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BIODIESEL FEEDSTOCK OUTLOOK

INTL FCStone Financial Inc.

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Talking Points

1. Feedstock Supply/Demand
2. What's to come
3. LCFS Affect on feedstock prices

Soybean Oil

Feedstock Supply/Demand

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U.S. Soybean Supply/Demand (USDA)										
	09/10	10/11	11/12	12/13	13/14	14/15	15/16	16/17	17/18	18/19
Planted Acres	77.5	77.4	75	77.2	76.8	83.3	82.7	83.4	90.1	89.6
Harvested Acres	76.4	76.6	73.8	76.1	76.3	82.6	81.7	82.7	89.5	88.9
Yield	44	43.5	41.9	40	44	47.5	48	52	49.1	52.8
Carryin	138	151	215	169	141	92	191	197	302	395
Production	3359	3329	3094	3042	3358	3927	3926	4296	4392	4693
Imports	15	14	16	41	72	33	24	22	22	25
Total Supply	3512	3494	3325	3252	3571	4052	4140	4515	4715	5113
Crush	1752	1648	1703	1689	1734	1873	1886	1899	2055	2070
Exports	1499	1501	1365	1317	1638	1842	1942	2174	2130	2060
Food/Seed/Ind	110	131	87	105	106	147	116	141	136	137
Total Use	3361	3280	3155	3111	3479	3862	3944	4214	4321	4268
Carryout	**151**	**214**	**170**	**141**	**92**	**190**	**197**	**302**	**395**	**845**
CO/Use Ratio	4.49%	6.52%	5.39%	4.53%	2.64%	4.92%	4.99%	7.17%	9.14%	19.80%
Avg Farm Price	$9.59	$11.30	$12.50	$14.40	$13.00	$10.10	$8.95	$9.47	$9.35	7.35 - 9.85

Feedstock Supply/Demand

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	U.S. Soybean Oil Supply/Demand (USDA)									
	09/10	10/11	11/12	12/13	13/14	14/15	15/16	16/17	17/18	18/19
Crush	1,752	1,648	1,703	1,689	1,734	1,873	1,886	1,901	2,055	2,070
Beginning Stock	2,861	3,406	2,425	2,540	1,655	1,165	1,855	1,687	1,711	2,156
Production	19,615	18,888	19,740	19,820	20,130	21,399	21,950	22,123	23,645	23,910
Imports	103	159	149	196	165	264	287	319	350	300
Total Supply	22,578	22,453	22,314	22,555	21,950	22,828	24,092	24,129	25,706	26,366
Domestic Disappearance	15,814	16,795	18,310	18,687	18,908	18,959	20,162	19,862	21,100	22,000
Biodiesel	1,680	2,250	4,870	4,689	5,010	5,037	5,670	6,200	7,000	7,800
Food, Feed & other Industrial	14,134	14,545	13,440	13,998	13,898	13,922	14,492	13,662	14,100	14,200
Exports	3359	3233	1464	2164	1877	2014	2243	2,556	2,450	2,200
Use, Total	19,173	20,028	19,774	20,851	20,785	20,973	22,405	22,418	23,550	24,200
Ending Stocks	**3,406**	**2,425**	**2,540**	**1,705**	**1,165**	**1,855**	**1,687**	**1,711**	**2,156**	**2,166**
Carryout/Use ratio	18%	12%	13%	8%	6%	9%	8%	8%	9%	9%
Avg Price	$0.3571	$0.5554	$0.5190	$0.4713	$0.3823	$0.3160	$0.2986	$0.3248	$0.3000	$0.3000

