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Argus Biofuels Outlook

A detailed monthly outlook forecasting demand and prices for environmental credits, renewables and key biofuels, including biodiesel, renewable diesel and HVO, ethanol, sustainable aviation fuel and renewable feedstocks, up to 12-months in the future.

With evolving government environmental regulations and energy markets, the Argus Biofuels Outlook will help you stay ahead of curve and make more profitable decisions with Argus' proprietary analysis and market insights.

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Issue 21-07

Wednesday
14 July 2021

Argus Biofuels Outlook

Overview

The US refining and biofuels sectors are anxiously awaiting the much-delayed 2021 Renewable Volume Obligation (RVO). Leaked guidance suggests that mandates will be trimmed to reflect the impact of Covid-19 on transport fuels. Renewable Identification Number (RIN) prices have more than doubled this year as a lack of regulatory guidance has left obligated parties to guess at compliance strategies, and we expect these prices to continue to be supported as uncertainty surrounds the handling of small refinery exemptions (SREs), as D4 Rins will be needed to cover any D6 shortfall, even if 2021-22 blend obligations are released on time.

Regulatory uncertainty also surrounds the European biofuels industry, and developments over the next few months will be key to understanding future demand. The transposition of the latest Renewable Energy Directive (RED II) into national laws is delayed across EU member states, with less than half having completed the process by the 1 July recommended deadline, and the European Commission was expected to present proposals for a further revision of the renewables directive by mid-July. In the meantime, several countries are establishing blending mandates that match or supersede RED II targets, and approving sub-targets for advanced/waste-based biofuels, and/or for the mandatory use of sustainable aviation fuel (SAF).

Key biofuel prices, prompt				$/t
	May 21	Jun 21	Jul 21e	Aug 21e
Europe				$/t
RED FAME 0°C CFPP fob ARA range	1,576	1,605	1,500	1,426
RED Rapeseed OME fob ARA range	1,595	1,614	1,519	1,445
RED UCOME fob ARA range	1,694	1,760	1,769	1,830
RED HVO fob ARA range (Class I)	1,713	1,891	1,853	1,816
RED HVO fob ARA range (Class II)	2,059	2,297	2,136	2,093
SAF fob ARA range (Class II)	2,467	2,699	2,667	2,613
Ethanol 68pc GHG fob ARA range	978	1,004	1,002	996
Ethanol 50-60pc GHG fob ARA range	975	1,001	999	993
US (biofuels)				¢/USG
Ethanol Chicago (Argo in-tank transfer)	254	239	tbd	tbd
Ethanol USGC fob Houston	264	248	tbd	tbd
B100 SME Chicago (Argo in-tank transfer)	588	586	tbd	tbd
US (feedstocks)				¢/lb
UCO USGC rail/truck del	57	60	tbd	tbd
Tallow, bleached fancy Chicago del	55	58	tbd	tbd
Asia-Pacific				$/t
RED HVO Class I Singapore fob	1,656	1,840	1,801	1,762
RED HVO Class II Singapore fob	2,002	2,246	2,084	2,039
UCO China fob	1,140	1,179	tbd	tbd

EUROPE

Summary

This month

Biodiesel, hydrotreated vegetable oil (HVO) and ethanol prices are expected to remain firm as agricultural commodities remain in tight supply and amid record-high prices, although on a monthly average basis, July values would still post small declines compared with June for most biofuels.

The month ahead

Increased driving activity during the summer months should sustain demand, even though year-on-year increases would be small, as summer 2020 was not severely affected by lockdown measures in most European countries. Ethanol demand will be boosted by mandatory E10 grades in Sweden in August and in the UK in September.

Next three-six months

Crop-based biodiesel should see a sharp decline in prices, driven by a correction in agricultural feedstocks to typical levels at the beginning of the European harvest. But waste-based feedstocks and biofuels should face smaller drops on rising interest and a more favourable framework in countries with double-counting systems in place.

Six-12 months forward

Most European countries, including major markets such as Germany, are still in the process of transposing EU RED II into national law, leading to new blending mandates that will take place from January 2022, or at a later date.

Regulation

Draft RED revision expected to shift to GHG targets

The European Commission was expected on 14 July to present legal proposals revising the EU's current 2018 renewables directive and aligning other legislation with the new 55pc greenhouse gas (GHG) emissions reduction target by 2030. The EU's current 14pc target share for renewables in the transport sector by 2030 could change to a GHG intensity target, albeit on the basis of a total 26pc share.

