

UCOTRADING



Argus Biofuels Asia 2019

EUROPEAN UCO MARKET FOR 2019

WHAT TO EXPECT AND HOW TO UNDERSTAND QUALITY AND LOGISTICS ISSUES
TO SUCCEED ON YOUR EXPORTS

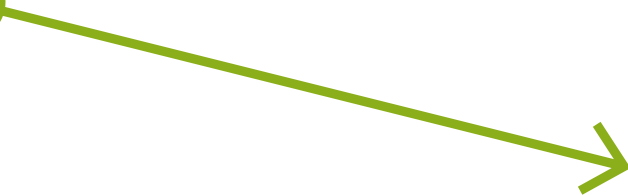
Whats happening with the uco prices in Europe?



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MARCH 2017

930€/tn



MAY 2019

545v €/tn

What can we do in this situation?

**ADAPT
COLLECTION
PRICES TO THE
MARKET TREND**



How?

- By controlling all the costs related to the uco supply chain

Main costs on the uco supply chain

- Collecting cost
- Logistics in origin
- Sustainability Certification
- Freight, Insurance and Financing
- Logistics at destination



Collecting costs

- In EU this costs varies between 200 and 300 €/mt for the collection. This costs includes:
 - Force of labour
 - Vehicles, fuel, insurance
 - Warehouse
 - Energy, water treatment, solids disposal
 - Operating costs
- PAYING FOR THE RESIDUE TO THE RESTAURANTS IS NOT INCLUDED. If you pay money it will increase the amount and it goes directly against the profit of the company.

Logistics in origin

- Inland transport from warehouse to the port
- Export dispatch
- THC
- Documents: Certificate of origin, BL, Export licence
- Packing: isotank, flexibag, IBC'S, drums
- Storage: shoretank, depot, external warehouse

Certification

- Cost for annual certification on ISCC-EU, RED or any other sustainability scheme authorized by the EU.
- For selling in the Italian market also mandatory to be certified under the Italian national sustainability scheme. This one is more expensive as it has 3 audits per year instead of one.

Freight, Insurance and financing

- Freight costs from FOB till CFR on its different packings: 20-40 feet container, isotank, bulk
- Insurance policy to cover the goods during the shipment. Also insurance for the currency
- Financial cost for the exporter or the importer depending on the agreement. Most common costs are: interest rate, swift transfer cost, L/C opening, transferring and confirmation costs, currency exchange costs

Logistics at destination

- THC at destination
 - Import dispatch
 - Documents: BL
 - Occupations at the yard
 - Demurrage costs for giving back container empty
 - Cost of heating for unloading
 - Storage: shoretank, depot, external warehouse
- Inland transport till the factory of destination
- Cost for proper flexibag disposal
 - Cost for veterinary inspection that is mandatory for uco in some EU countries like Portugal, Spain or Germany

Principal wastes used for biodiesel and its different quality specs required by european producers

- UCO “PREMIUM”
- UCO
- Acid oils
- FFA
- Oleins
- Soapstock
- Pome



UCO PREMIUM

- Huge demand from 1st Generation Plants to mix it with fresh oil and get UCOME full spec
- Quality: FFA max 3%, Sulfur max 30 ppm, IV min 90, MIU max 2%
- More demand than offer for this waste therefore HIGH PRICES
- Accepted for DC in all countries
- No Pre-treatment mandatory but often is neutralized to reduce acidity till 0,5% prior to convert into biodiesel

UCO

Worse quality due to longer use in the kitchen and worse treatment by the collectors

Higher FFA than the premium one (3-7%)

IV lower (40-80 ppm) as it is mainly made out from palm (Asia) or yellow grease (USA)

Sulphur higher than 40 ppm specially in the chinese and asian suppliers

Sometimes can be esterified acid oil with FFA 3% but sulfur higher than 120 ppm then. Ester content higher than 80%

Pre-treatment (neutralization) mandatory to reduce acidity prior to convert into biodiesel

FREE FATTY ACIDS

- Waste generated out of the physical refining (distillation) of crude vegetal or animal oil
- FFA higher than 70%, low sulfur and phosphorus
- Bright colour (white-yellow)
- Pre-treatment (esterification) necessary to reduce acidity prior to convert into biodiesel
- Only DC if the raw material distilled was a waste. PFAD not DC any more in Europe.

