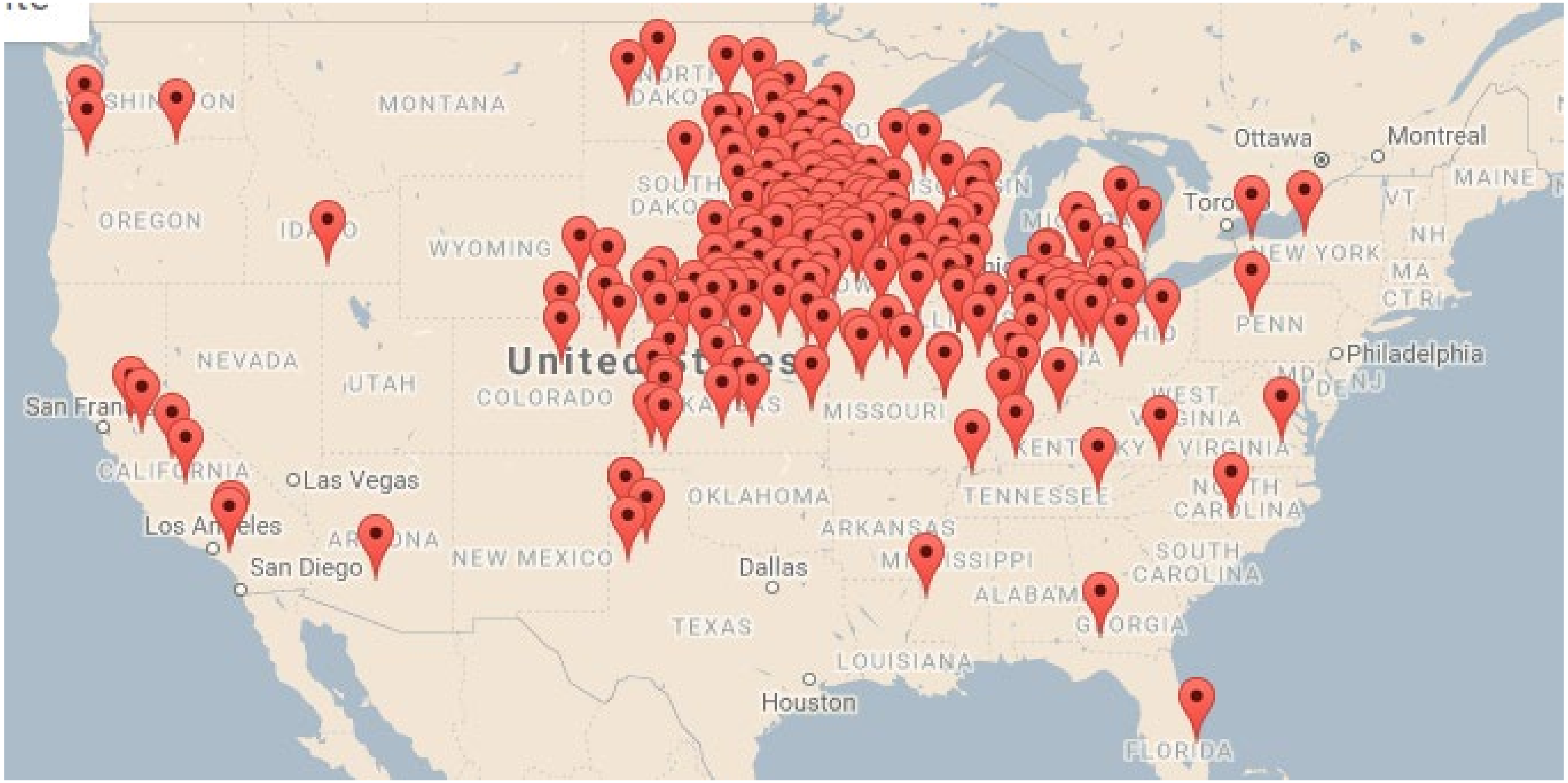
US DDGS

Who we are

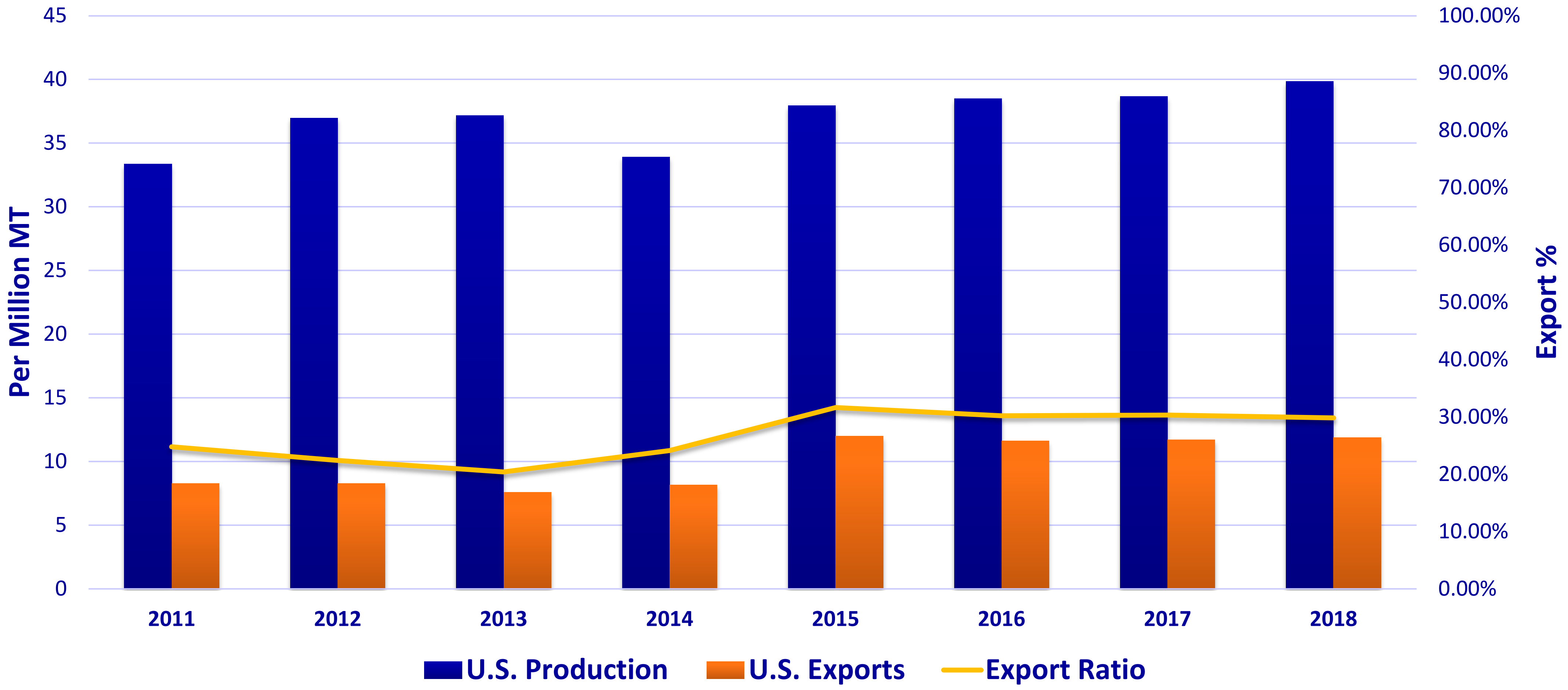
- CHS is the nation’s leading cooperative, owned by farmers, ranchers and co-ops across the United States.
- A diversified, global energy, grains and foods business, CHS is committed to helping producers, co-ops and other stakeholders grow their businesses.

