

DDGS: Market drivers and Platts price assessments

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Agenda

- Introduction | 2 min
- Platts DDGS prices and risk
- Price drivers and market trends
- Q&A | 5 min



Our prices underpin financial contracts

>70%

More than 70% oil derivatives contracts use Platts

>250

More than 250 S&P Global Platts price assessments are benchmarks that underpin some

More commodity contracts across global exchanges are settled against S&P Global Platts prices than any other PRA.

1,274

cleared financial contracts offered by S&P Global Platts exchange partners: Platts



Platts Agriculture Assessments

- GRAINS
- Corn CIF New Orleans
 - Corn PNW FOB
- FEED
- DDGS CIF New Orleans
 - DDGS FOB Chicago
 - Packer tallow Chicago
- OILSEEDS
- Soybeans CIF New Orleans
 - Soybeans FOB US Gulf
- BIOFUELS
- Ethanol Chicago Argo terminal
 - Ethanol NYH Barge
 - Ethanol Houston Tank
 - Ethanol California
 - Low Carbon Fuel Standard Credits
 - Renewable Identification Number
 - Biodiesel B100 SME Chicago/Houston
- RICE
- US #2 4% Broken Hard Milled FOB bulk NOLA
- RENEWABLE DISTILLATES
- Sustainable Aviation Fuel
 - Renewable Diesel

- VEGETABLE OILS
- CPO CIF Rotterdam
 - CPKO CIF Rotterdam
- SUGAR
- Western Europe Delivered
 - Europe Med Delivered
 - 45 ICUMSA in containers
- BIOFUELS
- Ethanol T2 FOB Rotterdam
 - FAME -10 FOB ARA
 - FAME 0 FOB ARA
 - PME FOB ARA
 - RME FOB ARA
 - SME FOB ARA
 - UCO CIF ARA
 - UCOME FOB ARA
- RENEWABLE DISTILLATES
- Sustainable Aviation Fuel
 - HVO

- GRAINS
- FOB Black Sea Wheat (Russia 12.5%)
 - FOB Black Sea Wheat (Ukraine 11.5%)
 - FOB Azov Sea Wheat
 - FOB Black Sea Corn
 - CIF Marmara Wheat
- VEGETABLE OILS
- Sunflower Oil FOB Black Sea Ukraine

- GRAINS
- CFR North East Asian Corn
- BIOFUELS
- Ethanol Grade B CFR Ulsan

- OILSEEDS
- CFR China Soybeans
 - China Soybean Crush Margin

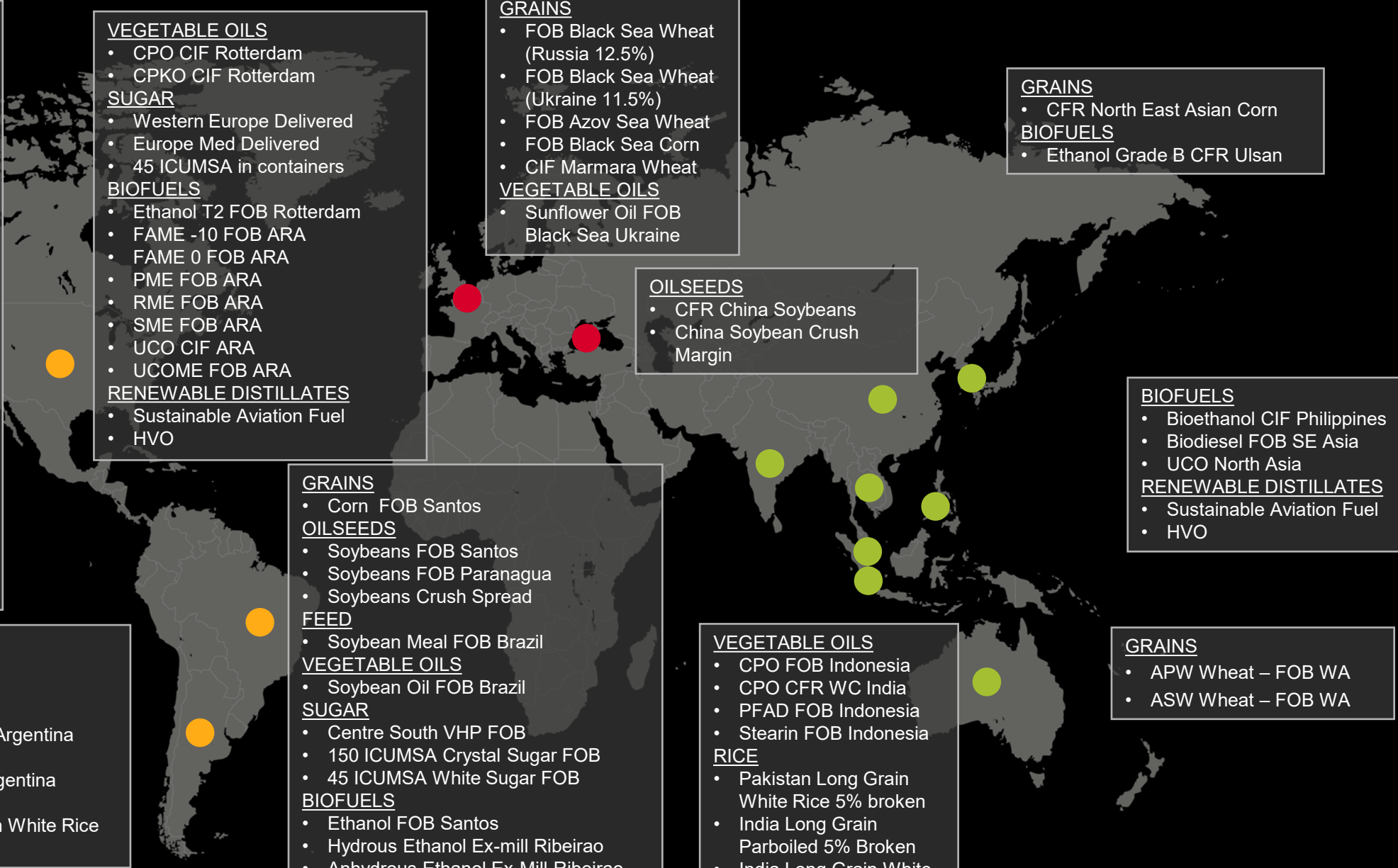
- BIOFUELS
- Bioethanol CIF Philippines
 - Biodiesel FOB SE Asia
 - UCO North Asia
- RENEWABLE DISTILLATES
- Sustainable Aviation Fuel
 - HVO

- GRAINS
- Corn FOB Up River
 - Corn PMX cargo
- FEED
- Soybean Meal FOB Argentina
- VEGETABLE OILS
- Soybean Oil FOB Argentina
- RICE
- Argentina Long Grain White Rice 5% broken

- GRAINS
- Corn FOB Santos
- OILSEEDS
- Soybeans FOB Santos
 - Soybeans FOB Paranagua
 - Soybeans Crush Spread
- FEED
- Soybean Meal FOB Brazil
- VEGETABLE OILS
- Soybean Oil FOB Brazil
- SUGAR
- Centre South VHP FOB
 - 150 ICUMSA Crystal Sugar FOB
 - 45 ICUMSA White Sugar FOB
- BIOFUELS
- Ethanol FOB Santos
 - Hydrous Ethanol Ex-mill Ribeirao
 - Anhydrous Ethanol Ex-Mill Ribeirao
 - Anhydrous Ethanol DAP Suape
 - Grade B Ethanol FOB

- VEGETABLE OILS
- CPO FOB Indonesia
 - CPO CFR WC India
 - PFAD FOB Indonesia
 - Stearin FOB Indonesia
- RICE
- Pakistan Long Grain White Rice 5% broken
 - India Long Grain Parboiled 5% Broken
 - India Long Grain White Rice 100% Broken

- GRAINS
- APW Wheat – FOB WA
 - ASW Wheat – FOB WA

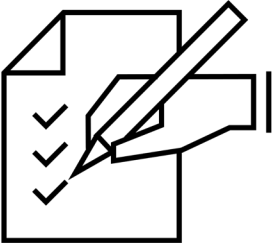


Our assessments fulfil diverse business needs

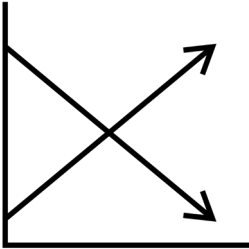
Platts price assessments are the basis for billions of dollars of transactions annually in the physical and futures markets:



Buyer, sellers and traders use them as a basis for pricing spot transactions and term contracts.



