UNION ZUR FÖRDERUNG VON OEL- UND PROTEINPFLANZEN E.V.

Biodiesel 2012/2013

Report on the Current Situation and Prospects – Abstract from the UFOP Annual Report

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The positive economic development in Germany compared to that of the other member states has continued during the reporting period. The financial crisis and low interest rates continue to drive consumption in this country. The automotive industry did not benefit much from this and had to accept considerable turnover losses on the German and European markets. However, this is contrasted by the considerable increase in demand for German-manufactured cars in China, the US and Brazil. While the industry in Germany bemoans 1.5 million new vehicle registrations in the first six months of 2013 and thus a drop in turnover of 8% and 6.4 million new registrations in Europe, a drop of 7%, the turnover in China for the same period rose by 21% or 7.7 million cars. The most important leading brands in Germany are benefiting from having aligned their strategies towards internationalization from early on. For this reason, the economic consternation resulting from the drop in turnover in Europe affects the various vehicle manufacturers in different ways. There is no sign of improvement in the near future either. Other than in China, the US and Brazil, the downward trend shall continue. This is caused not least by longer life spans, high prices for new vehicles, changes in preference among young buyers and the rapid development of car-sharing concepts in metropolitan areas. The first ones to feel the effect of this development are also the automotive suppliers, which is another core branch of the German and European vehicles industry. Mobility therefore needs to face up to a new set of challenges in Europe. Turnover will continue to fall, all the more so as individual mobility no longer holds the significance it once had. With this in mind the Federal Ministry of Transport, Building and Urban Development (BMVBS) initiated a dialog process in the spring of 2012, previously announced in the 2009 coalition contract, lasting several months for the development of a mobility and fuels strategy (MKS). Experts from professional associations and the worlds of economics and science were consulted and facts on engines, fuels and infrastructure requirements for all areas of mobility (road, rail, shipping traffic and aviation) were gathered. From UFOP's point of view, electric mobility will only play a minor role in future. The target which the German Federal Government has set itself, having one million vehicles on the roads by 2020, is not achievable. The reasons are plain to see: The vehicles are comparably expensive with too short a range, the infrastructure in the form of charging columns is not set up and incentives via tax relief are aimed at specific target groups.

Diesel fuel consumption, at 33.2 million tons (including biofuels share) has continued to remain at a comparably high level (previous year: 33.1 million tons). Due to the fact that the largest share of diesel fuels is used in the carrying trade, diesel consumption is also an indicator of economic development. Over the reporting period, the discussion on the further development of framework conditions policies for the promotion of biofuels gathered considerable momentum. In October 2012, the Commission presented its recommendations on changes to the Renewable Energy Directive (2009/28/EC) and the Fuel Quality Directive (98/70/EC). From UFOP's point of view, the way the discussion on the future policies on subsidization proceeded did indeed have a new "quality" in regard to the objectivity of the debate on these recommendations. Never before were biofuels discussed in such a critical and campaign-run way, which does not exactly make it easy for the policy-makers to come to a proper compromise. The public procedure does not meet the requirements of compiling a representative consensus on the pros and cons of biofuels by consulting so-called civil society and including this consensus in the discussion. On the contrary: Instead of having a dialog which meets these requirements, the existing opinion only became more entrenched among non-governmental organizations. Even public institutions don't stop at one-sided opinion-making. In this regard, Frankfurt Zoo has been informing its visitors for some months now about the manufacture of biodiesel in a very one-sided and blunt way. With the phrase "Biodiesel creates orphans", the zoo is implying that the biodiesel industry/biodiesel policies are exclusively responsible for intensified palm oil production, for which, in turn, the rainforest is cleared, thus destroying the habitat of countless species. In mid-July 2013, the chairman of the Bundesverband BioEnergie e. V. (German BioEnergy Association) (BBE), Helmut Lamp, invited among others the Zoo management to a press conference at the Frankfurt Zoo, but this was unsuccessful. In an open letter to the mayor of Frankfurt, the BBE chairman bemoaned how "... the opponents to the biofuels industry, who are largely interest-driven, can look back with satisfaction. In just a few years they have been successful in misleading large parts of the public with catchy, but angled and false arguments, thereby destroying to a large extent a young and promising industry - for now. Frankfurt Zoo, a municipal organization, is supporting this campaign in no small part."

A solution-oriented debate with the opponents to biofuels does not appear to be practical. UFOP repeatedly made efforts towards this dialog in particular within the framework of different events (among others: BBE/UFOP Biofuels Congress, side events for the International Green Week, UFOP Dialog Forum). UFOP also sees one of its duties as bringing the advantages of biofuel policies, which focus on consistent sustainability, to the political debating table in order to create regulations on protecting the rainforests in the near future.

The main question is whether or not the demand for resources for biofuels production causes "indirect land usage changes (iLUC)". As part of its public relations work, UFOP has intensified its efforts to provide proper information on this topic. In that regard, the core topic of "iLUC" was added to the UFOP homepage, which makes it possible to easily find more comprehensive information on the issue. In addition, the brochure "Raps – die Leit(d)-Kultur!?" (Rapeseed - Opportunity or Risk for the Future!?) was published for the International Green Week. Information on the iLUC problem was also provided in the rapeseed magazine which is issued once yearly and provided for perusal on the ICE trains at the height of rapeseed season.

Biodiesel Market 2012/13

In 2012, the sale of diesel fuels rose to a total of 33.2 million tons (see Tab. 2). The share of biodiesel as a blending component however fell in comparison to 2011 figures from 2.315 to 2.209 million tons. On average, the blend share was 6.7 % (2011: 7%). What needs to be taken into account here is that these figures do not just include the blended quantity of biodiesel, but also the share of hydrotreated vegetable oil (HVO). HVO is not listed separately in the biofuels statistics. Similarly, it is not possible to determine the share of biofuels which can be credited doubly to the quota obligation based on the existing biofuels statistics of the Federal Office of Economics and Export Control (BAFA). As such, the biodiesel industry is facing the problem of not being able to calculate the expected biofuels volume which can be transferred to the quota obligation for the following year. In day-to-day trading, the biodiesel industry is being confronted with ever increasing numbers of short-term biodiesel orders from the mineral oil industry. Tender offers of long-term contracts and larger volumes like in previous years are no longer happening. From UFOP's point of view, this change in buying patterns is due to the EU Commission approving 13 certification systems in 2011 for the European Union, as well as for implementation in non-EU countries like Argentina, Brazil or Indonesia and Malaysia. The availability of sustainable certified raw materials and thereby biofuels has increased correspondingly.

In general, the German and European biodiesel industry will have to be prepared for a drop in sales potential. The future share of HVO and the volume share of doubly creditable biodiesel/HVO are practically incalculable for the market participants. This seems to be proving itself true for the German market for 2013. From January to April 2013, some 10.6 million tons of diesel fuel were sold (Tab. 3). The blend share was 6 % on average (previous year: 7 %) and in April 2013 was just 5.1 %. The total turnover fell in this period by approx. 110,000 tons to 637,000 tons (previous year: 750,000 tons). The monthly average of blended biodiesel in 2013 was approx. 159,000 tons. If the sales trend should continue for the year 2013, the biodiesel sales (including HVO) will fall to some 1.91 million tons, thus decreasing by approx. 300,000 tons compared to 2012. For this reason, the pressure of competition in the biodiesel industry is exceptionally high. While a total of 2.4 million tons of biodiesel was produced in Germany in 2012, the industry needs to export biodiesel on an increasing basis in order to keep the degree of utilization of the plants at its current level. The margin pressure has been extraordinarily high and biodiesel plants in Germany have since had to be closed for good. For this reason, UFOP has revised its statistics on production plants in Germany by around one million tons (Tab. 4). So too in other EU countries, like France, where biodiesel plants are being shut down or adapted to process waste oils. This was announced in July 2013 by Sofiproteol, the financing company of the French oilseed and protein plants industry. The number of biodiesel plants which are still in operation in the EU is unknown.

Sales situation in Europe

According to the figures of the industry's information service, F. O. Licht, some 11.89 million tons of biodiesel including HVO were consumed in the EU in 2012. However, biodiesel production in the EU came only to 8 million tons and is some 0.5 million tons less than the level it was at in 2011. HVO production in the EU is estimated at 1.29 million tons in 2012 which is a drop of some one million tons compared to the all-time-high production volume of 2010. However, the additional volume of some 1.3 million tons of HVO needs to be included in the statistics for biodiesel production in 2012 (Tab. 5). In 2013, the European biodiesel producers will have to be ready to deal with a drop in production to less than 8 million tons for the first time since 2008.

Along with the relevant fuel standards (B7 or E5/E10), the basis for the regulatory instruments for biodiesel or biofuel blending into fossil fuels is generally the national legal regulations for the biofuels mandate to be fulfilled. Some member countries, like Spain for example, have reduced the mandate for the entire

Tabel 1: Domestic consumption of biofuels 2012

In 1000 tons	Jan.	Feb.	Mar.	April	May	June
Biodiesel blend	164.2	159.9	195.7	170.2	189.1	187.4
Biodiesel B100	5.3	4.8	4.9	20.0	13.8	5.0
Sum	**169.4**	**164.7**	**200.7**	**190.2**	**202.9**	**192.4**
Vegetable oil (V-oil)	0.2	2.9	1.8	1.9	1.0	1.1
Sum – Biodiesel and V-oil	**169.7**	**167.6**	**202.5**	**192.0**	**204.0**	**193.5**
Diesel	2,443.8	2,436.6	2,846.7	2,663.6	2,846.2	2,752.9
Blend share	6.7 %	6.6 %	6.9 %	6.4 %	6.6 %	6.8 %
Sum – Fuels	2,449.2	2,444.3	2,853.5	2,685.5	2,861.1	2,759.1
Biodiesel and V-oil share	6.9 %	6.9 %	7.1 %	7.2 %	7.1 %	7.0 %

Source: Federal Office of Economics and Export Control, AMI

Table 2: Domestic consumption – Biofuels Jan.–April 2013

In 1000 tons	Jan.	Feb.	Mar	April	Cumulated 2013	2012
Biodiesel blend	144.9	157.2	182.8	153.1	637.1	749.7
Biodiesel B100	7.2	3.0	9.2	1.4	20.8	34.9
Sum	**152.1**	**160.2**	**192.0**	**154.5**	**657.9**	**784.6**
Vegetable oil (V-oil)	0.1	0.0	0.1	0.1	0.3	6.8
Sum – Biodiesel and V-oil	**152.1**	**160.2**	**192.1**	**154.6**	**658.2**	**791.4**
Diesel	2,495.6	2,452.1	2,718.7	2,972.2	10,628.9	10,637.8
Blend share	5.8 %	6.4 %	6.7 %	5.1 %	6.0 %	7.0 %
Sum – Fuels	2,502.9	2,455.1	2,728.0	2,973.7	10,650.0	10,679.5
Biodiesel and V-oil share	6.1 %	6.5 %	7.0 %	5.2 %	6.2 %	7.4 %

Source: Federal Office of Economics and Export Control, AMI

quota from 6.5 % to 4.1 % (Tab. 6). A considerable loss elimination effect for the European biodiesel producers would already apply if the national mandates were oriented around the possible blending volumes as specified by the fuels norm. Over the past few years, UFOP has repeatedly reminded the national biodiesel associations not to neglect what is close to home in reference to the discussion on the political conditions for promoting biofuels. The "blend wall" of 7 % corresponds to an energy quota of around 6.5 % and, as measured by European diesel consumption of some 208 million tons, to a biodiesel demand of approx. 13.6 million tons. Due to the national implementation of doubly crediting biofuels from waste in accordance with Article 21 (2) of the Renewable Energy Directive, the impression is merely reinforced that the biodiesel industry in particular is more interested in further "cannibalizing" the sales potential than in developing new turnover possibilities. The only thing currently decelerating this development is the fact that not yet all member states have introduced the double credits system. In regard to this question in particular, no discernible joint strategy emerged over the reporting period. On the contrary: The newly established lobby "Mittelstandsverband abfallbasierter Kraftstoffe (Small to Medium-sized Companies Association for Waste-based Fuels) (MVaK), has set itself the target of representing solely the interests of the manufacturers and retailers of waste-based biofuels. UFOP laments this further flooding of the lobbying group at the level of biofuels producers. This makes it increasingly difficult to pool interests and jointly represent them. The industry will hardly have any more chances to develop mutual ideas and concepts in order to at least be able to maintain turnover prospects for biodiesel in the EU.

Internationalization of raw materials and biodiesel imports

While the globalization of the origins of biodiesel and thus raw materials is generally on the increase, it is linked to significant displacement effects. In 2008, some 2.2 million tons of biodiesel (soya methyl ester) were imported from the USA. The reason for this boom in imports was the granting of a so-called "blender credit" to the amount of one dollar per gallon (3.8 liters) This kind of export subsidy by the US government was stopped by successful anti-dumping proceedings against those companies with headquarters in the US. This import demand gap was gradually taken over by Indonesia and Argentina, as shown in Graphic 4. In 2012, some 2.4 million tons of biodiesel were imported from these countries. UFOP is extremely pleased with the anti-dumping proceedings introduced against Argentina and Indonesia in August 2012 which are showing tentative signs of success as of May 2013. The EU Commission's Directive (EU) No. 490/2013, L 141/16 announced the introduction of anti-dumping measures, provisionally limited to six months, on imports from

July	Aug.	Sept.	Oct.	Nov.	Dec.	Cumulated 2012	2011
194.6	198.1	187.4	161.1	150.2	166.2	2,209.6	2,315.9
9.1	12.8	18.8	9.5	8.6	18.5	131.0	97.2
203.7	**210.9**	**206.2**	**170.6**	**158.8**	**184.7**	**2,340.6**	**2,413.1**
7.3	5.4	1.4	0.7	0.3	0.6	24.7	19.6
211.0	**216.3**	**207.7**	**171.4**	**159.1**	**185.3**	**2,365.3**	**2,432.8**
2,871.2	2,977.6	2,771.5	2,949.5	2,865.6	2,407.7	33,061.0	32,963.8
6.8 %	6.7 %	6.8 %	5.5 %	5.2 %	6.9 %	6.7 %	7.0 %
2,887.6	2,995.8	2,791.8	2,959.8	2,874.6	2,426.7	33,216.7	33,080.7
7.3 %	7.2 %	7.4 %	5.8 %	5.5 %	7.6 %	7.1 %	7.4 %

Table 3: Biodiesel production capacities 2013 in Germany

Operator/Plant	Location	Capacity (ton/year)	
ADM Hamburg AG -Hamburg plant-	Hamburg	not specified	●
ADM Hamburg AG -Leer plant-	Leer	not specified	●
ADM Mainz GmbH	Mainz	not specified	●
Bioeton Kyritz GmbH	Kyritz	80,000	●
BIO-Diesel Wittenberge GmbH	Wittenberge	120,000	●
Bio-Ölwerk Magdeburg GmbH	Magdeburg	180,000	●
BIOPETROL ROSTOCK GmbH	Rostock	200,000	●
Biowerk Sohland GmbH	Sohland	50,000	●
BKK Biodiesel GmbH	Rudolstadt	4,000	
Cargill GmbH	Frankfurt/Main	300,000	●
EAI Thüringer Methylesterwerke GmbH (TME)	Harth-Pöllnitz	55,000	●
ecoMotion GmbH	Lünen	212,000	●
german biofuels gmbh	Falkenhagen	130,000	●
Gulf Biodiesel Halle GmbH	Halle	58,000	
KFS-Biodiesel GmbH	Cloppenburg	30,000	●
KL Biodiesel GmbH & Co, KG	Lülsdorf	120,000	
Louis Dreyfus commodities Wittenberg GmbH	Lutherstadt Wittenberg	200,000	●
MBF Mannheim Biofuel GmbH	Mannheim	100,000	●
NEW Natural Energie West GmbH	Neuss	260,000	●
Petrotec AG	Emden	100,000	
Petrotec AG	Südlohn	85,000	
Rapsol GmbH	Lübz	6,000	●
TECOSOL GmbH (formerly Campa)	Ochsenfurt	75,000	●
Ullrich Biodiesel GmbH/IFBI	Kaufungen	35,000	
Verbio Diesel Bitterfeld GmbH & Co, KG (MUW)	Greppin	190,000	●
Verbio Diesel Schwedt GmbH & Co, KG (NUW)	Schwedt	250,000	●
Vesta Biofuels Brunsbüttel GmbH & Co, KG	Brunsbüttel	150,000	
Vogtland Bio-Diesel GmbH	Großfriesen	2,000	
Total (without ADM)		**2,992,000**	

Note: ● = AGQMmember;
Source: UFOP, FNR, VDB, AGQM / some names are abbreviated
DBV and UFOP recommend procuring biodiesel from the members of the working committee
As of April 2013

Argentina and Indonesia. These amount to 83.84 EUR/ton of biodiesel from Indonesia and 104.92 EUR/ton of biodiesel from Argentina. The EU Commission will announce at a later date its decision on the possibility of retroactive anti-dumping customs duties being applied to imports recorded by the customs office since January 30, 2013. UFOP expects that the EU Commission will again confirm its declaration in November relating to the considerable damage to the European biodiesel industry as based on this provisional decision and set the customs duties rates for a period of five years (Graphic 4).