CHS markets more than 52 million metric tons of grains and oilseeds annually in 65 countries. In addition to being a leader in global grain origination, CHS is also a global leader in marketing distillers dried grains with solubles (DDGS) and fertilizer sourcing – which helps us achieve efficiencies that benefit all of our customers.

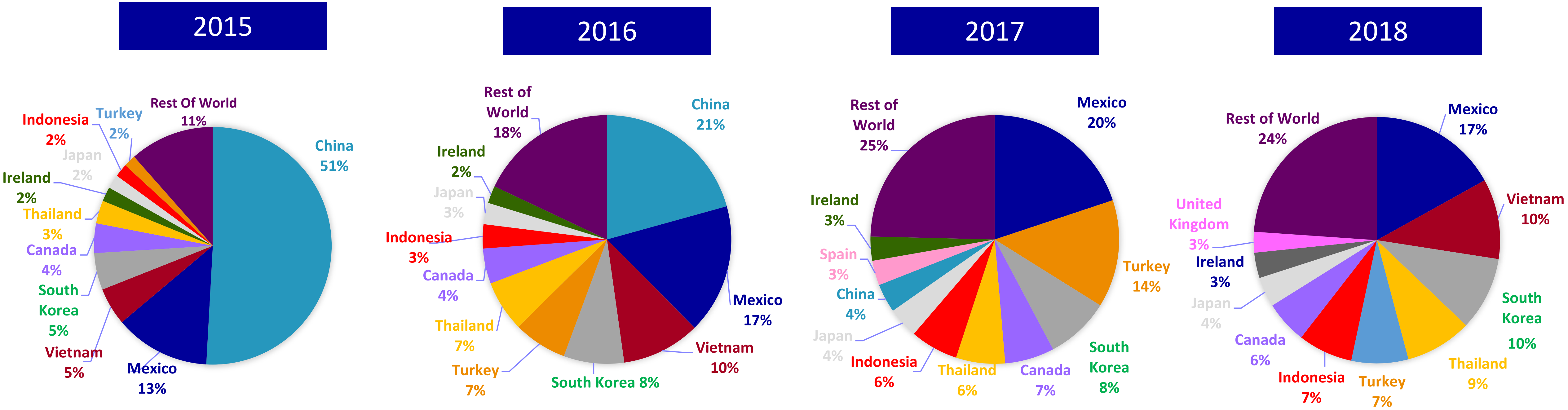
Ethanol plant locations



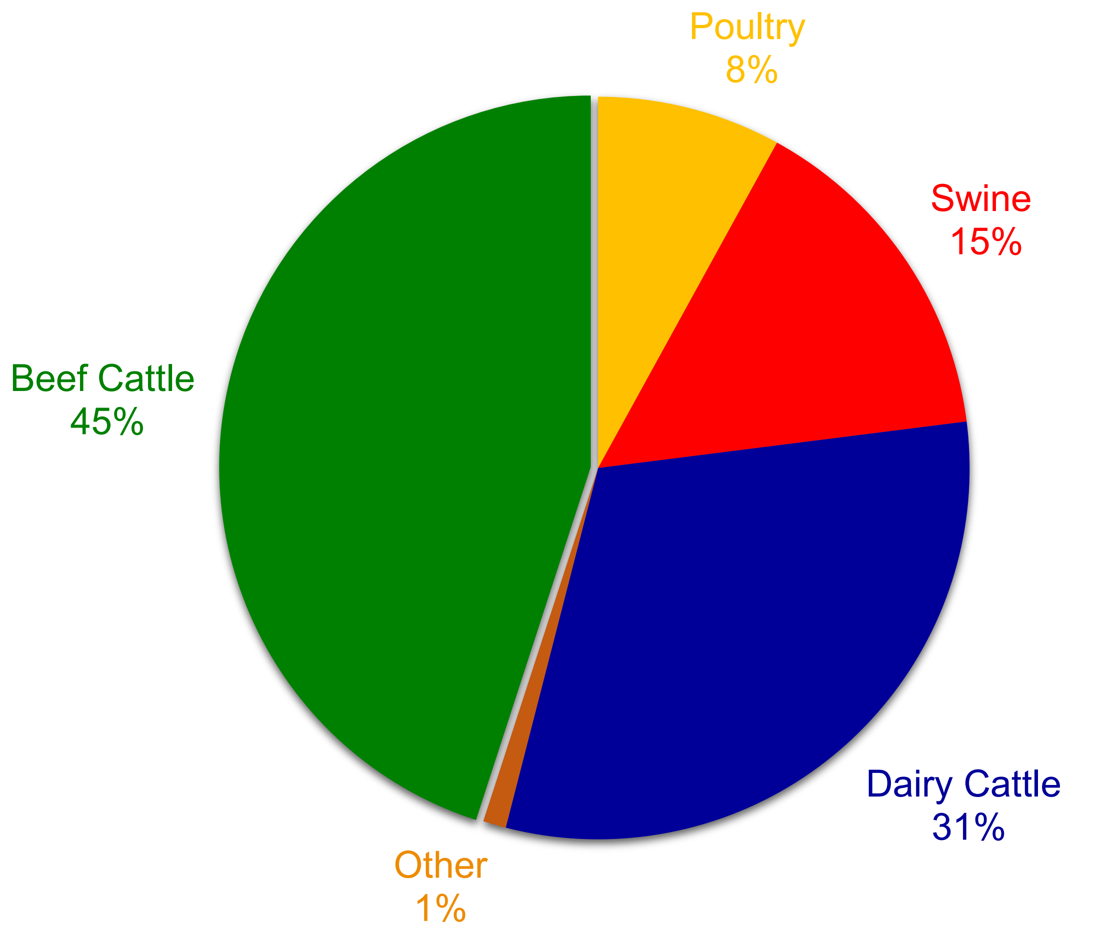