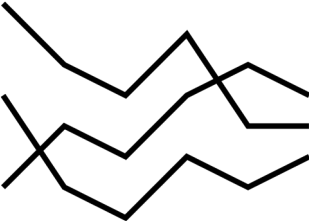
Risk managers use them to settle contracts and to place a market value on the products they hold.



Analysts use them to identify trends and patterns in supply and demand.



Governments reference them to formulate royalty payments and retail prices.



Commodity exchanges, clearing houses and financial institutions use them for listing, trading and clearing purposes.

Robust Assessments

Key principles and characteristics of
Platts price assessments



What is a robust price assessment?

- Consistently reflects market value
- Transparent and robust methodology
- Open to market scrutiny and feedback
- Broad industry participation
- Powered by rich, granular and verifiable price data
- Auditable price assessment process
- Independent, impartial



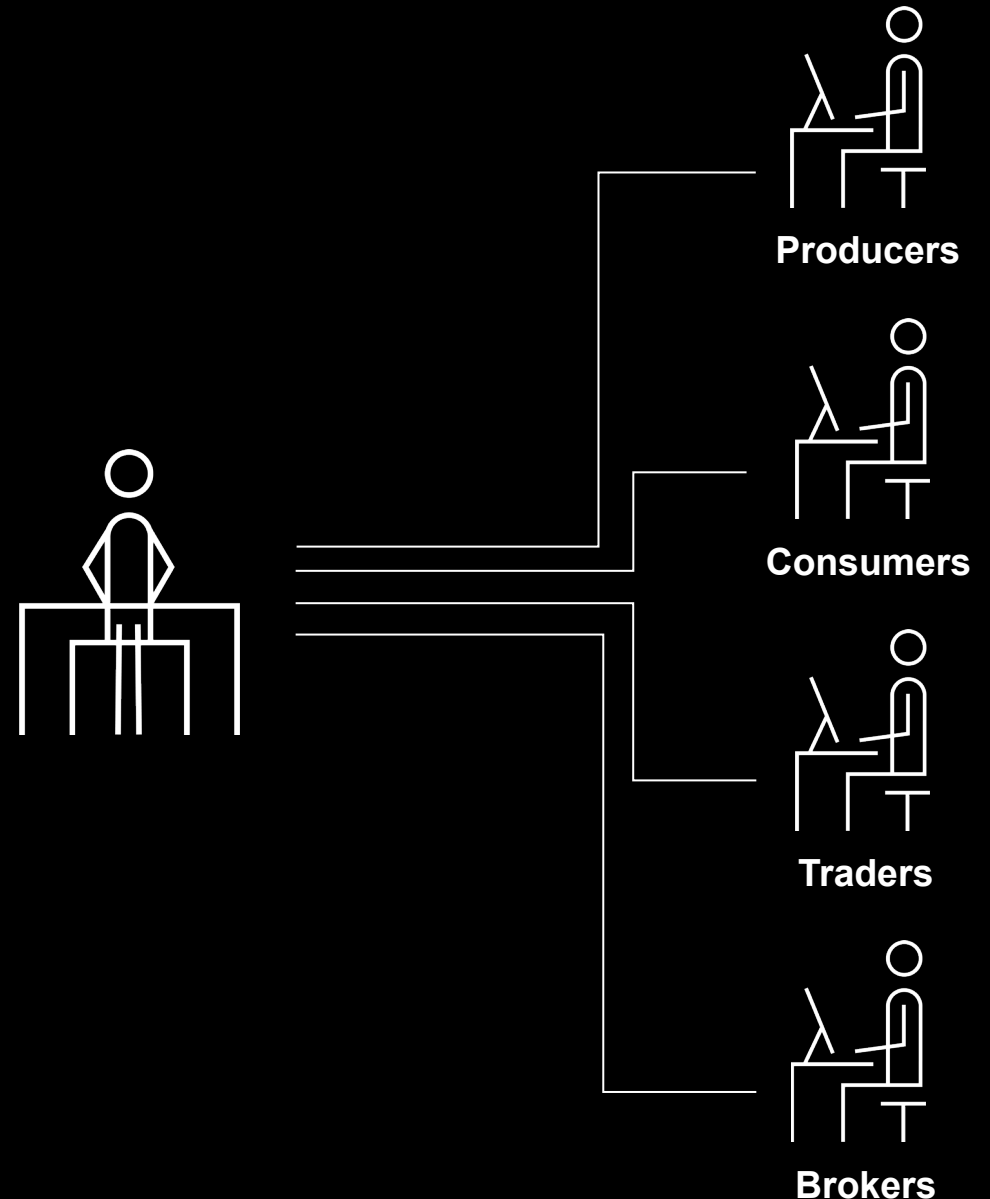
Assessment approach: source MOC

Structured end of day process closes 1:30 Houston

Indications tested in the market
Platts assessment process is designed to provide price assessments that properly reflect outright and spread values.

No new hears accounted for after cut-off time
– similar to eWindow assessment -enhancing:

- **Clarity** over the point in time reflected in the assessments
- **Consistency** throughout markets allowing assessments of both outright and spread values
- **Accuracy and relevance** by aligning assessment to periods of highest trading activity



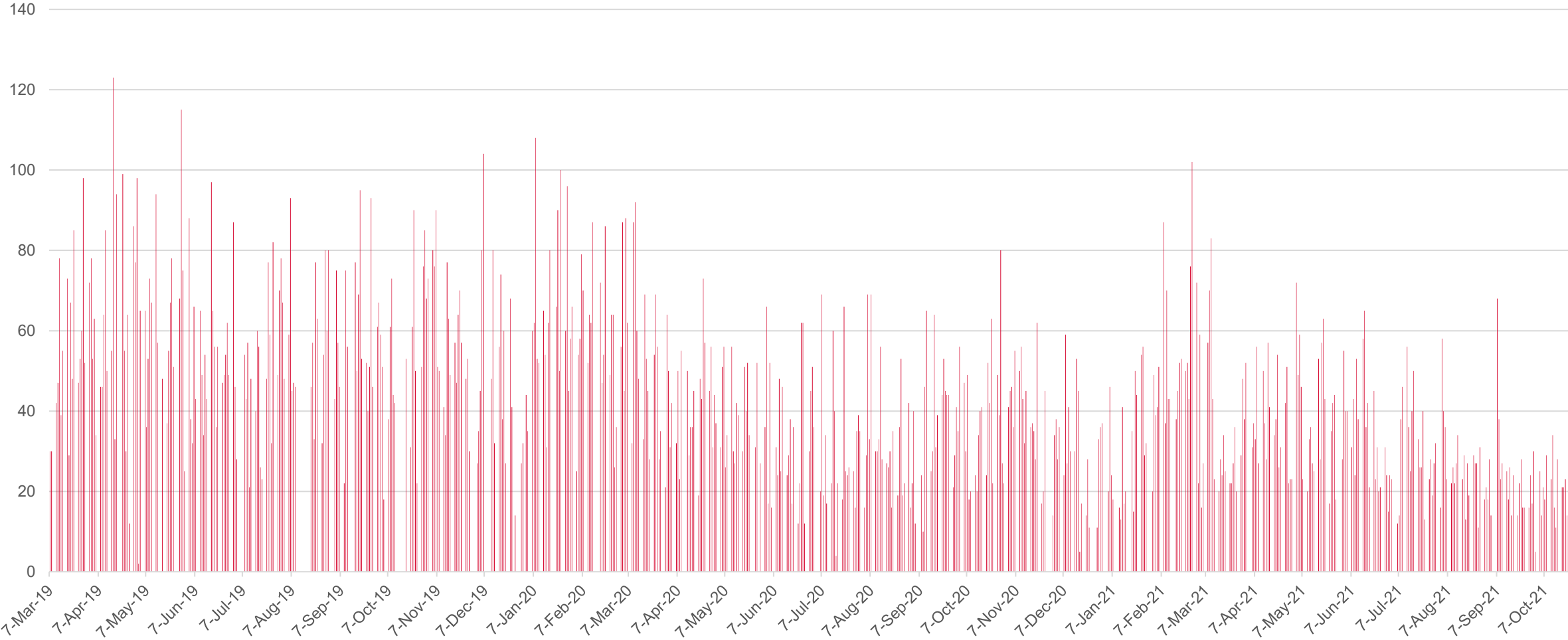
Producing the final assessment

Platts Price Assessment Methodology is built on two fundamental principles:

