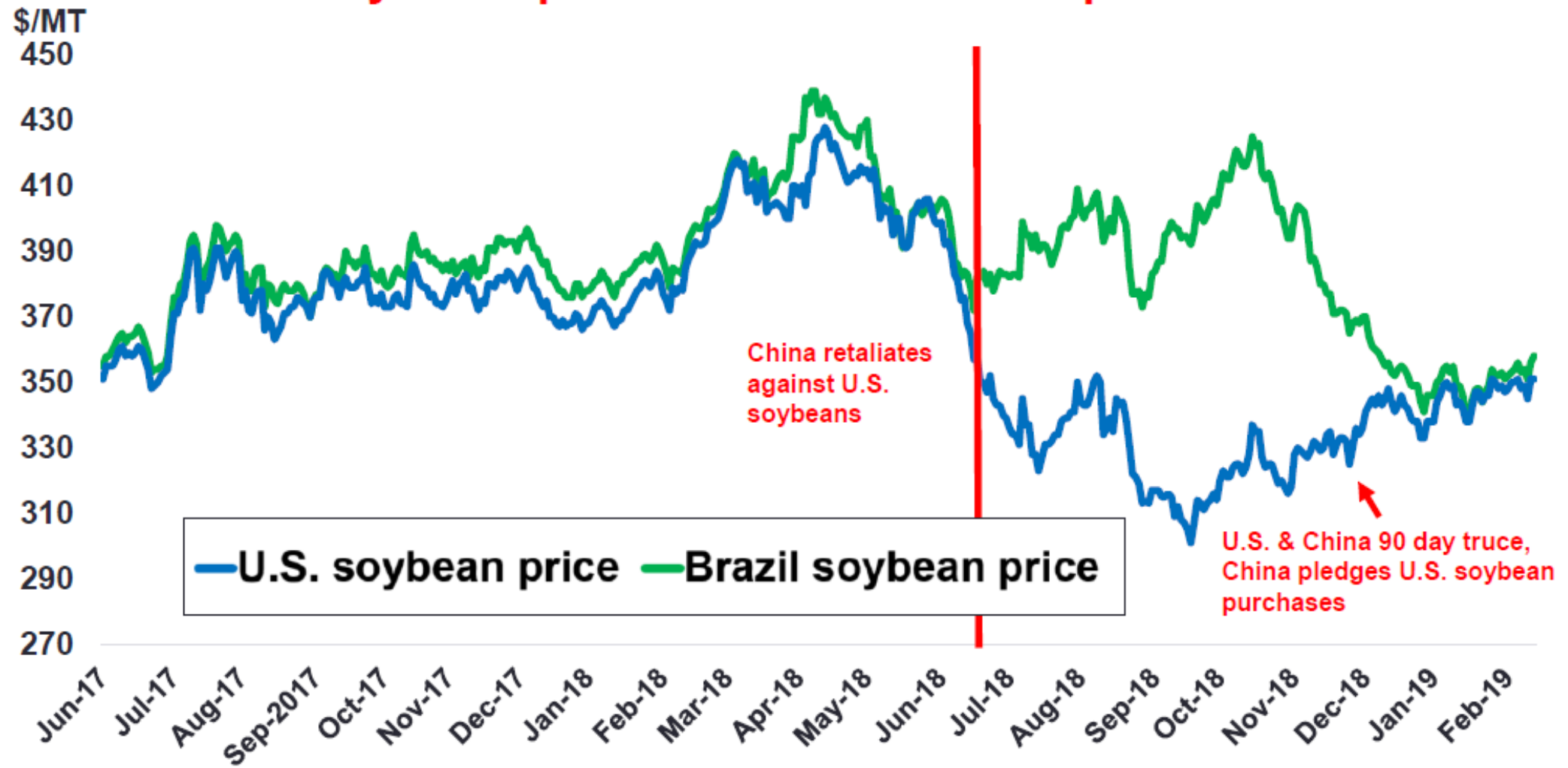
World Soybean Supply and Use (Million Bushels) 2019/2020

