



Environmental Action Germany, foodwatch, Greenpeace, NABU,

ROBIN WOOD and Transport & Environment **rebut 10 frequently heard**

Myths of the Biofuel Lobby

For more than 15 years, the EU has been promoting the blending of biofuels with fossil diesel and petrol. Biofuels are primarily produced from food and feed crops, which are grown specifically for this purpose. Biodiesel is typically produced from rapeseed, soy or palm oil; for bioethanol, which is blended with petrol, wheat, rye, maize and other types of grain as well as sugar beet and sugar cane are used.

Crop-based biofuels have been criticised for many years because their production competes with growing crops for food. The war in Ukraine and the resulting global food crisis have reignited the discussion about using crops for fuel instead of food. Several European countries are considering reducing crop biofuel use. The German government has announced its intention to completely phase-out the use of crop-based biofuels. The ongoing revision of the Renewable Energy Directive at EU level is an opportunity to end the use of food for fuel across Europe.

The biofuel industry is lobbying against these proposals, making various claims to support the continued use of crop biofuels. Many of them sound plausible at first, but do not stand up to scrutiny. With this comprehensive fact check, we would like to contribute data and facts to the public and political discussions regarding the use of food for fuel.

Claim 1: “There is no competition between food and fuel, because producing crop biofuels yields animal feed, such as rapeseed meal, as a co-product. Glycerine, which is used in the pharmaceutical industry, is also produced along the way. We need to continue producing crop-based biofuels because otherwise we would no longer obtain these valuable co-products.” Misleading!

It is correct that rapeseed meal is produced as a co-product when rapeseed is processed into biodiesel. But this also happens when the rapeseed oil is extracted for human consumption. Rapeseed meal as a co-product of processing rapeseed in no way justifies using the precious vegetable oil for fuel rather than food.

In general, one wrong does not justify another. The huge demand for animal feed that we have today is the result of overproduction and overconsumption of meat and other animal products – which causes massive climate, environmental and health problems. Producing animal feed consumes a major part of [the land used for agriculture](#). For example, more than half of the grain harvested in Germany is used to [feed animals](#). The vast amount of land required to produce crop-based biofuels cannot be justified by the even greater amount of land required to produce animal feed. A drastic reduction of livestock (and thus automatically of consumption of animal feed) is a key pillar of transitioning to a sustainable agricultural system.

Glycerine is a [marginal factor in biofuel production](#) as vegetable oil contains only a small percentage of it. Moreover, producing biofuel is not the only way to obtain glycerine which is also produced during other processes, e.g. when making [soap](#). Glycerine supply for disinfectants and the like is therefore not dependent on crop biofuel production. In many applications, such as creams and baked goods, there are also glycerine-free alternatives available.

Claim 2: “Only feed grain, which is not suitable for human consumption, is used for bioethanol.” Wrong!

Bread grade wheat and feed grade wheat differ only slightly in their baking properties. Feed wheat has a lower protein content, but it is entirely possible to produce high-quality baked goods from low-protein wheat if the baking processes are adapted. Cur-

rently, only about 30 per cent of the wheat produced in Germany is used for food. However, experts such as Professor Dr Friedrich Longin from the State Plant Breeding Institute at the University of Hohenheim consider that [more than 80 per cent](#) of the wheat grown would be suitable for breadmaking. During baking, there are numerous options to cope with lower protein levels of wheat, such as using fermentation starters or sourdoughs or adjusting the kneading energy.

This means, for example, that [one million tonnes of wheat](#) that are growing on fields in Germany at the moment, could be used for breadmaking. Fundamentally, it is about the land that is used: feed grain (wheat and rye) which has already been sown can be used to a large extent for human consumption, as described above; in the future, the land should be used to produce the food needed to fight against hunger and rising food prices.

Claim 3: “Ending the use of crop biofuels would not have a noticeable impact on food availability.” Wrong!

The quantities of food that are burned every day in the form of crop-based biofuels are anything but negligible.