Feedstock Supply/Demand

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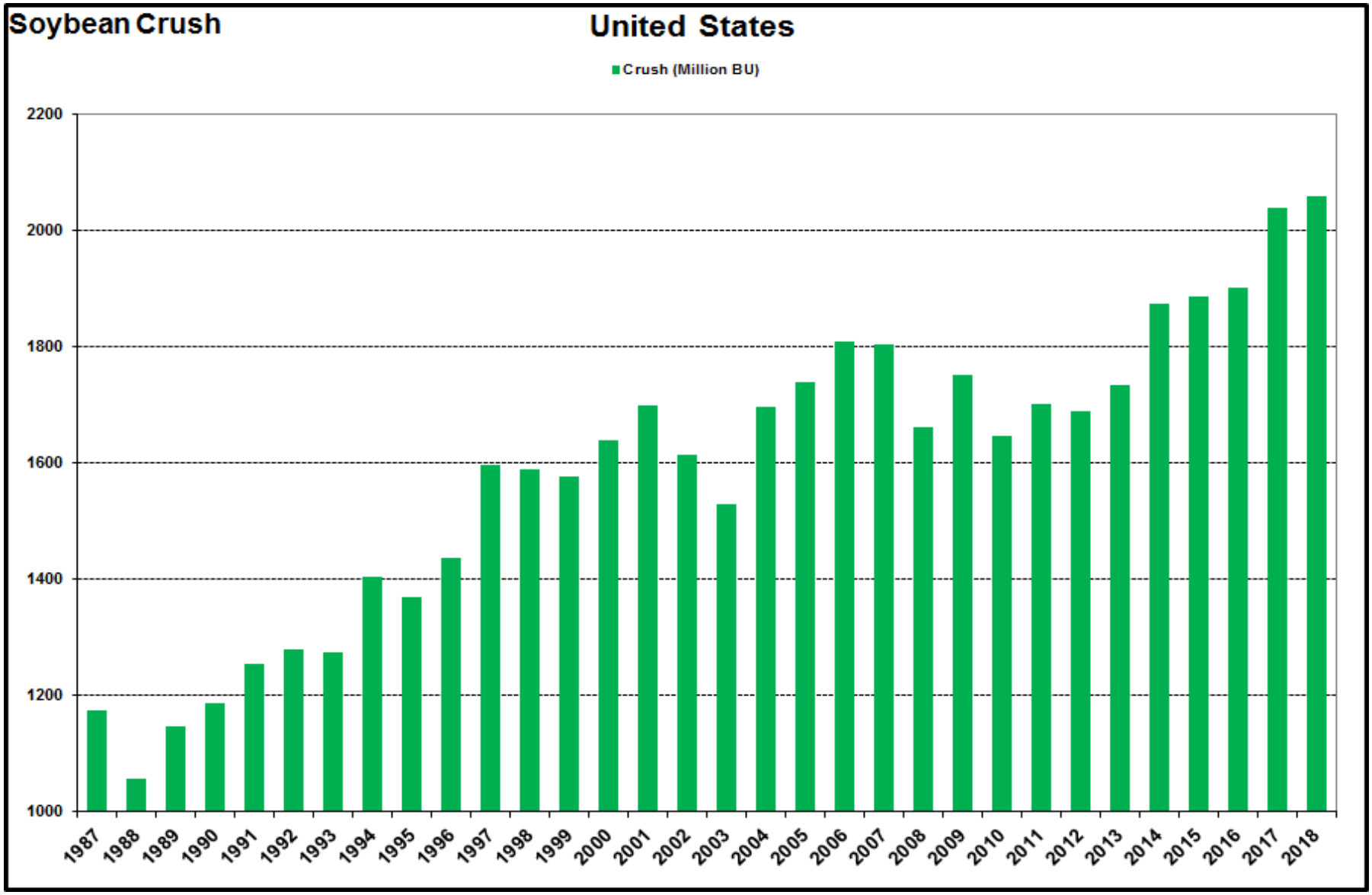