US DDGS Production vs Exports



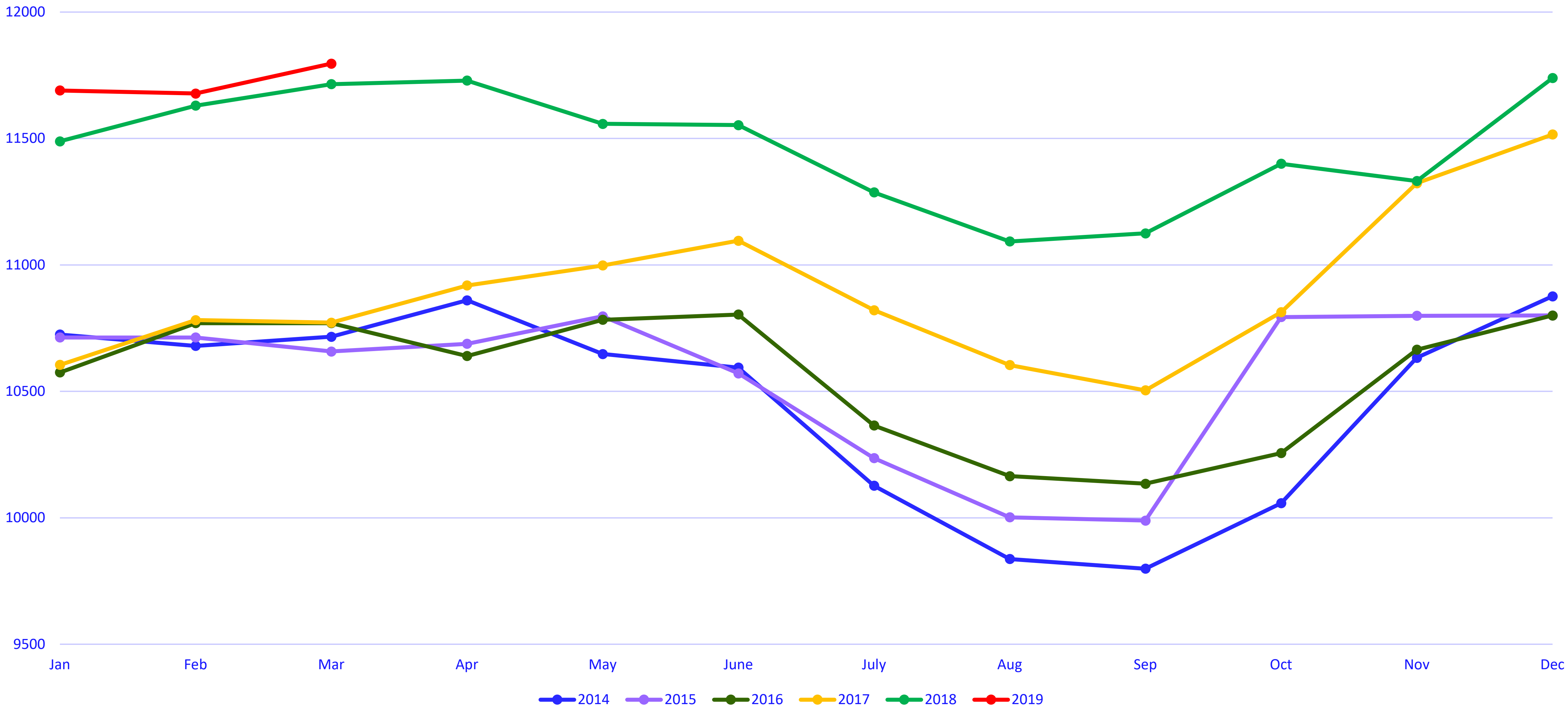
DDGS Export Comparison



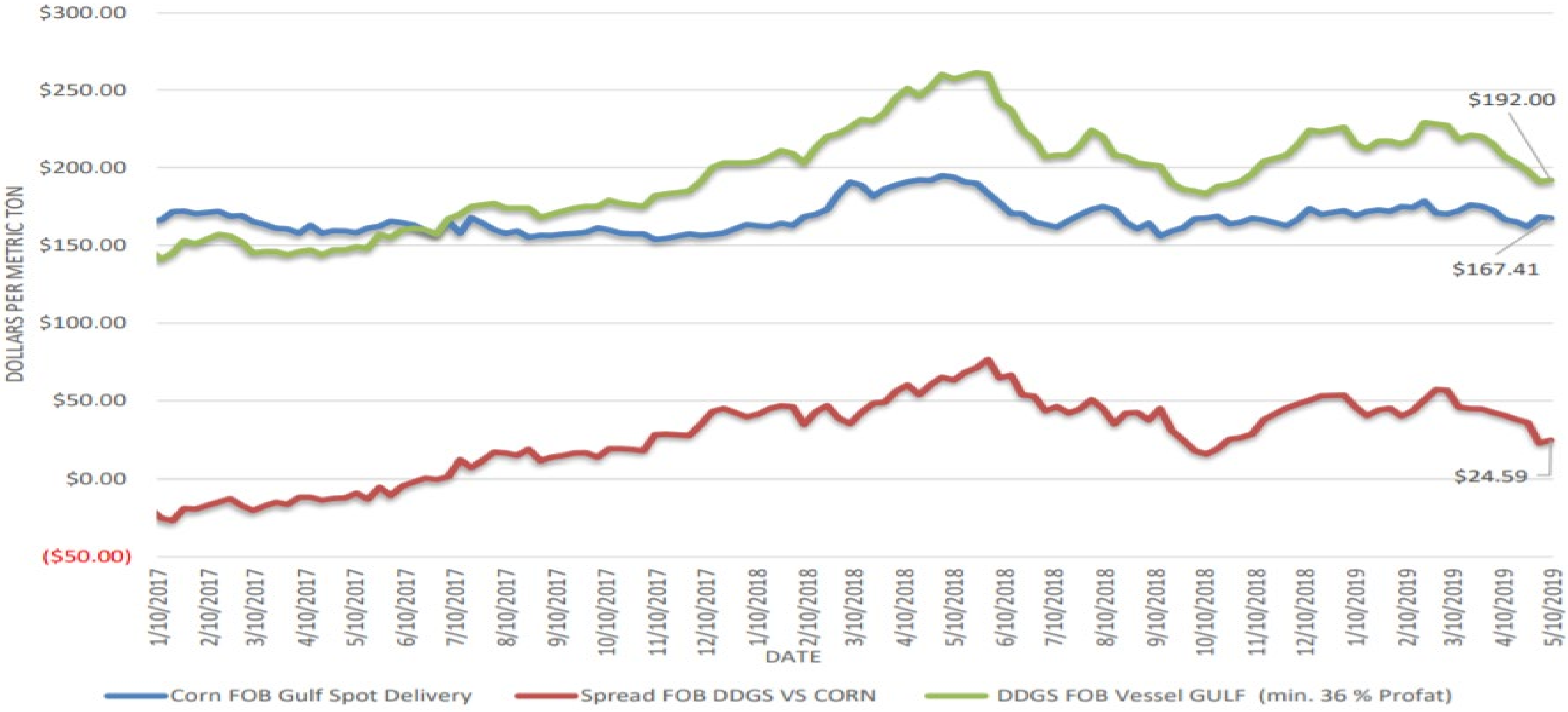
US DDGS consumption by species



Cattle on feed

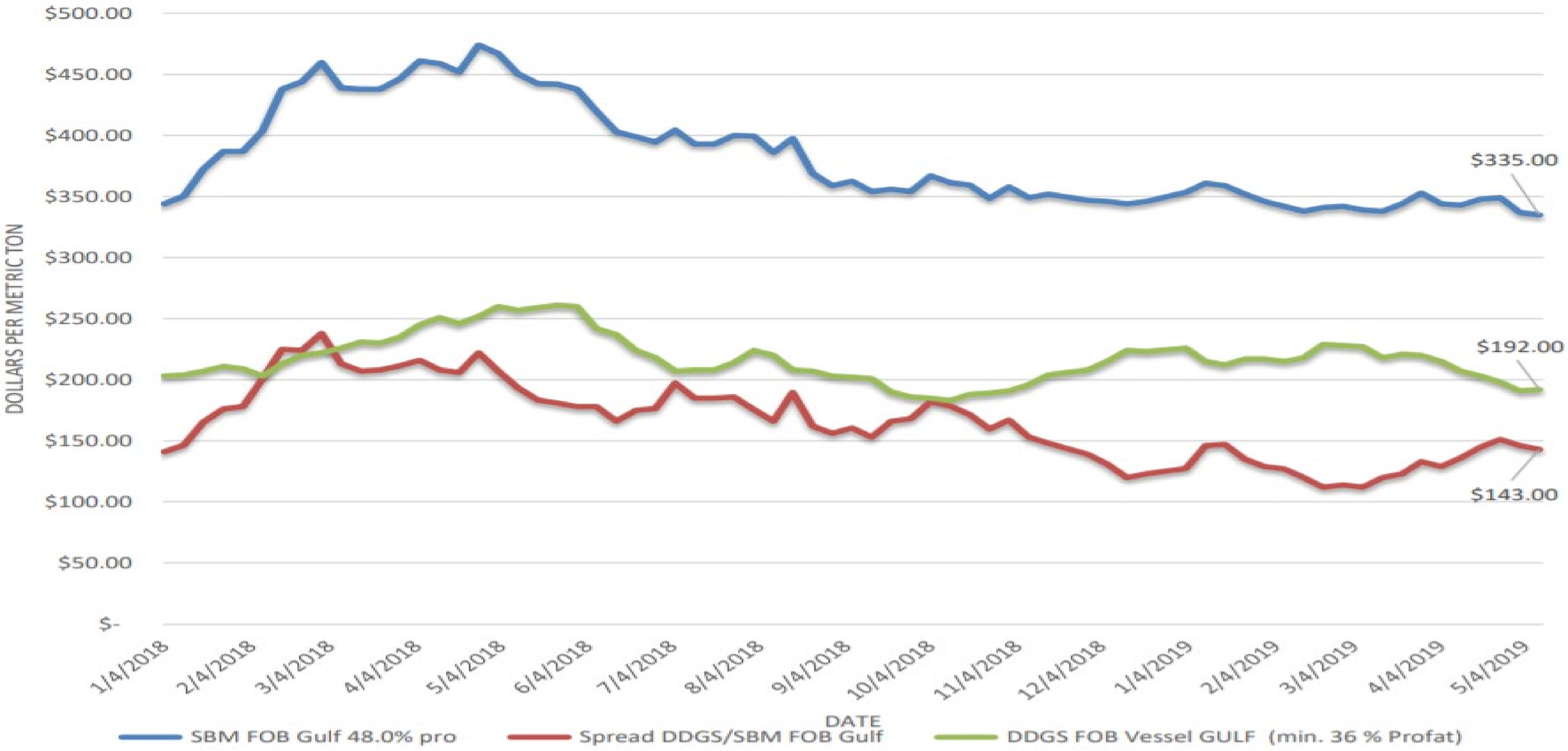


DDGS vs Corn in US Gulf



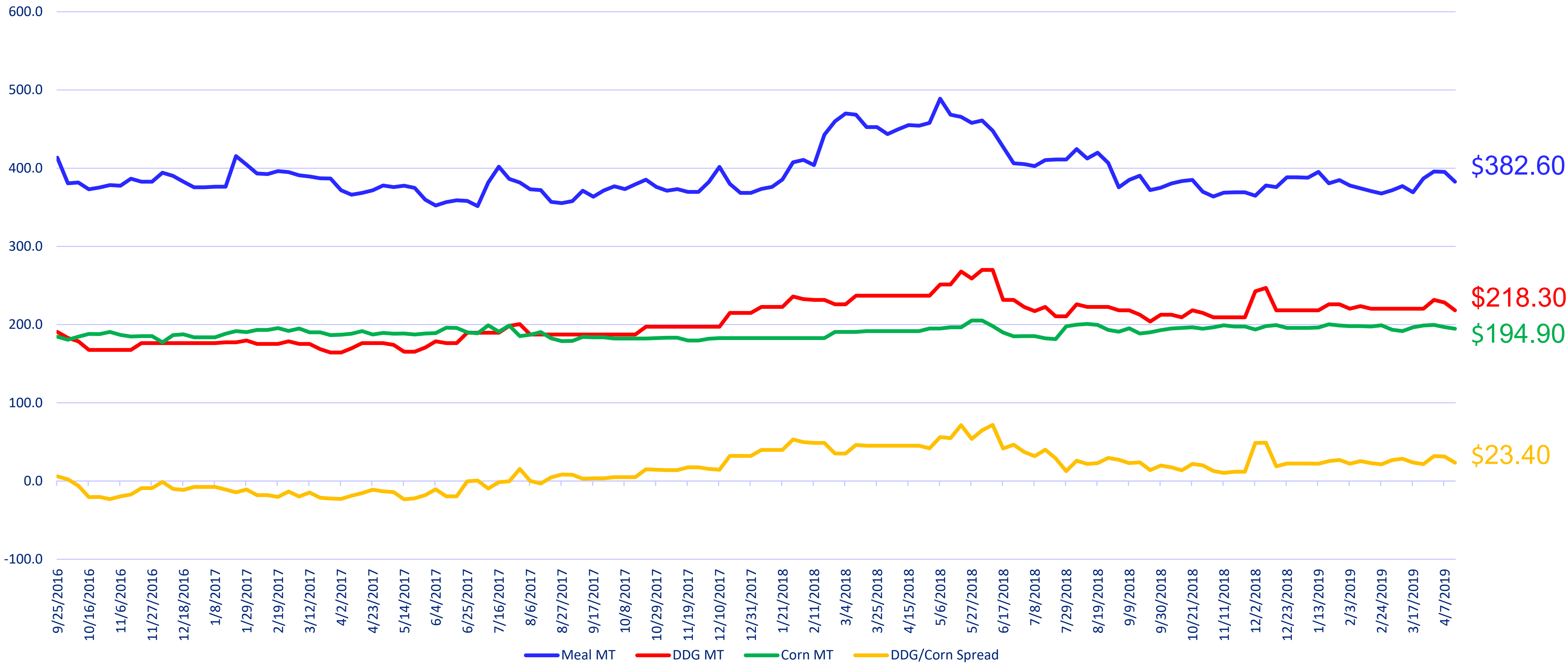
Source: USGC

DDGS vs SBM in US Gulf

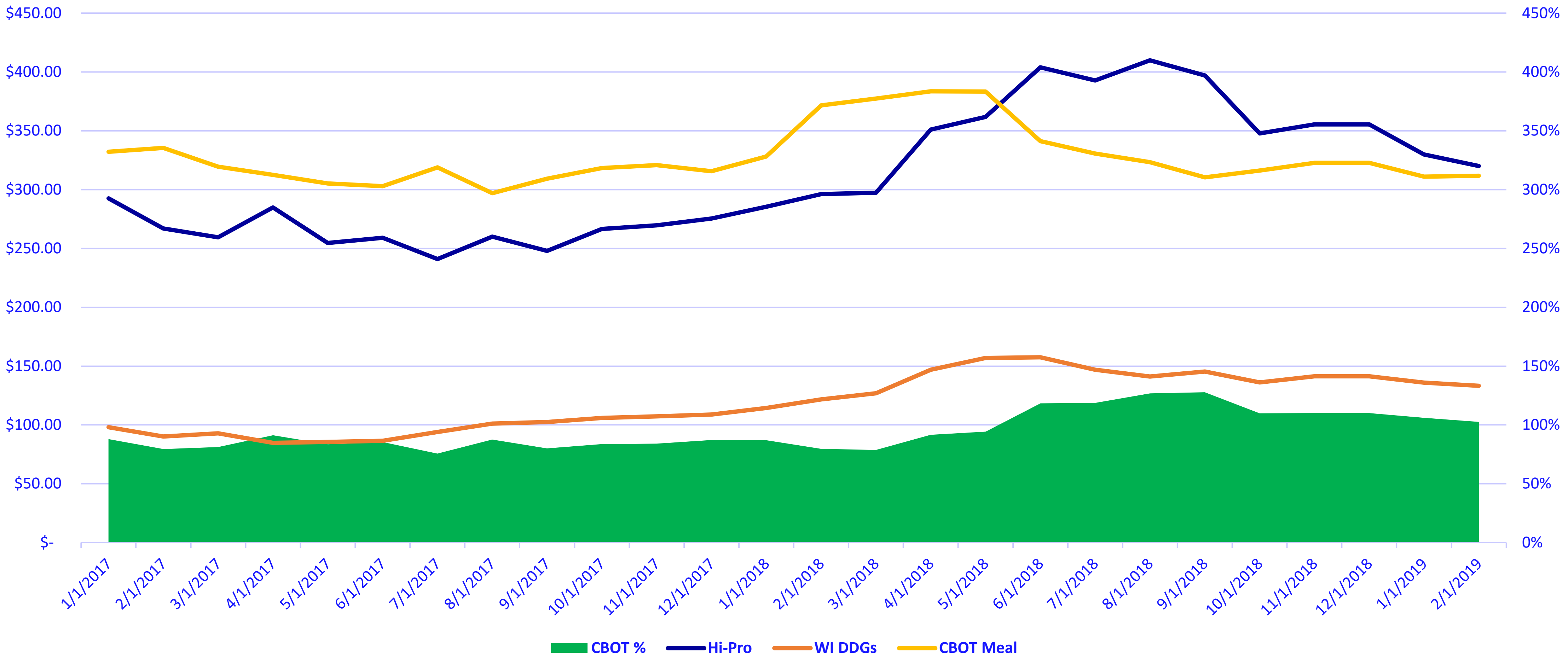


Source:USGC

California Meal/DDG/Corn



