

IMPLEMENTING THE COMMISSION'S PROPOSAL ON CONVENTIONAL BIOFUELS: THE CONSEQUENCES FOR AGRICULTURE AND INDUSTRY

The European Commission has decided to kick start its plan to phase out conventional biofuels, with little account given to the agricultural benefits linked to biofuel production and the worrisome impact their disappearance would have on markets, revenues and jobs. From the announcement of a gradual phase-out of so called “food-based biofuels” in the “European Strategy for Low-Emission Mobility” to the proposal on the Renewable Energy Directive post-2020 – which envisages a drop from 7% to 3.8% in the share of biofuels such as rapeseed biodiesel by 2030, without a minimum requirement – the viability of conventional biofuels in the EU's energy mix is put into question.

The phasing down provisions in the proposed EU legislation, however, do more than simply raise a red flag: they are essentially signalling to EU producers and investors that first generation biofuels are on their way out the EU energy door. Indeed, with no foreseen obligations for EU fuel suppliers to incorporate conventional biofuels in the energy mix, the minimum share is likely to go way below 3.8% – **probably even leading to a total elimination of conventional biofuels shortly after 2020.**

This raises serious concerns for 220,000 jobs which could be affected.

FEDIOL with this paper seeks to shed some light on the positive contribution biofuels currently make to rural economies and the negative effects which phasing out could have on European and global markets. Most of all, the paper lays out two potential scenarios which could result from calls for phasing out: whatever the market reaction to the Commission's proposals, the outcome inevitably has dramatic consequences for the whole EU oilseeds production chain.

The consequences of phasing out conventional biofuels

In the European Union, **current biodiesel production from rapeseed oil amounts to 6.4 million tons**. More generally, vegetable oil consumption for biofuels amounts to 10.4 million tons. Stopping biodiesel production raises the question of whether there is an alternative market for such a huge amount of vegetable oils: the response is no, because it would be difficult for rapeseed oil to compete with much cheaper oils on the world market. As a consequence, farmers would likely halt rapeseed production with heavy financial, social and agronomic implications. In our assessment, **we consider this might happen through a linear phase out between 2020 and 2025.**

1 million hectares of land would be abandoned each year over 5 years: There are no economically viable alternatives to rapeseed production. Using that surface for growing other crops such as cereals or protein crops instead of rapeseed would flood the markets, and drive crop prices down across the board. This would make them no longer profitable for **farmers** who **would likely cease their activities on these lands.**

The slowdown or halt in rapeseed production would lead to huge financial losses and to a domino effect throughout the production chain: Cutting a total of 16 million tons of rapeseed crush as well as 2.7 million tons of soybean crush out of production would cause the **closure of almost half of the EU crushing plants, representing around 10,000 direct jobs.** This would result in the loss of **more than 9.6 million tons of rapeseed meal** and **2.1 million tons of soybean meal.** The **cumulative loss in turnover would be** in the order of **€16.9 billion for farmers, €22.5 billion for crushers** and **€11.7 billion for compound feed manufacturers.** Thereafter, every year the revenue losses would amount to **€5.3 billion for farmers** and to more than **€7.5 billion for oilseed crushers,** while **compound feed manufacturers** would face additional **import costs of €3.9 billion each year.**

Benefits for the agricultural sector and rural economies

About 65% of biodiesel production in the EU is dependent on rapeseed – a crop containing about 40% oil and 60% meal. With the increase in biofuels demand, the production of rapeseed has almost doubled, with substantial benefits for the EU’s farming sector:

The EU has cut down on protein imports: The 60% meal which rapeseed delivers is high in protein content (34%), and therefore the increase in rapeseed production has enhanced the EU’s protein self-sufficiency – helping to patch up the EU’s 20 million ton protein deficiency (based on European Parliament estimates¹). The development of other varieties of rapeseed with low levels of glucosinolate – making the rapeseed meal more digestible for animals – has also made it possible to replace some portions of animal feed imports with local produce.

The EU’s food production has also benefited from biofuels production: Unlike what is often assumed, rapeseed oil has not been entirely diverted to serve as feedstock for biodiesel production. On the contrary, with a two-fold increase in rapeseed production through its inclusion in crop rotation, biodiesel has had no perceptible impact on sectors producing rapeseed oil for food, whose share has actually slightly increased over the last years. There is thus no dichotomy between food and fuel production.

The EU’s biofuel production ensures that rural areas remain populated: By providing direct and indirect employment, biofuels production keeps tens of thousands of people in rural areas and helps to maintain public services in more remote towns and villages – a crucial factor for EU farmers, who cannot benefit from these services elsewhere.

Grown and produced under stringent sustainability requirements, there are important environmental and agronomical benefits to rapeseed production, too.