Feedstock Supply/Demand

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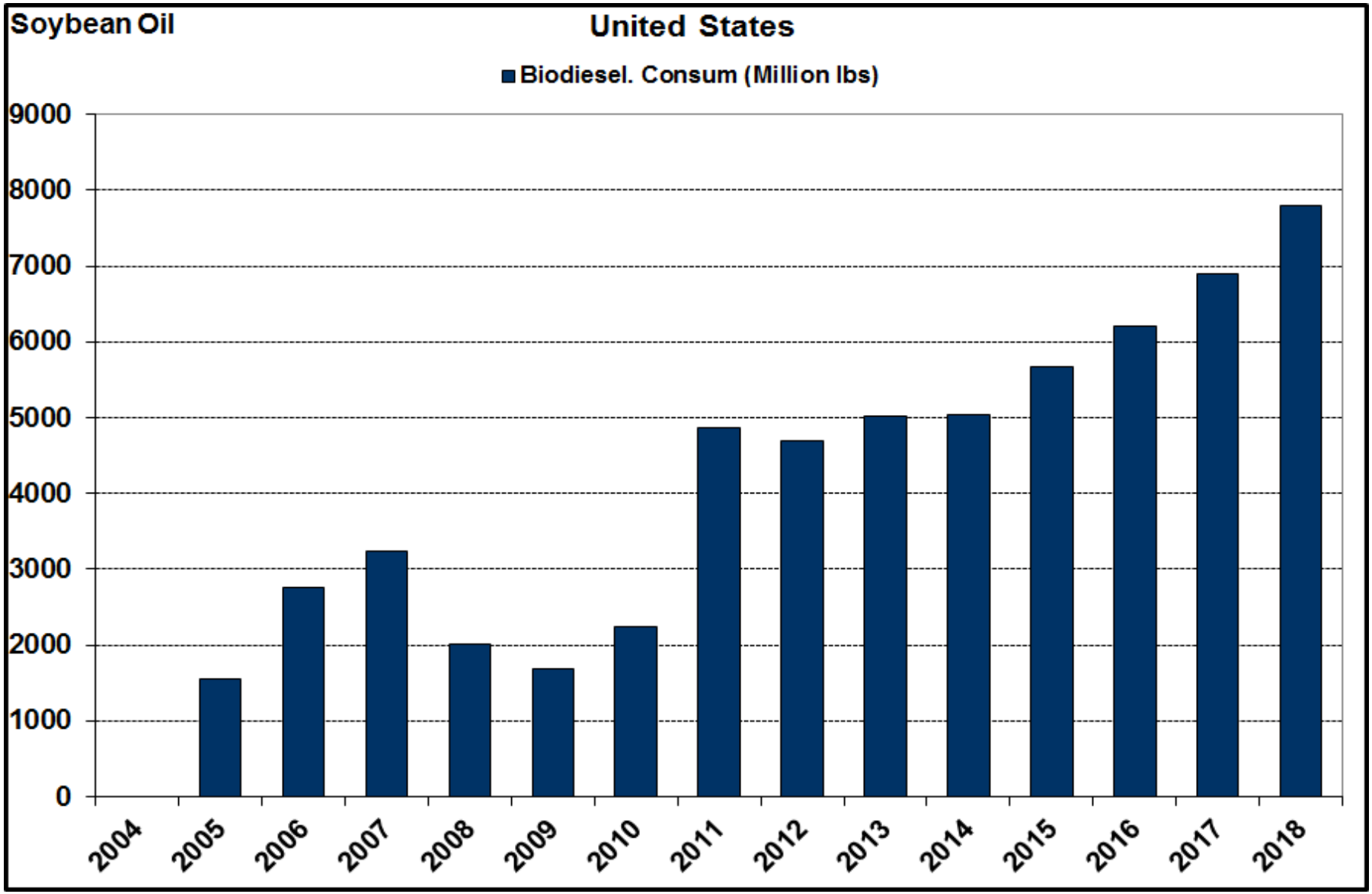