UFOP filling station study

Against this background, UFOP had its results confirmed in regard to the study it commissioned to examine the composition of raw materials in biodiesel blended into diesel fuels. 60 public gas stations were sampled in June 2013 in order to examine the raw materials composition in so-called summer goods. A "filtration value" of 0°C (-20°C in winter) applies for the summer quality of biodiesel as allowed by the fuel standard. In accordance with expectations, a raw materials mix of different vegetable oil based raw materials and origins was determined. At the time of sampling, the rapeseed oil share of the blended biodiesel was 53 %. Palm oil made up 25 %, while soya and coconut oil each made up 11 % (Graphic 5). UFOP published these study results with the declaration that they also confirmed the successful implementation of sustainability certification systems in non-EU countries as approved by the Commission in 2011. Sustainable certified vegetable oil as well as biofuels are available on a globalized

Table 4: Production and consumption of biodiesel in the EU in 2012

	Production Biodiesel	Production HVO	Consumption Biodiesel
Austria	264		583
Belgium	330		330
Czech Republic	173		245
Denmark	70		95
France	1.650	50	2.050
Germany*	2.400		2.340
Italy	350		1.400
Netherlands	377	800	197
Poland	592		650
Portugal	313		313
Slovakia	110		75
Slovenia	6		30
Spain	440	100	2.100
Sweden	130	20	355
Great Britain	270		555
Other EU	**482**	**320**	**572**
EU	**7.957**	**1.290**	**11.250**

Source: F.O. Licht
* incl. HVO

market. As such, the respective raw material prices (Graphic 6) are what also greatly influence market access. UFOP made it clear that those companies who comply with the international rules of the game as specified by the EU's sustainability certification system cannot be refused access to the market. However, it is ominous that the EU Commission needs to inspect the quality of the implementation of certification systems and of the local inspections/local certification just as intensely. This necessity was confirmed, among others, by the criticism of the Verband der Deutschen Biokraftstoffindustrie e.V. (Association of German Biofuels Industry) (VDB) after a trip by a delegation from the Federal Ministry for Food, Agriculture and Consumer Protection to Argentina. There, one company, among others, was presented which had been certified according to the French 2BSvs system. From UFOP's point of view, it generally needs to be noted that this system does not include a local inspection of the agricultural operations due to the fact that a corresponding check is done in the EU at random within the framework of cross-compliance requirements. However, this legislative basis for the cessation of inspections of agricultural operations does not exist in Argentina. UFOP deems it necessary that immediate action be taken in this regard. Unfortunately, this question has not yet been taken into consideration in the evaluation and field report undertaken by the office responsible for the implementation of the Biofuels and Bio-energy Sustainability Act, the Federal Office for Agriculture and Food (BLE).

Evaluation and experience report of the BLE

In general, UFOP sees the annual report of the BLE as the piece of documentation providing the most direction in terms of data quality and scope when it comes to satisfying the reporting obligations of the Federal Government to the EU Commission. The following results from the report should be taken into consideration:

- As of the end-of-period date of December 31, 2012, two certification systems (ISCC DE and REDcert DE) and 26 certification offices are recognized.
- Globally, the certification offices recognized by the BLE certified 1,259 operations.
- In 2012, 13,119 sustainability certificates for biofuels were logged in the "nabisy" database system.
- At approx. 63 %, rapeseed is the most important basic material in the production of biodiesel.
- 44 % of the sustainable biofuels logged in "nabisy" in 2012 and containing details on the area of cultivation is produced from raw materials cultivated in Germany.
- The evaluation report provides an overview of the increasing prevalence of raw materials diversification observed in 2012. While the share of biodiesel from rapeseed fell compared to 2011 figures, the share of biodiesel from waste almost trebled. The same conclusion applies in particular to the extraction of bio-methane from waste, whose share, as measured by energy content, increased as much as eight times.

New direction of EU biofuels policies – The Commission's recommendations

In mid-October 2012, the EU Commission presented its recommendations on changes to the Renewable Energy Directive (2009/28/EC) and on changing the Fuel Quality Directive (98/70/

Table 5: Biofuel mandates in the European Union

	Statutory provisions Biofuels	Remarks	Blending methods for Ethanol fuel and FAME**
Belgium	4% vol. for both biodiesel and ethanol fuel up to June 30, 2013	Tax exemption for biofuel share up to 5% vol. up to June 30, 2013; quota system; sanction mechanism introduced.	ETBE and ethanol blends up to 5% vol.; FAME blends up to 5% vol.; B 7 standard exists, but tax benefit only for B 5. Tax exemption for B 7 and E 10 approved up until September 30, 2019, but EU decision still required. .
Bulgaria	-	Tax exemption for biofuel share.	Ethanol and FAME blends up to 5% vol.
Denmark	5.75% cal.	Tax exemption for biofuel share.	E 5 and FAME blends up to 7% vol.
Germany	6,25 % cal.; minimum requirements for ethanol fuel (2.80% cal.) and biodiesel (4.40% cal.)	Sanction mechanism in existence; reduction in tax relief for pure biofuel.	ETBE, E 5, E 10; E 85; FAME blends up to 7% vol., B 100; PPO
Estonia	5.75 % cal.		-
Finland	6 % cal.		ETBE, E 5, E 10; FAME marginal.
France	7 % cal.	quota system; sanction mechanism introduced.	ETBE, E 5, E 10; B 7/30.
Greece	-	Quota system for FAME	Ethanol and FAME blends up to 5% vol.
Ireland	6% vol. in 2013; 4% vol. in 2012		Ethanol mixes up to 5% vol.; FAME mixes up to 5% vol.
Italy	5.50% cal. in 2014; 5% cal. in 2013; 4.50% in 2012.	Sanction mechanism in place.	ETBE; FAME mixes up to 5% vol.
Latvia	-	Tax exemption for biofuel share; production subsidies for biofuels.	Ethanol mixes up to 5% vol.; FAME mixes up to 5% vol.
Lithuania	-	Tax exemption for biofuel share.	E 5/ETBE, B 5.
Luxembourg	-		FAME mixes up to 5% vol.
Malta	1.25 % cal.		FAME mixes up to 5% vol., B 100.
Netherlands	5.50.% cal. in 2014; 5% cal. in 2013; 4.50% cal. in 2012; minimum blending specifications for biodiesel and ethanol fuel of 3.50% cal. each; quota increase recommended.		ETBE, E 5, E 10; FAME mixes up to 7 % vol.
Austria	5.75% cal.	Tax exemption for pure biofuels; lower taxation for mixes	E 5; B 7, B 100; PPO
Poland	7.55% cal. in 2014; 7.10% cal. in 2013; 6.65% cal. in 2012;	Sanction mechanism in place.	ETBE and Ethanol blends up to 5% vol.; B 7, B 100; PPO.
Portugal	B 7 (vol.)	Quota system.	B 7, B 100
Romania	Minimum blending specifications for biodiesel and ethanol fuel of 5% vol. since 2011; each increased to 7% vol. from 2013 onwards.	Sanction mechanism in place.	ETBE and ethanol blends up to 5% vol.; B 5.
Sweden	-	Tax exemption for biofuel share.	E 5, E 85, E 95; E 10 planned from 2014; special subsidies for E 85 cars; FAME mixes up to 7% vol., B 100.
Slovakia	5.75 % cal.	Tax exemption for biofuel share.	ETBE; B 5, B 30
Slovenia	5 % cal.	Tax exemption for biofuel share.	Ethanol and FAME blends up to 5% vol.

Spain	4.10 % cal. since 2013; 6.50% cal. in 2012; Mandatory blend of bioethanol min. 4.10% cal. in 2012, 3.90% cal. since 2013; Mandatory blend of biodiesel min. 7% cal. in 2012, 4.10% cal. since 2013.	Tax exemption for biofuel share up to Dec. 31, 2012; Sanction mechanism in place.	ETBE and ethanol mixes up to 5% vol.; FAME mixes up to 7% vol.
Czech Republic	5.75 % cal. for biodiesel; E 4.1 (vol.); B 6 (vol.)	Sanction mechanism introduced; Tax exemption for pure biofuels and high blends up to 2015.	ETBE and ethanol mixes up to 5% vol.; B 5 and B 30/100
Hungary	-	Tax exemption for biofuel share.	B 5; E 5; E 10 standard exists, but is not yet implemented.
United Kingdom	4.75% vol. since 2013/14; 4.50% vol. for 2012/13; (Apr 15/Apr 14 respectively)	Sanction mechanism in place; UCO biodiesel was subsidized up until March 31, 2012.	Ethanol and FAME mixes up to 5% vol. or 7% vol. Introduction of E 10 discussed.
Cyprus	2.50% cal. for biodiesel		FAME mixes up to 5% vol.

Source: F.O. Licht

EC). As expected, these recommendations, covering all levels of the biofuels chain and beyond, brought about intense debate and reactions. The suggested directive changes need to be discussed and passed within the framework of the so-called "Trilog procedure", that is, in a voting process among the EU Parliament, Council and EU Commission. This means that the European Parliament also needs to decide. The Environment Committee (ENVI) is responsible as the panel in charge for the European Parliament. In January, the Irish council presidency had immediately announced that it would tightly organize proceedings so that the final vote can take place in parliament at the end of 2013 during the next council presidency in Lithuania.

An overview of the recommendations:

1. Limiting the crediting of biofuels from cultivated biomass (food resources like rapeseed, corn, sugar beet, etc.) to the EU's expansion target of max. 5% in regard to the final energy consumption in 2020. After 2020, the subsidies for biofuels produced from these raw materials will end.
2. In order to incentivize investment in the production of biofuels from waste and residual products (e.g. straw) and simultaneously rebut the "food/fuel" discussion, biofuels from these resources are to be credited doubly/four-fold to the target of 10% of the final energy consumption in circulation (on an energy basis) by 2020. When it comes to national implementation, this means that it will be possible to accordingly credit the biofuels doubly/four-fold to the quota obligation, which would considerably lessen the demand for biofuels (biodiesel RME).
3. So as to take indirect land usage changes into account the so-called iLUC factors will not be introduced immediately. They are first to be included in reports up until 2017 stating which raw materials were used for the purpose of biofuels production. In the member states, the duty to inform is the responsibility of the mineral oil industry. This is practically the equivalent of a voluntary declaration. In the case of having to determine vegetable oil-based biodiesel, this is like stating that it will not be possible to achieve the target value for a reduction in greenhouse gas emissions with an iLUC factor.

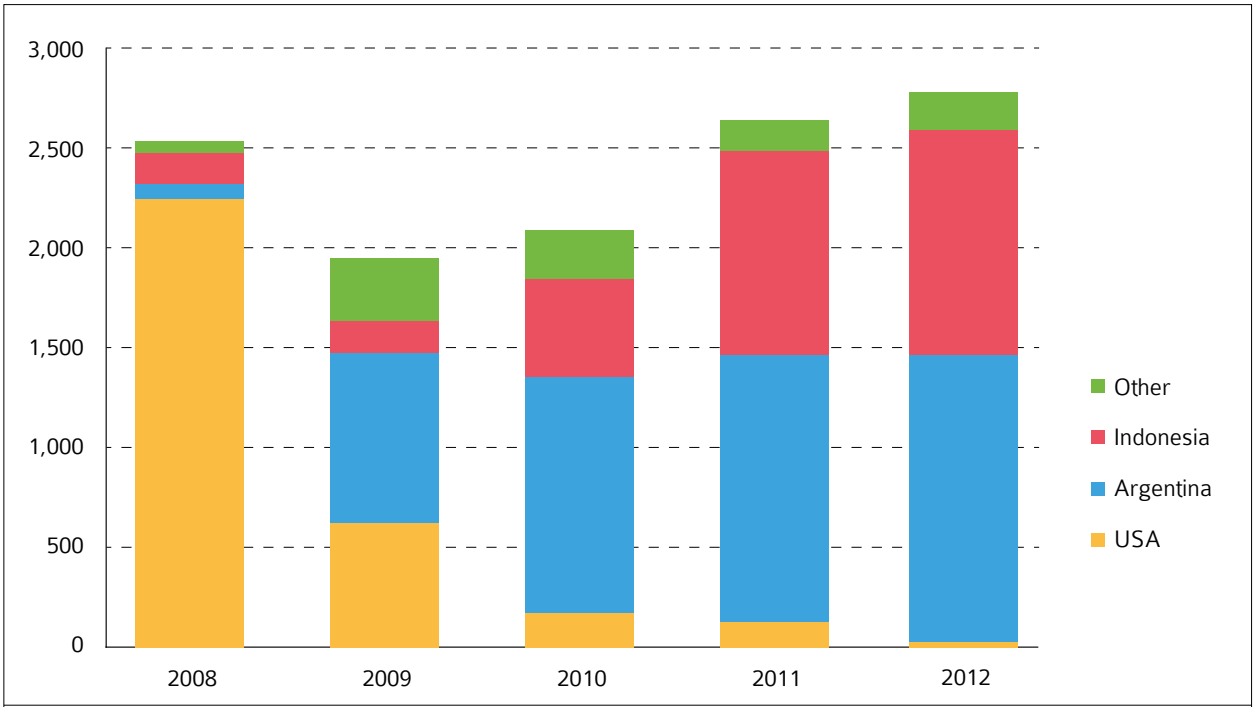
The Commission recommends the following iLUC factors:
- Starchy resources: 12 g CO2 eq./MJ,
- Sugary resources: 13 g CO2 eq./MJ,
- Vegetable oil (rapeseed, soya, palm): 55 g CO2-eq./MJ,
- Biofuels from waste and residual products: 0g CO2 eq./MJ.

As can be seen in Graphic 7, the introduction of iLUC factors means the end of vegetable oil-based biofuels (biodiesel, rapeseed fuel and HVO). A premium value of 55 g CO2/MJ would even bring about a negative greenhouse gas balance compared to diesel fuel with some kinds of raw materials. At first glance, the winner here would be bio-ethanol production from corn, sugar beet or sugar cane. However, the iLUC values for bio-ethanol would have to be recalculated if one is to follow the "logic" of indirect land usage change.

A critical view of IFPRI model and iLUC factors

The EU Commission hired the International Food Policy Research Center (IFPRI) based in Washington to evaluate the supply and demand effects as well as to calculate the indirect land usage changes resulting from demand for the biodiesel raw materials of rapeseed, soya and palm oil. At the core of it all was the question of to what extent there exists with models a cause-effect relationship between biofuels usage in the European Union and

Graphic 1: EU FAME imports (1000 tons)



Source: F. O. Licht

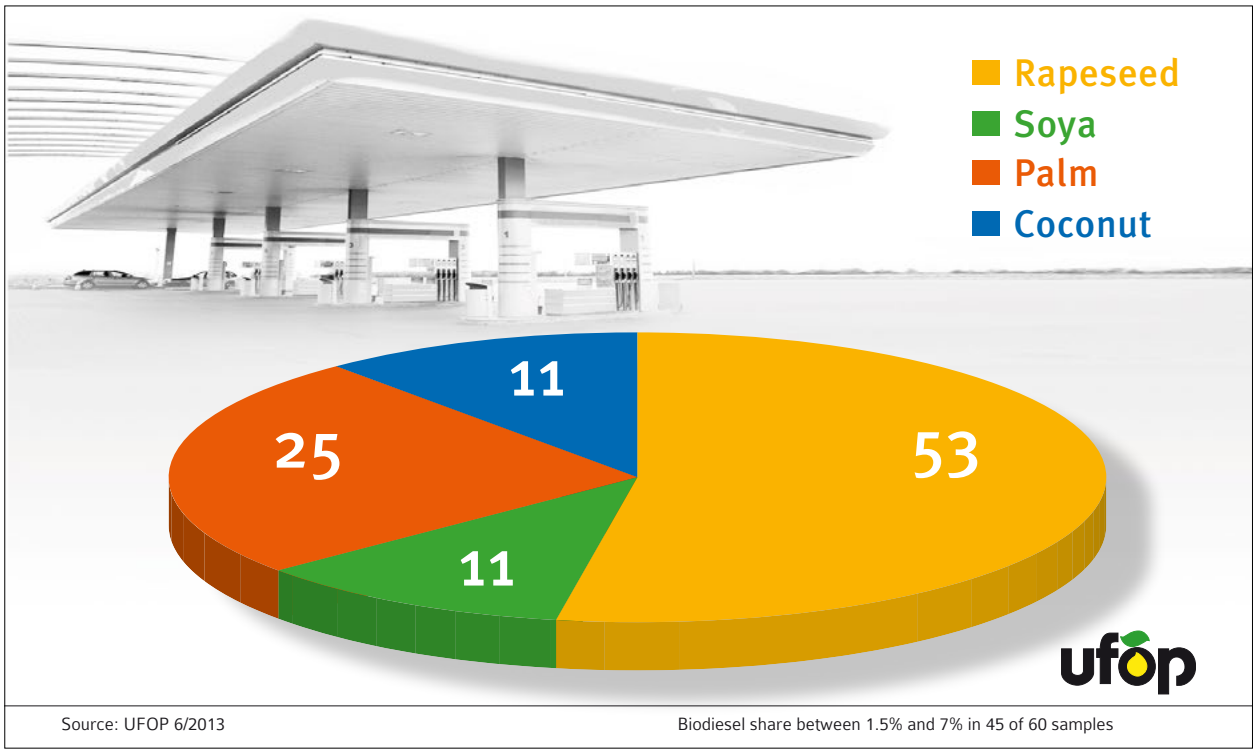
land usage changes in non-EU countries. This question was the subject of intense discussions. On the occasion of the 10th International Biofuels Conference of the Bundesverband BioEnergie e.V. (Federal Bio-Energy Association) and UFOP in January 2013 in Berlin, the representative of the EU Commission faced up to the accusation that this study is not suited as a basis for decision-making in regard to the introduction of iLUC factors, which would ultimately lead to the abandonment of an entire biofuels sector in the foreseeable future. The model further developed by the IFPRI Institute seemingly represents the best academic basis available to date for calculating iLUC factors. Simultaneously, the EU Commission as well as experts, repeatedly pointed out that iLUC factors cannot be calculated, but merely derived based on models. In order to provide justification for the iLUC factors, the EU Commission presented its precautionary principle, the aim of which is to prevent the worst-case scenario of EU biofuels policies leading to rainforest clearing in non-EU states like Indonesia and Malaysia. The reason given for the high greenhouse gas premium value with biodiesel is the allegation that rainforest areas in turf regions are also being cleared and that the related carbon removal considerably increases the iLUC value.