Rapeseed production plays a fundamental role for soil quality: Soil coverage with rapeseed over 10 months decreases the leakage of nitrates during winter, and improves the soil’s fertility and workability thanks to the rapeseed’s deep root system. This is significantly helping farmers meet the 3-crop requirement, particularly in less fertile areas.

Rapeseed production favours the growth and yield of other crops: If planted after rapeseed, winter wheat and barley achieve a 10% higher yield potential than they would with other crops, and need less fertilisers (about 0.15 tons of ammonium nitrate or €40 per hectare). Planting rapeseed before other crops also prevents diseases and weeds from spreading, thus reducing the need for crop protection products (estimated at about €50 per hectare).

Not all oils are the same

It is important to bring some clarity to the general misconception that the EU could stop importing tropical oils if rapeseed oil were used for food instead of for feedstock for biofuels.

Tropical oils are not directly interchangeable with all other vegetable oils: Palm oil, palm kernel oil or coconut oil have fatty acid profiles that are different from European seed oils. They are used for their special functional characteristics. To serve as a substitute for tropical oils, EU vegetable oils such as rapeseed would need to go through a hardening process in order to give the liquid oil a solid structure – a process which triggers a high amount of trans fatty acids (TFAs), which raise health concerns. In fact, over the last twenty years, palm oil has been used to replace partially hardened fats precisely to get rid of TFAs.

¹ EP Report on “The EU Protein Deficit : What Solution for a Long-Standing Problem”, Committee on Agriculture and Rural Development, 4 February 2011: <https://goo.gl/MXfT9O>

Biofuels keep land in use

Each year, the amount of arable land slipping away from cultivation increases – converted into forests, lost to urbanisation, or simply being abandoned. Through continuous supply to food, feed and technical markets, biodiesel production sustains activity on these lands, enabling the three-crop rotation system and ensuring high yield of crucial EU produce such as wheat.

Our assessment: two phase-out scenarios

The European Commission's proposal to decrease conventional biofuels will send negative signals to all players involved and trigger a subsequent reaction throughout the production chain. With no incorporation obligations for EU fuel suppliers or incentives for EU farmers to continue production, we assume a linear phase out of conventional biofuels from baseline production volumes to zero between 2020 and 2025.

By stopping biodiesel production there would be no alternative market for such an amount of vegetable oils, since it would be difficult for rapeseed oil to compete with much cheaper oils on the world market. Hence, farmers would likely reduce rapeseed production with heavy financial, social and agronomic implications.

In our assessment, we foresee the following scenarios:

Oilseed production maintained: In a very unlikely scenario, farmers would continue to produce oilseeds despite lower revenues. Crushers – no longer being able to sell the oil into the EU market – would have to compete with cheaper oils on the world market, particularly palm oil.

- Releasing massive volumes on the world markets would cause high turbulences on world prices for vegetable oils, having damaging consequences on the economies of other major oil producing countries – such as smallholders in Asia, Africa or Latin America, in addition to impacting farmers' incomes in Europe.
- The revenues of European producing and crushing industries would plummet. Producers and crushers combined could lose between €13.6 and €15.1 billion in turnover over a 5 year period, and between €2.7 and €3 billion every year thereafter.

While the above scenario is a possibility, it is far more likely that farmers respond to policy signals by reducing oilseed production altogether.

Oilseed production stopped and/or replaced: In a most likely scenario, farmers would reduce or replace their production of oilseeds to adapt to the loss of market share.

In that case, consequences would arguably be even worse over the assessed period:

- Switching to alternative crops such as wheat or protein crops is not a likely option in the absence of market and of revenues comparable to oilseeds;
- The land used for rapeseed harvesting would therefore more likely be left idle, leading to some 5 million ha of abandoned fertile farming land over 5 years;
- Crushing and refining activities would stop, leading in the long term to a closure of nearly half of the EU's plants – representing around 10,000 direct jobs;
- The closure of crushing plants would lead to the loss of 16 million tons of rapeseed crush and 2.7 million tons of soybean crush, for an overall loss of €22.5 billion for crushers and €7.5 billion each year thereafter;

- The EU would lose about 65% of its rapeseed meal supply and part of its domestic soybean meal supply over 5 years, triggering additional imports in the order of 11.7 million tons of soybean meal – i.e., overall import costs of €11.7 billion and thereafter annual additional import costs of €3.9 billion (€3.2 billion to replace EU rapeseed meal and €700 million to replace EU soybean meal) which would make the EU much more vulnerable to price and supply variations;
- Less rapeseed means more cereals in the crop rotation, implying enhanced use of pesticides and fertilisers for an additional cost of €450 million per year;
- Farmers' loss of turnover would be in the order of €16.9 billion over a 5 year period and thereafter of more than €5.3 billion each year.