Country / Region	Beginning Stocks	Production	Imports	Domestic Crush	Domestic Total	Exports	Ending Stocks
World	4,052	12,408	5,436	11,155	12,864	5,480	3,552
United States	909	3,558	15	2,105	2,233	1,775	475
Total Foreign	3,143	8,850	5,421	9,050	10,632	3,705	3,078
Argentina	1,062	1,947	143	1,639	1,900	301	951
Brazil	1,112	4,519	6	1,608	1,699	2,793	1,145
Paraguay	3	375	0	143	146	228	4
China	715	665	3,123	3,123	3,774	5	725
E.U.	40	96	559	584	645	9	39
S.E. Asia	36	24	341	149	353	1	46
Mexico	8	9	220	228	230	0	7
ROW	168	1,215	1,028	1,576	1,885	368	159

Brazil Soybean Production, Consumption, Exports, and Ending Stocks, 2006-2019



U.S. soybeans prices fall under trade dispute



Data: IGC, FOB prices

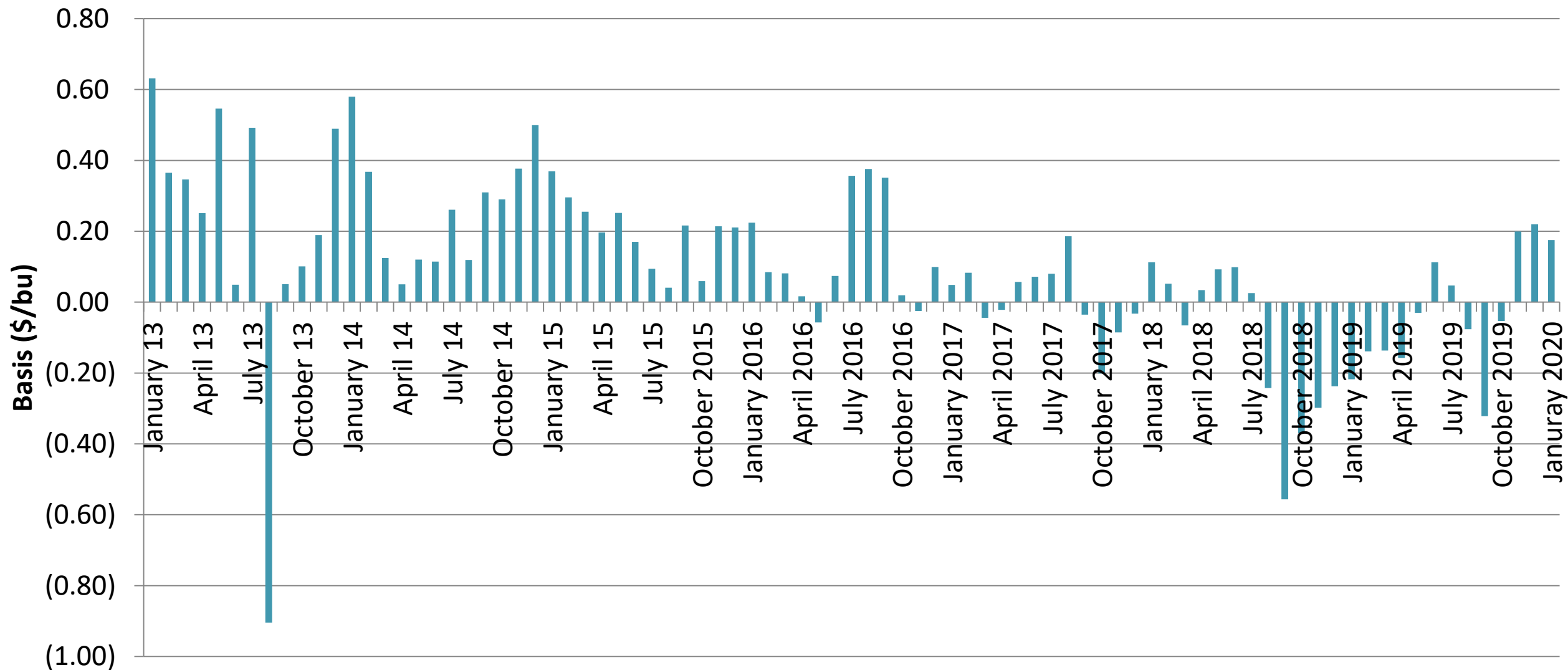
Real. Life. Solutions.