A+ Pro Yeast vs Soymeal and DDGS/ Fluid Quip product from UWGP



FEED PRODUCT INFORMATION

1) FST™/ FST NEXT GEN™ HI-PRO DISTILLERS DRIED GRAINS

AAFCO 27.5 CORN DISTILLERS DRIED GRAINS. Distillers Dried Grains is obtained after the removal of ethyl alcohol by distillation from the yeast fermentation of a grain or a grain mixture by separating the resultant coarse grain fraction of the whole stillage and drying it by methods employed in the grain distilling industry.

ANALYSIS*		As Is Basis	Dry Basis
Protein		40.00%	44.40%
Fat		6.14%	6.82%
Crude Fiber		6.14%	6.82%
Sulfur		1.02%	1.14%
Yeast	(approx)	5.00%	

Expected values. Numbers may vary based on plant operations.

2) FST™/ FST NEXT GEN™ FIBER AND SYRUP

AAFCO 48.2 CORN BRAN is the outer coating of the corn kernel, with little or none of the starchy part of germ. **AAFCO 27.7 CORN CONDENSED DISTILLERS SOLUBLES.** Condensed Distillers Solubles is obtained after the removal of ethyl alcohol by distillation from the yeast fermentation of a grain or a grain mixture by condensing the thin stillage fraction to a semi-solid. The predominating grain must be declared as the first word in the name.

ANALYSIS*	As Is Basis	Dry Basis
Protein	7.00%	23.33%
Fat	1.50%	5.00%
Crude Fiber	6.00%	20.00%
Sulfur	0.30%	1.00%

Expected values. Numbers may vary based on plant operations.