Other significant elements include maintaining a lower trajectory for the advance biofuels sub-target of at least 0.2pc in 2022, 1pc in 2025 and 3.5pc in 2030 — lower than a 5.5pc target included in previous drafts. The current draft proposal also appears to have removed the provision for advanced biofuels to be counted as twice their energy content, although biofuels from non-food and feed crops would still be counted at 1.2 times their energy content. EU member states and the European Parliament have to agree on a final text of the revised renewables law.

RED II delayed implementation across the EU adds uncertainty to the biofuels industry

The transposition of the current 2018 RED II into national laws is severely delayed across EU member states, with only 12 countries having completed the adoption and notified the legal measures to the European Commission as of mid-July.

Adding to the uncertainty is a commission public consultation until 27 July, with possible future changes, of a draft regulation on certification schemes that should then enter force with retroactive application from 1 July. Firms and voluntary certification schemes need time to adapt to new rules, industry associations say. They note that contracts have been signed on the basis of existing rules but feedstock harvested and biofuels manufactured before 1 July still represent the largest market share after the transposition deadline.

Germany's RED II national law to be completed in the coming weeks

In May, Germany's parliament passed its new biofuels law that targets a 25pc GHG emissions reduction by 2030, from a current 6pc. Other highlights of the standard are a 4.4pc cap in crop-based biofuels, a ban on palm oil-based biofuels in 2023, a 2.6pc minimum share for biofuels from advanced feedstocks (Annex IX Part A) and a cap of 1.9pc on waste-based biofuels from feedstocks listed in Annex IX part B. But the law excludes the use of palm oil mill effluent (POME), currently listed in Part A, whereas other advanced feedstocks would benefit from double-counting.

The law is expected to pass in the German Bundesrat in the coming weeks, and adopted by the government to take effect from 1 January 2022.

Netherlands and Hungary approve RED II ahead of July deadline

The Netherlands became the latest country to transpose RED II into national law in late June. The new legislation will be in place from 1 January 2022 and assumes a linear growth of the

Fundamentals

Agricultural markets

High volatility in rapeseed prices during June

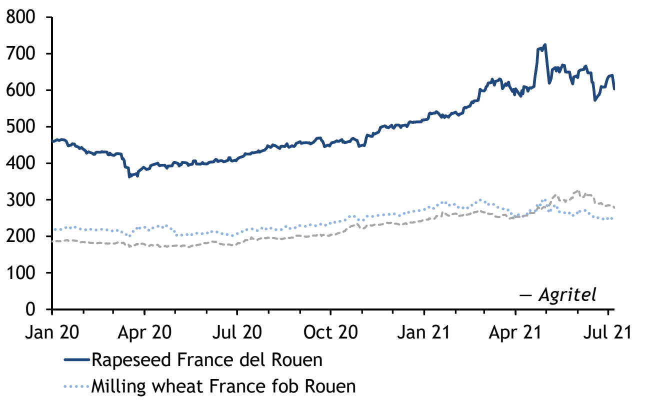
After reaching record highs at the end of April, rapeseed prices have been very volatile. On 7-17 June, the market lost €70/t but recovered most of it towards the end of last month, before falling by around €30/t in the first week of July. Higher summer volatility is a feature of rapeseed and other products in the oilseed complex. Rapeseed typically follows Canadian canola, where prices have risen sharply over the past few months amid extremely hot weather in June. But rapeseed prices could be capped by the higher availability of vegetable oil, unless US soybean yields drop, which could tighten supply.

Expectations for the European harvest are mixed. Germany is on track to produce more grain and rapeseed in 2021-22, but rainfall across the north and east of the country is needed to maintain the higher expectations. French rapeseed output in the upcoming year is projected to hit its lowest in 20 years amid declining planted areas and unfavourable weather. Rapeseed output in 2021-22 could reach 2.92mn t, down from 3.25mn t this year and its lowest since 2001-02.