Rollercoaster or soybean futures chart?



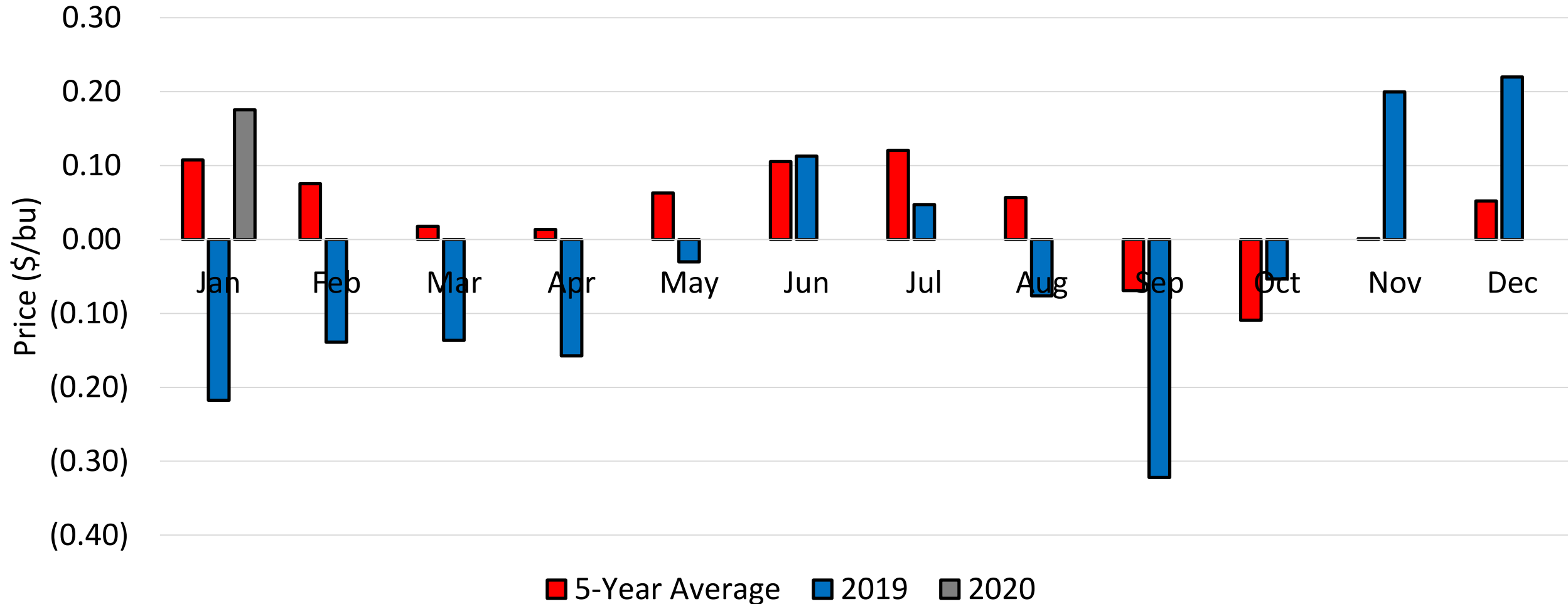
**\$8.70 to
\$9.70
trading
range**

Memphis Monthly Average Soybean Basis (Elevators and Barge Points), 2013-2020



Real. Life. Solutions.