UFOP was critical of the fact that the iLUC factors are based on the so-called national action plans communicated to the Commission and the associated biofuel demand volumes (see UFOP report 2010/2011, P. 27) for target compliance in 2020. However, the associated biofuel demands require an adjustment to the corresponding diesel fuel standard so as to increase the blend share for biodiesel beyond B 7. So too, the use of hydro-treated vegetable oils (HVO) is still for the most part restricted to the maximum technically possible potential of 2 million tons of Neste Oil's facility. In light of the narrow margins, UFOP is not of the opinion that any increase in HVO production capacities is to be expected. Against this background, UFOP determined that the iLUC factors suggested do not reflect the raw material demands for target compliance anyway and fundamentally criticized the fact that the EU Commission has not yet implemented a fuels strategy that takes biofuels into consideration.

Commission without ideas

The recommendations of the EU Commission underline their lack of ideas when it comes to reorganizing the future fuel supply for sustainable mobility step-by-step and switching to renewable fuels. Equal treatment gets left behind. This is because with fossil fuels, the source is not queried (e.g. the destruction of the environment as a result of oil shale mining in Canada, the environmental pollution in the Gulf of Mexico or in other crude oil drilling countries in Eastern Europe and Africa). Sustainability certification must also be created for fossil energy sources, a certification which is analogous to that for biofuels. It is simply naive to believe that waste and residual products are the solution to this resource and environmental policy problem. On the contrary: The multiple crediting of biofuels from waste and residual products leads vice-versa to a physical fossil fuel demand which is increasing in equal measure. Of all things, the winner in this scenario would be the mineral oil industry. This and other issues were treated in the analysis and commentary on the Commission's recommendations carried out by the German Biomass Research Centre commissioned by UFOP. This short study was communicated to the relevant members of the European Parliament and presented as part of a special event.

Graphic 2: Biodiesel – Raw materials mix in diesel



Source: UFOP 6/2013 Biodiesel share between 1.5% and 7% in 45 of 60 samples

Furthermore, the example of France makes it clear that waste materials from dubious sources are being processed into biodiesel and credited doubly to the quota obligation. As early as 2011, the rapeseed oil methyl ester demand fell by approx. 700,000 tons as a result of double-crediting. France therefore placed a cap to the amount of 125,000 tons on biodiesel which can be doubly credited. UFOP also demanded this of the German market. Otherwise the high monetary incentive means that "circumvention crimes" are to be feared. Chinese companies in particular are appearing on the market as "Producers" of used vegetable oils.

The different technology used to produce biofuels from straw and other residual products requires significantly higher investment than traditional biofuels production. The necessary period of amortization at the current low margins are accordingly lengthy. Also, it cannot be ruled out that the EU Commission will change the framework conditions for these biofuels as well in a few years. Sustainability criteria also need to be applied to straw and other residual products. This is what UFOP Chairman, Wolfgang Vogel, demanded in his cover letter included in the DBFZ study he sent to the members of the European Parliament. In his letter, the UFOP chairman also explained his particular concern that the Commission would also abandon the certification systems which have since been internationally introduced, and with that the monitoring tool which certifies the biomass origin for compliance with greenhouse gas emissions requirements. UFOP has repeatedly demanded in public campaigns that the international requirement platform developed as a result of EU biofuels policies, the "level-playing-field", must be further developed in terms of quality improvement ultimately so that the introduction of social standards be promoted in non-EU countries in particular. Implementing these certification systems and the approval and further qualification of the corresponding inspection points are also a way to participate in the shaping of requirements of local biomass production in non-EU countries in an increasingly sustainable way.

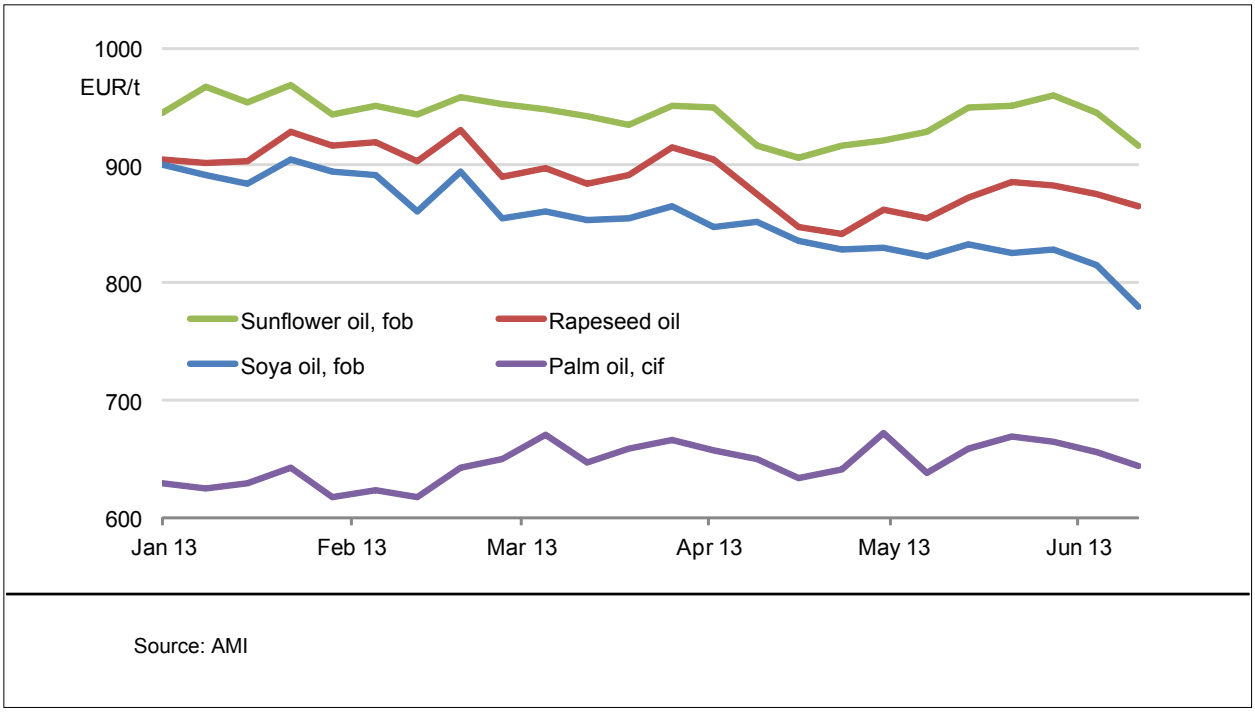
The decision is with the European Parliament

The Environment Committee of the European Parliament (ENVI) is responsible for drawing up the report. Other associated committees are the Committee for International Trade (INTA), Industry, Research and Energy (ITRE), Transport and Tourism (TRAN), Agriculture and Rural Development (AGRI).

On July 11, 2013, the Environmental Committee presented a compromise text for further parliamentary discussion. It dealt with the following core issues:

- Capping first-generation biofuels at 5.5 % of the entire final energy consumption in 2020,
- Introduction of a minimum quota of 2 % for "advanced" biofuels from waste and residual products (without used vegetable oils and animal fats), double crediting,
- Biofuels from waste oils and animal fats can be doubly credited twice within the quota specified for first generation biofuels of max. 5.5 %,
- Introduction of a minimum quota of 2 % for energy from renewable resources; double crediting of rail traffic when fulfilling the sub-quota and four-fold crediting of electro-mobility in the passenger vehicles area (road traffic),
- Fuels from algae (autotrophs), bacteria and from "non-biomass" like wind power for example (power to gas) can be credited four-fold,

Graphic 3: Price development of vegetable oils



- Introduction of iLUC factors in reporting from 2015 onwards and, if necessary, from 2020 for greenhouse gas balancing-basis is a scientific evaluation process.

This is contrary to the position of the European Agricultural and Co-operative Association – Copa Cogeca.

- Minimum share of biofuels from agricultural crops: 8%,
- Creation of a quota of 2% for second generation biofuels (including waste),
- Axing double/four-fold crediting,
- Axing iLUC regulations,
- Sustainability criteria must be introduced for all biofuels as well as for residual product and waste materials,
- An indefinite inventory clause must be applied to existing production plants,
- Re-evaluation of the emission value (comparator) for fossil fuels.

The entire German and European biofuels industry has been massively critical of the suggestions of the Environmental Committee. From UFOP's point of view, implementing this recommendation would signal the end of biofuel production after 2020. Looking towards this target year, protection of old production facilities was not taken into enough consideration. This does not create an incentive to invest in the production of "advanced biofuels". In reality, the recommendation signals a fundamental exit from biofuels policies in the mobility sector. The Green Paper "A Framework for Climate and Energy Policies up to 2030" presented by the EU in Spring 2013 also confirms this assessment. In it, biofuels play a subordinate role. The Commission does not attribute any energy or environmentally political importance to biofuels in the general concept of renewable energy sources after 2020. In doing so, the Green Paper emphasizes how the biofuels sector is not perceived as a sector of the future. There exists here a vacuum of activity, which UFOP, in cooperation with other organizations, must focus on more.

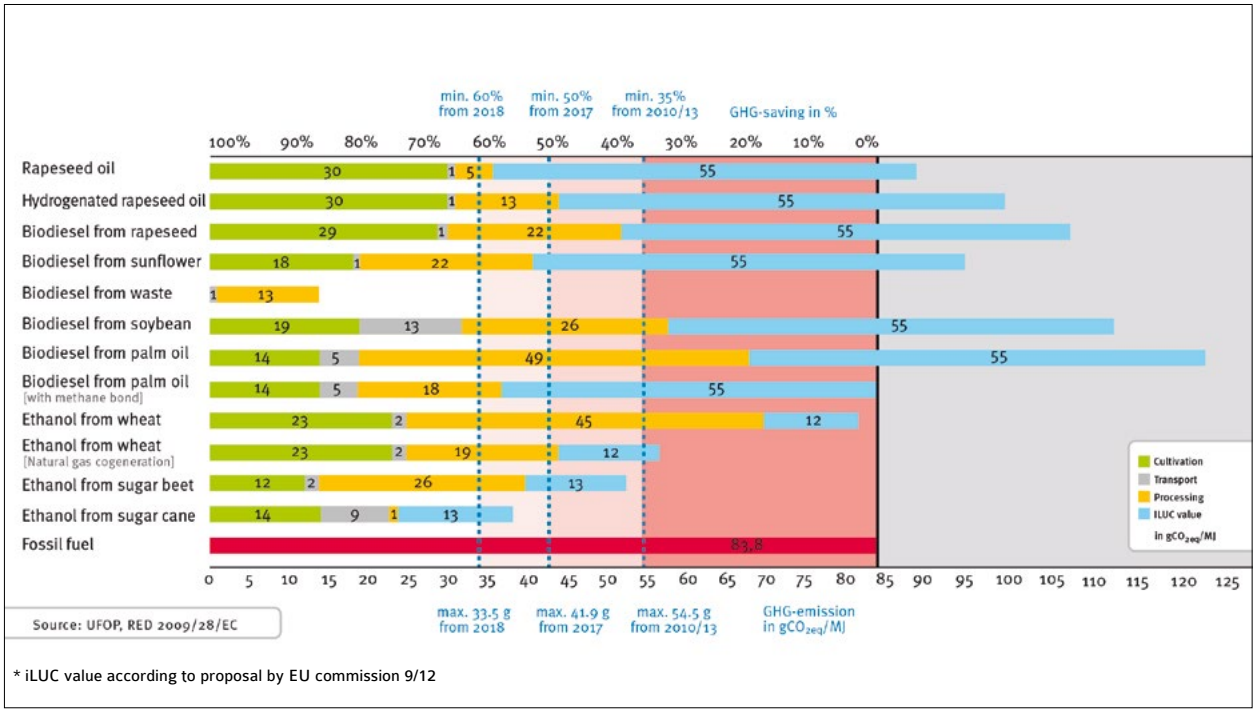
What's next?

In regard to the prospective drafting of framework political subsidy conditions in the Trilog procedure, it is foreseeable that the European Parliament's conclusion in November 2013 will determine the outcome of the procedure and point the way for the future. The presentation of the study promoted by UFOP and the VDB on the topic of "Determinants for the Level and Volatility of Agricultural Resource Prices on International Markets – Implications for Global Food and Policy-Making" which was given at the University of Giessen in cooperation with Copa Cogeca to members of the European Parliament and specialist press is a positive example of balanced and efficient collaboration. In addition, UFOP will further strengthen its joint activities with the European Oilseed Alliance (EOA).

Mobility and fuels strategy

In June 2013, the Federal Government accepted the report promoting a mobility and fuel strategy presented to it by the Federal Ministry of Transport, Building and Urban Development (BMVBS). This ended approx. 15 months of intense dialog with representatives of the vehicle, mineral oil and biofuels industry as well as representatives from science, research and professional associations. In five expert discussions, some of which

Graphic 4: Standard-GHG-emissions for biofuels + ILUC*



* iLUC value according to proposal by EU commission 9/12

were then split into work groups, facts were gathered in regard to the situation and framework conditions for biofuels in traffic, the importance of savings targets in traffic and the required infrastructure-based development for alternative fuels. In turn, the results were used in the discussion on recommendations for developing mobility concepts and ultimately creating the necessary framework conditions. In intense special workshops, facts were compiled on the topic of fossil fuels, biogenic fuels, engines in road and rail traffic as well as in shipping and aviation.

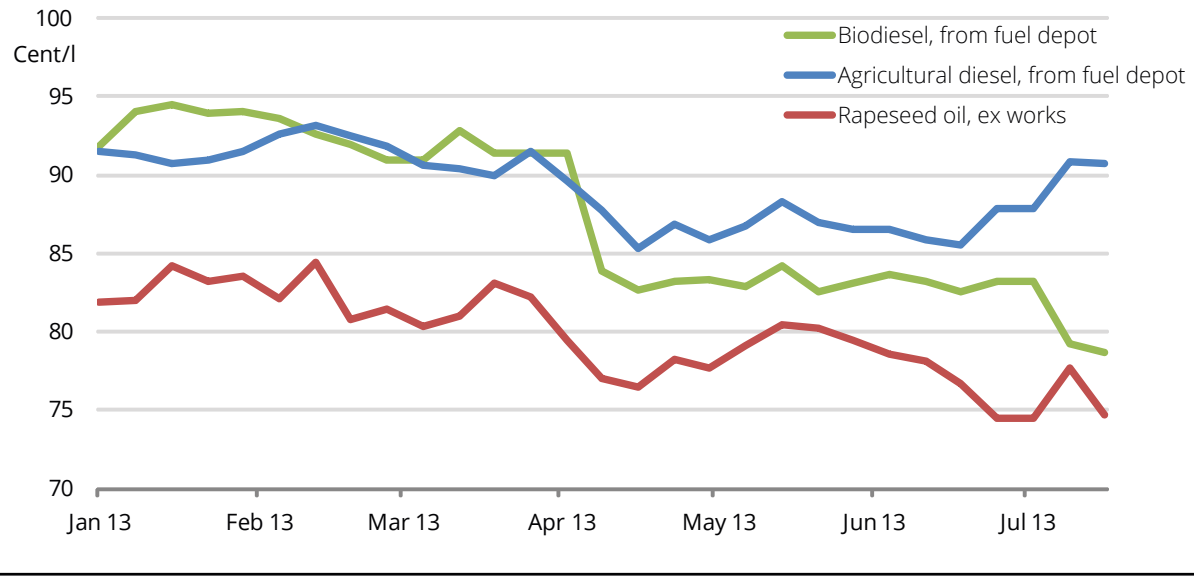
UFOP basically welcomed this open-ended dialog which was open to all types of technology as it was possible for the first time to discuss practically all of the critical questions on the use of biofuels in mobility over a period of several months. All the institutions involved in the creation of the MKS are listed in the report's appendix. UFOP sees the result as a comprehensive baseline study in the sense of a first beginning. This is a good basis for further specifying and designing a strategy. Over the course of the dialog process, it became clear that it was not going to be possible to produce a final report in the sense of a conclusive recommendation for the future formulation of a strategy. For this reason, the BMVBS has again pointed out that the discussion must bear in mind the time horizon of 2030 at the earliest and that this approach all in all is to be seen as a "learning" strategy. As such, UFOP expects that the discussion on the development of a binding strategy will be swiftly continued based on this comprehensive collection of information. Fundamentally, this dialog process could be a way to kick off an identical discussion on a European level.

Market incentive program for increased biofuel usage in agricultural farming and forestry management

The agricultural farming and forestry management sector is the only one since the change in 2006 to continue to receive full tax relief in relation to biofuels usage. The energy taxation directive explicitly stipulates the authorization to exclude companies in agricultural farming and forestry management from biofuel taxation. In contrast, the tax relief for using biodiesel or vegetable oil fuel in passenger vehicles or in the shipping trade expired on 1 January 2013. When using pure fuel, both biofuels must be taxed at a rate of 45.07 cent/liter. On January 1, 2013, the possibility to doubly credit biofuels from waste oils to the quota obligation was simultaneously introduced. The double crediting and the market pressure of sustainable certified raw materials and biofuels from non-EU states can be seen in the falling demand and prices for rapeseed oil. The sluggish turnover bemoaned by the oil mills as well as the increase in export volumes already happening confirm the market overhang with rapeseed oil. Falling rapeseed oil and thus rapeseed oil methyl ester prices on the other hand make the use of these fuels in agricultural farming and forestry management appealing again.