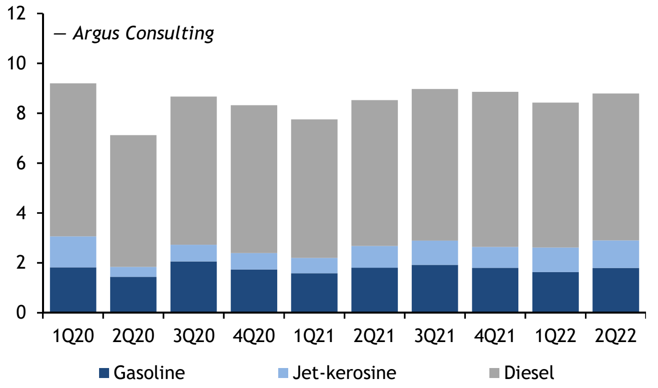
Corn, wheat prices to remain firm

Volatility has been significant in the grain market, and this should remain the case until trends and yields are confirmed in the northern hemisphere. Low corn output in Brazil is likely to support French corn prices during the summer, even though a drop in demand is expected as food producers shift towards wheat and barley. Tight inventories and high demand should support wheat prices in the short term, although production is under strong expectations in Germany (+5pc in 2020-21) and in the Black Sea. But uncertainties around US output can still pressure supply over the next quarter, as well as quality concerns owing to high rainfall in some parts.

Biofuel agricultural feedstock prices *$/t*



European fuel demand *mn b/d*



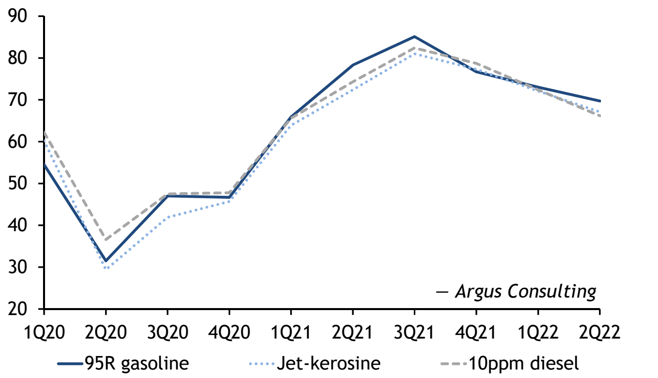
Fossil fuel demand and prices

The gradual relaxation of Covid-19 measures in parts of Europe has helped boost oil demand, with macroeconomic indicators showing rising activity. But road fuel demand remains below pre-pandemic levels and jet fuel sales are significantly down on 2019. And a worsening Covid-19 trajectory looks poised to delay a more rapid lifting of mobility and social mixing restrictions. Northwest Europe gasoline margins look set to firm in July, supported by high demand from the US (*see US fossil fuel demand and prices*).

Diesel pricing has been below gasoline pricing for four months, a reversal of the price relationship in 2019. Low demand for jet fuel has dragged down the entire middle distillate complex, while European car mileage has been hit by the alpha variant of Covid-19 at the beginning of this year and more recently the delta variant. The result is a persistent inability to draw down distillate stocks. This pattern looks set to become entrenched over coming months.

But overall, crude prices are firming on tightening OECD inventories, a US demand rebound, a hiatus in the US-Iran nuclear talks, and positive sentiment on vaccine roll-outs.

European fuel prices *$/bl*



NORTH AMERICA

Summary

This month
The Environmental Protection Agency (EPA) is expected to announce scaled-back blend mandates for 2021 and 2022, as the available blend pool was reduced amid Covid-19 policies.

The month ahead
We expect RIN markets to continue to be supported amid uncertainty surrounding the handling of SREs, as D4 RIN will be needed to cover any D6 shortfall, even if 2021-22 blend obligations are released on time.

Next three-six months
SREs remain the key unknown variable for 2021, as the US Supreme Court's decision opens the door for many refiners to file SRE requests. A worst-case scenario would require fully depleting banked RINs to meet 2021 compliance. Gasoline demand could rebound materially during the fourth quarter as many corporations are poised to initiate return-to-office policies, much of which involve flexible work from home (WFH) schedules.

Six-12 months forward
Looking forward, the progress of Covid-19 and its variants remains a chief unknown, dictating the upper and lower bands for any forecasting efforts. The return of China's hog population should see corn purchases drop off and perhaps re-emerge as ethanol imports. This would be a boon for an industry that has historically relied on nearly 1bn USG of exports a year to balance domestic production. Lastly, a slight trim in the 2021-22 renewable fuel obligations to be announced in July is widely anticipated, yet this should largely be offset by the larger unknown of SREs.