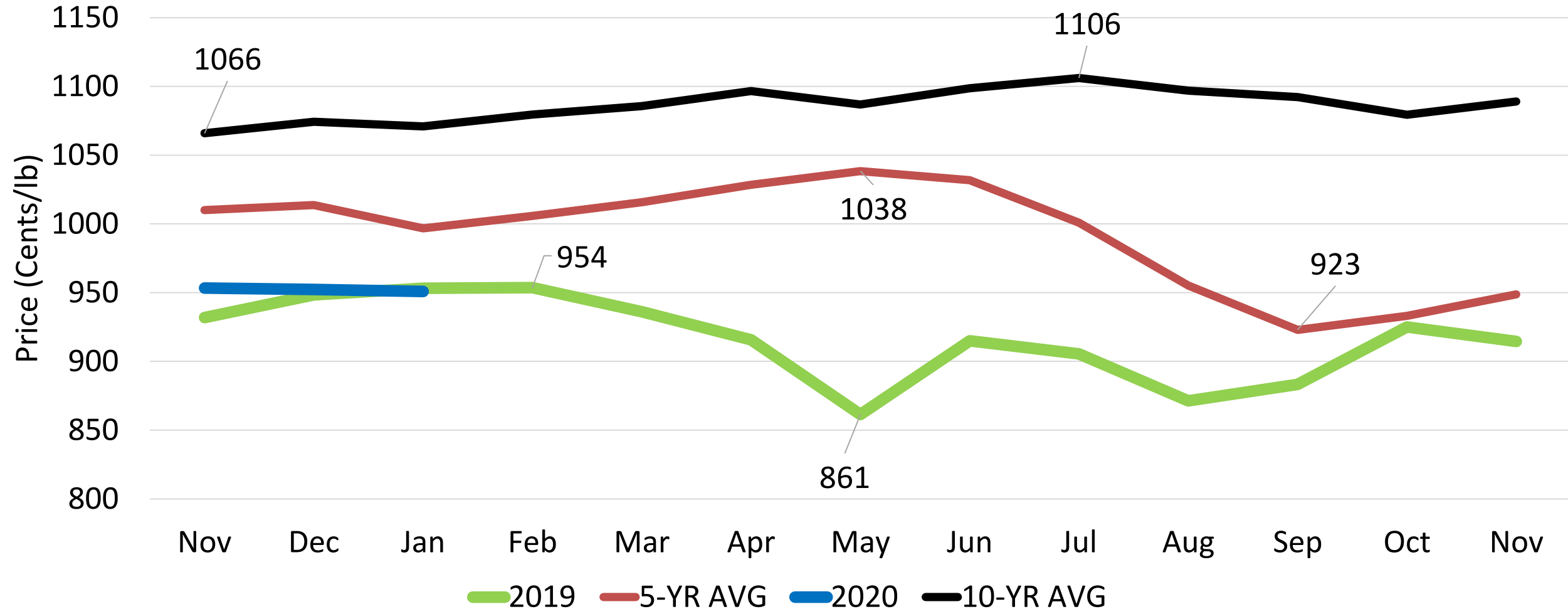
Memphis Average Monthly Soybean Basis (Elevators and Barge Points), Average (2015-2019), 2019, and 2020