Feedstock Supply/Demand

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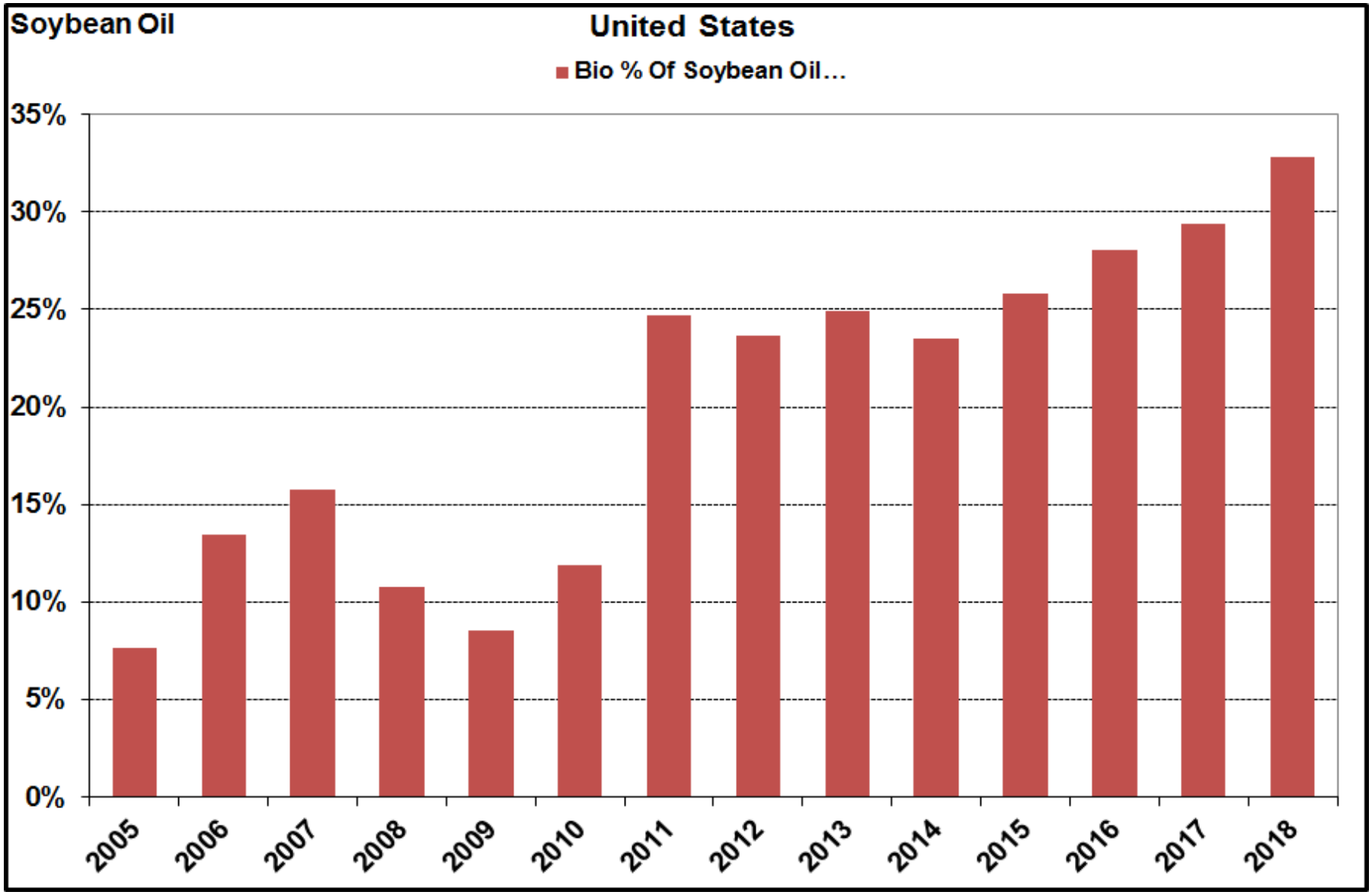

Feedstock Supply/Demand

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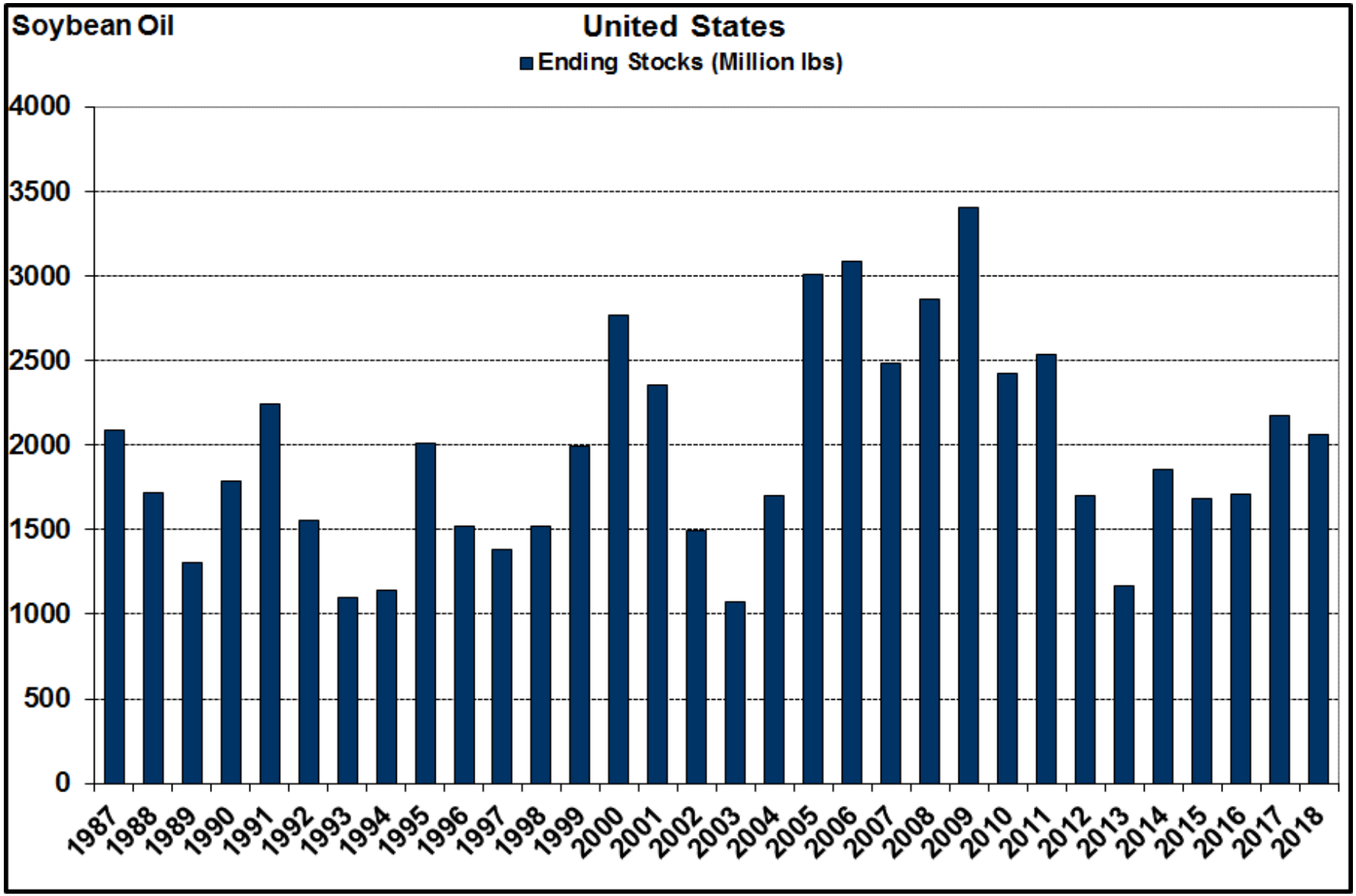