Across the EU, about 10,000 tonnes of wheat are turned into fuel every day. That is equivalent to about [15 million loaves of bread](#). On top of that, large quantities of other grains are used for biofuels. The amount of grain processed into biofuels in Germany in 2021 alone (2.4 million tonnes) would be enough to supply almost 16 million people threatened by hunger with a daily ration of grain for a year.¹

Besides grain, large quantities of [vegetable oils](#) are burned as biofuels – every day almost 19 million bottles of rapeseed and sunflower oil and 14 million bottles of soy and palm oil across Europe. This enormous waste of valuable vegetable oils as fuel is partly responsible for the fact that, globally, vegetable oils have seen the [largest price increases](#) of all food products in the last two years – and particularly since the invasion of Ukraine.

Stopping the use of crop biofuels in the EU could [compensate](#) for over 20 per cent of total wheat exports from Ukraine, almost 30 per cent of maize exports and 9 per cent of sunflower oil exports. Halving the amount of grain used for crop-based biofuels in Europe and the USA would be sufficient to fully [replace](#) Ukraine’s grain exports.

Ending the use of crop-based biofuels is therefore one of the most effective measures to tackle the global food crisis and can be implemented by policymakers in the short term.

Claim 4: “The market will take care of the problem. Due to current high prices of agricultural feedstocks, crop biofuel production has already been reduced and the feedstocks are going into the food sector. Government intervention is unnecessary.”

Wrong!

The market cannot be relied on to solve the problem. In Germany, for example, unconfirmed information from the [industry association UFOP](#) (Union for the Promotion of Oil and Protein Plants) suggests that, while the production of crop biodiesel is currently reduced, the use of bioethanol actually increased significantly in the first few months of this year – even as grain prices exploded. Similarly, in 2020, the use of bioethanol in Germany [did not decrease significantly](#), despite substantially increased grain prices.

The reason is that the fuel industry faces high penalties if they do not meet their legal emission reduction targets. Blending crop biofuels with fossil diesel and petrol is one of the cheapest options for oil companies to meet their emission targets on paper – even if feedstock prices are high. Wheat prices, for example, which are already at record levels, would have to increase a lot further before turning wheat into biofuel becomes financially unattractive for companies operating in Germany. Unlike oil companies, however, the world’s hungry people are not in a position to pay record prices for basic foodstuffs. According to [UN projections](#), the current price inflation for staple foods will drive millions of people around the world into malnutrition.

It is telling that the [discussion](#) around phasing out the use of crop biofuels in Germany alone was enough to significantly lower rapeseed prices in recent weeks. This shows that ending government support for crop-based biofuels would be effective in curbing the price increases for agricultural commodities.

Doing nothing in the face of an escalating global food crisis and hoping that the market will solve the problem means ignoring the human right to food. It was government incentives that created a market for crop biofuels in the first place; now it is high time that policymakers remove these misguided incentives.

If no action is taken, almost 10 million tonnes of food and feed crops will end up in fuel tanks next year in Germany alone, according to the [German Environment Ministry](#).

Claim 5: “Using crop biofuels significantly reduces greenhouse gas emissions. Crop biofuels are indispensable if we want to achieve the climate targets in the transport sector.”

Wrong!

The use of crop-based biofuels reduces greenhouse gas emissions only on paper; in reality, crop biofuels are fuelling the climate crisis.

[Official figures](#) suggest that crop-based biofuels help reduce greenhouse gas emissions, but a very important factor is missing from these calculations: the amount of land, which is used for growing the crops, is not taken into account at all.

Rapeseed and grain fields, palm and soy plantations for crop biofuels occupy vast areas of land around the world. Crops for fuel grow on 6.5 per cent² of Germany’s arable land, and around the globe just under [1.9 million hectares](#) – an area almost as big as Slovenia – are currently used to produce crop biofuels for consumption in Germany alone. The EU’s consumption of crop biofuels requires [more than 5 million hectares](#) of arable land worldwide, based on a conservative estimate.

When the impacts of this land use are properly taken into account, crop-based biofuels are even more harmful to the climate than fossil fuels. Numerous scientific studies, including ones [commissioned by the EU](#), have shown that the additional demand for agricultural land that comes with crop biofuels leads – directly or indirectly – to the expansion of agriculture into previously uncultivated areas. As a result, natural ecosystems are destroyed, often in tropical countries – with extremely harmful consequences for climate and biodiversity.