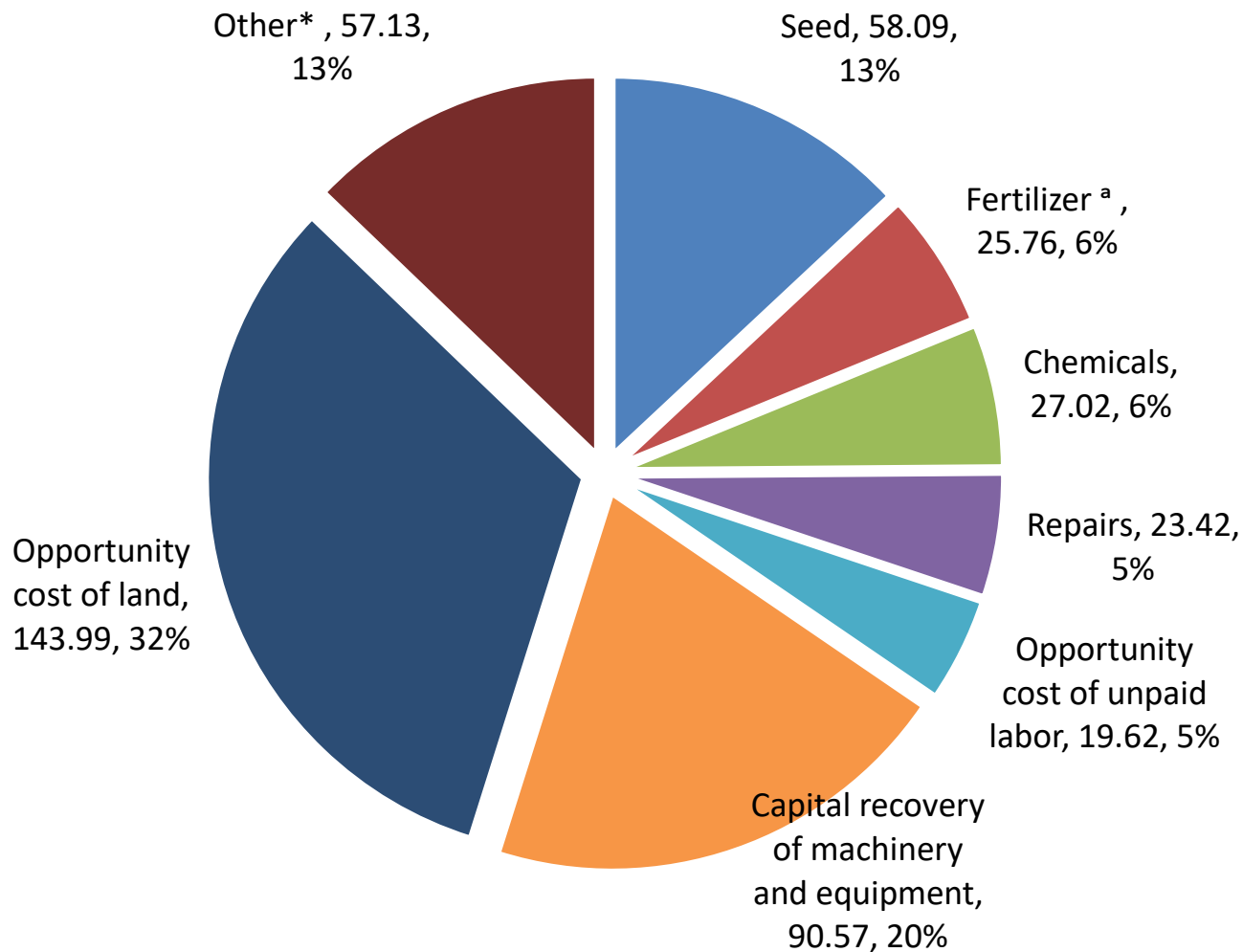


Real. Life. Solutions.

