

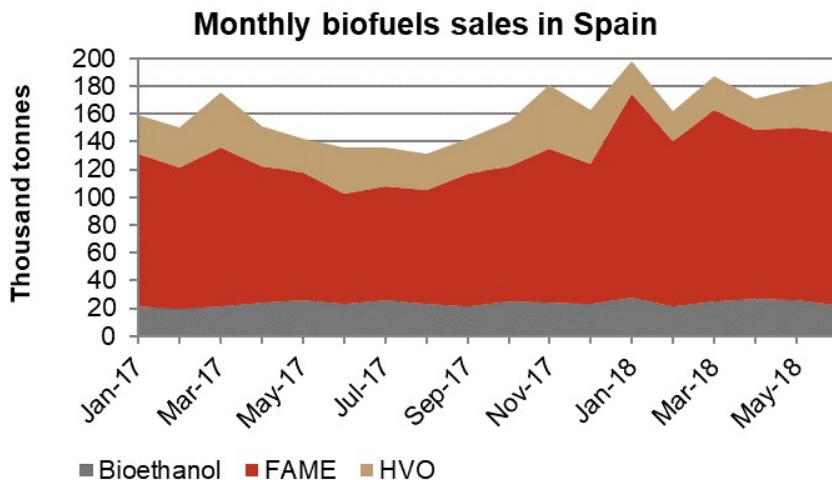
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Indonesian palm oil no longer peerless in Spanish FAME market as feedstock supply diversifies

Stratas Advisors

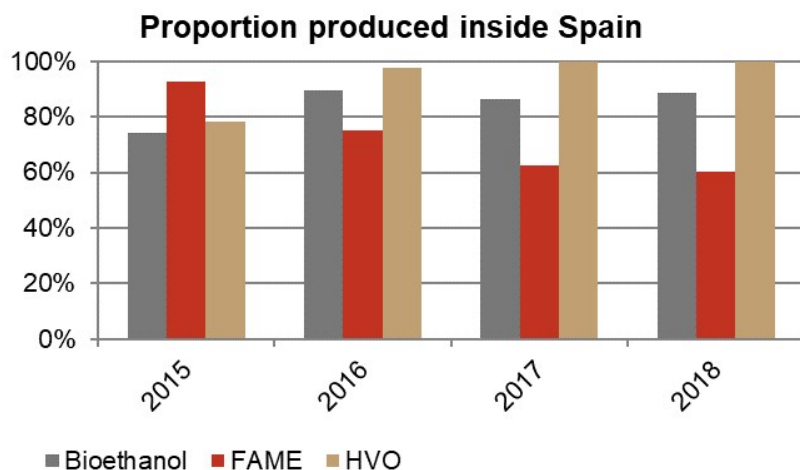
Despite being only the fifth largest EU member state in terms of population, Spain consistently ranks among the top three biomass-based diesel producers and consumers in Europe. The diesel-gasoline consumption ratio in Spain is 3:1, compared to an EU average of 2:1. Traditionally, more than half of the country's total biomass-based diesel has been derived from Indonesian palm oil. However, since 2017 Argentine SME has cut into Indonesian palm oil market share. Additional shifts in feedstock composition are expected in 2019 as Spain starts implementing double counting measures for advanced biofuels while EU AS-duties are underway and the European Commission (EC) will take a decision on what feedstocks are considered high-risk indirect land use change (ILUC).

In H1 2018, ethanol represented 13.7 vol% of Spain's total biofuels sales, a mild decline compared to 14.8 vol% in H1 2017. This is mainly due to a rapid growth in FAME consumption, which increased its market share from 65.1% of biofuels sales in H1 2017 to 71.6% H1 2018. Total biomass-based diesel sales witnessed a whopping year-on-year growth of 20%, while ethanol sales also expanded by 10%.



Source: CNMC

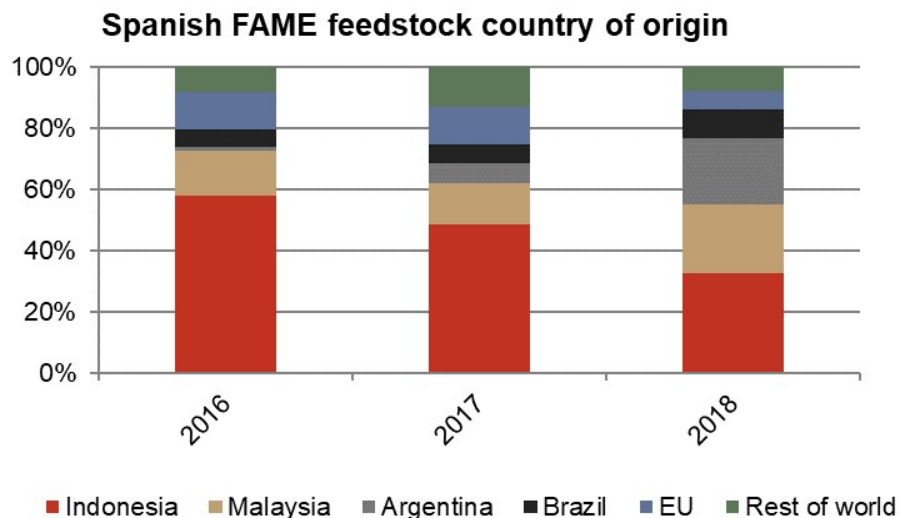
The lion's share of consumed ethanol and HVO volumes are produced inside Spain, with domestic production remaining steadily above 85% of demand for these two biofuels since 2016. The portion of domestically produced FAME decreased from 93% of total consumption in 2015 to 60% H1 2018. This decline can largely be attributed to increased SME imports from Argentina. While Spain imported virtually no SME from the country in 2015, Argentinian imports represented 20% of Spain's FAME market in H1 2018.