Against this background, the Deutsche Bauernverband e. V. (German Farmers' Association) (DBV), the Bundesverband dezentraler Ölmühlen und Pflanzenöltechnik e. V. (Federal Association of Local Oil Mills and Vegetable Oil Technology) (BDOel) and UFOP have initiated a joint market incentive program for the promotion of the use of biofuels in agricultural farming and put forward a proposal in this regard. The aim of the program is not just to enable the use of fuel in tractors which already

Graphic 5: Wholesale trade prices without VAT



Note: Rapeseed oil and biodiesel for use in agriculture farming exempt from energy tax, agricultural diesel partially taxed at 25.56 cent/l, all prices not including transport fees
Source: AMI

have approval to use biodiesel, but, in light of the ever more stringent legal emissions requirements, to accelerate market access for tractors which meet the strictest legal exhaust requirements. Tractor manufacturers like John Deere for example or automobile manufacturers like DEUTZ AG have since taken successful steps in this regard. Similarly, modern tractor engines are equipped with common rail injection systems as well as particle filters and additive (urea)-supported exhaust cleaning systems. In accordance with the organizations' requirements the market incentive program stipulates an investment grant for the purchase of 10,000 tractors of this new generation over a period of five years. At the same time, the agricultural diesel regulation should be adjusted in such a way that farming operations can immediately acquire energy-tax-exempt biofuels, thereby bypassing the bureaucratic reimbursement procedure. This measure would simultaneously be of help to businesses in terms of liquidity. From the associations' viewpoint, it is remarkable that approx. 1.8 billion liters of diesel fuel are still being consumed in agricultural farming and forestry management. As current comparison calculations (see Graphic 8) at the wholesale trade level confirm, the use of biodiesel or vegetable oil fuel can also pay off when the farmer takes advantage of the reimbursement for diesel fuel. In order to raise interest in biodiesel and rapeseed oil, UFOP has added to the information provided on its website under the biodiesel prices, bio-heating oil prices and biofuels statistics banner. The price comparisons are now updated and published on a weekly basis.

The basic interest on the side of agricultural farming in using biodiesel or vegetable oil-based fuel was confirmed in the DBV survey for the "business barometer". The operations were also asked about their interest in the potential use of these fuels. Regardless of the size of the operation, on average more than 30% of the businesses showed an interest. At the same time, the businesses were asked about their concerns in relation to the use of biodiesel and vegetable oil fuel. As listed in Tab. 7, the main issue is the question of fuel quality. The future informational work of UFOP will focus on this issue precisely in order to ensure customer satisfaction.

Table 6: DBV farmers' survey

"What prevents you from using biofuels in your business?"				
			Farmers	
	Total (n = 270)	North (n = 79)	South (n = 122)	East (n = 69)
Fuel quality not secured / Engine damage feared	38 %	36 %	41 %	26 %
No approval for tractors and machines	32 %	18 %	39 %	38 %
Costs	23 %	20 %	26 %	14 %
Technically impossible / Machine too old	12 %	22 %	5 %	15 %
Bureaucratic procedure of tax reimbursement	7 %	7 %	7 %	7 %
Multiple selection; Not supported; Filter: Interest in use of biofuels			Source: DBV survey (extract), June 2013	

"What prevents you from using biofuels in your business?"				
			Farmers	
	Total (n = 270)	< 50 ha LA (n = 40)	50 – 99 ha LF (n = 86)	≥ 100 ha LA (n = 144)
Fuel quality not secured / Engine damage feared	38 %	44 %	33 %	37 %
No approval for tractors and machines	32 %	33 %	32 %	31 %
Costs	23 %	12 %	28 %	28 %
Technically impossible / Machine too old	12 %	18 %	7 %	11 %
Bureaucratic procedure of tax reimbursement	7 %	5 %	9 %	7 %
Multiple selection; Not supported; Filter: Interest in use of biofuels			Source: DBV survey (extract), June 2013	

More than a third of those farmers asked are interested in the use of pure biofuels (biodiesel or vegetable oil) regardless of the size of their business				
	Total (n = 849)	< 50 ha LF (n = 126)	50 – 99 ha LF (n = 261)	≥ 100 ha LF (n = 462)
Yes, already used pure biofuels	2%	0%	3%	3%
Generally yes, but currently not used	32%	31%	33%	32%
No, no interest	66%	69%	64%	65%
				Source: DBV survey (extract), June 2013

Public relations work

EU information events

The importance of the European Parliament to the further development of the biofuels market and thereby to the sales of rapeseed as a raw material for German and European biofuels production has increased considerably in the works of UFOP in 2012 and 2013. For this reason, numerous bilateral discussions were held with officials and members of parliament in Brussels as were multiple local informational events. On November 14, 2012, UFOP, together with the Verband der Deutschen Biokraftstoffindustrie e. V. (Association of the German Biofuels Industry) (VDB) and the Verband der ölsaatenverarbeitenden Industrie in Deutschland e. V. (Association of the Oilseed-Processing Industry in Germany) (OVID) invited members of the European Parliament as well as their employees and other multipliers to an informational event. The topic was "Biofuels on the way out? – Consequences of the EU Commission's Recommendations". The main issue of the event visited by over 20 participants at the offices of the representatives of the Free State of Bavaria in the EU was the appraisal of the Commission's recommendations by the German Biomass Research Center (DBFZ).

Information event for parliamentarians in Brussels

Similarly, on June 18, 2013, the results of a study undertaken by Prof. Dr. Michael Schmitz from the Institute for Agrarian

UNION ZUR FÖRDERUNG VON OEL- UND PROTEINPFLANZEN E.V.

UFOP „POLITIK AKTUELL“

BIOKRAFTSTOFF- UND RESSOURCENPOLITIK
NACHHALTIG AUF WACHSTUM AUSRICHTEN!

Forderungen der UFOP zur Bundestagswahl 2013

Biokraftstoffe

Mit der Erneuerbare-Energien- und der Kraftstoff-Qualitäts-Richtlinie hat die EU für alle Mitgliedsstaaten die Verpflichtung vorgegeben, ab 2020 einen Anteil erneuerbarer Energien im Transportsektor von mind. 10 % erfüllen zu müssen. Deutschland ist Vorbild und Antreiber für eine strategische Ausrichtung alternativer Kraftstoffe und Antriebe zur schrittweisen Entwicklung einer nachhaltigen Mobilität.

Deutschland hat als erstes EU-Mitgliedsland Nachhaltigkeitsanforderungen in das nationale Recht umgesetzt. Die Zertifizierungssysteme ISCC und REDcert wurden bereits 2010 durch die BLE anerkannt. Inzwischen hat die EU-Kommission 13 Zertifizierungssysteme zugelassen. Damit wurden in kurzer Zeit Anforderungen an eine nachhaltige Biomasseproduktion definiert, die auch in Drittstaaten eingehalten werden müssen, wenn Rohstoffe oder daraus hergestellte Biokraftstoffe aus diesen Herkünften in die EU eingeführt werden.

Dieser Weg eines international ausgerichteten Regulierungsrahmens („level-playing-field") bereitet den Weg für die Umsetzung einer an umwelt- und sozialen Nachhaltigkeitskriterien auszurichtenden Produktion und Weiterverarbeitung von Biomasserohstoffen. Deshalb muss gerade jetzt die Einführung und Kontrolle der entsprechenden Zertifizierungssysteme evaluiert und stetig verbessert werden. Dadurch werden international ausgewogene Wettbewerbsbedingungen geschaffen, in deren Umfeld sich auch die europäische Biokraftstoffwirtschaft und die Rohstoffproduktion behaupten können. Andernfalls wird sich der Trend zur Verdrängung der europäischen Landwirtschaft und Biokraftstoffwirtschaft durch den stetig zunehmenden internationalen Mengen- und Preisdruck verstärken. Dies würde die öffentliche Akzeptanz von Biokraftstoffen in Frage stellen. Ein Rückgang der heimischen Biokraftstoffproduktion gefährdet nicht nur die in den vergangenen Jahren aufgrund politischer Weichenstellungen getätigten Investitionen. Es droht auch der Verlust der wichtigsten heimischen Proteinquelle in der Nutztierfütterung: Rapsextraktionsschrot bzw. Rapskuchen als Nebenprodukt der Rapsölherstellung!

Die UFOP fordert auf europäischer Ebene:

1. **Die Weiterentwicklung der EU-Biokraftstoffpolitik auf Basis der vorhandenen Produktionskapazitäten und dem nachhaltig verfügbaren Rohstoffpotenzial.**
   Die im Oktober 2012 veröffentlichten Vorschläge der EU-Kommission führen in die Sackgasse. Sie sind nicht geeignet, Investitionen in innovative Biokraftstoffe und Rohstoffgewinnungspfade für Biomasse anzustoßen und zeigen keine klare Perspektive für die Biokraftstoffproduktion nach 2020 auf.

2. **Die Beendigung der Mehrfachanrechnung von Biokraftstoffen aus Abfall oder Reststoffen.**
   In dem Maße, wie der Mengenanteil an mehrfach anrechenbaren Biokraftstoffen zunimmt, steigt der Bedarf an fossilem Kraftstoff. Die Mehrfachanrechnung steht damit den klima- und ressourcenschutzpolitischen Zielen und damit einer nachhaltig ausgerichteten Mobilitätspolitik entgegen. Grundsätzlich müssen auch Abfälle den Nachweis einer „nachhaltigen Herkunft" erbringen. Sie sind nicht per se „iLUC-frei". Die absichtliche Erzeugung von Abfall durch die Schaffung künstlich hoher Abfallpreise muss unbedingt verhindert werden.

Ausgabe Juni 2013

UFOP – Today's Politics: "Biofuels"

Politics and Market Research at the Justus Liebig University, Giessen, in cooperation with the VDB and the European Farmers and Co-operative Association (Copa Cogeca), were presented in Brussels as part of a press conference and an information event for EU parliamentarians. The examination concerns itself, among other things, with the question of whether or not the raw materials requirement for producing biofuels is responsible for price spikes and hunger in the world. The response to these events was a pleasingly positive one and enhanced the discussion on the partly false or exaggerated appraisal of the effects of worldwide biofuels production.

Political information

The "UFOP – Today's Politics" medium has developed into a central instrument of information dissemination among political decision-makers. A maximum of two pages present the politically relevant topics of UFOP's activities. In the area of biofuels, four issues on the topics of indirect land usage changes (iLUC), biofuels quota trading and the demands of UFOP in the 2013

federal elections (biofuels and protein plants) were published during the reporting period. The sending of mails to members of the Bundestag and application of this information when UFOP attended federal party conventions made sure that information, lines of argumentation and UFOP demands reached the political decision-makers.

Federal party conventions

In the reporting period from fall/winter 2012 to summer 2013, UFOP participated in multiple federal party conventions, manning the joint renewable energies stand organized by the Renewable Energies Agency (AEE).

- CSU October 19-20, 2012 in Munich
- Alliance '90/The Greens November 16-18, 2012 in Hanover
- CDU December 3-5, 2012 in Hanover
- Alliance '90/The Greens April 26-28, 2013 in Berlin
- FDP May 4-5, 2013 in Nuremberg

The overriding goal of the AEE participation is to communicate to the politicians of all parties the environmental and resource-political advantages as well as the necessary framework conditions for the promotion of renewable energies required for them to work. For UFOP, participation does not just mean the chance to specifically present its own positions on current, politically relevant topics like iLUC, the "Food vs. Fuel" discussion or on fiscal topics, it provides the opportunity to have detailed discussions with politicians on the topics and answer questions.

UFOP stand at the FDP federal party convent 2013

Deutsches Biomasseforschungszentrum
gemeinnützige GmbH

DBFZ

Erläuterung und Kommentierung des Vorschlags der Europäischen Kommission zur Anpassung der EU-Biokraftstoffpolitik vom 17. Oktober 2012

Vorschlag für eine Richtlinie zur Änderung der Richtlinien 98/70/EG (FQD) und 2009/28/EG (RED) - COM(2012) 595 final

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Stefan Majer

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www.dbfz.de
info@dbfz.de

Datum: 06.02.2013

DBFZ explains and comments on the EU Commission´s recommendations

UFOP and AGQM Experts Seminar

On October 29, 2012, UFOP, together with the Arbeitsgemeinschaft Qualitätsmanagement Biodiesel e. V. (Biodiesel Quality Management Work Group) (AGQM), organized an experts seminar at the "Haus der Land- und Ernährungswirtschaft" in Berlin, where DBFZ experts presented the first results of a study evaluating the recommendations of the Commission on iLUC.

UFOP had commissioned the DBFZ with explaining and evaluating the EU Commission's Directorate-General climate policy considerations in regard to introducing so-called iLUC factors. The aim of the seminar was to have those participating offer additional proposals and recommendations for the creation of a final version of the report to be published in the spring of 2013.

1st BBE/UFOP Experts Seminar on "Sustainability of Biofuels"

The regulations on changing the biofuels quota (36th BImSchV - Federal Immission Control Ordinance) and on biofuels sustainability (Biokraft-NachV) passed at the end of 2012 were the

UFOP Chairman, Wolfgang Vogel, at the "Fuels of the Future" Congress


UFOP Dialog Forum 2012

main points of focus of the Berlin seminar to which the Bundesverband BioEnergie e. V. (German BioEnergy Association) (BBE) and UFOP had invited the relevant economic representatives on March 14, 2013. Talks on implementing the new legal requirements, experiences and problems with certification as well as the need to act in regard to greenhouse gas calculations for biofuels provided the framework for the discussions. With more than 90 participants, the number of interested parties greatly surpassed the expectations of the organizers. In the views of BBE and UFOP, the great response underlined the high demand for information and advice, but so too the insecurity felt by the industry in regard to the operational implementation of the new regulations of the 36th BImSchV - Federal Immission Control Ordinance.

10th BBE/UFOP specialist convention "Fuels of the Future"

For the anniversary edition of the annual international "Fuels of the Future" experts congress, the Bundesverband BioEnergie e.V (German BioEnergy Association) (BBE) and UFOP invited once again some 500 participants from over 20 nations to come to Berlin on January 21 and 22, 2013. The participants received information on and discussed current industry developments and exchanged experiences on the implementation of sustainability standards. Once again at the central focus of the talks were the recommendations of the EU Commission regarding biofuels policies and their consequences. The inclusion of this primary event in the International Green Week and the specialist trade show on bioenergy and renewable resources "nature.tec", taking place within its framework, also proved its worth in 2013, thereby giving the participants the opportunity to once again take part in a bioenergy trade evening at the exposition.

As part of the press conference which traditionally accompanies the congress, UFOP Chairman, Wolfgang Vogel, and BBE Chairman, Helmut Lamp, presented the press with the positions and demands of the associations in regard to the future shaping of European policies for the promotion of biofuels.

UFOP Dialog Forum

On the occasion of the UFOP members' meeting, a very well-frequented public dialog forum with around 100 participants took place on December 3, 2012 in Berlin. The focus of the "Biofuels from Rapeseed - Plaything of Politics?" event was on the current recommendations for changes to the EU's biofuels policies. The podium was made up of a wide spectrum of experts with Prof. Dr. Gernot Klepper from the University of Kiel Institute for the World Economy, Detlev Evers, President of the Deutsche Biokraftstoffindustrie e. V.(German Biofuels Industry) (VDB), Heinrich Kemper, UFOP board member and rapeseed cultivator, Dr. Stephan Schleissing, CEO of the Institut Technik-Theologie-Naturwissenschaften (Institute of Technology, Theology and Natural Sciences) at the Ludwig Maximilian University in Munich, and Prof. Dr. Harald von Witzke of the Humboldt University in Berlin. It became clear that the industry needs a set of mandatory and reliable political framework conditions. If biofuels were to be subjected to an additional across-the-board European greenhouse gas premium, this would effectively exclude rapeseed-based biodiesel from the market. This would frivolously put at risk the billions of Euros of investment made based on the trust placed in the politically desired and declared renewable energy targets for the transport sector.

Rapeseed power on the race track and in the Media

For over a decade now, celebrity German musician Smudo has been pursuing his passion for motor-racing. Over the same period he has been involved in a partnership with UFOP testing rapeseed fuels. The most recent chapter in their joint racing history saw Smudo, his Four Motors racing team and UFOP competing together in front of over 200,000 racing fans

UFOP Chairman, Wolfgang Vogel and CEO, Stephan Arens, with Smudo and his Four Motors team at Potsdamer Platz in Berlin

at the international ADAC 24-hour Race over the 2013 Whitsun weekend. Flowing through the engine of the bioconcept car, VW Scirocco, christened "BioRocco" by the fans, was the 100% rapeseed fuel "Diesel regenerativ". With a share of 7% of classic biodiesel (RME), this fuel also consists of hydrotreated rapeseed oil (HVO), which is produced and marketed under the name NExBTL by the Finnish company, Neste Oil. However, in 2013, the use of rapeseed-oil-based fuels is not just limited to the blend used in the 24-hour race. In addition, a fuels research project saw so-called Rmax biofuel subjected to intense bench testing. In this Rmax blend, the share of classic biodiesel (RME) is almost exactly as high as that of rapeseed oil HVO. What's special about this Rmax blend is how much it conforms to DIN standards. It betters all of the parameters of the DIN EN 590 diesel standard. Only the stipulated maximum limit of 7% biodiesel share in normal diesel is intentionally exceeded in order to demonstrate how high the technical potential of a biofuel like this is.

UFOP not only used the application of rapeseed fuel during the 24-hour race to demonstrate the performance power of modern biofuels, but also to point out the important problems when it comes to the future drafting of framework condition policies for its promotion. For this reason, UFOP specifically invited politicians and other decision-makers from the area of the biofuel sales market to discover and discuss the associations' positions and requirements.

International Green Week Berlin 2013

From January 18 to 27, 2013 at the International Green Week in Berlin, UFOP presented a comprehensive range of topics detailing everything to do with the topic of rapeseed. With its two trade fair stands at the "ErlebnisBauernhof" (Farm Experience) and the specialist "nature.tec" show as well as multiple side events, a comprehensive informational offer was provided for both end consumers and, in particular, professional visitors and politicians. Unlike previous years, the presentation in the ErlebnisBauernhof in Hall 3.2. was not limited to the topic of rapeseed cooking oil. Due to the choice of rapeseed as the main focus plant of the hall, an idea for the stand was realized which presented rapeseed as a "360° culture", whose oil and protein content can be used in its entirety as food, feed and fuel.

As well as appearing at the trade fair, UFOP also participated with other biofuels associations in the hall of the specialist trade show for bioenergy and renewable resources, "nature.tec". Here, the main focus was on addressing the politicians. The center point of talks was on the recommendations presented by the EU Commission a few weeks prior to the fair in relation to the topic of iLUC and the subsidization of biofuels derived from agrarian resources due to expire in 2020, like rapeseed and corn.