3) ULTRAMAX™ HYDROLYZED YEAST FROM TS4™ SYSTEM

ULTRAMAX™

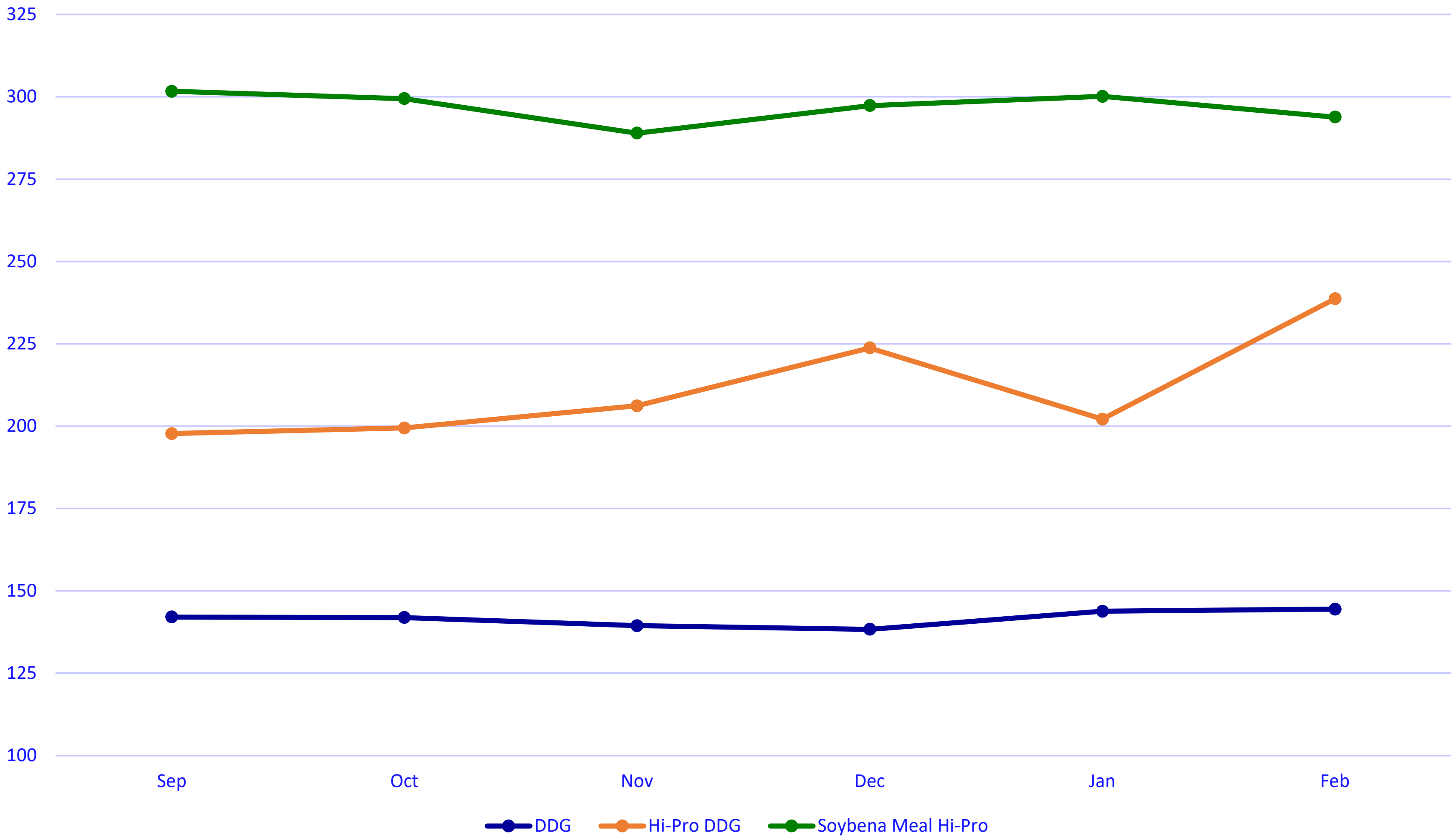
AAFCO 96.12 Hydrolyzed Yeast is a concentrated, non-extracted is concentrated, non-extracted, partially soluble, yeast digest. Solubilization is accomplished by enzymatic hydrolysis of whole Saccharomyces cerevisiae. Salts may be added as processing aids in accordance with good manufacturing practice. It must not contain less than 35% crude protein.

ANALYSIS*	As Is Basis	Dry Basis
Protein	40.91%	45.45%
Fat	6.14%	6.82%
Crude Fiber	12.27%	13.64%
Sulfur	2.05%	2.27%
Yeast	>50.00%	

Expected values. Numbers may vary based on plant operations.

8.50 x 11.00 in

ICM Hi-Pro DDG Comparison

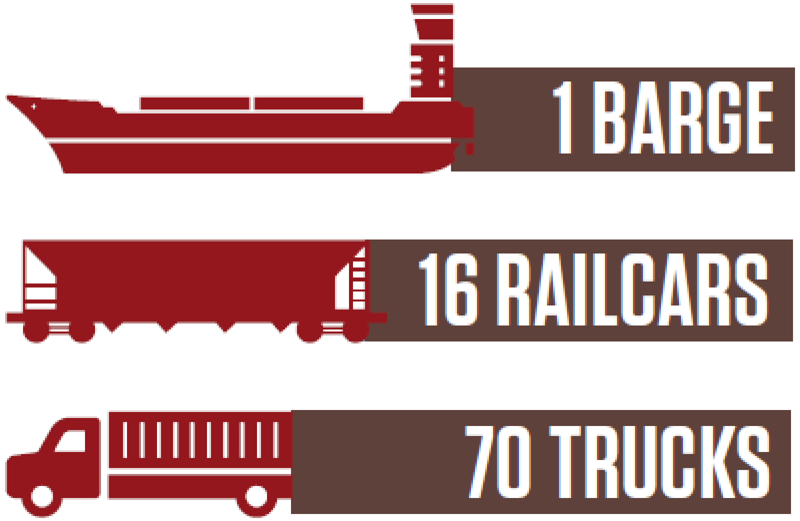


	DDG	Hi-Pro DDG	Soybean Meal Hi-Pro
Sep	142.07	197.77	301.67
Oct	141.89	199.47	299.45
Nov	139.4	206.18	289
Dec	138.34	223.76	297.33
Jan	143.78	202.12	300.12
Feb	144.46	238.7	293.85