- **Price** as a function of **Time**
- **Transparency**

Daily price points gathered from the market, published and used to set assessment

Number of heards per day

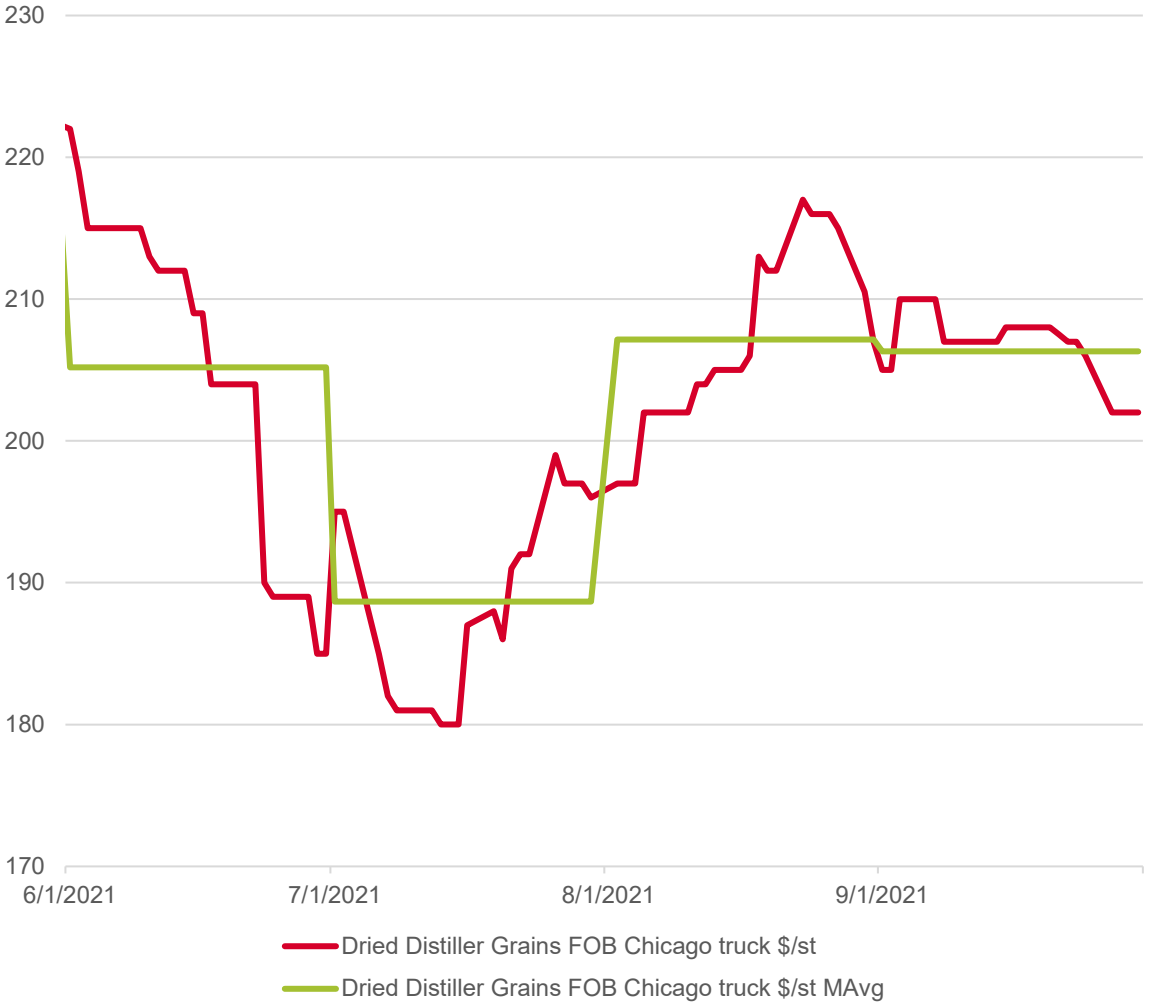


Examples of Indexing and Risk Management

- Pricing a physical contract:
 - Customizable, for example: 5 day average, 10 day average, weekly, or monthly settlement
 - Uses average of Platts settlement price to establish contract price
 - Premium or discount to settlement can be negotiated
 - I.E. Average of Platts FOB Channahon Assessment for 5 business days beginning 6/22, ending 6/26 + \$1/st
- Pricing a financially-settled contract:
 - Using Platts settlement price to settle a financial swap
 - Only cash flows exchanged, not physical delivery
- Risk management: using Platts settlement for Mark-to-Market accounting, P&L statement

Fixed price and floating price

DDGS FOB Chicago truck daily and month average



Example lifecycle of an assessment

Physical Price assessment

- Daily price assessment based on physical market bid/offers trades
- Price information gathered through survey method and published in real time

OTC financially settled broker contracts

- Brokers within the market build and OTC swap contract that financially settles on a month average Platts assessment
- Bilateral credit

+200k mt

OTC contracts traded by brokers

+200k mt

bilateral contracts traded by financial institutions

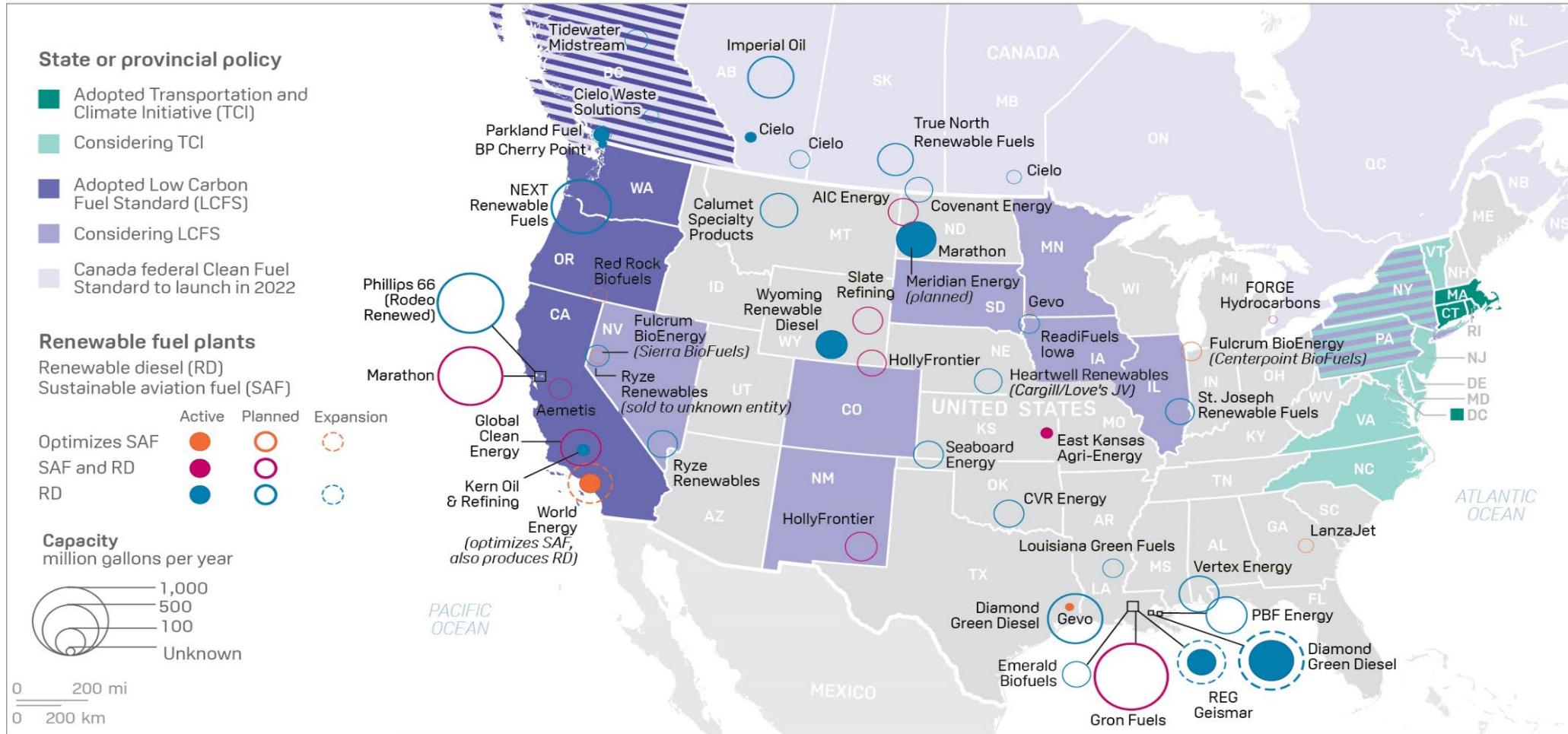
Exchange cleared financially settles futures

