BIOFUEL PUBLICATIONS

Biofuel policy/iLUC, GHG balance, Biofuels in agriculture and forestry, Biodiesel and Rapeseed oil Fuel

BIOFUEL POLICY / ILUC

Progress Report „Biodiesel & Co. 2022/2023“
The progress report provides information on national and international biofuel policy issues relevant to the UFOP in the reporting period 2022 – 2023. The almost 60-page report is supplemented by comprehensive statistics on national and international biodiesel production, on the current biofuel quota regulations enshrined in law in the member states and by the publication of excerpts from the statistics from the experience and evaluation report of the Federal Agency for Agriculture and Food (BLE). All sources are linked to further information.

bit.ly/41X78BR

UFOP-Report on Global Market Supply 2023/2024
The report confirms that in purely arithmetic terms food supply per capita is sufficient to feed the world's population. The report finds that the causes primarily lie in extreme natural events, inadequate state leadership, corruption and forced migration, along with the implications of climate change (Report contains 38 issues and charts, 56 pages).

bit.ly/GMS-Report24

UFOP Study: Development of a monitoring concept for the evaluation of ILUC (2022)
Models to assess Indirect Land Use Change (iLUC) not sufficiently robust.

bit.ly/3ZNPMF5

Position paper by FJRG: Future biofuel research: Technology and climate protection
Drive climate protection forward now with sustainable and greenhouse gas-optimised biofuels and at the same time raise their potential through strategic research funding; this is, in brief, the message of the position paper published by the UFOP in cooperation with the Fuels Joint Research Group (FJRG). Biofuels are the only alternative so far for replacing fossil fuels in existing vehicle fleets. The UFOP underlines the statement of climate scientists that time is running out and that political action must therefore be geared to this.

bit.ly/3Zt0z8b

Monitoring renewable energies in transport
The subject matter of the report is the – sobering – stocktaking on the achievement of the climate protection goals in the transport sector in Germany. The political measures and legal framework conditions are explained in detail. It is recommended that all GHG mitigation options be considered in a technology-open manner.

bit.ly/3EYIqGY

Study: Determinants for the level and volatility of agricultural commodity prices on international markets: Are biofuels responsible for price volatility and food insequrity?
To counter prevailing prejudices against biofuels, the the UFOP and the German Biofuels Industry Association (VDB) conducted a scientific study under the direction of Prof. Dr. Michael Schmitz and M.Sc. Palina Moleva from the Institute for Agricultural Policy and Market Research at the Justus Liebig University in Gießen.

bit.ly/3F5bJI6

Position paper: Climate change mitigation with sustainable renewablefuels
Making use of existing sustainable renewable fuels options to reduce greenhouse gases in transport and encouraging the development of new technologies.

bit.ly/2FbeGHC

Further information:

www.ufop.de/english/bio-fuels

GENERAL BIOFUEL INFORMATION

BLE: Evaluation and Progress Report 2021

The 12th evaluation and progress report of the Federal Office for Agriculture and Food (BLE) informs about the development of biofuels placed on the market in Germany. In 2021, 3.95 million tonnes of biofuels were registered for inclusion in the greenhouse gas reduction quota. These biofuels, certified in accordance with the Biofuel Sustainability Ordinance, saved emissions amounting to 11.1 million tonnes of CO_2 equivalent and thus made an important contribution to achieving Germany's climate protection goals. The average saving compared to fossil fuels was 84.4 percent, which is also the highest value since the introduction of the greenhouse gas reduction quota in 2015.

bit.ly/3tzoIzi

Policy Information Biofuels

What does the German public think about biofuels? With a view to answering that question, we commissioned the market research institute KANTAR to collect and evaluate opinions on biodiesel, bioethanol and biomethane. The results are clear: the vast majority not only likes biofuels, but would even favour incorporating higher levels into blends than is currently the case. At the same time, the respondents found it important that these biofuels are sustainable.

bit.ly/Biofuels23

Position paper: Biofuels are essential for fulfilling the climate protection targets in the commitment period 2021 to 2030

The German Federal Government's six month presidency of the Council of the European Union began on 1 July 2020. As a goal of its agenda, the Federal Government stated that it wishes to "work towards climate-friendly, sustainable and affordable mobility". The biofuel associations welcome this objective and point out that openness to technologi cal ideas and the sustainably available potential of biofuels need to be considered in order to fulfil national climate pro tection targets.

bit.ly/39tFhOZ

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BIOFUELS IN AGRICULTURE AND FORESTRY

Flyer „Biofuels in agriculture and forestry“

"Biofuels in Agriculture and Forestry" is an industry stakeholder platform of various associations, companies and institutes from the agriculture and forestry sector. The aim of the platform is to provide comprehensive and impartial information on the advantages and technical aspects of the use of various biofuels and other renewable energy sources in agriculture and forestry.