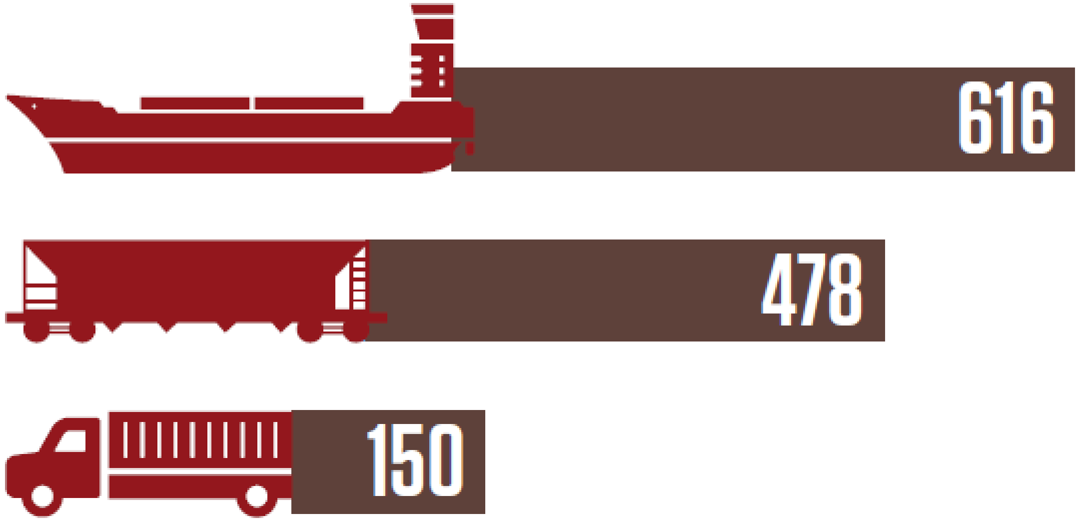
CHS

Cost Competitiveness of Domestic Transportation

Units to Carry 1,750 Short Tons of Dry Cargo



Ton-miles Traveled per Gallon of Fuel

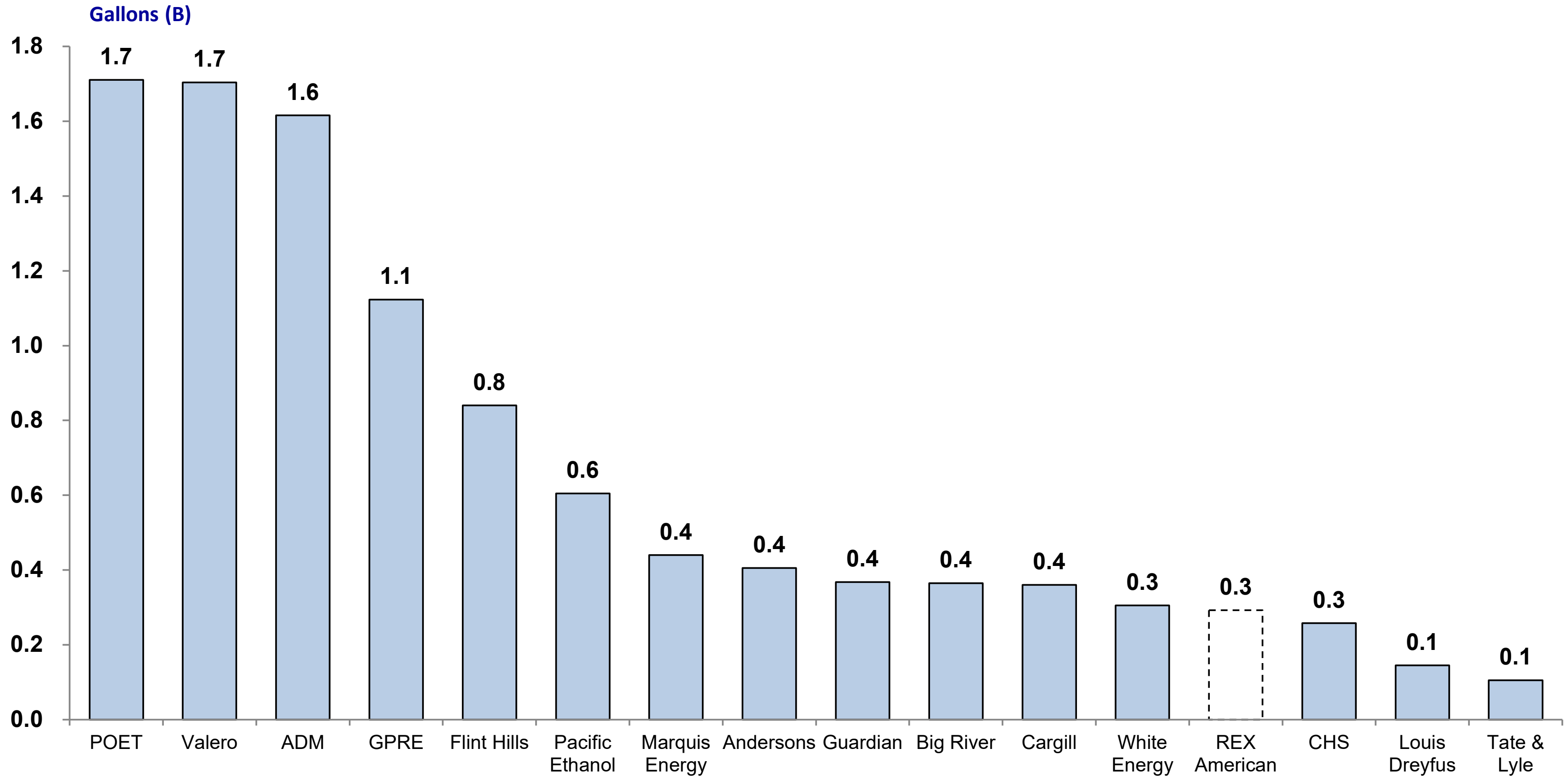


The river system needs major maintenance and upgrades. As of 5/1 the Mississippi is closed above St. Louis. It will be early June before we see a significant supply of empty barges on the upper Mississippi

Baltic index Vessel freight remains inexpensive for now. However we expect vessel owners and container lines to attempt to pass along the added cost of IMO Low Sulphur bunker/scrubber regulations. In the end supply and demand will dictate prices, and vessel supply is plentiful

Large Integrated Producers

The 5 largest producers account for 42% of total industry nameplate capacity. This market has witnessed an upward trend in concentration over the last five years.



Courtesy of Ocean Park Advisors

Number of Plants	**27**	**14**	**8**	**13**	**7**	**9**	**2**	**4**	**3**	**4**	**3**	**3**	**6**	**2**	**2**	**1**

CHS

Low Carbon Fuel Standards

- Regulations in place or imminent in California, Washington, Oregon, and much of Canada
- Multiple states considering similar regulation including Minnesota and many East coast states (Delaware, Connecticut, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, and Vermont)
- This will significantly change the spread between wet and dry feed
- This will play a key role in expansion and coproduct diversification decisions

Things to come

- Increased volatility created by geopolitical actions
- More volatile freight market
- Higher priced vessel and container freight as a result of low Sulphur regulations
- More diverse coproducts from ethanol production
- Consolidation of ownership moving towards petrochemical ownership and away from farmer owned
- Continued expansion but at a slower pace
- Low Carbon Fuel rules paying an increasing role in production decisions