- Black Sea Wheat Financially Settled (Platts) Futures Settlements
- Australian Wheat FOB (Platts) Futures Settlements
- Black Sea Corn Financially Settled (Platts) Futures Settlements
- South American Soybeans (Platts FOB Santos)

DDGS market drivers and pricing trends

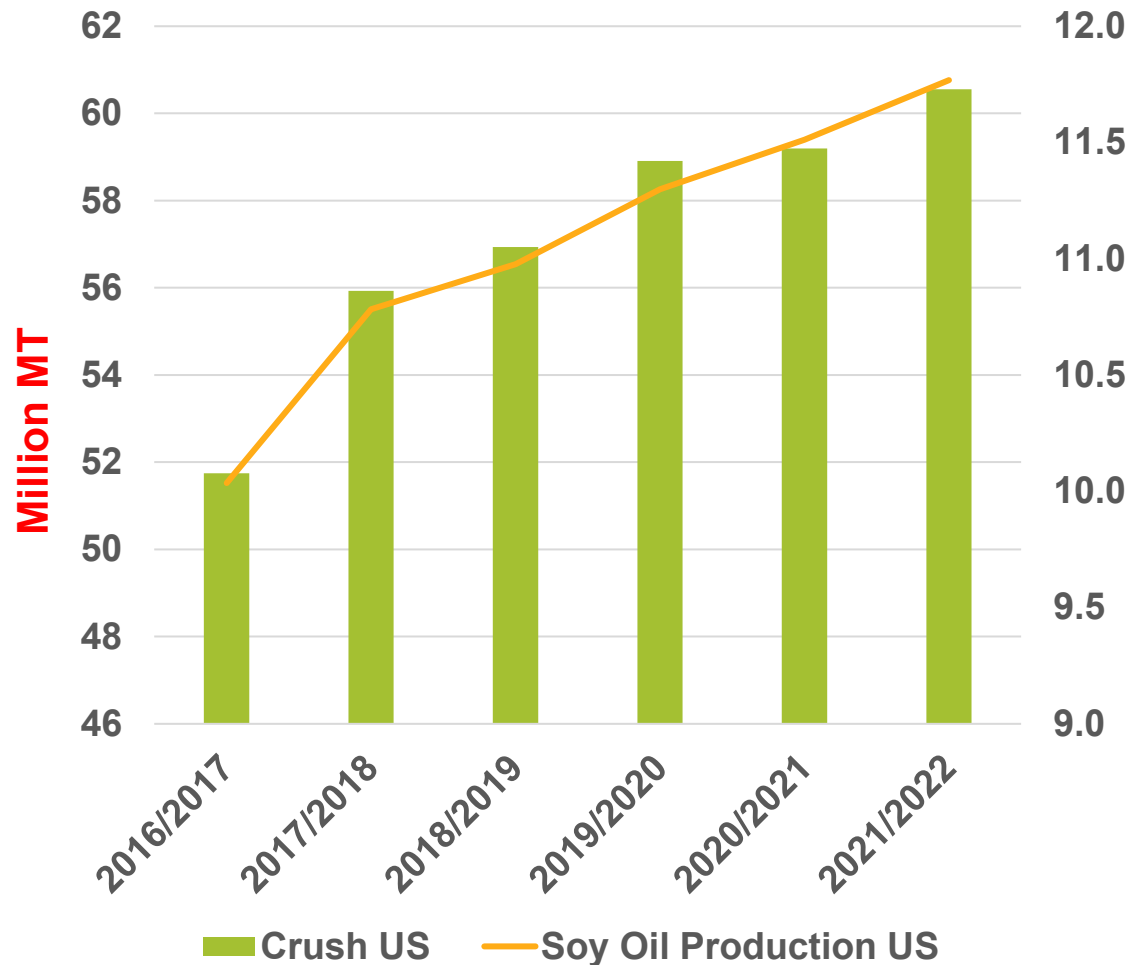


Refiners jump on renewable fuel bandwagon in response to strong incentives for renewable diesel, sustainable aviation fuel



Source: S&P Global Platts; EIA

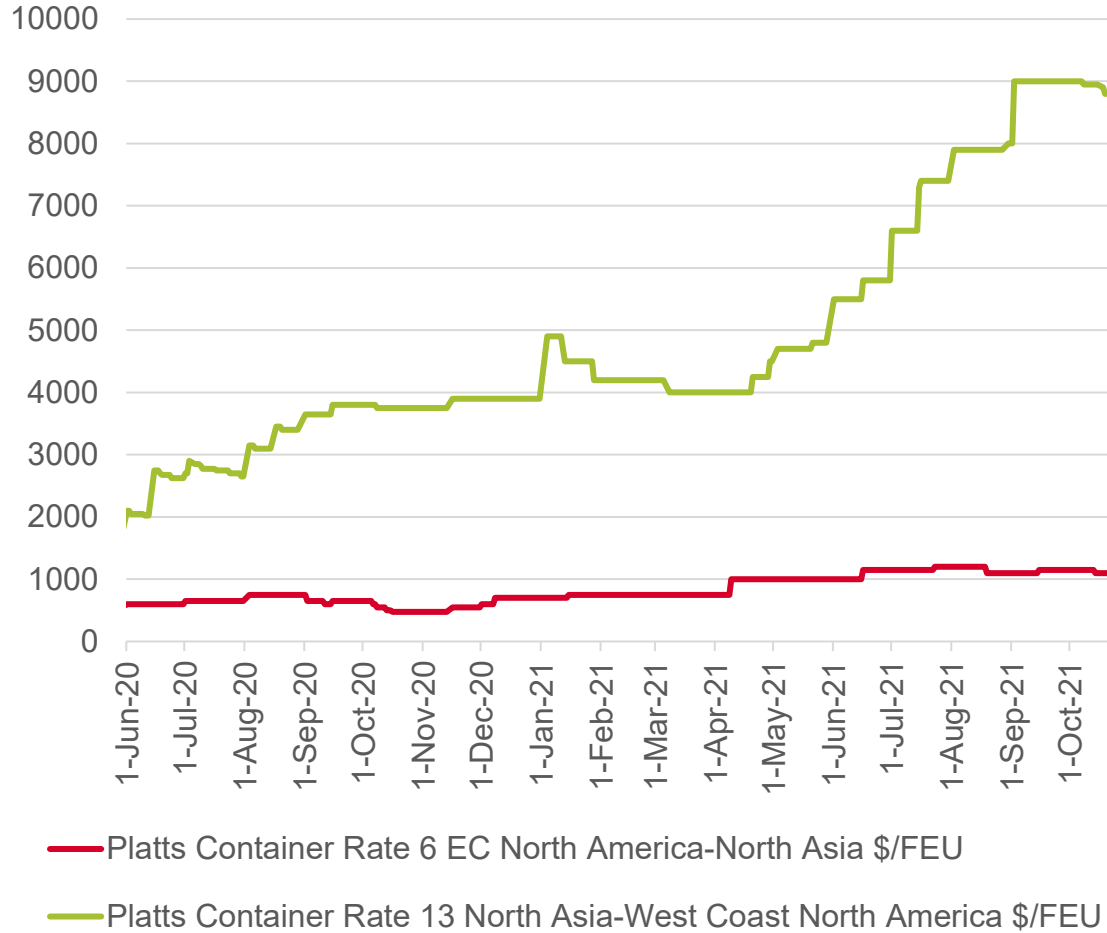
US soybean crushers stretched to their limits as vegetable oils take center stage in renewable fuel production