FATS & GREASES

Feedstock Supply/Demand

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Category (million pounds)						
Production	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**
Tallow	5,751	5,708	5,382	5,260	5,643	5,721
Inedible tallow	*3,623*	*3,596*	*3,391*	*3,313*	*3,500*	*3,668*
Edible tallow	*920*	*913*	*861*	*841*	*903*	*903*
Yellow grease/used cooking oil	1,953	1,976	2,057	2,042	2,020	2,013
White Grease	1,587	1,583	1,559	1,673	1,736	1,655
Choice White grease	*1,255*	*1,251*	*1,233*	*1,322*	*1,368*	*1,306*
Lard	*332*	*332*	*327*	*350*	*369*	*349*
Poultry fat	2,260	2,293	2,329	2,400	2,454	2,415
Subtotal	**12,320**	**12,325**	**12,064**	**12,128**	**12,594**	**12,617**
Imports						
Tallow	138	131	138	141	174	220
White Grease	39	48	46	76	64	60
Lard	*14*	*14*	*16*	*14*	*10*	*13*
Choice White Grease	*25*	*34*	*30*	*62*	*53*	*47*
Yellow Grease/Used Cooking Oil	35	46	38	49	51	85
Poultry Fat	1	1	1	1	1	4
Sub-Total Fats and Greases	**214**	**225**	**223**	**268**	**289**	**369**

Sources: Global Trade Atlas for exports. US Energy Information Agency for biodiesel inputs.

USDA NASS - Fats and Oils: Oilseed Crushings, Production, Consumption and Stocks Annual Summary for 2017 Production

NA = Not available

* - 2017 domestic use is negative due to carryover from previous year

Feedstock Supply/Demand

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Consumption	2012	2013	2014	2015	2,016	2017
(Feed, food, fatty acid, carryover, other)	7,801	7,765	7,661	7,634	8,028	7,920
Tallow	*4,265*	*4,388*	*4,188*	*4,071*	*4,595*	*4,665*
Poultry Fat	*2,053*	*2,100*	*2,114*	*2,169*	*2,203*	*2,207*
White grease	*1,161*	*1,099*	*1,086*	*1,115*	*1,179*	*1,083*
Yellow grease/used cooking oil	*322*	*178*	*273*	*279*	*51*	**-35.2736*
(Methyl ester)	1,976	2,462	2,319	2,648	2,519	2,628
Animal Fat	1,017	1,104	1,033	1,271	1,130	1,157
White grease	*408*	*466*	*471*	*589*	*578*	*591*
Tallow	*385*	*452*	*355*	*430*	*332*	*389*
Poultry fat	*176*	*161*	*176*	*197*	*220*	*177*
Other	*48*	*25*	*31*	*55*	*n/a*	*n/a*
Recycleld Oils	959	1,358	1,286	1,377	1,389	1,471
Yellow grease/used cooking oil	*670*	*1,048*	*1,088*	*1,255*	*1,389*	*1,482*
Other	*289*	*310*	*198*	*122*	*n/a*	*n/a*
(Total Domestic Consumption)	**9,777**	**10,227**	**9,980**	**10,282**	**10,547**	**10,548**
Exports	**2012**	**2013**	**2014**	**2015**	**2,016**	**2017**
Inedible tallow	1,073	843	887	756	625	715
Yellow grease/used cooking oil	997	796	734	558	631	662
Edible tallow	166	157	90	143	265	171
Lard	55	65	47	44	42	38
Poultry fat	32	33	40	36	32	35
Choice White Grease	3	1	1	0	1	2
Subtotal	2,326	1,894	1,800	1,537	1,596	1,624
CARRYOUT	432	430	507	576	741	814