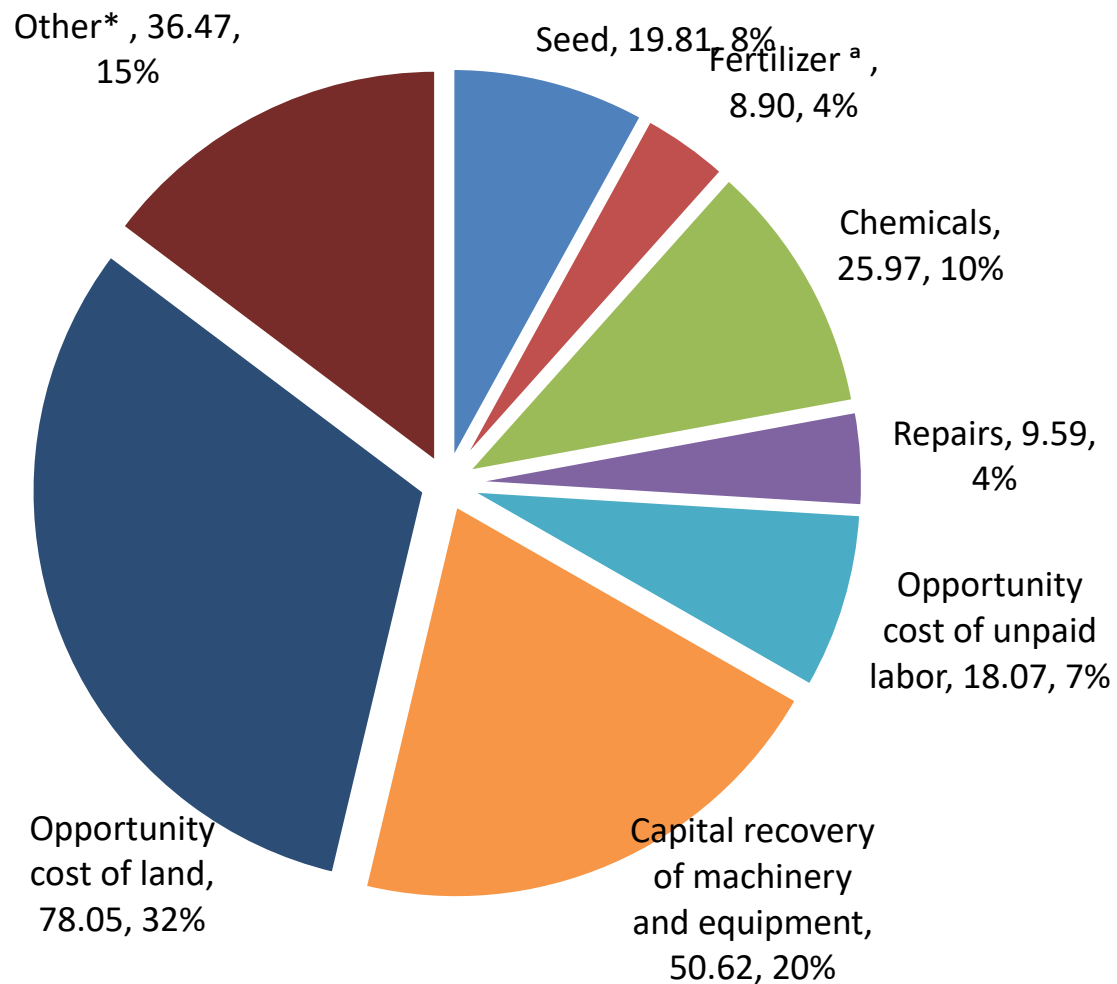
Soybean: Average Monthly November Futures Contract Price, 2014-2018 Avg and 2019



2016-2018 US Total Soybean Expenditure Averages
(\$445.60/acre)



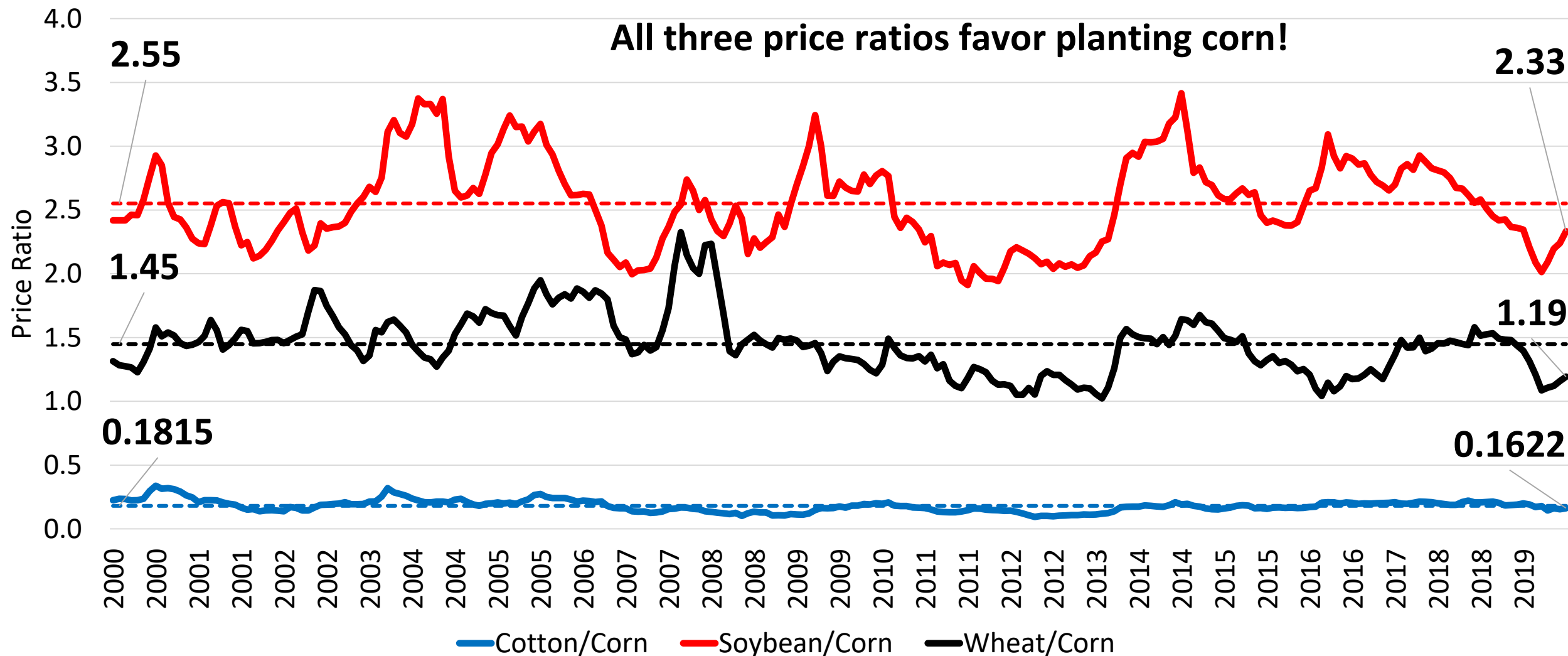
1997-1999 US Total Soybean Expenditure Averages
(\$247.47/acre)