UFOP was able to greet quite a large number of politicians to both of its trade fair stands. German Agricultural Minister, Ilse Aigner, and Berlin's Mayor, Klaus Wowereit, kicked things off with their opening round tour. Along with SPD candidate for Chancellor, Peer Steinbrück, Development Minister, Dirk Niebel, front-runner of Alliance '90/The Greens and Deputy Bundestag President, Katrin Göring-Eckardt, FDP party leader, Rainer Brüderle, Alliance '90/The Greens party leader, Renate Künast and Die Linke (The Left Party) party leader, Gregor Gysi, it was also possible for UFOP to welcome the Nutrition Committee of the German Bundestag, the Federal Ministry for Food, Agriculture and Consumer Protection Work Group of the CDU/CSU party as well as numerous other members of the Landtag and Bundestag houses of parliament.

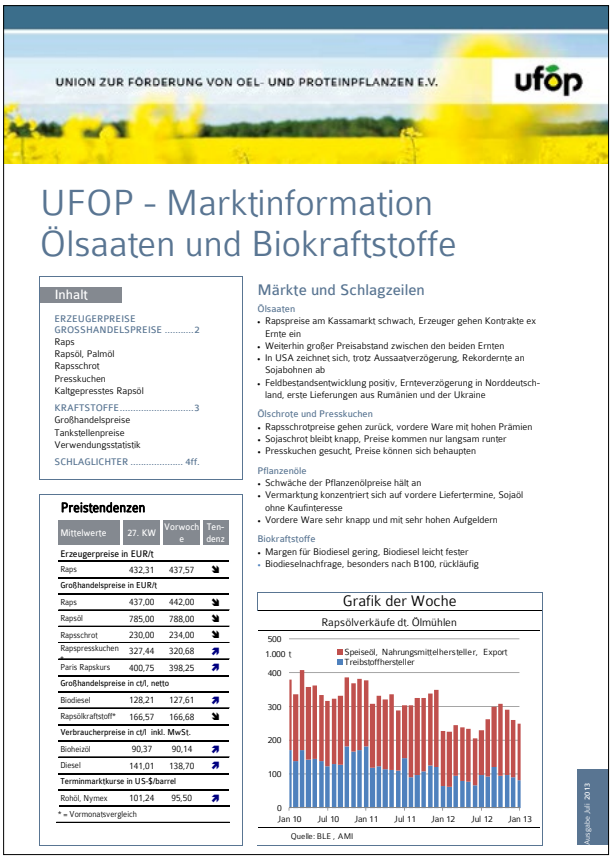
Joint biofuels stand at the 2013 nature.tec

Extended market report proposal of UFOP and other information media

For many years now, among the most important elements of UFOP's PR work in the area of biofuels and oilseeds are the monthly online publications of the "UFOP market information on oilseeds and biofuels" as well as the weekly market and price reports on biodiesel and on oilseed, vegetable oil and oil meal prices. In 2013, this information not only underwent a makeover to customize it to the association's corporate design, it was also supplemented quite significantly. As such, bio-heating oil prices and English versions of the market information are now also being published. An additional service offered by UFOP is its "Graphic of the Week", available to editorial offices for download in both English and German.

Over the reporting period, multiple online and printed publications were also produced emphasizing the expertise of UFOP in regard to rapeseed/biofuel topics and are likely to have significantly influenced the intense discussions regarding the future of rapeseed-oil-based biofuels:

- UFOP Gas Station Study - June 2013
- UFOP Brochure: "Raps – die „Leit(d)"-Kultur!?" (Rapeseed – A Defining/Declining Culture?)
- Special Edition: Biodiesel 2011/2012
- Today's Politics series
- EU Biofuels Policies – DBFZ explains and comments on the EU Commission's recommendations


UNION ZUR FÖRDERUNG VON OEL- UND PROTEINPFLANZEN E.V.

ufop

UFOP - Marktinformation
Ölsaaten und Biokraftstoffe

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Preistendenzen

Mittelwerte	27. KW	Vorwoche	Tendenz
Erzeugerpreise in EUR/t			
Raps	432,31	437,57	↘
Großhandelspreise in EUR/t			
Raps	437,00	442,00	↘
Rapsöl	785,00	788,00	↘
Rapsschrot	230,00	234,00	↘
Rapspresskuchen	327,44	320,68	↗
Paris Rapskurs	400,75	398,25	↗
Großhandelspreise in ct/l, netto			
Biodiesel	128,21	127,61	↗
Rapsölkraftstoff*	166,57	166,68	↘
Verbraucherpreise in ct/l inkl. MwSt.			
Bioheizöl	90,37	90,14	↗
Diesel	141,01	138,70	↗
Terminmarktkurse in US-$/barrel			
Rohöl, Nymex	101,24	95,50	↗

* = Vormonatsvergleich

Märkte und Schlagzeilen

Ölsaaten
- Rapspreise am Kassamarkt schwach, Erzeuger gehen Kontrakte ex Ernte ein
- Weiterhin großer Preisabstand zwischen den beiden Ernten
- In USA zeichnet sich, trotz Aussaatverzögerung, Rekordernte an Sojabohnen ab
- Feldbestandsentwicklung positiv, Ernteverzögerung in Norddeutschland, erste Lieferungen aus Rumänien und der Ukraine

Ölschrote und Presskuchen
- Rapsschrotpreise gehen zurück, vordere Ware mit hohen Prämien
- Sojaschrot bleibt knapp, Preise kommen nur langsam runter
- Presskuchen gesucht, Preise können sich behaupten

Pflanzenöle
- Schwäche der Pflanzenölpreise hält an
- Vermarktung konzentriert sich auf vordere Liefertermine, Sojaöl ohne Kaufinteresse
- Vordere Ware sehr knapp und mit sehr hohen Aufgeldern

Biokraftstoffe
- Margen für Biodiesel gering, Biodiesel leicht fester
- Biodieselnachfrage, besonders nach B100, rückläufig

Grafik der Woche

Rapsölverkäufe dt. Ölmühlen

Quelle: BLE , AMI

Ausgabe Juli 2013

Publication of UFOP's market information

Selection of print and online media

Continuous press work

Traditional press work has been a core element of UFOP's public relations policy over the reporting period. Over 30 press releases relevant to various aspects of biodiesel and biofuel have been published. Here, the provision of information and the formulation of positions and demands within the context of biodiesel legislation and sustainability have been the most important concerns. The reports can be read at www.ufop.de/presse/aktuelle-pressemitteilungen/.

An overview of the most important press releases related to the topic of biodiesel, etc. (August 2012 to July 2013):

July 17, 2013

Biofuels more interesting to agricultural farming

In terms of the closure of regional cycles, the use of vegetable oil and biodiesel in agricultural farming and forest management is self-evident. Both fuels remain fully tax-privileged.

July 11, 2013

Environmental Committee decides on the demise of European biofuels production

In UFOP's view, the compromise reached at today's Environment Committee meeting of the European Parliament seriously endangers the prospects of German and European biodiesel production.

July 10, 2013

UFOP Gas Station Study: Variety of raw materials in biodiesel share on the rise

At 53 %, rapeseed oil makes up the highest percentage of the raw material and remains the most important resource in the production of biodiesel in Germany, followed by palm oil at 25 %, and coconut and soya oil each at 11 %. This is the result of the study presented by UFOP.

July 4, 2013

Certification safeguards sustainability of biofuels

On the occasion of the publication of the gas station tests carried out by Greenpeace, UFOP points out that the biofuels policies of the European Union are to-date the most efficient driver of implementing international minimum standards for sustainability certification of biomass resources.

June 21, 2013

Indonesia burning the image of sustainable, certified biodiesel

Despite the global discussion on indirect land usage changes, which has since been incorporated into the biofuels policies of the European Union, the Indonesian government remains inactive in the face of the ongoing destruction of the rain forest using slash-and-burn techniques.

June 19, 2013

Mobility strategy of the federal government – The first step has been taken

UFOP appraises the report presented at today's BMVBS conference as a comprehensive baseline study for the further specification of a balanced mobility and fuel strategy.

May 29, 2013

EU imposes anti-dumping customs duties on biodiesel imports from Argentina and Indonesia

Due to the acutely tense situation on the EU's biodiesel market as a result of margin pressure and bankruptcies, UFOP welcomes the decision of the EU Commission to impose anti-dumping customs duties on biodiesel imports from Argentina and Indonesia.

March 21, 2013

Things heated up at the "Green Hell"...

...as one of the 173 vehicles, the UFOP-sponsored bioconcept car of the Reutlingen-based "Four Motors" racing team, started on Whitsunday in front of more than 210,000 spectators of the ADAC 24-hour race on the "Nordschleife" track of the Nürburgring.

May 16, 2013

Finkbeiner study contradicts IFPRI and iLUC factors

UFOP particularly welcomes the study results presented this week by Prof. Dr. Matthias Finkbeiner of the Technical University, Berlin, on the scientific rating of indirect land usage effects, iLUC factors, in ecological balance sheets.

May 3, 2013

Fuel quality improvement of biodiesel by reducing the boiling curve using metathesis

With the aim of improving motor compatibility, a UFOP-sponsored research group project proved that the quality of biodiesel can be improved upon considerably by using metathesis.

April 23, 2013

Smudo with "rapeseed power" at Potsdamer Platz and Nürburgring

The well-known musician and racing driver, Smudo, presented the team and technology behind his bioconcept car at Potsdamer Platz in Berlin ahead of the ADAC 24-hour race.

March 15, 2013

Results from the first BBE/UFOP Experts Seminar on "Sustainability of Biofuels"

First BBE/UFOP experts seminar on "Sustainability of Biofuels" reveals uncertainty in the biofuels industry in regard to the implementation of the Biofuels Sustainability Act and the 36th BImSchV - Federal Immission Control Ordinance.

March 8, 2013

Regulation on existing plants expiring – Practical testing of certification systems and checkpoints

UFOP wishes to provide the reminder that the requirement of a greenhouse gas emissions reduction for biodiesel from soya or palm oil according to the standard values of the Renewable Energies Directive will not be met, unlike biodiesel from rapeseed.

March 1, 2013

Double-credits hitting biodiesel turnover hard

The turnover of biodiesel in 2012 fell again by 2.8% to a total of 2.34 million tons. This continues on the negative trend which the Union for the Promotion of Oil and Protein Plants (UFOP) sees as quite alarming.

Feb. 22, 2013

Reject ILUC factors! – UFOP Chairman, Vogel, appeals to the Federal Government

The UFOP Chairman appeals to federal ministers Aigner, Rösler and Altmeier to fundamentally reject the introduction of iLUC factors.

Feb. 19, 2013

EU Biofuels Policies – DBFZ explains and comments on the EU Commission's recommendations

The DBFZ, acting on behalf of UFOP, explained the recommendations of the EU Commission on changes to the Renewable Energy Directive and the Fuel Quality Directive in a technical paper and commented on its most important points.

Jan. 30, 2013

New UFOP Brochure: "Raps – die „Leit(d)"-Kultur!?" (Rapeseed – A Defining/Declining Culture?)

The debate surrounding food vs. fuel and indirect land usage changes concerns not only the biofuels industry, politics and environmental organizations, but also the public more and more.

Jan. 21, 2013

BBE/UFOP: Criticism of the EU Commission's recommendations on biofuels policies

The biofuels industry is pleading for the retention of the current biofuels strategy and rejects the recommendations of the EU Commission to reduce the risk of indirect land usage changes.

Dec. 17, 2012

Bundesrat confirms concerns of UFOP relating to Commission's recommendations on biofuels policies

UFOP welcomes the statement made today in the Bundesrat regarding the recommendations of the EU Commission on changing the Fuel Quality and Renewable Energy Directive.

Dec. 4, 2012

UFOP Dialog Forum discusses future framework conditions for biofuels policies

On the occasion of the UFOP members' meeting, a very well-frequented public dialog forum with around 100 participants took place.

Nov. 15, 2012

UFOP expects major market disruptions due to iLUC factors

The introduction of iLUC factors will redirect entire production and trade flows while simultaneously bringing about the abolition of internationally created sustainability certification.

Nov. 13, 2012

UFOP demands reliability in biofuel policies

On the occasion of the EuroTier event, the Chairman of the Union zur Förderung von Oel- und Proteinpflanzen e. V. (Union for the Promotion of Oil and Protein Plants e.V.) (UFOP), Dr. Klaus Kliem, demanded long-term reliable framework conditions for biofuels. He continued that these would be the deciding precondition for investing in this sector, not just writing off plants.

Oct. 17, 2012

Biofuels – Commission's recommendations disappoint

The Chairman of UFOP, Dr. Klaus Kliem was disappointed with the recommendations of the Commission on changes to the Renewable Energy Directive and the Fuel Quality Directive.

Oct. 16, 2012

UFOP and AGQM Experts Seminar on October 29, 2012

UFOP has commissioned the Deutsches Biomasseforschungszentrum gemeinnützige GmbH (German Biomass Research Center) (DBFZ) with explaining and evaluating the EU Commission's Directorate-General "climate policy" considerations in regard to introducing so-called iLUC factors.

Oct. 12, 2012

Shifting to transition goods raises biodiesel price

According to the data of the agricultural market information service, AMI, so-called transition goods are being offered by biodiesel producers since October 1, 2012.

Oct. 5, 2012

EU must not be allowed to undo the energy revolution by introducing extra iLUC charges

On the initiative of the Bundesverband BioEnergie e. V. (German BioEnergy Association) (BBE) numerous associations and organizations have published a joint declaration denouncing the EU recommendation to introduce so-called iLUC factors.

Sept. 21, 2012

Federal Government report on biofuel requires improvement

This is the conclusion reached by the UFOP in its evaluation of the report. According to the report, considerable quantities of biodiesel from the year 2010 were charged to the quota year 2011 during the subsequent taxation process and are therefore quoted as a cause for the decline in domestic demand for biodiesel.

Sept. 19, 2012

Specialist seminar on the realignment of EU funding policies on biofuels and on current regulatory issues

The Directorate-General proposals on "Climate Policy" for modifications to the RES Directive and Fuel Quality Directive require the biofuel industry to lead the way.

Sept. 12, 2012

Reliability of EU Commission policies on biofuel questioned

In the EU Commission's General-Directorate (GD) "climate policy" recommendations, the Union for the Promotion of Oil and Protein Plants e.V. (UFOP) perceives a complete departure from a reliable, future-oriented climate and biofuel policy.

Sept. 12, 2012

Rapper at the wheel and rapeseed in the tank

For the last ten years, the musician and racing driver Smudo and his Four Motors team have been running a variety of bio-concept cars – with rapeseed power providing sustainable power.

Sept 6, 2012

UFOP welcomes the introduction of anti-dumping proceedings against Argentina and Indonesia

Following the application of the European Biodiesel Boards (EBB), the responsible advisory committee of the Commission agreed to the implementation of anti-dumping proceedings against biodiesel imports from Argentina and Indonesia.

Aug. 31, 2012

UFOP welcomes BLE initiative to intensify Europe-wide cooperation

UFOP expresses concern over the varying administrative practices when implementing the Renewable Energy Directive in national law.

Aug. 24, 2012

UFOP doubts scientific validity of study on greenhouse gases carried out by University of Jena

UFOP experts doubt the scientific validity of the study "Uncertainties about the GHG Emissions Saving of Rapeseed Biodiesel", a part of the "Jena Economic Research Papers" series. According to the association, it illustrates once again that studies not subjected to review by an impartial expert should not be published.

Expert Commission on Biofuels and Renewable Resources

On the occasion of the meeting on 11 June 2013, Chairman, Prof. Dr. Axel Munack, was able to welcome Mr. Ralf Thee of the Forschungsvereinigung Verbrennungskraftmaschinen e. V. (Combustion Machines Research Association) (FVV) and Dr. Ralf Stöckel, TOTAL Deutschland GmbH as new members to the Expert Commission.

At the beginning of the session, Dieter Bockey of UFOP presented the EU Commission's recommendations of October 2012 on changes to the Renewable Energy Directive and the Fuel Quality Directive. The central point is the introduction of a restriction to biofuels from agricultural crops like rapeseed and corn to 5% in regard to final energy usage in the year 2020.
Thereafter, biofuels produced from these raw materials should no longer be included in these promotion policies. The introduction of raw-material-specific so-called iLUC factors should meet the concerns of the effects of indirect land usage. With vegetable oil fuels (rapeseed oil fuel, RME, SME, etc.) this means an added 55g CO2-equivalent/MJ. This could mean that the minimum requirements for greenhouse gas reduction, today at 35% and 50% from 2017 onwards, will no longer be achieved. In order to promote the production of biofuels made from non-foodstuff-based raw materials, like straw, it should, depending on the type of raw material, be possible to credit them by a factor of two or four to either the target or the national quota obligations. The introduction of the iLUC factors derived from the study carried out by the IFPRI Institute in Washington are emphatically rejected by biofuels organizations.
Even the authors of the "IFPRI Study" hired by the EU Commission confirm that it contains over 20 "errors". Consultation sessions within the framework of the "Trilog procedure" have begun and the relevant committees are engaged in coming to an agreement on a position. At the time of publication, the consultation sessions in the council of environmental ministers were not yet showing any sign of a commonly-held position. The European Agricultural and Co-operative Association (Copa Cogeca) on the other hand has taken up a clear position, calling for, among other things, a minimum share of biofuels from agricultural crops to the amount of 8% and the axing of iLUC factors. Also on the calendar are the continuation of talks in the plenum of the European Parliament in September 2013 and a possible final vote in November.