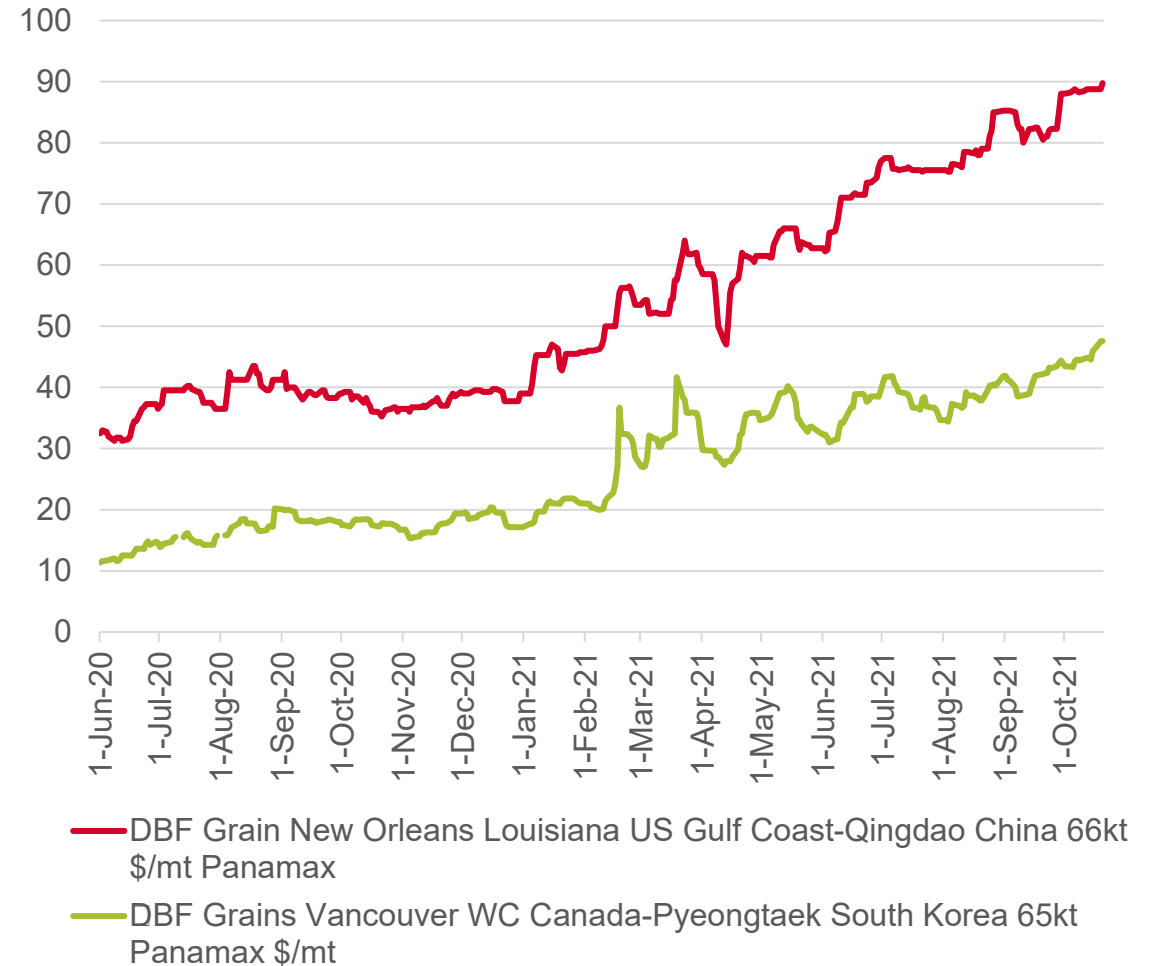
- “Domestication” of US soybean production
- At 2.3 billion bushels, US soy crush is near capacity with new plants coming online in 2022
- US soy oil demand for renewable fuel will surpass 12 billion lbs. in 2021-22, up 40% since 2019-20; soy oil exports down 50% in same period
- Crushers will also produce meal
- Corn oil also key renewable feedstock