Source: CNMC

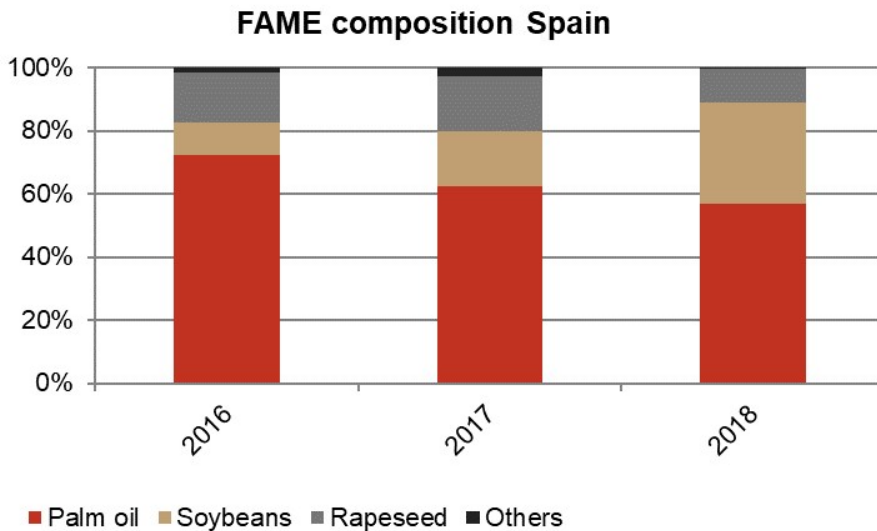
In contrast to Spain's relatively high domestic biofuels production, the vast majority of feedstock is imported. In H1 2018, almost no FAME feedstock and only 20% of ethanol feedstock originated from Spain. During this same period, 86% of HVO feedstock was imported from Indonesia and almost all of the remaining 14% from Malaysia.

Spanish dependency on Indonesian FAME feedstock has decreased in recent years. While 58% of the raw material came from Indonesia in 2015, this had reduced to 33% in H1 2018. A major factor behind this decrease is the cheaper availability of Argentinian SME after the EU lowered its anti-dumping duties under WTO pressure in 2017, and then fully lifted them early 2018. While only about 1% of FAME feedstock originated from Argentina in 2016, this had risen to 21% in H1 2018. Imports of Malaysian palm oil increased from 13% of total feedstock in 2017 to 22% H1 2018, largely due to Kuala Lumpur's suspension of export taxes on palm oil.



Source: CNMC

The geographic shift in imports from Southeast Asia (where palm oil is dominant) to South America (with mostly soybean cultivation) is also apparent when looking at the type of feedstock used for Spanish FAME. Between 2016 and H1 2018, palm oil use in Spanish FAME declined from 72% to 57%. Over this same period, the volume of soybean as FAME feedstock climbed from 10% to 32%. Rapeseed (mainly grown in Europe) saw its year-on-year blending share nearly cut in half in H1 2018, a trend which is estimated to have continued in H2 2018 after an extremely dry summer resulted in record-high RME prices. 97.6% of Spanish HVO was still derived from palm oil in H1 2018, with a 10% year-on-year supply decrease from Indonesia being cancelled out by a commensurate increase in Malaysian imports.



The outcomes of AS-duty proceedings against Argentina and Indonesia in 2019 will largely determine how medium-term PME and SME imports into the EU develop. In December 2018, the EC proposed to impose 25%-33% definite countervailing AS-duties on SME imports originating from Argentina. That same month, it formally opened an AS investigation against Indonesian PME. Member states are expected to ratify the measures against Argentina soon, meaning they are likely to go into effect by February 2019. The proceedings against Indonesia are in a more uncertain stage, with a decision expected between September 2019 and January 2020.

Moreover, domestic blending mandates in palm oil exporting markets will also have an effect on feedstock composition. Indonesia implemented a B20 blending mandate across the entire diesel segment in September 2018, and will start rolling out B30 in 2019. Malaysia is phasing in its B10 mandate, which should be fully effective in February 2019. What is more, Malaysian Prime Minister Mahathir Mohammed recently announced the government intends to introduce a B20 mandate by 2020. Despite these significant increases in local demand, Stratas Advisors expects Indonesian and Malaysian PME available for global exports to remain at comfortable levels until at least 2020.

How imports of different feedstocks will shift over the course of the coming years also depends on how the EC is to define high-risk ILUC feedstocks, which will be capped at 2019 levels and phased out by 2030. A recent study from the International Council on Clean Transportation (ICCT) shows that one interpretation of the term could in theory allow for a doubling of current palm oil consumption in EU biofuels by 2030, despite the general expectation that the regulation will limit palm oil usage. The decision is expected by February 2019.

Lastly, the transposition of EU RES-T targets into national law will play a significant role as well in feedstock demand. With overall Spanish blending mandates set to increase from 6% cal (calorific) in 2018 to 7% cal in 2019 and 8.5% cal by 2020,

biofuel demand is expected to continue growing in the medium term. Spain is one of only a few EU member states that had not previously implemented double-counting provisions to meet targets, resulting in an outflow of qualifying product to neighboring countries. Implementation of double counting provisions on 3 January 2019 will increase the market share of waste-based and second-generation feedstock like UCOME and TME. Spanish producers are anticipating this change in demand. Musim Mas, Spain's largest palm oil processor, is considering transforming its 200,000 tonnes/year PME plant in Cartagena to run waste oils and animal fats. The recent restart of a plant in Linares, which had been idled for three years, should add another 60,000-70,000 tonnes of waste-based FAME in 2019.