Against the background of the foreseeable regressive development of the use of rapeseed in the production of biofuels, the Expert Commission complied with the request of the UFOP advisory board to carry out a review of the use of rapeseed oil in the area of oleochemicals/lubrication. Rolf Luther of Fuchs Europe Schmierstoffe GmbH presented the sales trend of bio-lubricants in Germany for the period 1990–2010. The sale of lubricants increased annually by some one million tons. However, product development is embedded in the increasing requirements of performance. This means that modern lubricants are to be seen increasingly as construction elements in mechanics and, therefore, are determined by specific application-relevant design requirements. The construction of special lubricant refineries, for example in Asia, means that the production of lubricant is becoming increasingly independent of the petrochemical industry. Reducing the share of petrochemical raw materials from current levels from approx. 80% to approx. 50% is deemed by all means achievable. Here, there exists the possibility of securing primary or regionally produced renewable resources in one's own area. Due to this high specific requirement, what dominate today are synthetic ester oils based on rapeseed or on animal-based fats or palm oil/palm kernel oil. Other oil plants like soya or sunflowers play a rather less important role. While rapeseed dominates when it comes to pure vegetable oils, for example in loss lubrication (chainsaw oil), the volume requirement is considerably less than with synthetic ester oils. Optimizing the process of synthesis in the processing of vegetable oils lessens the importance of prior synthesis work through the cultivation of, for example, highly oleic sunflowers. The only thing that matters is the raw material price. The bio-lubricants industry is expecting incentives in the form of legal obligations which promote the use of bio-lubricants in environmentally-sensitive areas. This topic is at the top of the European Lead Market Initiative's list of priorities for organically based products (LMI). In this regard, sustainability certification, even with the material-based usage of renewable resources, will be deemed necessary in the future. Here, the specific requirements of organically based chemistry need to be met. Product-specific certification, in the same way as with biofuels, is not possible due to the multitude of products. It makes greater sense to seek certification up to the point of the first processor within the framework of the raw materials provision chain. Currently, the use of rapeseed oil in the European oleochemicals industry is estimated to be around 100,000 tons annually. According to the estimates of the experts, a change in favor of rapeseed oil is not on the cards in the immediate future due to the price situation of soya, palm and rapeseed oil.

Dr. Jörg Ullmann, Robert Bosch GmbH, provided an overview of the causes of deposit formation in high-pressure injection systems. The following three items may be the causes of deposit formations: organic polymer connections with additive components containing polymers or other polar functional groups, fuel-borne oxidation products and bonds which contain sodium soaps or sodium chlorides. The comprehensive results of the examinations conclude that the degree of deposit formation can only be determined by engine rig testing, with it being dependent on the fuel quality and, above all, on the additive type (PIBSI) and its concentration. Additives like cleaning detergents can reduce deposit formation. However, the discussion pointed out that examination results to the contrary also exist.

The question on deposit formation is one of the central topics when it comes to the use of biodiesel as a pure fuel or as a blending component. Dr. Ulrike Schümann of the work group for reciprocating engines and combustion motors at the University of Rostock presented the current status of the project plan for "modeling the formation of internal deposits in common rail injectors". This plan is a further component of a joint research project which comprises additional work packages, sponsored by the Forschungsvereinigung Verbrennungskraftmaschinen e. V. (Combustion Machines Research Association) (FVV) and the Fachagentur Nachwachsende Rohstoffe e. V. (Agency for Renewable Resources) (FNR). The systematic analysis of the deposit types and volumes are the main focus of this part of the project. Due to the fact that developments in injection systems are heading in the direction of 2,500-3,000 bar and that up to five injections per work step are already standard in today's complex injection strategies in modern diesel engines, it is understandable that even the smallest quantities of deposits in a jet needle's play of approx. 2-4 µm can have a significant influence on the operational behavior of the injector. Stefan Innerhofer of regineering GmbH reported on the UFOP-sponsored project on the topic of "Using the inner-motor potential of biodiesel by recognizing specific fuel properties in the common rail diesel motor". Measurements with B7, B30 and B100 were taken at four selected operational points in the engine performance map and a performance comparison was carried out at the operational points when using B30 or biodiesel as a pure fuel. With the B30 and B100 fuels, optimization of the engine occurred separately. The testers came to the conclusion that, while taking into account the specific fuel properties of biodiesel, a significant reduction in particle emissions is possible in comparable nitrogen oxide emissions. However, in the performance map areas with lower partial load increased carbon monoxide and particle emissions were recorded. The consultant noted that it could be possible to compensate for this by optimizing the injection strategy. That said, the interpretation of these results does need to be qualified as it was only possible to test four operational points. However, the results substantiate the recommendation that a comprehensive range of examinations be executed on an entire engine.

The "Bioconcept Car" racing project, jointly-sponsored by UFOP and Neste Oil, played a part in raising the question of how to find the optimum combination of diesel fuel, biodiesel and hydrotreated vegetable oil (HVO) so as to benefit from possible synergies. The results of a range of examinations carried out by Dr. Thomas Wilharm of ASG Analytik Service GmbH determined that a mixture of 50% biodiesel and 50% hydrotreated vegetable oil (HVO) produced the blend with the best analytical properties compared to all other examined blend combinations of diesel fuel and different shares of diesel fuel, biodiesel and HVO. Compared to all other fuel combinations, the combination "R-max", 50% FAME and 50% HVO, stood out with its high degree of oxidation stability, good lubricity and comparably good surface tension. The results of this examination make up part of the monitoring program within the framework of the motor sport activities of UFOP and Neste Oil. Additional fuel samples will be taken and examined during different testing runs and when participating in races. An appraisal of the engine is carried out to finish up.

Prof. Dr. Jürgen Krahl of Coburg University provided information on the current status of the "Diesel R33" project. In this project of the Coburg University and the Thünen Institute, Braunschweig, sponsored by companies from the automotive industry, the petroleum industry and UFOP, a premium fuel composed of 7% biodiesel, 26% hydrotreated vegetable oil (HVO) and conventional diesel fuel will be tested. The product name R33 is derived from the 33% share of biogenic fuel components. Fall of this year sees the start of the comprehensive fleet project which plans to include a total of 280 cars, utility vehicles and buses of different makers. The vehicles will be provided for the most part by companies and institutions from the Coburg University region.

Within the framework of the Expert Commission's meeting, the following new project plans were presented and deemed to be worthy of promotion by it:

1. "Operational behavior of industrial and agricultural engineering motors, emissions standard EU COM IV, in biodiesel operation (B100)".
2. "Examinations of sludge formation in engine oil when using biogenic fuels" - Application for a grant
3. "Creation of a fuel with low NO2 emissions and high oxidation stability", Coburg University.

New projects

Research grant: "Examinations of sludge formation in engine oil when using biogenic fuels"

Project direction: University of Applied Sciences, Coburg
Run-time: September 2013 to August 2016

So-called sludge formation can come about in the engine oil pan if the enrichment of biodiesel in engine oil and the impact of heat have a corresponding reaction medium. The reactive groups (double bonds among others) existing in the fatty acid methyl ester molecule bond with other components of the fuel.

Polymerization comes about which is irreversible and leads to deposits in the oil pan. This sludge formation is a phenomenon which has already been known for quite some time and was first observed in utility vehicles using biodiesel as a pure fuel in practice (in particular cases there was even engine damage).

Engine oil dilution and the occurrence of this so-called sludge formation are essential reasons for why the automotive industry insists on enforcing an upper limit of max. 7% by volume in regard to the maximum blending of biodiesel in diesel fuel in the diesel fuel standard. The circumstances for the emergence of this sludge formation are very complex. Within the framework of this grant, targeted examinations of the causes of oil sludge formation in engine oil are to be carried out. Specifically, it deals with the reaction mechanisms which bring about oil sludge formation.

Due to the increasing demands of motor engineering resulting from the introduction of engines of emissions standard EURO VI in cars and utility vehicles, an intensification of this problem may be expected. This is due to the increasing injection pressures and the fact that German automobile manufactures do not use any additive-based after-injection methods (like with Peugeot => B30 approval) in order to reduce fuel requirements for the burnout of the particle filter.

Creation of a biodiesel-based fuel with low NO2 emissions and high oxidation stability

Project monitoring: University of Applied Sciences, Coburg
Run-time: August 2013 to December 2014

In the past, UFOP has repeatedly supported projects which examine emissions limited by law based on different engine types (car/utility vehicle) and emissions classes with the aim that biodiesel meet the legal requirements in accordance with the respective emissions standard (EURO III/IV, currently V/VI). When using pure fuels or when there is an increasing share of biodiesel in the diesel fuel mix, the problem of increased emission of nitrogen oxide compared to pure diesel fuel comes about.

This problem is relevant as the respective exhaust standards for biodiesel also need to be met in order to be approved for road use. With the market launch of EURO-V and the current VI engines, NOx-storage catalytic converters are simultaneously integrated into the exhaust after-treatment in order to fulfill the NOx emissions requirement.

The subject of this project is the examination of the question of whether or not it is already possible to reduce NOx emissions using suitable additives. First examinations with biodiesel or higher admixture shares confirm the reduction effect, but this is with conventional additives, that is, additives not yet optimized to the chemical structure of biodiesel as a pure fuel or blending component.

The aim of the project is to adapt additives in relation to their chemical effectiveness over the course of the examination of these existing additive options and in the best case scenario to develop additives which simultaneously increase the biogenic share in the fuel based on renewable resources. The fundamental advantage of this additive group scheduled for testing is the effect of improving the "oxidation stability" parameter which is important to fuel quality. However, it needs to be made sure that the additives retain their function at different temperatures and at low temperatures in particular.

Operational behavior of industrial and agricultural engineering motors, emissions standard EU COM IV, in biodiesel operation (B100)

Project monitoring: Institute for reciprocating engines and combustion motors, University of Rostock
Run-time: 2014-2015

The aim of this project is to continue with the very successful collaboration with DEUTZ AG in the granting of approval of biodiesel as a pure fuel. In this regard it was only recently possible to successfully complete the final report on the project plan of "Endurance tests on DEUTZ Agripower engines of emission class EU COM IIIB with SCR system for the approval of biodiesel". This project a) facilitated the granting of approval for biodiesel as a pure fuel for today's primarily market-sold DEUTZ diesel engines for use in agricultural power units and b) simultaneously confronted the reservations against B100 approval with higher emissions requirements.

This project pursues the aim of achieving a basis for pure fuel approval for the next generation of engines so that "connections" in this regard remain intact and are safeguarded.

The project comprised of six work packets plans to test B100 in relation to its compatibility with a modern exhaust after-treatment system in order to safeguard fault-free operation. The background to this is the fact that with this emissions class, in the off-road area too (for example, agricultural farming, construction machinery), so-called on-board diagnostics (OBD) will be introduced. OBD constantly monitors whether or not emissions requirements are being met during running operations. As soon as, for example, NOx emissions exceed the specified emissions standard, the driver receives a signal in relation to this problem and is prompted to have the problem inspected and/or resolved.

Against this background, a number of parameters will be tested while under load at the University of Rostock over the course of several months. Ultimately this is done in order to begin testing in real-life conditions so as to qualify these engines in the next step should the test produce positive results.

The following will be examined:

- Emissions data before and after exhaust after-treatment,
- Function check of the particle filter regeneration,
- Identification of the conversion rates in the exhaust tract (SCR – use of urea in NOx reduction),
- Analysis of the OBD function,
- Rail behavior when under pressure,
- Behavior on cold start-up,
- Biodiesel entering engine oil,
- Identification of wear-and-tear metals in the engine oil, carbon-particulate matter percentage, viscosity and density.

Project plan: "Rig testing to optimize a B30/HVO/DK fuel mixture for use in motor-racing"

Project monitoring: Four Motors GmbH
Run-time: December 2012 to December 2013

The aim of this project is to develop a quality-optimized mix of rapeseed-biodiesel, HVO and mineral oil diesel which is to be used during the motor-racing activities of UFOP's Bioconcept Car. A VW 2.2l TDI engine will be used as the basis for the testing runs. The optimum fuel mix will be determined in the run-up to rig testing. Here, different fuel mixtures will be ignited in a controlled AFIDA system and the combustion residue analyzed. The optimized mix will then be tested on the rig and the exhaust emissions (ECE cycle - European testing cycle for measuring emissions and 13-stage test) examined in comparison to B7. After the application of the engine to the optimized fuel mix, a 24-hour cycle is started during which exhaust emissions, performance, torque, fuel consumption, etc. are examined. During the 2013 racing season, further data will be gathered and samples of the fuels will be taken and analyzed on a regular basis. The results of the fuel quality examinations of the rig testing will be communicated to the press, for example, on the occasion of the IAA in Frankfurt.

Project plan: Fleet experiment "Diesel R33"

Project direction: University of Applied Sciences, Automotive Technology Transfer Center of Coburg University (TAC)
Run-time: July 2013 to February 2015

This project links up with the regenerative diesel project: a fuel mix of 83% HVO and 7% biodiesel. This fuel mix was successfully tested in a fleet test. UFOP supported this project with the target of promoting rapeseed oil as a resource in the production of the HVO used and the biodiesel share. It was possible to demonstrate the "path to certification" from rapeseed cultivation to its processing in Germany. The project was presented at the international BBE/UFOP Biofuels Congress and as part of the special "nature.tec" show at the 2011 International Green Week.

In an extensive fleet test consisting of 280 vehicles, a marketable fuel mix will be demonstrated for the first time with R33, consisting of 7% biodiesel, 26% HVO and diesel. This fuel mix meets all of the requirements specific to fuel quality of the diesel fuel standard EN 590. The project is to be assigned to the applied fundamental research area. Targeted examinations of vehicles will be carried out with our project partners, Volkswagen AG and Daimler AG. The vehicle fleet covers all of today's exhaust emission classes. Consumer acceptance of biofuels is also of key importance. For this reason, public relations above all should be a particular core focus for the duration of the project.

Members of the UFOP expert commissions

As of: August 2013

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Raw Material Basis for Biodiesel Components in Diesel Fuels

Filling station trial for "standard" diesel fuels throughout Germany (summer products 2013)
Report updated, 08/2013

Sample selection

1. Only "standard" diesel fuels were analysed as samples, because so-called premium fuels do not usually contain biodiesel components (fatty acid methyl esters, FAME).
2. The samples – 60 filling stations in total – were taken from the areas surrounding various refinery locations, in order to gain a representative picture of the fuel composition in Germany.
3. In addition, the sampling was conducted corresponding to the market relevance of the fuel suppliers (see: www.ed-info.de/edplus/ArtikelAnsichtArc.php?newsId=269).

Analytical methods

1. In an initial analysis step, the biodiesel components of the samples were determined according to DIN EN 14078.
2. Samples with a biodiesel content greater than 1.5 % (V/V) were then treated in accordance with DIN EN 14331. This implies a separation of the diesel matrix from the biodiesel.
3. Finally, the fatty acid samples of the gained biodiesel fractions were determined according to DIN EN 14103.
4. The obtained fatty acid patterns were compared with fatty acid patterns of known oils such as rapeseed, soya, palm and coconut.
5. Ideally, an identification of the analysed raw material basis was realised by a simulation calculation.
6. Samples with a fatty acid methyl ester content of max. 0.1 % vol. (five samples were affected) were tested for carbon 14 content in accordance with DIN EN 15440 (composite sample). For the biomass validation, the utilised method serves to determine the proportion of hydrated vegetable oil (HVO) in diesel fuel.

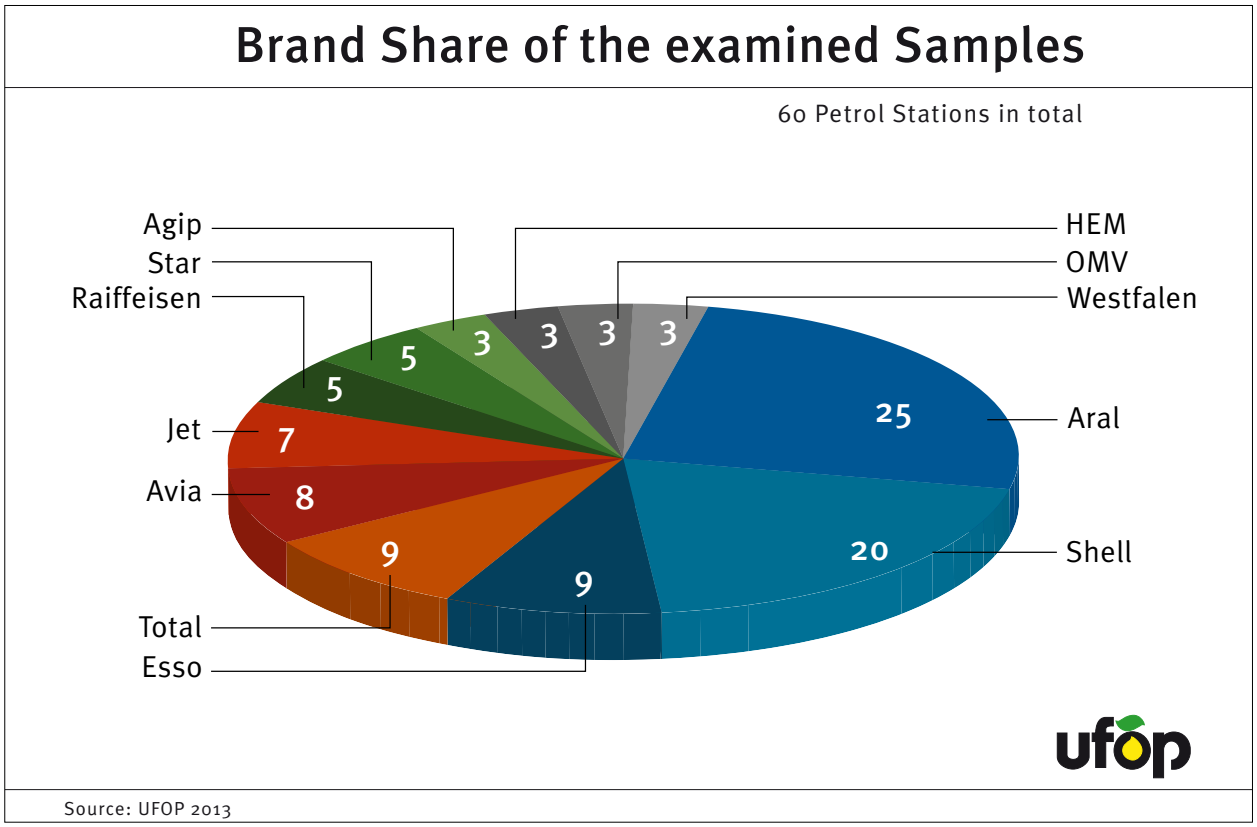

Figure 1: Representation of the brand share of the examined samples in the total sample scope