Oleins

- Waste generated from the chemical refining of crude vegetal or animal oil
- FFA around 50%
- Higher content on sulfur (100-300 ppm) if vegetal and specially on animal origin (300-600 ppm) because of fur and nails
- Phosphorus (300-600 ppm) depending on the raw material
- Pre-treatment (esterification) necessary to reduce acidity prior to convert into biodiesel
- Dark colour (brown-black)
- Only Double counting if proof that they are not valid for human

Soapstock

- Waste obtained from the soap used in the crude oil chemical neutralization.
- Treated with strong acid you get a fatty part that is the olein.
- Content in 1 mt of soapstock varies from 20-50% of oleins

POME (Palm Oil Mill Effluent)

- POME is a waste water/sludge arising from palm oil production usually released to open ponds. The oil extracted from POME is often referred to as “Palm Sludge Oil” or “Sludge Palm Oil”
- Really high content in sulfur and phosphorus

Assessing the current UCO market price and availability

- Deep decrease in prices since March 2017 and there are no signs of an end in this downwards trend because of the huge imports of cheap biodiesel coming from Indonesia and Argentina.
- Weak EUR against USD around 1,12-1,14 levels affecting also imports as margins are already too low
- Actual prices in May:
 - 555€/mt CIF ARA for uco premium
 - 535€/mt CIF ARA for standard uco
 - 485€/mt CIF ARA for uco max 10% FFA
 - 355€/mt CIF ARA for FFA and Acid Oils

NEWS AND CHANGES FOR THE ASIAN WASTE IN THE EU

- Italy opens now DC to foreign uco but it would be mandatory for all uco collectors and traders to fulfill the Italian rules by certifying the point of origin.
- Total will open soon its HVO refinery in Marseille and Eni also in Venice.
- Those factors will contribute to higher demand of waste in the following months.
- Entry of Double Counting in Spanish Market since January 2019. It is expected that more than 1,6 million tonnes of biodiesel will be consumed this year in Spain. Really attractive market for low IV DC biodiesel and raw materials as CFP levels accepted in Spain are the highest in all European countries.

CO-PROCESSING AND HVO: A HUGE OPPORTUNITY FOR THE LOW IV UCO

- Palm based uco faces problems on the EU winter season (Oct-May) because of its low IV (50-65). When converted to UCOME gives a CFPP of +12°C
- The EN14214 asks for -10°C, 0°C or +5°C depending on the EU markets what makes almost impossible to use low IV UCO in winter.
- HVO is huge opportunity for palm based waste as the result of the production gives an HVO valid as -30°C does not matter the IV of the raw material used. This makes low IV waste really attractive for co-processing and HVO also in winter season.

QUALITY REQUIRED FOR HVO AND CO-PROCESSING

- Content on metals is the key point. Catalyst only work with really low content on metals (max 25 ppm) and the waste does not fulfill this requirement
- Pre treatment is mandatory to clean the product and reduce the metal content prior to conversion in the refinery
- Fe+ K+ Na+ Mg+Ca should be max 25 ppm
- Ph max 50

Logistic and document issues

- UCO normally goes in isotank/flexibag due to small size of the collectors
- IV lower than 70 needs heating prior to unloading
- Countries with EUR1 avoid payment of 2% and 2,9% import tax in UE.
- Annex VII mandatory to travel with the waste
- Veterinary control in some countries (Portugal and Spain) due to the animal content of the uco
- Uco by bulk normally not affordable with volumes lower 1500 mt
- Very important to negotiate 7 days for free at the port of destination and 14 days to give back container empty to avoid extra costs at destination.

Final remarks

- Big demand for premium uco will remain for 1st generation plants however price follows the general market downtrend.
- Investments on distillation and neutralization allow to use the rest of the wastes for 2nd generation plants
- Neste is already producing from waste and some other producers like ENI and TOTAL will start immediately
- Also coprocessing of HVO in refineries with uco and waste is under production tests by different petrol companies all over Europe.
- REDII approved: 14% of fuel for transport purposes must come from renewable sources by 2030. From 2019 first generation biofuels will gradually phased out until reaches zero in 2030.
- Weak Eur/usd does not help imports of waste into EU.
- Marine transport and aviation opportunity for 2nd generation biofuels

THANKS A LOT FOR YOUR ATTENTION

UCO TRADING SPAIN , your specialist for the European waste based
biofuels market.

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