Soybean - Net Return Table (\$/acre; \$445)

		Yield (bu/acre)										
		20	25	30	35	40	45	50	55	60	65	70
Price (\$/bu)	7.50	(296)	(258)	(221)	(183)	(146)	(108)	(71)	(33)	4	42	79
	7.75	(291)	(252)	(213)	(174)	(136)	(97)	(58)	(19)	19	58	97
	8.00	(286)	(246)	(206)	(166)	(126)	(86)	(46)	(6)	34	74	114
	8.25	(281)	(239)	(198)	(157)	(116)	(74)	(33)	8	49	91	132
	8.50	(276)	(233)	(191)	(148)	(106)	(63)	(21)	22	64	107	149
	8.75	(271)	(227)	(183)	(139)	(96)	(52)	(8)	36	79	123	167
	9.00	(266)	(221)	(176)	(131)	(86)	(41)	4	49	94	139	184
	9.25	(261)	(214)	(168)	(122)	(76)	(29)	17	63	109	156	202
	9.50	(256)	(208)	(161)	(113)	(66)	(18)	29	77	124	172	219
	9.75	(251)	(202)	(153)	(104)	(56)	(7)	42	91	139	188	237
	10.00	(246)	(196)	(146)	(96)	(46)	4	54	104	154	204	254
	10.25	(241)	(189)	(138)	(87)	(36)	16	67	118	169	221	272
	10.50	(236)	(183)	(131)	(78)	(26)	27	79	132	184	237	289
	10.75	(231)	(177)	(123)	(69)	(16)	38	92	146	199	253	307
	11.00	(226)	(171)	(116)	(61)	(6)	49	104	159	214	269	324
	11.25	(221)	(164)	(108)	(52)	4	61	117	173	229	286	342

U.S. Monthly Farm Price Ratios, 2000-2019



Soybean Summary

- Global stocks remain elevated.
- Brazil production potential is looking strong for this harvest and export competition will continue.
- Trade deal with China creates short and long term uncertainty.
- How many acres will be planted in 2020 in the US.
- African swine fever impact on feed demand is largely unknown (multiple countries)
- Impact of coronavirus.
- Expect a wide price range (\$8.50-\$10.50?)

S. Aaron Smith
Associate Professor and Extension Economist
Department of Agricultural and Resource Economics
University of Tennessee Institute of Agriculture
Email: aaron.smith@utk.edu
Website: <http://cropeconomics.tennessee.edu/>
Ph: 865-974-7476

THANK YOU!