Sources: Global Trade Atlas for exports. US Energy Information Agency for biodiesel inputs.

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Feedstock Supply/Demand

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EIA Biodiesel Production

(million pounds)												
	Canola	Corn Oil	Palm Oil	Soyoil	Other Oils	Poultry	Tallow	White Grease	Recycled oils Other	Yellow Grease	R other	Total Consumption
2010	248	112	0	1,141	0	99	170	333	41	244	41	2,610
2011	847	305	0	4,126	0	240	429	533	87	471	196	7,353
2012	787	571	0	4,023	0	176	382	409	49	672	290	7,368
2013	646	1,066	442	5,508	6	161	465	466	17	1,048	310	10,321
2014	1,048	977	0	4,870	42	176	356	471	31	1,088	148	9,652
2015	745	1,057	0	4,910	3	196	429	590	55	1,256	122	9,644
2016	1,130	1,306	0	6,096	4	219	331	578	69	1,390	32	11,924
2017	1,453	1,579	0	6,230	0	159	345	589	43	1,470	21	12,130

(million gallons using 7.6 pounds/gallon conversion)												
	Canola	Corn Oil	Palm Oil	Soyoil	Other Oils	Poultry	Tallow	White Grease	Recycled oils Other	Yellow Grease	R other	Total Production
2010	33	15	0	150	0	13	22	44	5	32	5	343
2011	111	40	0	543	0	32	56	70	11	62	26	967
2012	104	75	0	529	0	23	50	54	6	88	38	969
2013	85	140	58	725	1	21	61	61	2	138	41	1,358
2014	138	129	0	641	6	23	47	62	4	143	19	1,270
2015	98	139	0	646	0	26	56	78	7	165	16	1,269
2016	149	172	0	802	1	29	44	76	9	183	4	1,569
2017	191	208	0	820	0	21	45	78	6	193	3	1,596

