



Online Publications

Biofuel Policy, GHG Balances
and Biodiesel

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Subject: Biodiesel Policy & Markets

Biodiesel 2017/2018 – Report on Progress and Future Prospects

With the special report „Biodiesel 2017/2018“, the Union for the Promotion of Oil and Protein Plants (UFOP) annually summarizes the most important chapters from its annual report on biodiesel. The chapter „Biodiesel & Co“ explains the most important biofuel policy issues at national and European level in the context of international climate change commitments, in particular the decisions on the recast of the Renewable Energy Directive (REDII) as a result of the trilogue procedure.



UFOP Report on Global Market Supply 2017/2018

The report presents the European and world demand for biomass for the purpose of biofuel production in relation to supply in the food and feedstuff markets.



Germany's most beautiful oil fields – Resource and climate protection in transport

The National Climate Action Plan 2050 aims to reduce greenhouse gas emissions by around 90 per cent. This means that in 2050 transport will be virtually “fossil-free”. Switching existing diesel vehicle fleets to biodiesel represents a comprehensive contribution to greenhouse gas reduction. The brochure provides information on the potential uses of rapeseed biofuel in the transport sector and its importance for achieving the national climate protection goals.



Biofuels study “Implications of political decisions on biofuels and raw materials markets”

Almost without exception, renewable energies markets today are characterized by complex regulatory and funding policy framework conditions. The biofuels study “Implications of political decisions on biofuels and raw materials markets” sheds light on the impacts of policy measures on biofuels and raw materials markets with the aim of deriving recommendations for action from this.



Special report No 18/2016: The EU system for the certification of sustainable biofuels

In practice, considering the present stage of technical development and possibilities to use alternative energies in transport, the 10% target of the RED can be achieved only through a substantial use of biofuels. In the special report No 18/2016, the European Court of Auditors found that the assessments carried out by the Commission as a basis for the recognition of voluntary schemes did not adequately cover some important aspects necessary to ensure the sustainability of biofuels.



Good Reasons for Biofuels

Human-caused climate change is a natural disaster which measured by geological standards is already occurring at a rapid pace and is already visible and noticeable. Agriculture is immediately affected by this changes. It is a part of the solution and contributes to the reduction of greenhouse gas emissions. The Climate Action Programme 2020 and the National Climate Action Plan 2050 show the challenges of adapting to the decarbonization of road transport, which are presented in the brochure.



Rapeseed: A Versatile Crop

Rapeseed provides many benefits for farmers thanks to its individual properties. Among other things, it contributes to improving soil quality and increasing the yield of subsequent crops. Rapeseed is well-known for its high-quality oil. However, the seeds comprise not only about 42% oil but also high-quality protein, which is extracting during pressing. As rapeseed cake (cold pressing) or rapeseed meal (extraction), it represents a sought-after, domestic protein that not been modified genetically.



Certifying biofuels: Weaknesses in recognition and supervision of the system, say EU Auditors

Weaknesses in the system of certifying sustainable biofuels could undermine the basis of the EU's 2020 targets for renewable energy in transport, according to a new report from the European Court of Auditors.



Study: Integrated Fuels and Vehicles Roadmap to 2030+

In October 2014, the European Heads of States communiqué agreed on the 2030 Climate and Energy Policy Framework. This framework set binding targets for the reduction of greenhouse gas (GHG) emissions and non-binding targets for renewable energy consumption and improvements in energy efficiency. The overall GHG emissions reduction target of -40% (-43% for ETS sector and -30% for non ETS sector) in 2030 below 2005 levels was in line with both the ambition to reduce GHG emissions in the European Union (EU) by 80-95% below 1990 levels by 2050 and the vision of the EU White Paper on Transport.



Rapeseed – Opportunity or risk for the future!?

From the start until the middle of May, the yellow blossoms of rapeseed stamp the agricultural landscape unmistakably across many regions of Germany. The crop was actually sown before winter, at the end of August, and the harvest will begin in July. The vegetation cycle comes to a close in 11 months.



“indirect Land Use Change” (iLUC) – A critical inventory for objective political decision-making

With this article, advice is offered for the second round of legislation on the complex of “Land Use Change” (LUC). It will be shown how the European Commission has derived factors for EU legislation for indirect land use change (so-called iLUC) using econometric model calculations. These factors do not possess adequate legal certainty and would make no contribution to solving the problem of worldwide land use change if they were to be introduced.



