

Yelto Zimmer

**German rapeseed on the verge of collapse?
Consequences of a new EU biofuel policy**

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The EU is planning to limit the European biofuel production and to make the greenhouse gas balance (GHG balance) subject to much stricter regulations. The result will be that by 2020 only 5 % of the consummated fuel would consist of fuels that originate from food commodities. In addition, it is planned, to prescribe an informative accounting of GHG under consideration of the effects of indirect land use changes. As its GHG balance is not particularly good, rapeseed oil as well as other vegetable oils could even completely lose the political support of the EU in the long run. Without such support it is hard to image any EU biodiesel production to happen.

Against this background some people argue that the European rapeseed production is at risk, given the high share of EU rapeseed that is currently being used to produce biodiesel.

Global vegetable oil markets are important

To classify the possible consequences of such changes, a range of facts has to be straightened and assumptions have to be made:

- (1) In the following, the worst case will be used to simplify matters: a complete cessation of the demand for vegetable oil for the European biodiesel production at short notice
- (2) As there are neither import duties nor other significant trade restrictions, the European market for oilseeds and vegetable oil is directly linked with the global market
- (3) On the international markets, vegetable oils are very close substitutes. I. e. a lasting price change for soy oil would push the prices for the other vegetable oils into the same direction
- (4) During the last decade, the global demand for vegetable oil has been growing by nearly 6 % per year. International analysts estimate that this trend will continue

In case of a sudden cession of the demand for vegetable oils, a short-time surplus of approx. 12 million t would be on the market. Compared with the global market for vegetable oil (about 150 million t), that would not be very much. But as the international markets are driven by marginal changes – particularly in inventory levels – decreasing prices will be an initial consequence.

A realistically assumed continuation of the present growth in the demand for vegetable oils would correspond to an increase by approx. 7.5 million t per year. I. e. within two years, the global demand would grow to the same extent as this

¹ Generally, the article is based on a paper by the author in cooperation with the colleagues O. von Ledebur, R. Klepper, M. Banse and V. Wolf of the Thünen Institute for Market Analysis.

short-term "surplus" of the EU. Consequently, the anticipated significant drop in prices will only be temporary.

This implies for the European rapeseed economy, that it is principally possible to export the quantities that have been used for biodiesel by now. The example Canada shows, that this is not only a theoretical possibility. In 2012, Canada exported about 3 million t of rapeseed oil mainly to China and to the USA. Additionally, there were 8 million t of rapeseed exports primarily to Japan, Mexico and Pakistan. Similar exports have been achieved in previous years.

EU as exporter of rapeseed – consequences for EU prices

However, such changes in the market conditions would affect the European rapeseed production, as the EU would develop from a net-importer of vegetable oils and oilseeds to a net-exporter. I. e. the domestic price level would be oriented towards the so-called "export price parity" and would decrease, as the recoverable farm gate prices would be dictated by the global market prices minus the cost for transport and logistics to the importing countries. In the current net-importer situation the transport and logistics costs are added to world market prices in order to derive at a domestic farm gate price. The envisaged price decrease at the farm gate cannot be exactly predicted, but 45 €/t can be considered to be a reasonable figure. This estimate is based on the margins between exporting and importing countries prices in previous years.

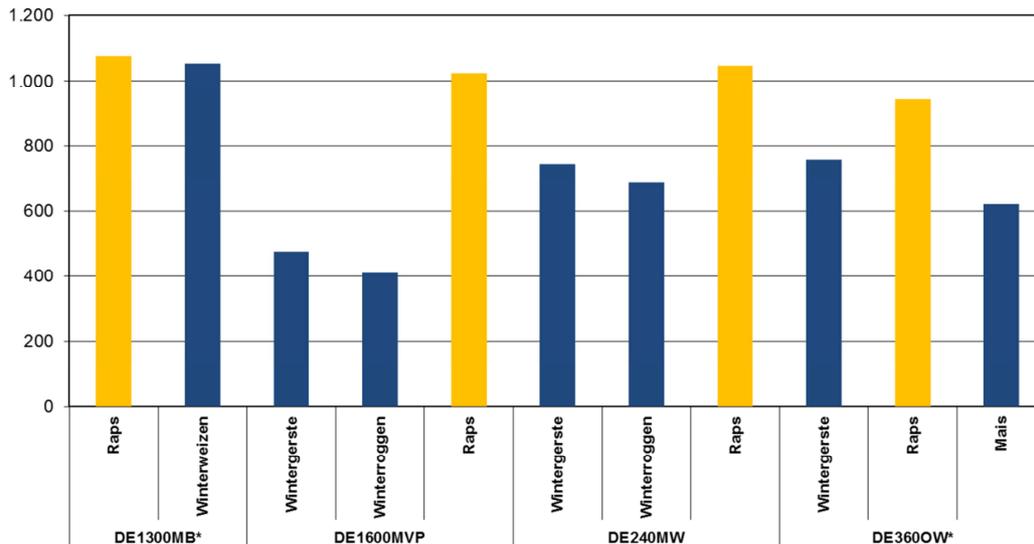
On-farm: Rapeseed still rather profitable

Consequently the question arises, which effects of the lower prices are to be expected on the farm level. In order to find an answer to this question, this price modification is being calculated for some German arable farms within the *agri benchmark* Cash Crop network.

Figure 1 shows the gross margins for rapeseed and the relevant competing crops. The realized prices for rapeseed were about 370 €/t, the wheat price about 165 €/t, respectively 120 €/t for barley. It reflects that up to now, the highest gross margins have been achieved with rapeseed.

A decline in rapeseed prices of 45 €/t would reduce the rapeseed gross margins of these farms about 200 €/ha. As shown in figure 1, for three out of four farms, rapeseed would still remain more attractive than the competing crops. Only for farm DE1300MB it would be theoretically rewarding, to give up the cultivation of rapeseed and to cultivate more wheat instead.

Figure 1: Gross margins rapeseed and alternative crops (€/ha, 2008 – 2011)



Source: *agri benchmark* Cash Crop 2012

The problem: as usual in the region Magdeburger Börde, this farm uses a very cereal-emphasized crop rotation, as there are only rapeseed and sugar beet as economically attractive leaf crops (non-cereals) available. Given the quota system in sugar beet the only realistic alternative to rapeseed would be stubble wheat (wheat following wheat). More stubble wheat (present share in total wheat acreage about 50 %) would lead to increasing costs per ha of wheat because of higher pest and weed pressure, to decreasing average yields and thus to lower gross margins. Consequently it is doubtful, whether such farms would reduce the percentage of rapeseed significantly.

In the medium term, soybeans could become an economically attractive alternative – according to provisional calculations they show an indifference yield of about 3 t / ha.

Generally, it is to be expected that the loss of the European biodiesel production would cause a drop in incomes of the farmers and processors. But the cultivation of rapeseed would only decrease slightly. However, the prerequisite is that the participating players follow a clear export strategy in time. And there is also still work to be done in the own backyard: the share of rapeseed oil in the EU market of vegetable oils for human nutrition amounts to only 20 % - in Canada to more than 50 %.