Rising freight prices challenge exports

Container rates

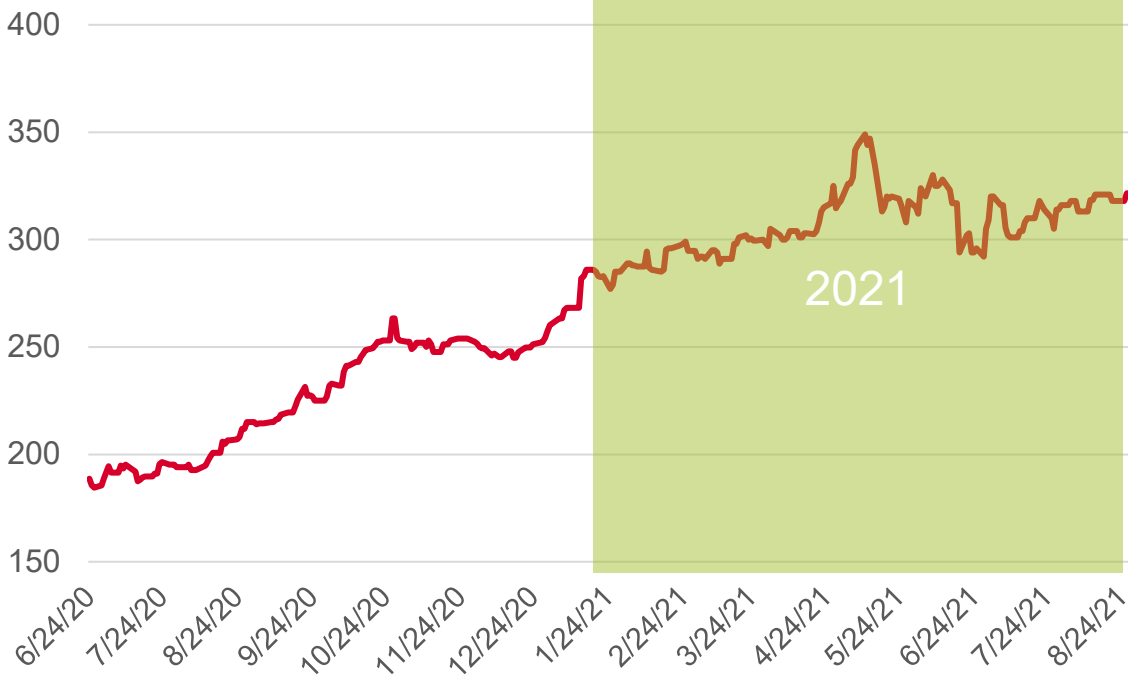


Grain bulk shipping

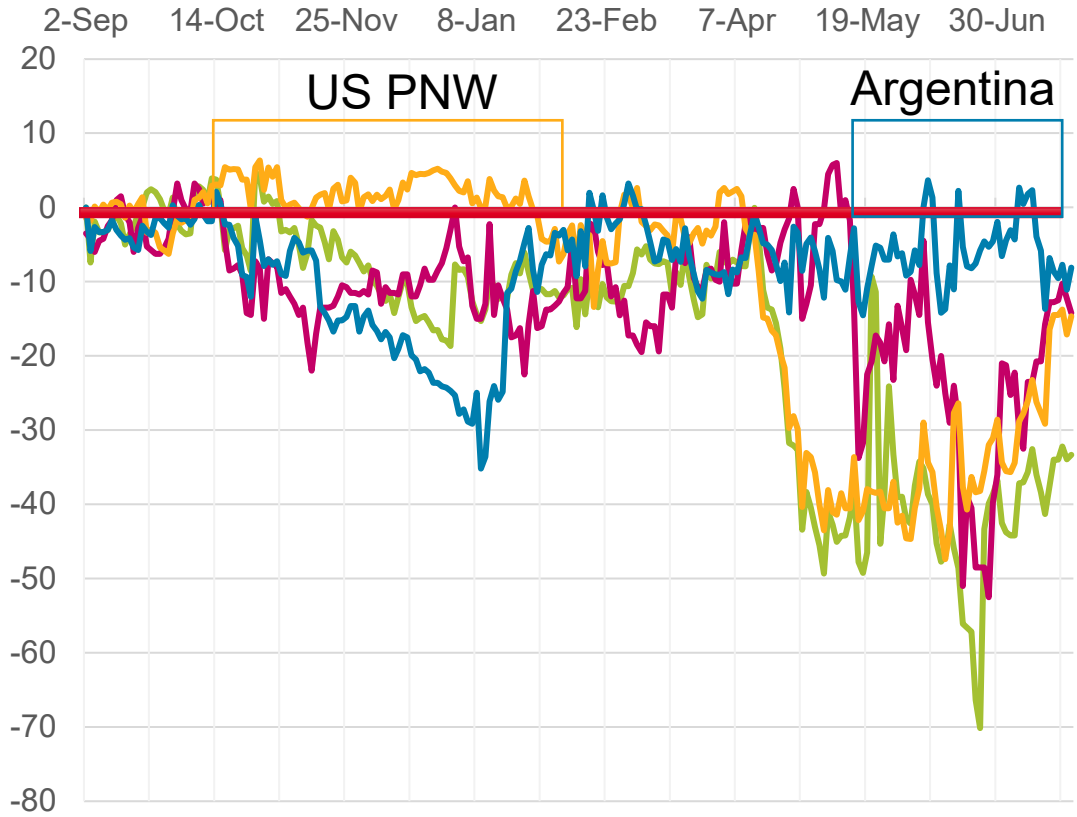


Corn Rally Supported by Freight

CFR NE Asia Corn



	Average 2020	Average 2021	Change Y-O-Y by mid August
CORN	\$212	\$303	42%
FeedWheat	\$260	\$282	9%



- US Gulf Margin
- PNW Margin
- Ukraine Margin
- Argentina Margin

South Korea Q1 buying pace slow at 2021 start but pace picks up

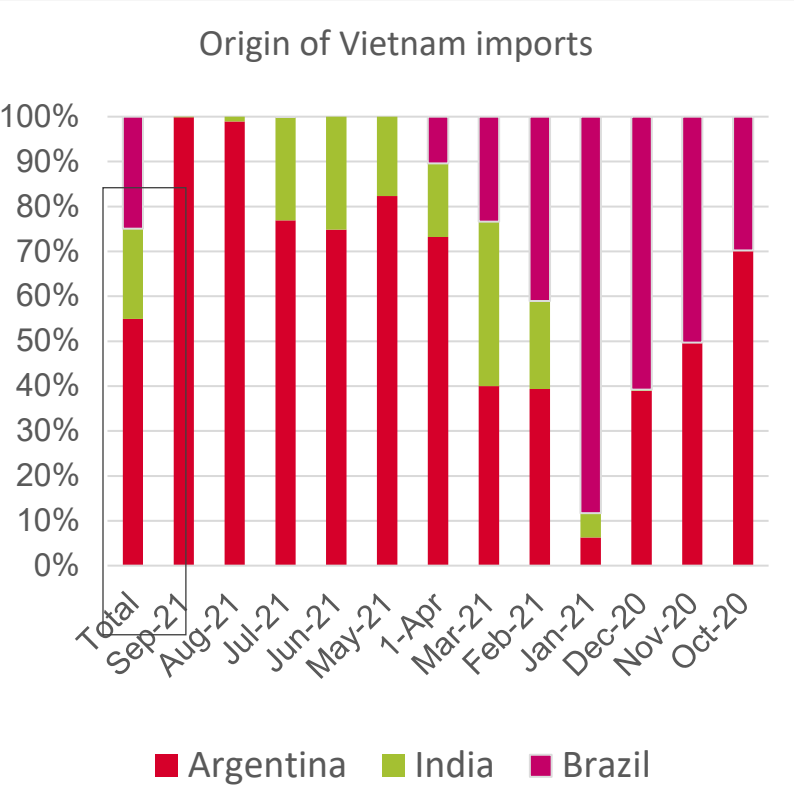
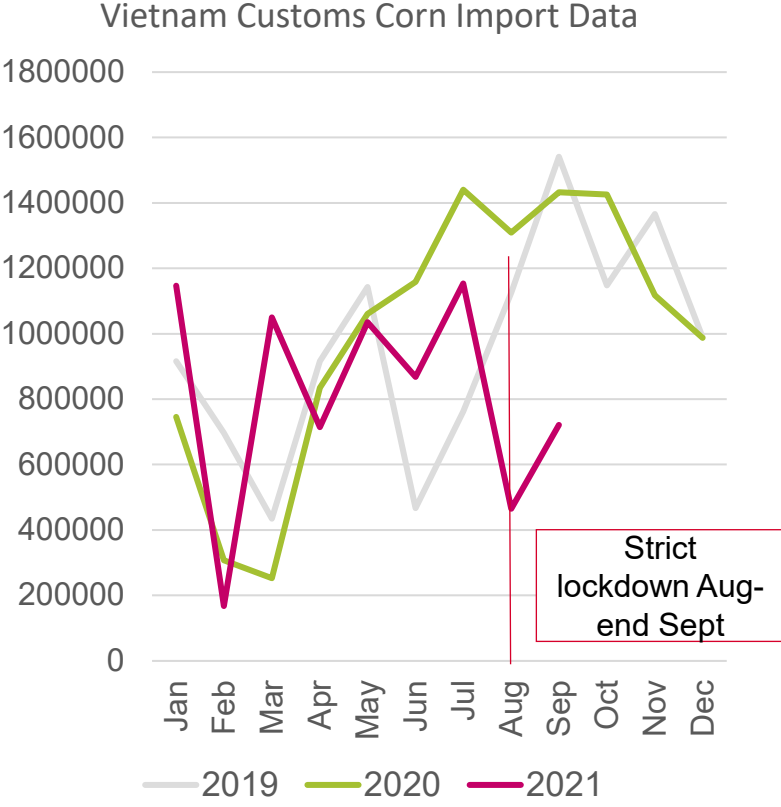
H1 2020	H1 2021	%	H2 2020	H2 2021	%
5.81 mmt	6.14 mmt	+6	4.4 mmt	4.8 mmt	-8%

Corn arriving into Korea 2021



- Q1 2021 pace lagged 2020, buyers could not fathom the \$100/mt annual increase in prices
- Aug saw return of buying but paying CNF basis rather than flat prices as a hedge
- In Q1 and Q2, Feed wheat demand substituting corn, purchasing done up to April arrival.
- FW / corn spread positive, switch back to corn