Study: Determinants for the level and volatility of agricultural commodity prices on international markets

With the worldwide explosion in prices for agricultural commodities and basic foodstuffs in the period 2007 to 2008 and the subsequent collapse in 2009 caused by the recession, an intensive discussion has begun on the possible negative consequences of high and volatile prices for world food security.



➤ More information: www.ufop.de/english/bio-fuels/

Position paper – Advanced alternative liquid fuels: For climate protection in the global raw materials change

This position paper is intended to appeal to decision-makers in politics, business and science. With regard to climate protection goals, the paper aims at showing technological ways to achieve the full integration of the transport and heating sectors into the energy transition by 2050 in a realistic, sustainable and economically justifiable manner.



Approval list of commercial vehicle manufacturers for operation with biodiesel (B20 | B30 | B100)

The importance of biodiesel as a pure fuel has also declined significantly in the areas of heavy commercial vehicles and non-road vehicles. The current approval list of commercial vehicle manufacturers gives you an overview of approved commercial vehicles and engines as well as the compliance with emission standards.



DEUTZ AG Technical Circular "Fuels 0199-99-01218/4"

DEUTZ has now approved the engine series TCD 2.9/3.6/4.1/6.1/7.8/12.0/16.0 under the current EU Stage IV/US Tier 4 standard, as well as all older DEUTZ engines without exhaust after treatment, for operation with paraffinic diesel fuels and bio diesel or biodiesel blends. This will make a further significant reduction to the carbon footprint of combustion engines and even raises the prospect of running such engines on a carbon-neutral basis.



ATZ extra: Operating performance of a tractor engine of emissions standard EU IV in biodiesel operation

Agriculture is particularly affected by climate change but is also required to make as much of a contribution to climate protection as possible. Approximately 1.6 million tonnes of diesel fuel is used in agriculture each year. This means that the optimum reduction of fuel consumption has been achieved. Fuel consumption tends to increase as updated crop protection product authorisations preclude reduced tillage and increasingly, weeds must be controlled mechanically.



Project report for the release of DEUTZ Euro IV common rail engines for biodiesel out

With the target of obtaining the release for the TCD 2013 4V of emission level EURO IV with DEUTZ Common Rail injection system in commercial trucks, an engine and function test on the test rig and a field test for making sure of the biodiesel compatibility were performed by DEUTZ AG with financial assistance from the Union for the Promotion of Oil and Protein Plants e. V. (UFOP).



UFOP-funded project for the approval of biodiesel as a pure fuel for DEUTZ Agripower engines

The DEUTZ Agripower engines of the series TCD 7.8 L6, TCD 6.1 L6 and TCD 4.1 L4 can be approved for operation with biodiesel as a pure fuel. This is the result of the project successfully completed by DEUTZ AG. In the course of this project, the engines were subjected to extensive field tests in practice, with a conclusive result for DEUTZ common rail injection systems and exhaust gas aftertreatment systems.



Reducing emissions using biofuel blends from engines with SCR catalytic converters (Offprint MTZ 2/2014)

By optimising the dosing quantity of urea in the exhaust aftertreatment (AdBlue), a further reduction of nitrogen oxides at higher levels of biodiesel in diesel fuel is possible. These are the findings of the project undertaken at the Thünen Institute of Agricultural Technology in Braunschweig, which studied the effects of biofuel blends on the emissions of a commercial vehicle engine with an SCR catalytic converter.



MTZ special publication: Lowering the Boiling Curve of Biodiesel by Metathesis

There exist some disadvantages when Biodiesel is used in vehicles equipped with diesel particulate filter (DPF). Especially during the regeneration phase, fuel bedabbles the piston walls and is taken over into the engine oil. Unlike fossil diesel fuel, biodiesel can not evaporate out of the engine oil because of its high boiling range. This leads to oil dilution and, furthermore, the formation of oligomers and oil sludge. The Thünen Institute of Agricultural Technology and the Technology Transfer Center Automotive Coburg (TAC) of the Coburg University of Applied Sciences modified the boiling behaviour of biodiesel by metathesis. This enables the new fuel to evaporate from the engine oil.