Historical RIN, B100 and HOBO

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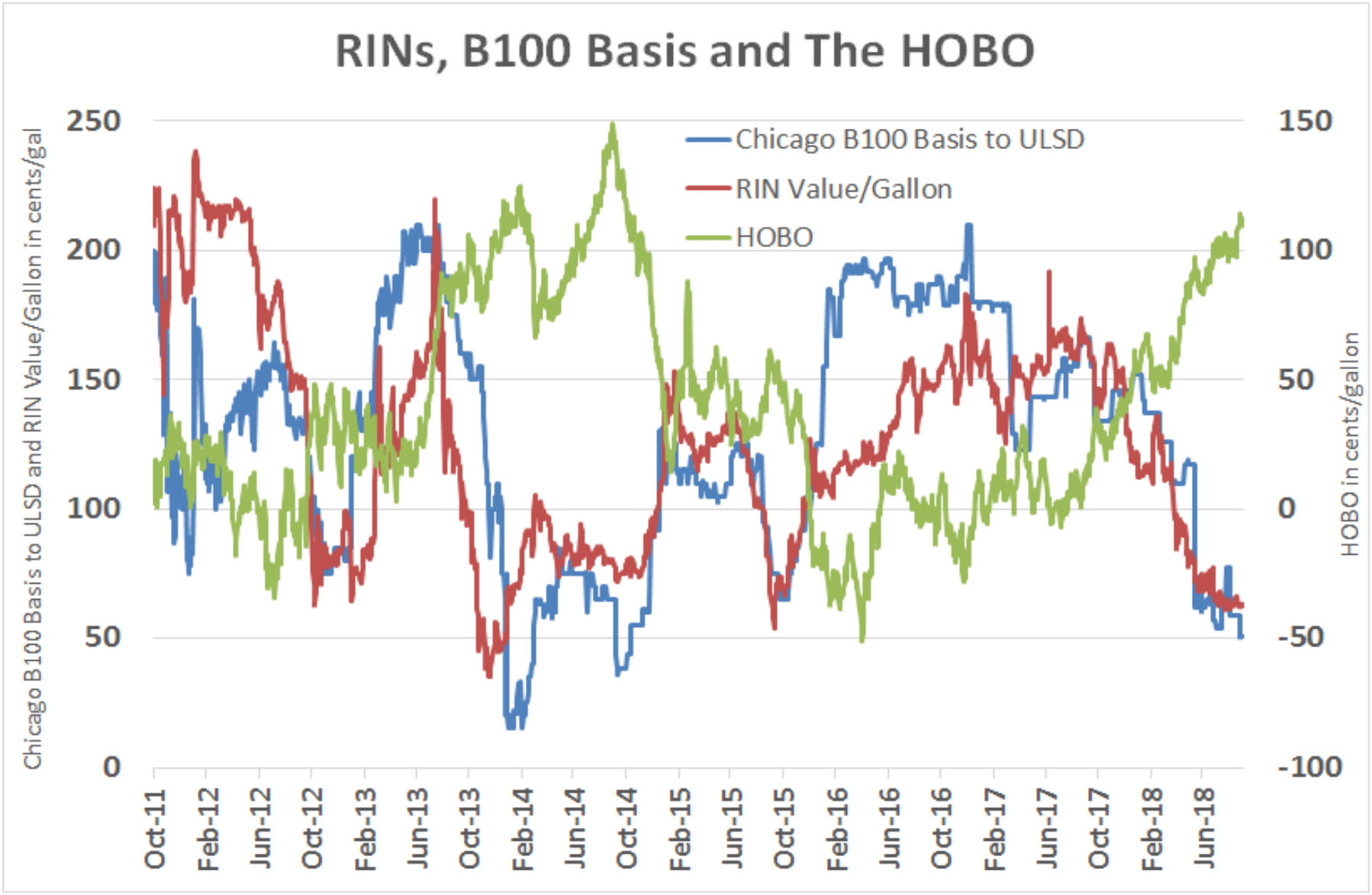

What's to Come

Biodiesel, Renewable Diesel and Co-Processing

Biodiesel: A fuel comprised of mono-alkyl esters of long chain fatty acids derived from vegetable oils or animal fats that meet the fuel specification requirements of ASTM D6751. Produced in free-standing facilities.

Renewable Diesel: liquid fuel produced from biomass that meets the fuel specification requirements of ASTM D975 (petroleum diesel fuel) or ASTM D396 (home heating oil).

Co-Processed Renewable Diesel: Renewable diesel that is produced when an oil company adds small amounts of vegetable oils, animal fats and used restaurant grease (yellow grease). Scheduled to be produced in existing oil refineries.
**National Biodiesel Board*

Where Do We Go From Here

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Renewable Diesel

- Much higher entry cost than biomass-based diesel
- Drop-in fuel that can go directly into the pipeline
- Get $1 tax credit
- 494.5 MMGY capacity as reported by National Biodiesel Board + 100 MMGY
- Another 190+ MMGY under construction that I know of

Co-Processed Renewable Diesel

- Very small entry cost
- Drop-in fuel that can go directly into the pipeline
- Does not qualify for $1 tax credit
- Nearly all refiners, if not all, actively pursuing

U.S. Energy vs Ag Sector

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Energy

- 3.415 bill bbls crude oil = 465 MMT
- Comes out of ground year-round
- Can produce from land and water
- 844 large oil rigs (Baker Hughes)
- 25,000 bbl trade blocks
- Product moves through pipelines
- EPA cost center

Ag

- Big 3 (Corn, Soybean and Wheat) = 20.737 bill bu = 538 MMT
- Comes out of ground once a year
- Can only produce on land
- 163,849 very large farmers as reported by USDA ($500k+ revenue) or 8% of farms
- 150 bbl trade blocks
- Product moves via truck, rail and barge
- Producers of EPA credits

Energy vs Ag/Renewable Sector

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Oil and Gas

- 141 refineries (EIA)
- 6.8 bill bbls refining capacity = 285 bill galls (EIA)

Ag/Renewables

- 2,583 grain elevators (USDA) along with on farm storage
- 198 ethanol plants (RFA), 130 biodiesel plants, 4 renewable diesel plants (NBB)
- 16.241 bill gall ethanol capacity and 2.783 bill gall bio and renewable diesel capacity (RFA and NBB)