Regulation

The refining and biofuels sectors are anxiously awaiting the much-delayed 2021 Renewable Volume Obligation (RVO). Leaked guidance suggests that mandates will be trimmed to reflect the impact of Covid-19 on transport fuels. Yet any material cut to the ethanol standard is unlikely, given the strength of the biofuel/corn lobby and the political sensitivity of ethanol blending — particularly as President Joe Biden's administration recently overturned the year-round RVP waiver for E15.

With final proposals, obligated parties could better balance their exposure, while reducing some of the risk premium baked into credit values. Participants in the refining sector would probably require a mild bullish response from the current administration, and the lack of a July announcement with a further extension in compliance deadlines will increase the level of uncertainty in an industry increasingly constrained by aggressive climate goals.

Competitive crucible, EU could set clearing price
While feedstock supply, sourcing, logistics and quality are the main bottlenecks for this rapidly expanding industry, the situation is poised to turn truly kinetic as nearly a dozen US states mull similar programmes. On top of this, the EU seeks to meet aggressive climate goals and Canada is on pace to launch its Clean Fuel Standard in December 2022. As RIN markets cautiously correct downward in response to increased regulatory clarity and low carbon fuel standard (LCFS) prices remain rangebound, European HVO demand will soon have the pull to siphon off US supply and indeed could become the next global clearing price. Much of this arbitrage hinges on D4 pricing and the management, or lack thereof, of the Renewable Fuel Standard.

Renewable feedstocks remain the global chokepoint
As overly ambitious global environmental programmes clash for supply from relatively archaic and unsophisticated agricultural markets, we expect efforts to free up marginal supply through substitutes or increased output to work alongside demand-side adjustments such as lower mandates.

In early June, Malaysia announced that it will indefinitely delay its 20pc biofuels mandate owing to high prices. Indonesia will stick to its B30 blend despite rising domestic prices curbing exports. Malaysia announced that it will trim export levies for July, a move that is likely to stay in place for several months. Palm has increasingly found its way into animal feed, and it was promoted in Germany as a non-food grade feedstock for fuel use. The US and China have turned to wheat to free up various corn products and oils, which alongside rising freight costs, should see Chinese foreign purchases dwindle.

In the US, the EPA is expected to announce scaled-back blend mandates for 2021 and 2022, as the available blend pool was reduced amid Covid-19 policies. Large consuming states in South America have also made hefty cuts to biodiesel mandates, driven as inflation containment efforts.

Demand

Ethanol

We expect US ethanol demand to average just under 1.2mn USG, or close to 920,000 b/d, during July, an increase of 3.5pc over June and up by 8pc year on year, as summer demand expands the motor fuel blend pool. Our second-half 2021 projection stands at 1.216mn USG/month, up by 8pc year on year but down by 3pc on pre-pandemic, 2019 levels. Rebounding gasoline demand and record-high RIN prices saw ethanol blend rates creep higher to average just under 9.5pc in June, peaking at nearly 10pc during the first week of the month — the highest blend rate in the history of the programme. This marks the most significant reaction to persistent RIN market strength since the initial blend wall-driven, "RIN-sanity" rally of 2013. A recent appeals court decision allowing the year-round sale of E15 should have little impact on blend rates this year as E15 pumps are still not widely available, ethanol remains a relatively abundant and cheap octane source for blenders and robust RIN prices continue to encourage discretionary blending. Unsurprisingly, the reversal will be fought by the ethanol lobby despite E15's lack of penetration at the retail level.

Renewable diesel

We anticipate second-half renewable diesel (RD) demand to average 82mn USG/month, or a little over 60,300 b/d, with an average blend rate of 1.52pc. This is up by 1.3pc on a year earlier and an astounding 12pc on 2019 levels as the industry witnessed robust growth despite tremendous headwinds presented by the global pandemic. The US achieved a nationwide blend rate of 1.22pc during 2019, 1.46pc in 2020 and is slated to achieve 1.58pc for 2021.

The main constraint facing the RD sector's expansion will continue to be a tight global renewable feedstock market. As discussed below, only marginal increases in production and substitution of cheaper alternatives will free up incremental product. On the demand side, some regions of the world are willing to trim biodiesel demand to tamp down prices — and inflationary pressure — yet this is unlikely to take effect in the EU or Canada.

We expect US RD expansion to fall short of announced capacity and thus do not expect overcapacity to materially erode margins, as less profitable projects fail to come to fruition, lose financing or are significantly scaled back.