bit.ly/3ROCVQW

BIODIESEL RESEARCH

Final Report: Investigation into the interactions between fuels and fuel-carrying vehicle components in PHEV

When up to 10 % fatty acid methyl ester (FAME) is added to diesel fuel, operational reliability is maintained even if the fuel is stored in the vehicle tank for a period of 9 months. This requires a suitable additive to stabilise the fuel mixture. This is the primary result of the investigations into the ageing behaviour of fuels in vehicle tanks over relatively long storage times, in near-application conditions. They were part of the research project "Fuels for PHEV vehicles" (Plug-in Hybrid Electric Vehicles, PHEV), which investigated interactions between fuels and their chemical components and fuel-carrying vehicle components.

bit.ly/3bCXk7W

Final Report: Biodiesel as an integral component of pioneering diesel fuels

In this project, co-funded by UFOP, the University of Applied Sciences Coburg has investigated future regenerative fuels with regard to their miscibility and ageing behaviour in order to be able to make better predictions about the miscibility of fuels. Based on solubility parameters and a developed algorithm, the miscibility of RME, OME as an option of a renewable synthetic fuel and HVO was derived theoretically and verified experimentally.

bit.ly/3bB6ou4

OCL Scientific Paper: The significance and perspective of biodiesel production – A European and global view.

Biofuels, such as biodiesel, are playing a role regionally within the context of the growing challenge of a global climate change policy. The contribution is an evaluation of the situation and it demonstrates the limits of the development based on different aspects.

bit.ly/2rM48eU

MTZ special publication – Development of a Low- Emission Fuel with High Biogenic Content and High Oxidation Stability

Compared to fossil diesel fuel, biodiesel has significantly lower carbon monoxide, particulate mass and hydrocarbon emissions. In contrast, however, there are higher nitrogen oxide emissions and a reduced aging stability. In a joint research project, the Transfer Center for Automotive Technology at Coburg University (TAC) and the University of Applied Sciences and Arts in Lemgo (Germany) have analyzed how the oxidation stabi lization of biodiesel by hydrazides can be further improved.

bit.ly/39ynBkv

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.

bit.ly/36lE89a

"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.

bit.ly/2QS6W2C

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.

bit.ly/2FfX4um

BIOFUELS IN OPERATION

Approval list of commercial vehicle manufacturers for operation with biodiesel (B10 | B20 | B30 | B100)

The current approval list of commercial vehicle manufacturers gives an overview of approved commercial vehicles and engines as well as the compliance with emission standards.

bit.ly/42cRCkS

Approvals in inland navigation for operation with biodiesel (B7 | B20 | B30 | B100)

The use of biodiesel in ships and vessels can significantly reduce the particle emissions in the exhaust gas. Furthermore, biodiesel is a practically sulphur-free and easily biodegradable fuel (Water Hazard Class - WGK 1) and due to its high flash point it is no hazardous goods. Biodiesel is subject to a comprehensive sustainability certification from cultivation to production.

bit.ly/3ZJsMHL

DEUTZ AG Technical Circular "0199-99-01218/6 EN"

DEUTZ is approving its entire TCD engine portfolio for use with alternative diesel fuels. This means that paraffinic diesel fuels such as HVO (hydrotreated vegetable oil) can now be used to run all DEUTZ engines that meet the EU Stage V emissions standard, including the TCD 5.2 series.

bit.ly/42eNbpN

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.

bit.ly/2FjDwF7

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 UFOP.

bit.ly/36j0sR0

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.

bit.ly/37tbraz

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).

bit.ly/36j0sR0

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.

bit.ly/39tv7gx

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.

bit.ly/2QFkGhe

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.

bit.ly/2QgWEtJ

MTZ Offprint: Reducing emissions using biofuel blends from engines with SCR catalytic converters

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. As part of this project, both regulated emissions as well as polycyclic aromatic hydrocarbons (PAHs) and the mutagenicity of the exhaust gas were determined. While no consistent effect of the biofuel blend could be determined in terms of regulated emissions, the SCR catalytic converter did lead to significant reductions in the emission of PAHs and in the mutagenicity of the exhaust gas.

bit.ly/3igMdmp

MTZ Offprint: 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 These turn into ash during the combustion process in the engine, which can result in permanent damage to the components of the exhaust gas treatment system. Deutz and ASG have investigated the impact of current grades of biodiesel on the systems in real-life operation.

bit.ly/3oN6Qcq

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.

bit.ly/2u7r6hj

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.

bit.ly/2MPbRA7

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

The content of this brochure published by the Bavarian „Technologie und Förderzentrum Nachwachsende Rohstoffe" – TFZ – (Technology and support center for renewable ressources) 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 Anex V of the REDII proposal.

bit.ly/37xCwJY

UFOP-MARKET INFORMATION

For further informations regarding oilseeds, oilseed meals and oilcakes, vegetable oils and biofuels you can use the monthly UFOP market information service.

bit.ly/36ioiMJ

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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 agri-cultural 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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