How Its Hedged

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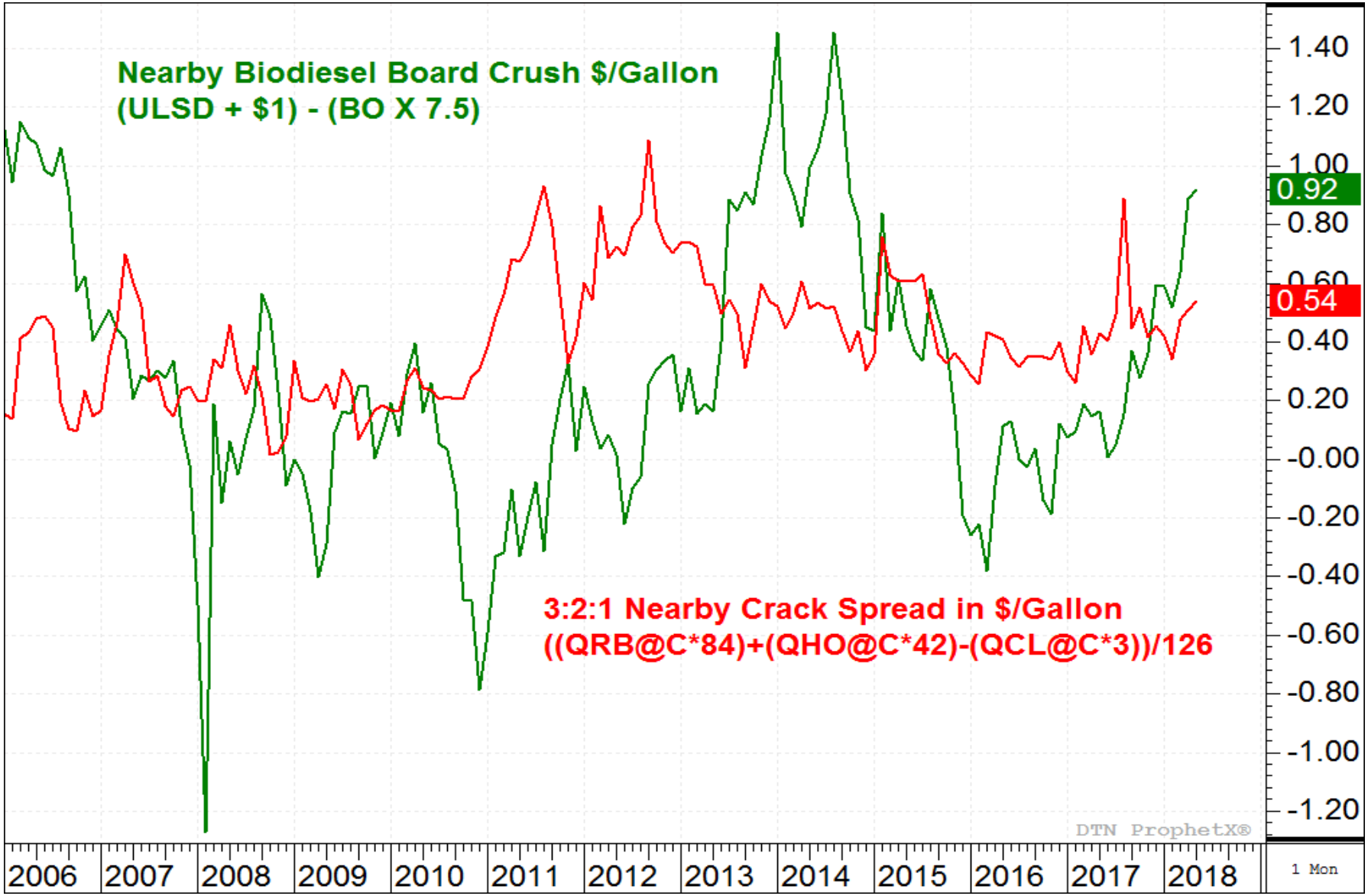

CARB LCFS Price History

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CARB LCFS Price History

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ULSD Baseline CI	98.4						
Bio Energy Density	126.13						
2017 Canola	62						
2017 UCO	22						
2017 Soyoil	52						
2017 Corn Oil	34						
2017 Tallow	33						
			Biodiesel $/Gal of B100				
			Canola	Corn Oil	UCO	Soy	Tallow
LCFS Credit	177.9		0.82	1.44	1.71	1.04	1.47
Estimated Values							

THANK YOU