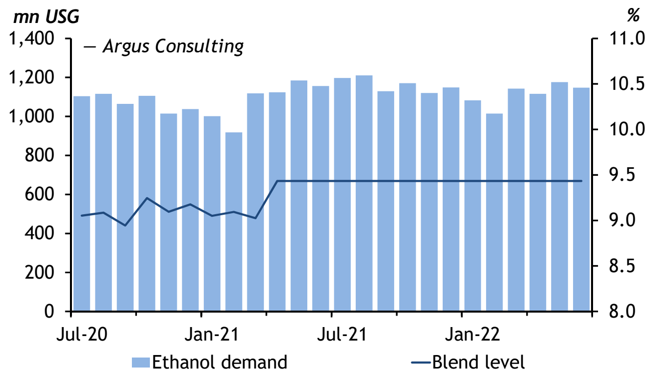
Biodiesel

We have increased our outlook for US biodiesel demand by 1.8pc to average 164mn USG/month during the second half of the year, as we anticipate increased consumer spending and rising industrial activity spurred by the proposed $1.9 trillion Covid-19 relief bill. Biodiesel consumption is expected to rise by over 20pc over June to 186mn USG in July, up by 3pc on a year ago and up by nearly 15pc on 2019 levels. Economic recovery is set to expand the available distillate blend pool at a time when higher temperatures allow for increased seasonal, discretionary blending. This, coupled with recovering biodiesel production margins and elevated RIN prices, should see biodiesel output ramp up to meet growing demand. While US diesel demand is expected to run more than 5pc under 2019 levels at 3.67mn b/d, on-road diesel consumption can easily support normal blending operations of around 149mn USG, with discretionary blending maxing out at 248mn USG in July.

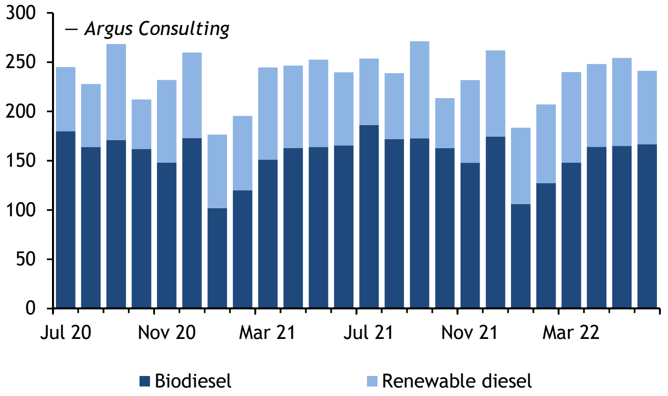
Feedstocks

As noted in last month's outlook, efforts to substitute cheaper alternatives and anti-inflationary demand cuts in South America and Asia were set to weigh on record-high feedstock markets. Soybean oil rallied to an all-time high of 72.08¢/lb in early June, up by 4.5pc on May's record high of 68.97¢/lb. Poor harvests, a lack of immediately viable sub-

US ethanol demand



US biodiesel and RD consumption *mn USG*



ASIA-PACIFIC

Prices

HVO

HVO Singapore fob prices at all-time high

The uptick in HVO prices in the ARA region prompted an increase in HVO Singapore fob prices in June. Class I price assessments were in the high $1,700s/t in the first week of June, and have gradually climbed over $100/t during the month, to reach $1,900/t on two days in early July.

Prices are likely to post some small declines over the next few months, as some correction is still expected in the European market. But as our European forecasts predict a much smaller drop for HVO than for crop-based biodiesel, HVO Singapore fob prices are likely to take a similar direction, with monthly averages ranging from $1,650/t to $2,100/t over the next 12 months (for Class I), or from $1,850/t to $2,500/t for Class II and Class III (over the same period).