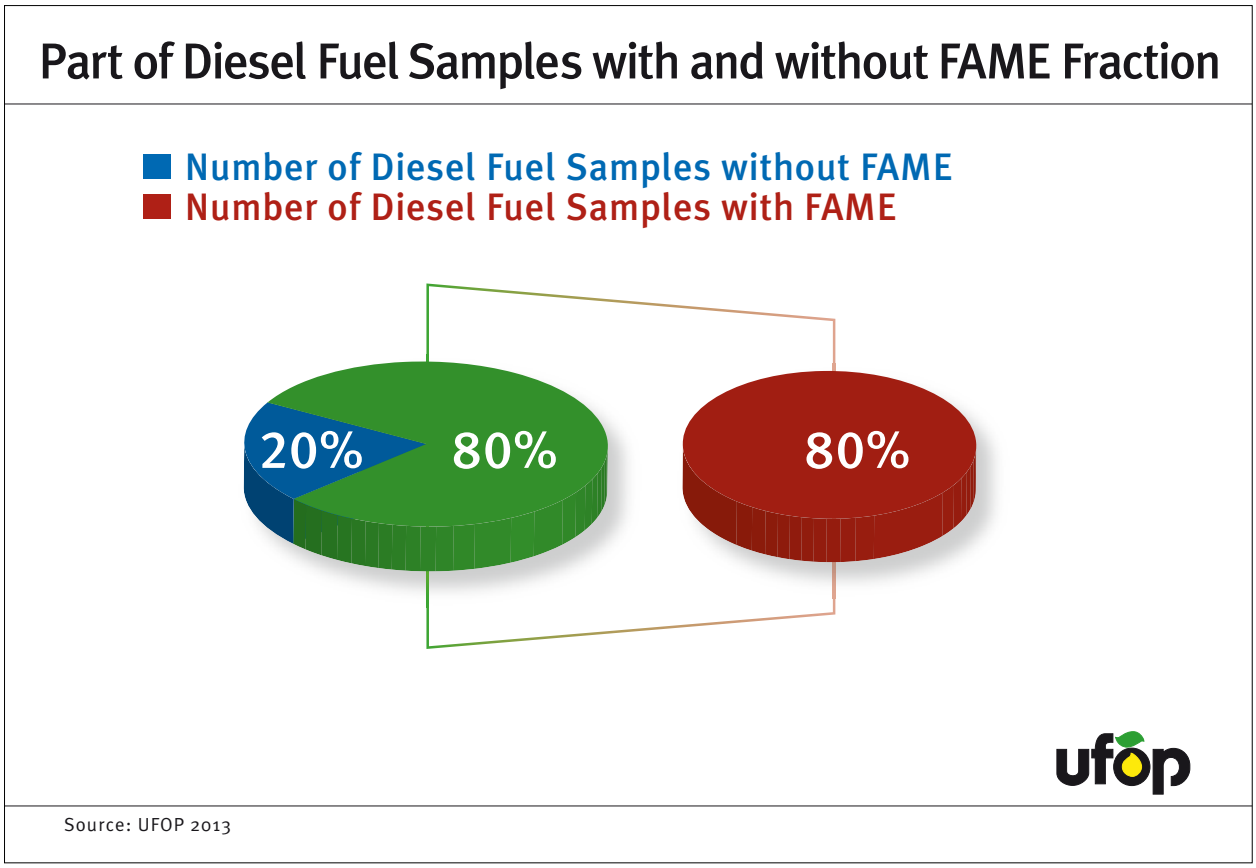

Figure 2: Representation of the percentage shares of diesel fuel samples with and without FAME

Results

All samples with a biodiesel content of less than 1.4 % (V/V) were designated as diesel fuels without FAME component. This corresponds to a total number of 12 samples (out of 60 overall). Of these 12 samples, 10 samples had a biodiesel content of less than 1.0 % (V/V) respectively 5 samples less than 0.5 % (V/V). It remains to be noted here that biogenic components for fulfilment of the quota obligation, which are present in the fuel based on hydrated vegetable oils, cannot be validated with the test methods applied here.

The carbon 14 content was determined in the composite sample as 7.6 ∓ 1.2 %. This result is based on the total carbon content in the tested sample. In conventional diesel fuels, the carbon content is approximately 85.0 % (m/m). This average value was used to determine the aforementioned biomass content. If, for example, hydrated vegetable oil (HVO) was added to the diesel fuels, based on an average density of about 780 kg/m³, a proportion by volume of HVO of about 8.3 % (V/V) results. Raw material classification is not possible using this method. It is to be assumed that palm oil is the raw material basis for reasons of price, but this has not been taken into account in the representation of the raw material composition (diagram 3).

The evaluation of the regional distribution (by postcode areas) is roughly oriented to the refinery locations in Germany. Based on the 12 diesel fuel samples without FAME component and 3 fatty acid samples of biodiesel components that could not be clearly assigned to a definite raw material combination, Figures 3 and 4 represent a sample scope of 45 (instead of 60). Drifts in the fatty acid samples primarily occur due to thermally induced oxidations and/or hydrations (for example: deep-frying processes, fat hardening etc.). "Drifted" fatty acid samples can be found in used cooking oil fatty acid methyl esters in particular. Table 1 illustrates the assignment between postcode area and refinery location.

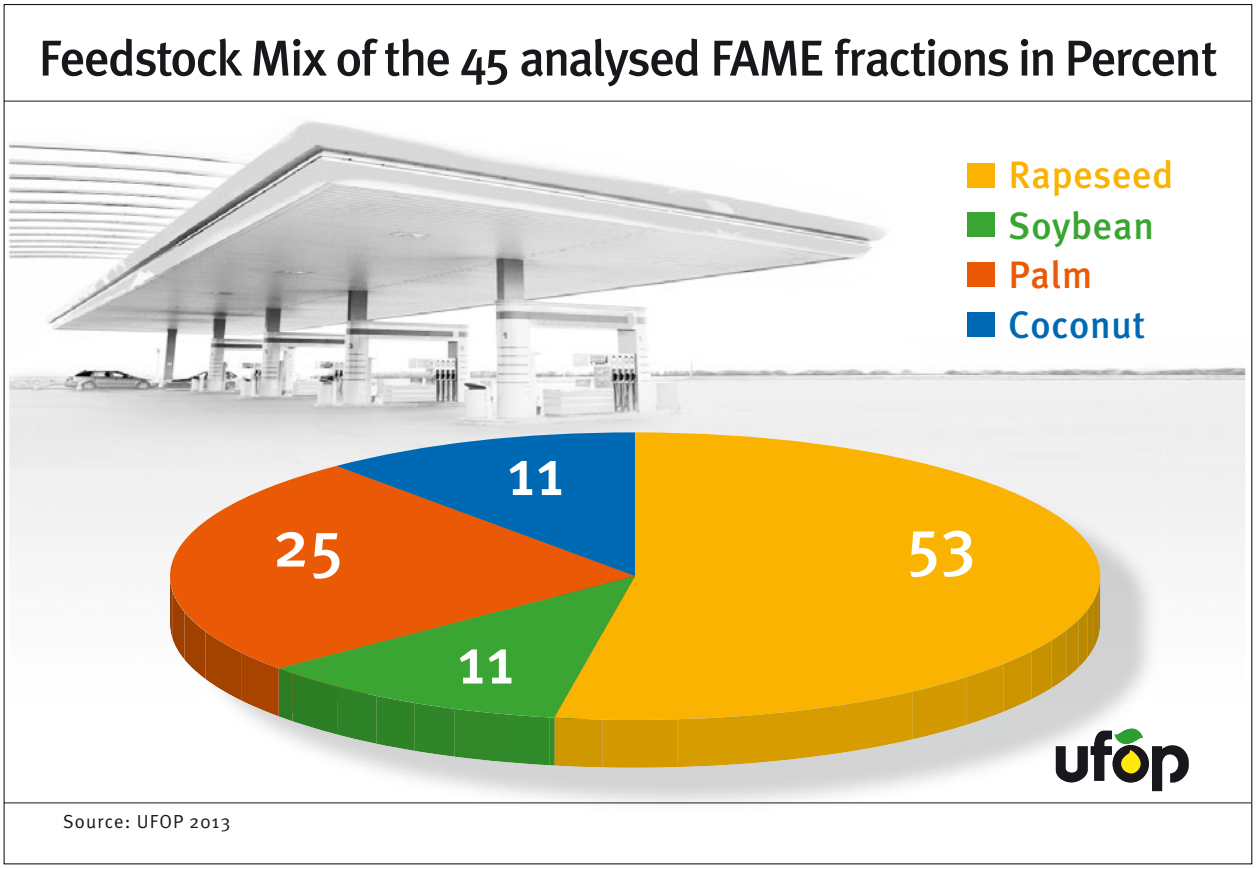

Figure 3: Raw material mix in the analysed biodiesel components

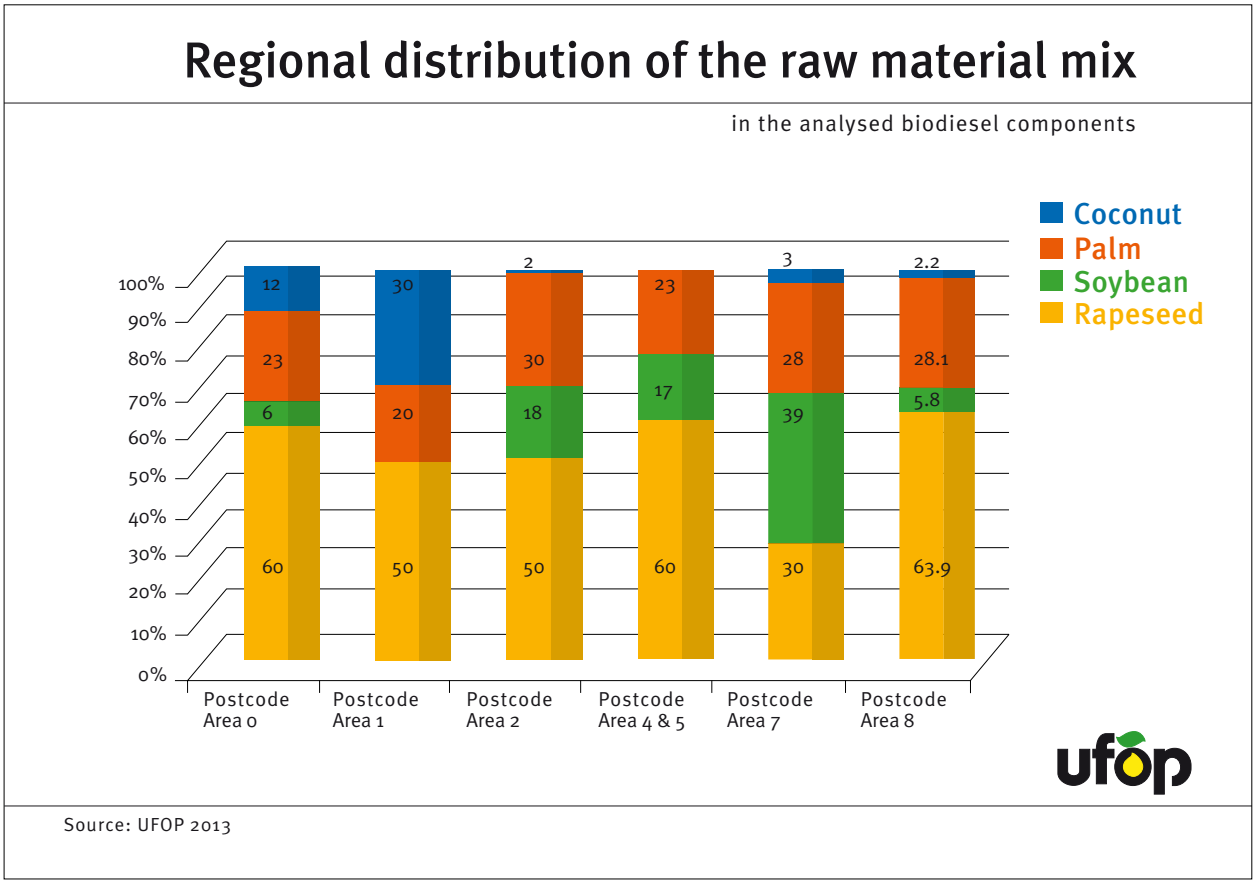

Figure 4: Regional distribution of the raw material mix in the analysed biodiesel components

Table 1: Assignment of the postcode areas to the refinery locations

Postcode Area	Location of RefineryIndustry
0	Leuna
1	Schwedt
3	Hamburg and Heide
4 und 5	Gelsenkirchen and Köln
7	Karlsruhe
8	Burghausen, Ingolstadt and Vohburg

Evaluation and commentary of the results

1. The determined raw material mix in the biodiesel reflects the composition at the time of sampling. As a rule, the results of the study commissioned by Greenpeace are confirmed.
2. Conclusions in respect to the raw material composition for the production of biodiesel in German plants are not possible. According to the Verbandes der Deutschen Biokraftstoffindustrie (Association of the German Biofuel Industry), almost exclusively rapeseed from domestic cultivation is used for the production of biodiesel (press release of 16.04.2013). Nor can the content of old fat methyl esters be validated in biodiesel with existing methods in a legally certain way. The corresponding amounts should therefore be identified in the biofuel statistics. A validation of hydrated vegetable oils (HVO) is possible, but a validation of their raw material composition is not.
3. The Renewable Energies Directive (2009/28/EC) was applied within national law in Germany as early as 2010. This speeded up the introduction of the certification systems ISCC and REDcert, with the result that no other certified raw material was available due to the failure to implement certification systems in other EU member states or in countries outside the EU (Asia, South America) apart from German rapeseed in the years 2010 and 2011 in particular.
4. The EU Commission has meanwhile recognised 13 international certification systems. These were not implemented across the board, in contrast to rapeseed cultivation in Germany. Rather, the implementation was based on the relevant plantations or soya cultivation areas of the company producing the raw material.
5. The distributors or the quota obligatory parties (the companies in the mineral oil business) are responsible for the raw material composition at the public filling stations. The quality of the certification systems, the certification bodies and ultimately the sustainability validations must be formulated so that a traceability of the raw materials is ensured. The corresponding sustainability validations are incorporated in the "nabisy" database of the Federal Office for Agriculture and Food (BLE) and can be viewed via the responsible bodies of the customs administration for auditing the sustainability regulations as a prerequisite for tax concessions or for apportioning to the quota obligation.
6. The BLE provides information annually with its Evaluation and Empirical Report (see: www.ble.de).
7. Biofuels assume a pioneering role for the introduction of sustainability indicators, beginning with raw material cultivation and marketing through to the end use. Nevertheless, biofuel production from imported vegetable oils, measured in terms of the international raw material requirement, plays a subordinate role.
   Palm oil production worldwide 2010: 53 million tonnes,
   Utilisation areas: 71% food industry, 24% material use (soaps, cosmetic industrial products), 4.7% energy use (electricity, heat and fuel production). Source: 18/12 Lebensmittelpraxis.
8. The introduction of certification systems as a prerequisite for market access or for participation in the funding framework of the quota obligations or tax concessions has established an economic incentive for the implementation of certification systems in other countries. The quality involved in the implementation of certification systems must be at the forefront in future, and these will have to be oriented internationally to the environmental and social standards of the European Union. However, a problem is posed by the fact that an utilisation-relevant certification (only for biofuel use) is not constructive, as this ultimately creates legalised means of bypassing the circumstances.
9. A continuous evaluation of the certification systems and certification bodies is a prerequisite for the requisite acceptance on the part of the processing industry and consumers. Minimum criteria in regard to the sustainability can already be anchored in the procurement provisions of the food, chemical and biofuel industry so as to avoid bypassing measures.