Lowering of the Boiling Curve of Biodiesel by Metathesis

The boiling line of diesel fuels is relevant for the combustion in modern engines. Biodiesel shows a boiling behaviour that is very different to diesel fuel. To adapt the boiling line, metathesis reactions were carried out. Different products were obtained by varying the catalysts and the ratio of biodiesel to 1-hexene.



Final report – Screening of suitable monomer-crosslinker systems and experiments on molecular recognition of acylated Steryl glycosides (ASG)

The subject of this project, which was initiated by the AGQM, is a feasibility study for the analysis of the field of application of nanostructured molecularly imprinted polymer adsorbent particles (MIPs) for the isolation of minor biooil components (useful and/or contaminant materials).



Optimisation of the Post-injection during Particle Filter Regeneration can reduce the Fuel Entry into Engine Oil of Passenger Car Diesel Engines

The bench tests, which were carried out in an operating point with small engine load in the regenerating mode, showed that the fuel entry increased into the engine oil with increasing RME content of the fuel. In this case the RME-concentration increased in the engine oil whereas the DF-concentration decreased.



Final Report: Oil Dilution of a Passenger Car Diesel Engine in Operation with blended Diesel Fuel B10

Currently Biodiesel (RME) is mixed according to EN 14214 and EN 590 with up to 5% of fossil diesel fuel. With a further increase of RME fraction to 10% (B10 blend), there are uncertainties regarding the undisturbed long-life behaviour due to variations of the physicochemical properties of RME in comparison to commercial diesel fuel.



Subject: GHG Balances

Information about the conversion of the biofuel promotion from an energy quota to a greenhouse gas quota starting in 2015

In the amendment to the law for promoting biofuels dated July 15, 2009 (Federal Gazette I p. 1804), the German Bundestag already stated that the energy related biofuel quota would be converted to a greenhouse gas quota starting in 2015.



DBFZ: Influence of the reevaluation of residual and waste materials on the GHG balance of first generation biofuels

The German Biomass Research Center (DBFZ – Deutsches Biomasseforschungszentrum) comes to the conclusion in its report „Determinants for the reevaluation of residual and waste materials on the GHG balance of first generation biofuels“ that a reevaluation and correction is called for in regard to the methodology and values specified in the biofuel directives for calculation of the GHG balance for biofuels from residual and waste materials.



DBFZ: Revision needed regarding the GHG standard values for biodiesel from animal fats and vegetable waste oils

The German Biomass Research Center (DBFZ – Deutsches Biomasseforschungszentrum) has studied the effect of different transport expenditures involved in the collection of animal fats and vegetable waste oils on the greenhouse gas balance of biofuels produced from these. The DBFZ comes to the conclusion that the standard values specified in Renewable Energies Directive (2009/28/EC) have to be revised.



Element pollution of exhaust aftertreatment systems by using biodiesel (Offprint MTZ 6/2012)

Biodiesel is a particularly attractive fuel for agricultural machinery. However, the introduction of new emission standards has made the use of exhaust gas treatment systems in agricultural vehicles essential. The combination of biodiesel and exhaust gas treatment causes problems, because the biodiesel contains traces of inorganic elements. Deutz and ASG have investigated the impact of current grades of biodiesel on the systems in real-life operation.



TFZ-KOMPAKT 13 "Climate protection by rapeseed oil fuel"

The content of this brochure published by the Bavarian „Technologie und Förderzentrum Nachhaltige Rohstoffe“ – TFZ – (Technology and support center for renewable resources) is concerning the reasons why farmers should use rape seed oil as an alternative sustainable fuel instead of fossil diesel and what are in total the GHG benefits if e. g. also the rape meal is taken into account (substitution method). These „effects“ had not yet been taken into consideration in Annex V of the REDII proposal.



Sow ideas, **harvest success!**

The Union for the Promotion of Oil and Protein Plants e. V. (UFOP) represents the political interests of companies, associations and institutions involved in the production, processing and marketing of domestic oil and protein plants in national and international bodies. UFOP supports research to optimise agricultural production and for the development of new recycling opportunities in the food, non-food and feed sectors. UFOP public relations aim to promote the marketing of domestic oil and protein plant end products.

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