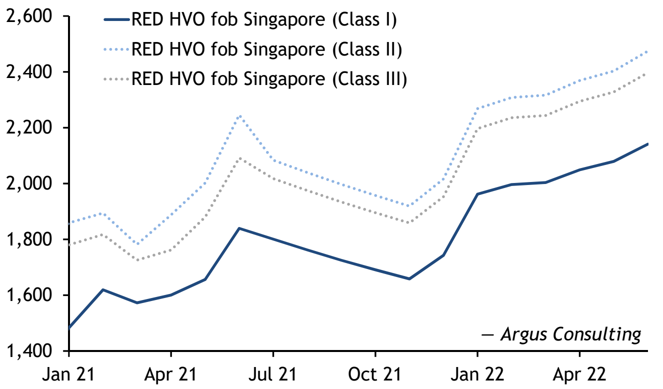
SAF

Asia-Pacific SAF prices rise in June

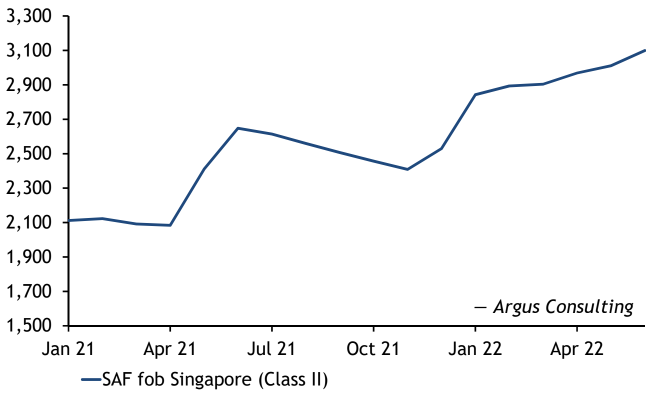
SAF Singapore fob prices have followed European prices in June and increased sharply for a second consecutive month to a monthly average of $2,650/t and reaching highs of $2,700/t in early July.

Demand for and supply of SAF in the Asia-Pacific region continue to develop at a reasonable pace. Neste is expanding its SAF plant in Singapore, with works to be completed in early 2023, and there are other projects for production in Japan and South Korea. Efforts to increase the use and production of SAF in the region are gaining momentum, with several airlines establishing partnerships that aim to increase the use of biojet, although no national mandates have been imposed.

Asia-Pacific HVO prices *$/t*



Asia-Pacific SAF prices



Asia-Pacific biofuel price outlook *$/t*

Product	Apr 21	May 21	Jun 21	Jul 21	Aug 21	Sep 21	2Q 2021	3Q 2021	4Q 2021	1Q 2022	2Q 2022
HVO											
HVO Class I Singapore fob	1,600	1,656	1,840	1,801	1,762	1,725	1,699	1,763	1,697	1,987	2,090
HVO Class II Singapore fob	1,888	2,002	2,246	2,084	2,039	1,997	2,045	2,040	1,964	2,298	2,415
HVO Class III Singapore fob	1,762	1,880	2,092	2,018	1,975	1,934	1,911	1,976	1,902	2,225	2,340
SAF											
SAF Class II Singapore fob	2,084	2,410	2,648	2,614	2,559	2,507	2,381	2,560	2,465	2,880	3,026

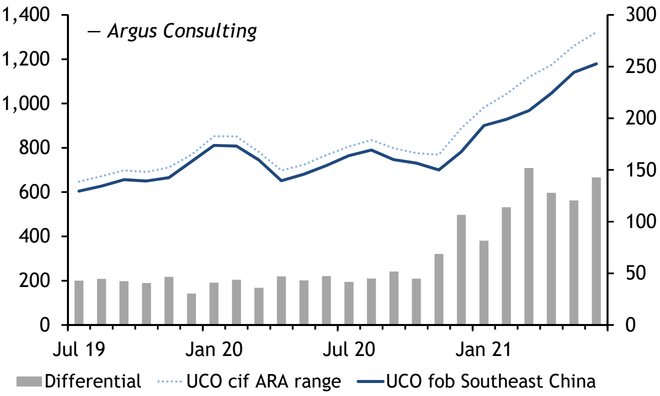
UCO

UCO: Prices rising but at slower pace

UCO southeast China fob prices rose in June to $1,179/t, a 3pc increase on the month, and 13pc higher than in April. But these increases are lower than UCO cif ARA prices, with the differential increasing from $50/t on average in 2020 to $140/t in June.

The main reason behind this decoupling is freight. Although more has been moving through bulk, Flexitank shortages have nearly quadrupled freight costs on the China-ARA route since the end of last year, amid rising Covid-19 cases in China and increasing congestion at ports. China remains a key UCO supplier to Europe, but more Flexitanks have been heading to Malaysia.

UCO prices



Argus *Biofuels Outlook* is published by Argus Media group

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ISSN: x

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