Index of tables

Biofuels

Tab. 1: Domestic consumption – Biofuels 2007–2012 in 1000 tons

	2007	2008	2009	2010	2011	2012
Biodiesel admixture	1,423.3	1,612.8	2,276.3	2,288.8	2,315.9	2,347.6
Biodiesel pure fuel	1,821.3	1,082.5	240.6	293.1	97.2	131.0
Total - Biodiesel	**3,244.6**	**2,695.3**	**2,516.9**	**2,581.8**	**2,413.1**	**2,478.7**
Vegetable oil	755.8	401.4	99.9	60.9	19.6	24.7
Total - Biodiesel & V-oil	**4,000.5**	**3,096.7**	**2,616.9**	**2,590.0**	**2,432.8**	**2,503.4**
Diesel fuel	29,058.8	29,905.6	30,936.2	32,128.0	32,963.8	33,678.0
Admixture share in %	4.9	5.4	7.4	7.1	7.0	7.0
Total - Fuels	**31,635.9**	**31,389.4**	**31,276.8**	**32,482.0**	**33,080.7**	**33,833.7**
Biodiesel & V-oil share in %	12.6	9.9	8.4	8.1	7.4	7.4
Bioethanol ETBE	366.2	366.9	202.3	124.9	162.2	141.7
Bioethanol admixture	88.6	250.9	692.7	1,022.8	1,052.4	1,089.7
Bioethanol E 85	6.1	8.5	9.0	13.0	19.7	21.3
Total - Bioethanol	**460.0**	**625.0**	**902.5**	**1,158.4**	**1,230.9**	**1,248.8**
Motor fuels	21,292.0	20,561.4	20,232.8	19,633.7	19,601.1	18,486.8
Motor + bioethanol fuels	21,243.0	20,568.5	20,240.2	19,644.4	19,617.4	18,504.3
Bioethanol share in %	2.2	3.0	4.5	5.9	6.3	6.7

Source: Federal Office of Economics and Export Control, AMI

Tab. 2: Monthly domestic consumption – Biofuels 2008–2012 in 1000 tons

	2007	2008	2009	2010	2011	2012
Biodiesel admixture						
January	92.91	135.05	125.55	175.66	157.32	161.02
February	98.19	117.40	179.80	149.07	149.26	172.99
March	107.19	122.26	181.10	190.61	172.71	220.94
April	111.98	135.35	195.36	207.83	186.92	194.71
May	117.07	130.45	194.28	202.72	205.23	210.06
June	122.29	137.81	192.06	193.79	176.67	209.83
July	119.85	143.87	203.74	200.04	224.75	220.32
August	133.89	133.63	209.86	190.56	215.32	223.92
September	129.10	139.32	204.82	191.20	190.48	213.08
October	127.71	149.92	194.01	198.09	214.12	173.56
November	132.71	130.71	211.37	196.24	219.27	178.68
December	130.46	137.06	184.35	166.38	216.99	168.52
Average	**118.61**	**134.40**	**189.69**	**188.52**	**194.09**	**195.64**
Total quantity	**1,423.34**	**1,612.83**	**2,276.30**	**2,262.18**	**2,329.03**	**2,347.62**
Biodiesel pure fuel						
January	131.28	64.93	14.12	18.79	3.59	5.26
February	122.29	37.15	7.85	10.98	4.97	4.77
March	150.94	73.75	32.01	19.04	2.22	4.93
April	144.83	84.91	28.10	22.96	3.36	19.98
May	158.47	114.10	16.09	38.84	4.69	13.79
June	146.17	139.25	14.05	39.44	7.32	5.04
July	171.38	120.95	20.01	27.75	4.77	9.10
August	133.05	111.74	21.23	40.02	5.05	12.77
September	178.07	111.42	31.47	36.13	10.39	18.80
October	188.73	114.81	21.71	22.90	9.42	9.49
November	158.83	59.31	21.41	10.70	8.32	8.64
December	137.25	50.14	12.49	5.50	33.06	18.47
Average	**118.61**	**90.21**	**20.04**	**24.42**	**8.10**	**10.92**
Total quantity	**1,821.28**	**1,082.46**	**240.54**	**293.05**	**97.16**	**131.03**
Total Biodiesel						
January	224.19	199.98	139.67	194.46	160.91	166.28
February	220.47	154.55	187.65	160.05	154.23	177.76
March	258.13	196.01	213.11	209.66	174.93	225.87
April	256.81	220.26	223.46	230.79	190.28	214.69
May	275.54	244.56	210.47	241.56	209.91	223.85
June	268.46	277.05	206.11	233.22	183.99	214.86
July	291.23	264.82	223.75	227.79	229.54	229.42
August	266.93	245.37	231.09	230.58	220.37	236.69
September	307.17	250.74	236.29	227.32	200.86	231.88
October	316.45	264.73	215.72	220.99	223.54	183.06
November	291.54	190.02	232.78	206.95	227.59	187.32
December	267.71	187.20	196.84	171.88	250.05	186.99
Average	**118.61**	**224.61**	**209.74**	**212.94**	**202.18**	**206.55**
Total quantity	**3,244.62**	**2,695.29**	**2,516.93**	**2,555.24**	**2,426.20**	**2,478.65**

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	2007	2008	2009	2010	2011	2012
Vegetable oil (V-oil)						
January	29.67	25.84	9.19	4.12	0.51	0.23
February	79.63	24.16	4.68	2.76	1.21	2.91
March	45.70	20.52	5.81	7.97	1.06	1.79
April	45.66	28.38	8.40	6.60	3.24	1.86
May	37.77	32.44	6.48	5.68	2.41	1.04
June	99.99	38.30	8.37	5.83	0.97	1.09
July	68.54	33.31	8.91	6.37	0.43	7.34
August	90.79	49.66	8.83	6.33	0.57	5.44
September	61.37	44.09	11.99	3.97	2.53	1.45
October	74.63	41.49	11.10	4.99	2.27	0.74
November	58.59	28.02	8.54	3.98	2.18	0.28
December	63.51	35.17	7.70	2.32	2.26	0.55
Average	**118.61**	**33.45**	**8.33**	**5.08**	**1.64**	**2.06**
Total quantity	**755.84**	**401.39**	**100.00**	**60.92**	**19.63**	**24.71**
Bioethanol						
January	41.29	40.41	66.45	83.28	86.98	95.09
February	37.32	38.06	59.62	75.13	95.35	94.37
March	47.49	52.92	78.66	87.83	84.00	107.17
April	43.03	51.10	88.17	91.95	88.08	110.54
May	37.47	53.72	81.37	102.83	107.35	112.39
June	39.95	45.20	77.68	103.28	108.01	106.49
July	39.21	50.30	89.63	117.17	110.83	107.62
August	38.97	49.55	77.80	105.26	112.81	103.76
September	34.90	46.24	76.74	101.92	111.76	100.56
October	34.54	63.28	68.79	98.98	109.84	113.68
November	29.23	61.84	65.48	95.67	106.14	105.41
December	36.61	72.38	71.42	98.39	110.92	91.77
Average	**118.61**	**52.08**	**75.15**	**96.81**	**102.67**	**104.07**
Total quantity	**460.01**	**624.99**	**901.80**	**1,161.68**	**1,232.07**	**1,248.84**

Source: Federal Office of Economics and Export Control, AMI

Tab. 3: International trade with biodiesel 2008–2012 in tons

	2008	2009	2010	2011	2012+
Import of biodiesel					
January	13,716	64,876	67,044	35,999	28,314
February	38,647	51,192	74,784	26,463	23,553
March	35,093	75,210	88,039	48,629	37,962
April	66,413	60,175	58,430	78,277	57,864
May	80,127	96,561	150,943	82,276	98,628
June	84,964	84,527	154,608	124,658	107,837
July	113,357	89,320	136,781	114,971	83,011
August	122,054	134,946	136,321	105,697	92,707
September	68,727	94,198	128,279	86,085	73,889
October	41,455	73,278	87,527	86,125	77,912
November	25,767	55,633	104,588	62,443	34,383
December	30,342	111,048	73,386	70,318	44,436
Total	**720,663**	**990,964**	**1,260,735**	**921,941**	**760,496**
Export of biodiesel					
January	51,785	28,704	68,836	61,252	74,819
February	75,034	55,936	97,385	129,323	74,305
March	51,083	54,082	95,514	101,078	89,012
April	57,621	36,947	78,214	135,813	83,517
May	66,792	41,715	103,827	131,876	92,820
June	27,728	46,299	114,460	157,211	107,248
July	117,267	73,904	89,507	116,598	102,486
August	94,855	68,717	166,430	99,556	115,680
September	71,094	106,998	85,514	144,816	131,896
October	137,769	85,796	107,993	105,822	124,902
November	57,572	81,106	78,703	85,557	93,297
December	77,464	81,202	126,207	74,957	126,939
Total	**886,064**	**761,405**	**1,212,596**	**1,343,859**	**1,216,921**

Source: Federal Statistical Office, AMI

Tab. 4: EU production capacities for biodiesel 2007–2012 in 1000 tons

	2007	2008	2009	2010	2011	2012+
Germany	4,390	5,085	5,086	4,933	4,932	2,992[1]
France	780	1,980	2,505	2,505	2,505	2,456
Italy*	1,366	1,566	1,910	2,375	2,265	2,310
The Netherlands	115	571	1,036	1,328	1,452	2,517
Belgium	335	665	705	670	710	770
Luxembourg	-	-	-	-	-	20
United Kingdom	657	726	609	609	404	574
Ireland*	6	80	80	76	76	76
Denmark	90	140	140	250	250	250
Greece	440	565	715	662	802	812
Spain	508	1,267	3,656	4,100	4,410	4,391
Portugal	246	406	468	468	468	483
Austria	326	485	707	560	560	535
Finland*	-	170	340	340	340	340
Sweden	212	212	212	277	277	182
Estonia	35	135	135	135	135	110
Latvia	20	130	136	156	156	156
Lithuania	42	147	147	147	147	130
Malta	8	8	8	5	5	5
Poland	250	450	580	710	864	884
Slovakia	99	206	247	156	156	156
Slovenia	17	67	100	105	113	113
Czech Republic	203	203	325	427	427	437
Hungary	21	186	186	158	158	158
Cyprus	6	6	20	20	20	20
Bulgaria	65	215	435	425	348	408
Romania	81	111	307	307	277	277
EU 27	**10,318**	**15,782**	**20,795**	**21,904**	**22,257**	**21,862**

Note: Calculation based on 330 working days/year/plant;
* = from 2007 incl. production capacities for hydrotreated vegetable oil (HVO)
1 = UFOP – without ADM (Production locations: Hamburg, Leer, Mainz)
+ = interim
Source: European Biodiesel Board, national statistics, AMI

Tab. 5: EU production of biodiesel 2006–2013 in 1000 tons

	2006	2007	2008	2009	2010	2011	2012[1]	2013[2]
Belgium	1	145	277	416	350	350	330	330
Denmark	70	70	98	86	76	80	70	70
Germany	2,200	2,890	2,600	2,500	2,350	2,780	2,400	2,100
United Kingdom	256	427	282	196	154	177	270	290
France	592	954	1,763	2,089	1,996	1,400	1,650	1,750
Italy	594	470	668	798	799	620	350	400
The Netherlands	18	85	83	274	382	491	400	500
Austria	122	242	250	323	337	310	310	310
Poland	89	44	170	396	371	364	592	510
Portugal	79	181	169	255	318	366	313	313
Sweden	48	114	145	110	130	130	130	130
Slovenia	2	7	8	7	21	0	6	6
Slovakia	43	46	105	103	113	125	110	100
Spain	125	180	221	727	841	649	440	250
Czech Republic	110	82	75	155	198	210	160	150
EU 27	**4,434**	**6,129**	**7,321**	**8,888**	**8,981**	**8,595**	**8,013**	**7,708**

Note:
1 = interim
2 = Projection
Source: Licht Interactive Data

Tab. 6 a: Germany biodiesel [FAME] trade in tons – Import

Import	Jan.-Apr. 2013	2012	2011	2010	2009	2008
Import	7,213	29,132	26,062	17,123	11,177	6,229
Austria	27,320	197,584	82,287	208,412	100,845	94,451
Belgium	1,005	420	10,451	7,702	4,701	2,381
Czech Republic	675	1,052	1,212	-	-	3,008
Denmark	-	-	-	-	-	2,644
Estonia	-	-	-	15	-	2,011
Finland	151	739	5,758	1,175	997	4,200
France	-	1,726	2,714	13	3,861	400
Itlay	-	-	11,859	-	-	2,102
Latvia	-	-	-	-	204	102
Lithuania	71,436	412,624	1,039,849	958,988	610,156	340,124
The Netherlands	10,025	53,900	83,790	9,740	1,046	-
Poland	-	276	-	-	-	2
Slovakia	156	-	-	-	-	-
Slovenia	-	1	6	3,006	1,576	1,112
Sweden	-	1,296	1,259	2,964	76	14
United Kingdom	6	26,265	69,949	46,977	38,421	38,676
EU	**117,987**	**725,015**	**1,335,196**	**1,256,115**	**773,060**	**497,456**
USA	-	-	-	3	1,135	155,109
Indonesia	-	-	5,046	2,960	-	-
Malaysia	-	-	2,042	509	1	-
Other states	-	22,517	36	1,157	2,618	6,588
TOTAL	**117,987**	**747,532**	**1,342,320**	**1,260,744**	**776,814**	**659,153**

Quelle: F.O. Licht

Tab. 6 b: Germany biodiesel [FAME] trade in tons – Export

Export	Jan.-Apr. 2013	2012	2011	2010	2009	2008
Austria	45,853	170,359	64,032	68,707	32,734	56,312
Belgium	20,450	125,061	87,801	136,380	57,750	31,910
Bulgaria	900	14,245	1	13	3	24
Crotia	-	-	5	5	11	11
Cyprus	4,143	14,898	981	1,408	7,997	1,896
Czech Republic	16,554	94,628	58,678	22,608	32,987	5,346
Denmark	5,227	26,343	36,453	1,514	4,770	6,278
Estonia	-	4	-	-	2,603	10,018
Finland	218	13,349	29,661	493	818	1,056
France	29,455	72,596	41,085	113,073	60,803	86,105
Greece	1	106	36	100	32	19
Hungary	9,496	33	62	2,441	5,304	8,451
Ireland	-	3,004	1	-	1	108
Italy	41,395	69,057	32,192	58,037	32,219	12,825
Latvia	-	5	2,482	-	-	10,202
Lithuania	1,587	131	116	-	126	27
Malta	1	1,240	-	-	-	-
The Netherlands	129,073	305,171	305,201	239,384	206,492	273,148
Poland	36,374	199,947	484,061	388,839	113,530	91,672
Portugal	-	26	13	34	3,734	22
Romania	-	13,602	10,760	4,209	4,090	997
Slovakia	116	4,875	15,715	13,696	33	8,228
Slovenia	1,360	6,506	3,332	14,762	51	29
Spain	96	4,546	221	12,407	6,383	5,826
Sweden	2,650	41,840	20,162	8,193	27,291	9,223
United Kingdom	29,130	24,589	115,138	74,655	69,280	76,144
EU	**374,079**	**1,206,161**	**1,308,189**	**1,160,958**	**669,042**	**695,877**
USA	**37,931**	**404**	**1,086**	**1,167**	**801**	**749**
Other states	**8,585**	**8,166**	**17,424**	**50,495**	**5,647**	**8,524**
TOTAL	**420,595**	**1,214,731**	**1,326,699**	**1,212,620**	**675,490**	**705,150**

Quelle: F.O. Licht

Tab. 7: Biodiesel production capacities 2013 in Germany

Operator/Plant	Location	Capacity (ton/year)	
ADM Hamburg AG -Hamburg plant-	Hamburg	not specified	●
ADM Hamburg AG -Leer plant-	Leer	not specified	●
ADM Mainz GmbH	Mainz	not specified	●
Bioeton Kyritz GmbH	Kyritz	80,000	●
BIO-Diesel Wittenberge GmbH	Wittenberge	120,000	●
Bio-Ölwerk Magdeburg GmbH	Magdeburg	180,000	●
BIOPETROL ROSTOCK GmbH	Rostock	200,000	●
Biowerk Sohland GmbH	Sohland	50,000	●
BKK Biodiesel GmbH	Rudolstadt	4,000	
Cargill GmbH	Frankfurt/Main	300,000	●
EAI Thüringer Methylesterwerke GmbH (TME)	Harth-Pöllnitz	55,000	●
ecoMotion GmbH	Lünen	212,000	●
german biofuels gmbh	Falkenhagen	130,000	●
Gulf Biodiesel Halle GmbH	Halle	58,000	
KFS-Biodiesel GmbH	Cloppenburg	30,000	●
KL Biodiesel GmbH & Co, KG	Lülsdorf	120,000	
Louis Dreyfus commodities Wittenberg GmbH	Lutherstadt Wittenberg	200,000	●
MBF Mannheim Biofuel GmbH	Mannheim	100,000	●
NEW Natural Energie West GmbH	Neuss	260,000	●
Petrotec AG	Emden	100,000	
Petrotec AG	Südlohn	85,000	
Rapsol GmbH	Lübz	6,000	●
TECOSOL GmbH (formerly Campa)	Ochsenfurt	75,000	●
Ullrich Biodiesel GmbH/IFBI	Kaufungen	35,000	
Verbio Diesel Bitterfeld GmbH & Co, KG (MUW)	Greppin	190,000	●
Verbio Diesel Schwedt GmbH & Co, KG (NUW)	Schwedt	250,000	●
Vesta Biofuels Brunsbüttel GmbH & Co, KG	Brunsbüttel	150,000	
Vogtland Bio-Diesel GmbH	Großfriesen	2,000	
Total (without ADM)		**2,992,000**	

Note: ● = AGQMmember;
Source: UFOP, FNR, VDB, AGQM / some names are abbreviated
DBV and UFOP recommend procuring biodiesel from the members of the working committee
As of April 2013

Tab. 8: International trade with ethanol (ethyl alcohol, denatured) 2007–2012 in tons

	2007	2008	2009	2010	2011	2012+
Import of ethanol						
January	5,139	5,557	6,631	6,631	10,227	7,781
February	7,883	7,935	5,978	5,978	10,833	22,735
March	5,528	3,584	7,192	7,192	8,534	39,433
April	11,157	4,579	6,564	6,564	9,553	52,608
May	6,555	4,948	6,666	6,666	6,764	52,585
June	9,092	3,885	6,473	6,473	7,927	51,882
July	11,203	20,040	6,473	6,473	7,644	45,797
August	7,674	3,712	10,186	10,186	7,463	47,750
September	9,889	5,731	7,507	7,507	14,225	52,654
October	10,974	11,283	8,138	8,138	11,283	55,362
November	7,818	7,817	9,265	9,265	15,069	26,165
December	7,641	7,236	10,588	10,588	12,328	37,610
Total	**100,551**	**86,307**	**91,659**	**101,861**	**121,850**	**492,362**
Export of ethanol						
January	2,685	1,685	2,012	2,039	3,575	5,965
February	2,162	5,077	3,357	1,747	1,928	4,312
March	7,314	1,505	1,724	1,691	3,364	3,498
April	2,116	1,821	1,741	1,500	1,780	3,659
May	1,474	3,580	1,810	1,274	3,088	4,838
June	1,893	4,782	1,696	1,481	4,535	4,653
July	1,408	6,021	1,209	2,163	4,525	5,840
August	1,756	1,955	1,515	2,059	3,298	3,750
September	1,682	1,690	1,650	2,488	3,622	5,226
October	2,577	4,363	1,912	3,134	7,834	3,994
November	2,459	1,960	1,662	1,461	3,776	4,021
December	1,944	1,295	1,371	1,496	4,468	4,211
Total	**29,470**	**35,732**	**21,660**	**22,537**	**45,793**	**53,967**

Source: Federal Statistical Office, AMI

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