Vietnam 2021 feed demand hit by new waves of COVID restrictions



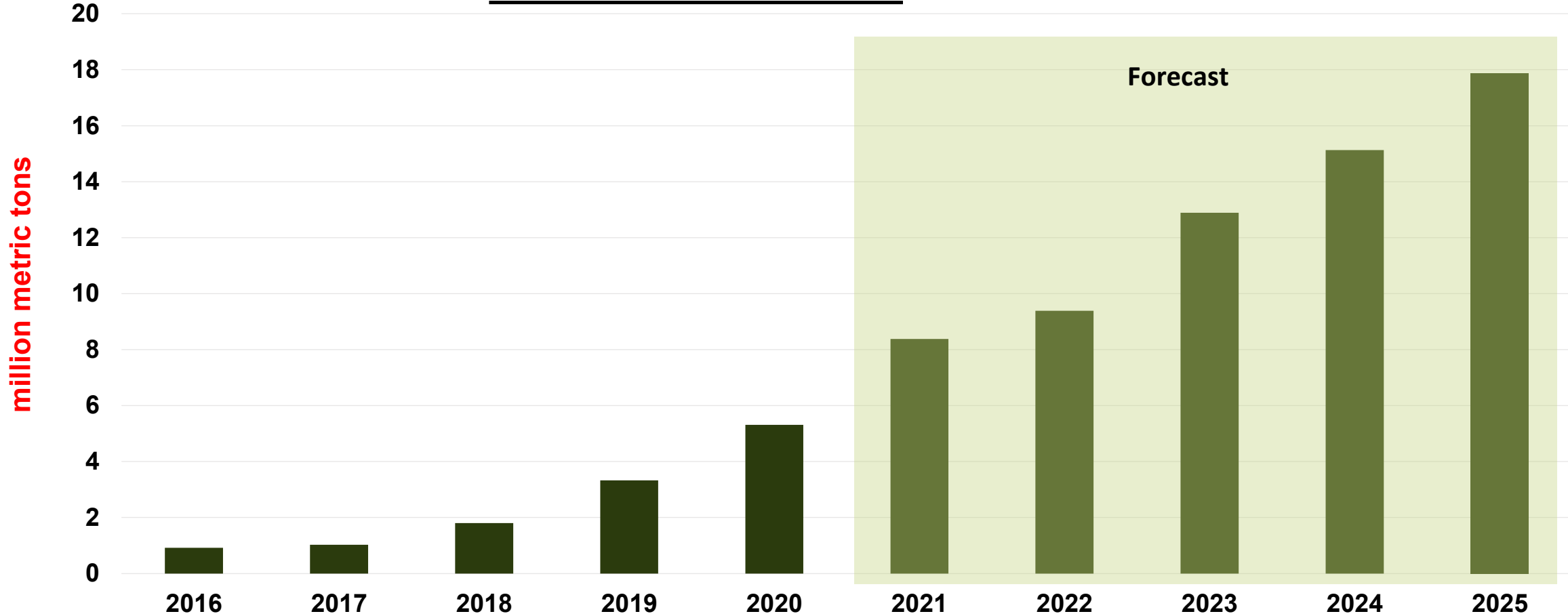
Jan-June	Corn Imports
2019	4.57 mmt
2020	4.41 mmt (ASF)
2021	4.99 mmt (YOY + 13.2%)

Q3	Corn Imports
2019	3.4 mmt
2020	4.2 mmt (ASF)
2021	2.4 mmt (YOY - 43%)

Source: Vietnam General Statistics Office

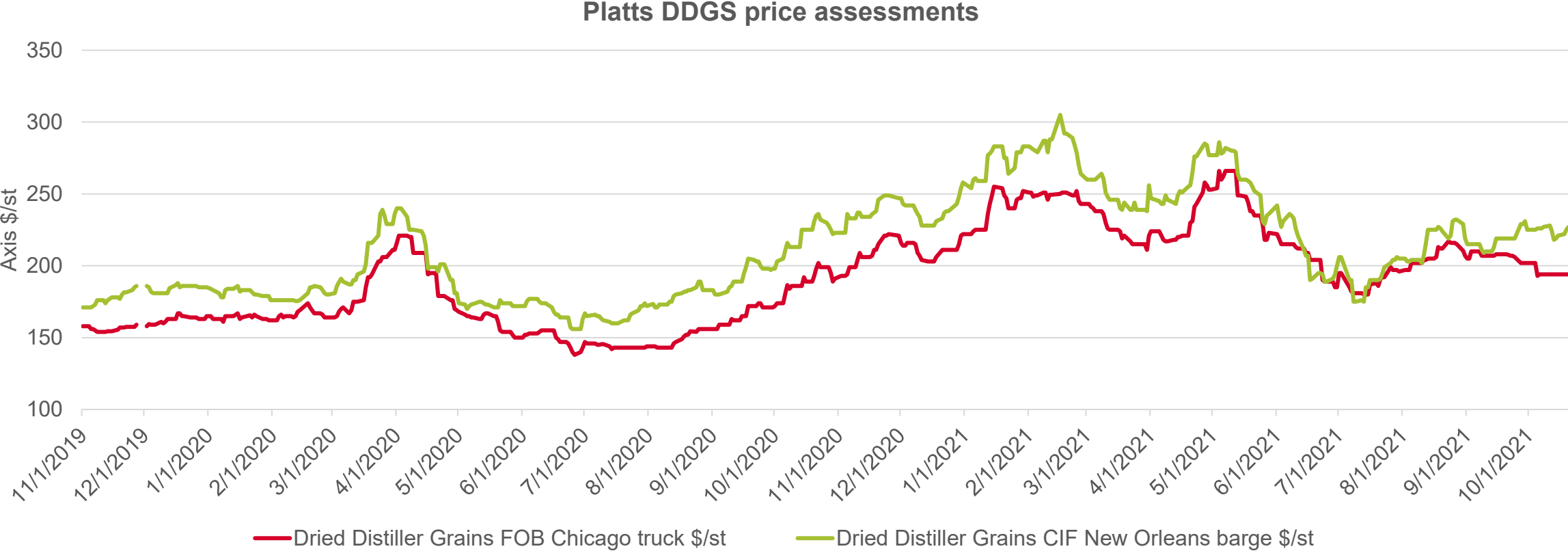
Brazil's corn ethanol output growing exponentially. The expansion is needed to help meet the country's decarbonization goals

Brazil: Corn to ethanol use



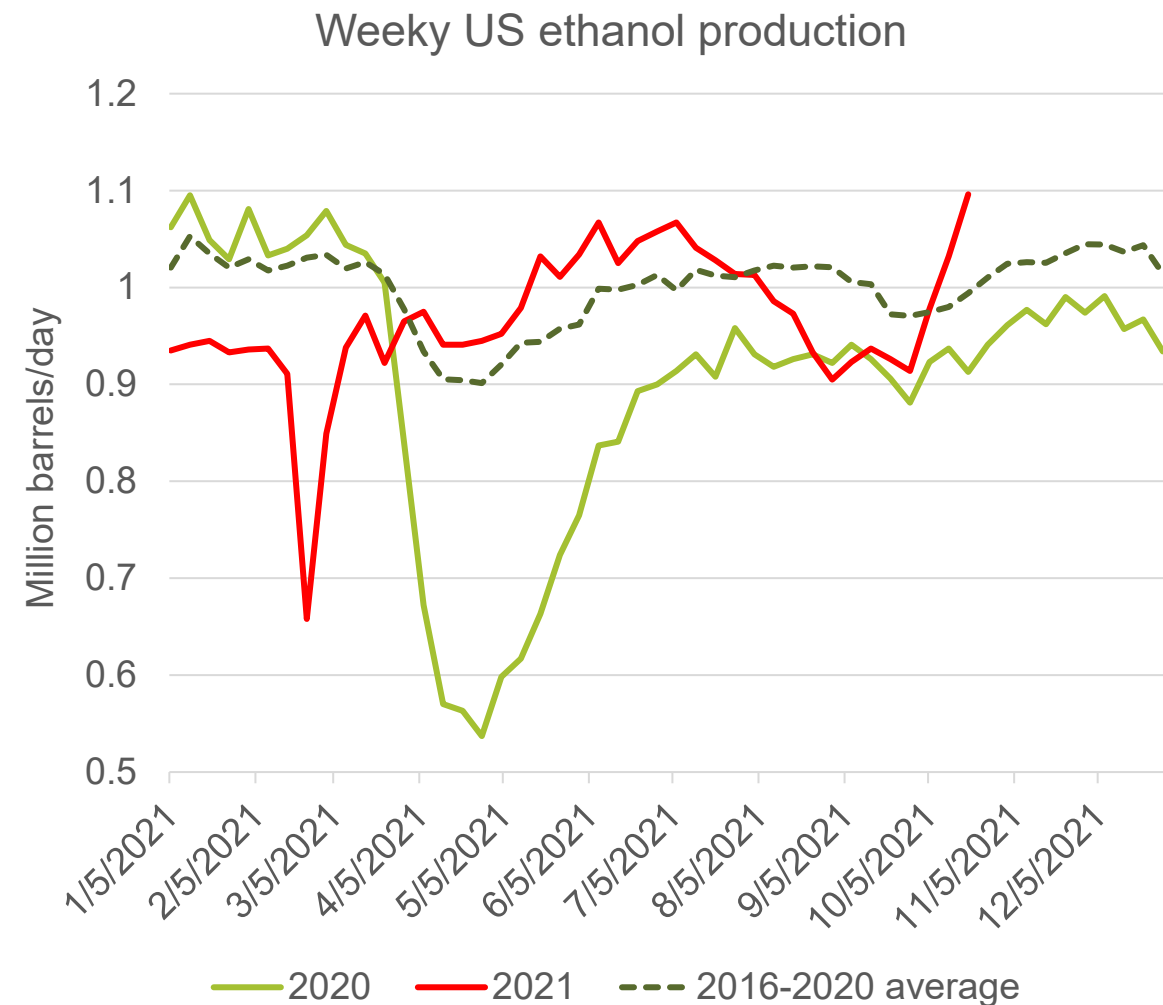
Source: UNICA, Platts Analytics

Platts outright DDGS values

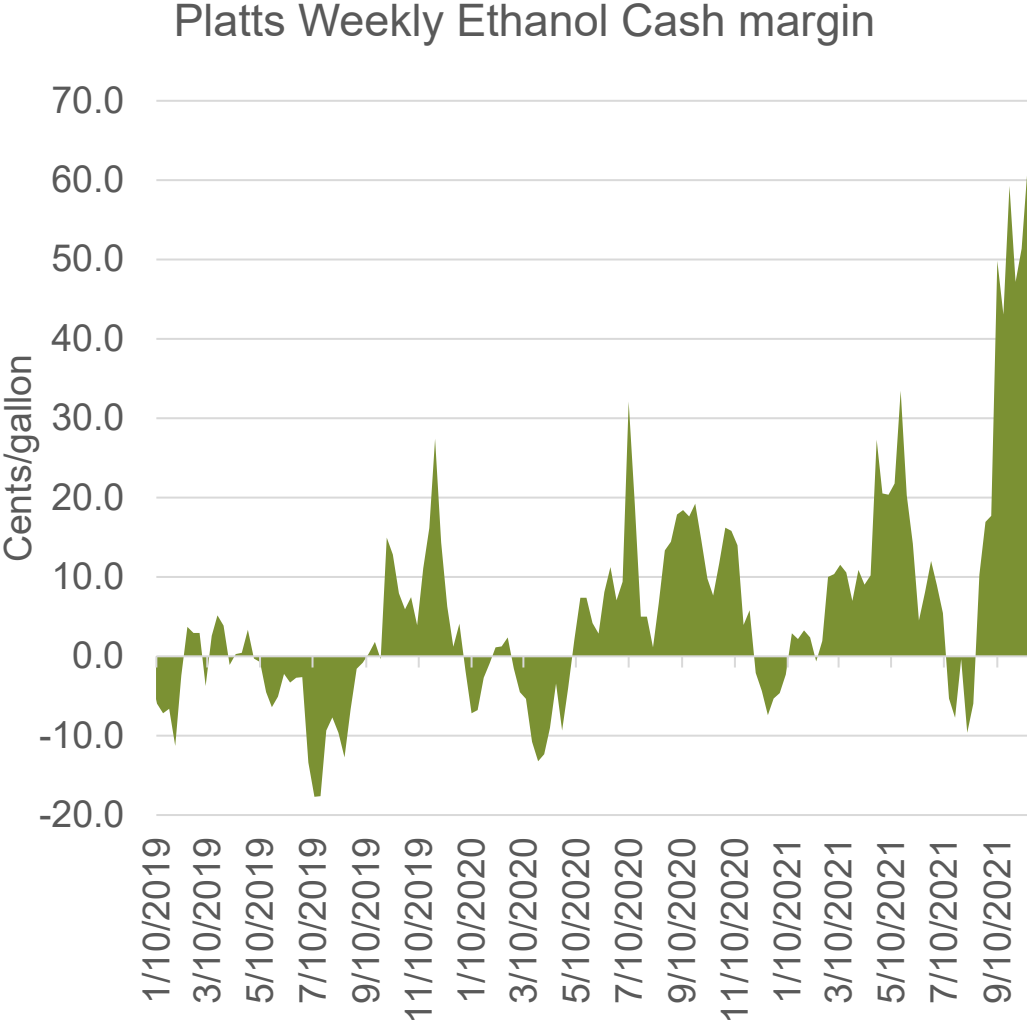


- Last 12 months correlation between CBOT futures and DDGS Channahon trucks: 27%
- Last 12 months correlation between CIF NOLA corn and CIF NOLA DDGS Channahon trucks: -2%

Ethanol production and margin



Source: S&P Global Platts Analytics, EIA



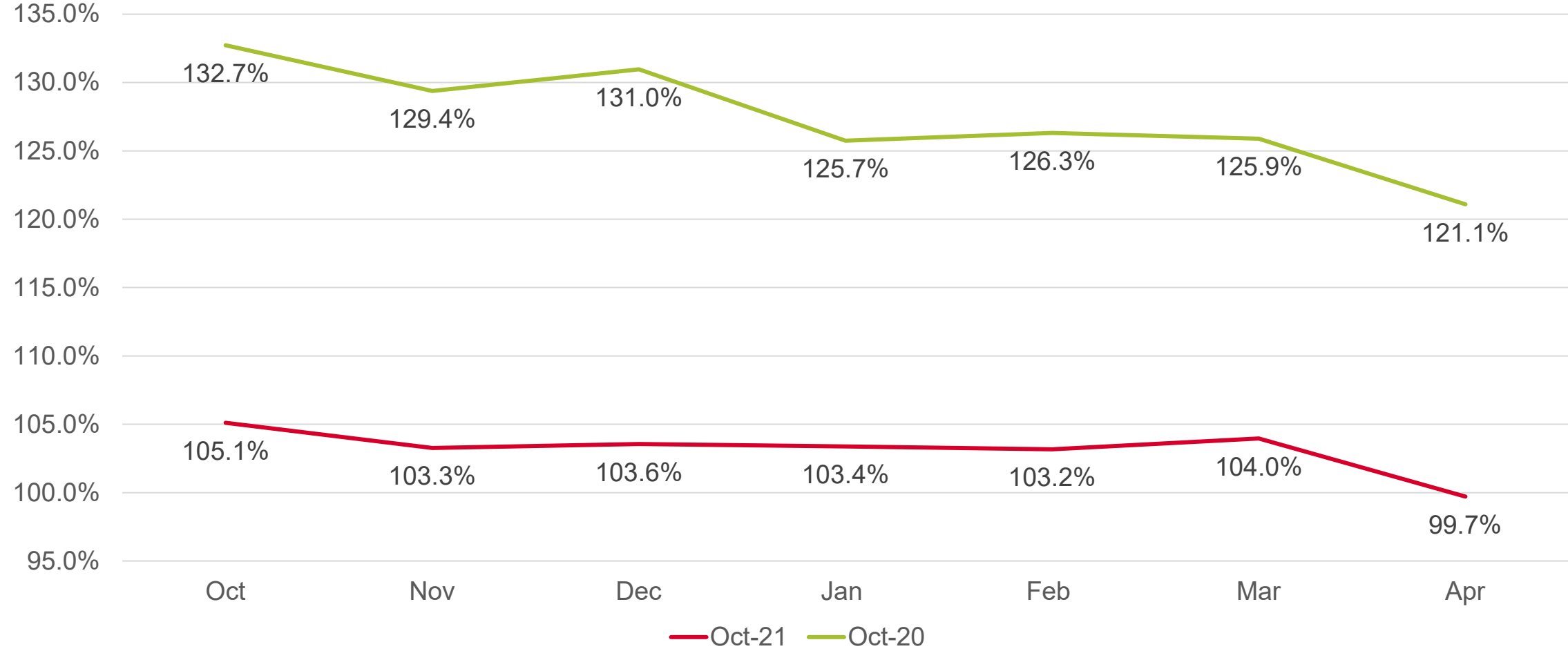
DDGS CIF NOLA R.V. to Corn

Platts CIF NOLA DDGS to CIF NOLA corn relative value



DDGS well positioned heading into winter

CIF-DDGS Relative Value to CIF-Corn FORWARD CURVE



**YOU ARE MORE THAN WELCOME,
to **participate** in the discovery-price process!**

Q&A