Fundamentally, reserving vast areas of land for producing biofuels means that less land is available for natural ecosystems that could store carbon and provide important wildlife habitats. This effect alone causes enormous climate damage which more than cancels out the small benefit to the climate of replacing fossil fuel, as a recent [study by the ifeu Institute](#) on behalf of Environmental Action Germany (Deutsche Umwelthilfe, DUH) has shown.

On top of the climate damage, biodiversity and ecosystems also suffer from the unnecessary additional intensive agriculture that comes with crop biofuels – with monocultures which support few species, frequent use of pesticides and fertiliser and intensive

tillage. The [Federal Environment Agency in Germany](#) has long classified the government support for crop-based biofuels (estimated at just under 1 billion euros in Germany in 2018) as an environmentally harmful subsidy.

There are [numerous measures](#) available to governments to actually reduce CO₂ emissions from transport and achieve the climate targets. The key levers for this are measures to avoid unnecessary transport, to promote modal shift towards active and public transport, and to accelerate electrification. Instead of continuing to use crop-based biofuels to make greenhouse gas emissions from transport look smaller on paper, governments should focus on enabling a [comprehensive shift towards green mobility](#) and a rapid phase-out of vehicles with internal combustion engines.

Claim 6: “If we stop using crop-based biofuels, we will need more fossil fuel and will make ourselves even more dependent on fossil fuel imports (including from Russia).”

Misleading!

The use of crop-based biofuels has very little impact on our dependence on fossil fuels. In contrast, it has a huge impact on food supply and prices. Ending the use of crop biofuels would help tackle the escalating global food crisis (see response to claim 3). The additional demand for fossil fuels, on the other hand, would be manageable and could easily be compensated by accompanying measures to reduce fuel consumption overall – in Germany, for example, by introducing a general speed limit (see response to claim 5).

Biofuels are not a suitable means of reducing our dependency on fossil oil imports: only a few per cent of biofuel are added to fossil petrol and diesel – yet even to produce these small quantities, the land use impacts are enormous and far exceed ecological limits. There is simply not enough land available for any further expansion of crop-based biofuels. For instance, if Europe wanted to replace all its fossil oil imports from Russia with crop biofuels, that would require an area equivalent to at least [70 per cent of the EU’s total arable land](#).

In reality, the use of crop-based biofuels reinforces and perpetuates our dependency on fossil fuels, because biofuels are used to greenwash continued use of internal combustion engines. In public, the biofuel lobby typically presents itself as very concerned about the climate crisis and our dependency on fossil fuels. At

the same time, however, together with the oil industry and parts of the car industry, it is fighting tooth and nail to [prevent the phasing out of combustion engines in the EU](#) and to ensure that as many combustion vehicles as possible are still sold in the coming years – even though it is absolutely clear that they will be run almost entirely on fossil fuels.

To end our dependency on fossil fuels, transport must be avoided where possible or shifted to climate-friendly modes of transport, in particular cycling, rail and local public transport. In addition, electrification must be accelerated.

Claim 7: “All crop biofuels have to be certified as sustainable – so they are guaranteed to be environmentally friendly.” Wrong!

Sustainability certification sounds nice, but unfortunately does not solve the problems of crop-based biofuel. The key reason for the devastating climate and ecological impact of crop biofuels is the fact that immense areas of land are required for producing them (see response to claim 5).

Even assuming that certifications reliably cover all the important criteria and are rigorously enforced (which is sadly not always the case), growing certified crops still uses just as much land as without certification. At best, certification can ensure that forests are not directly cleared or wetlands drained for the cultivation of rapeseed, maize, oil palms or soy for biofuels. But even with certification, crop biofuels still require millions of hectares of intensively managed land which are not available for food production or the regeneration of natural ecosystems.

Claim 8: “Reforestation land instead of growing crops for biofuel on it does not help the climate, as natural ecosystems such as forests are very uncertain carbon sinks.”

Misleading!

With a phase-out of crop biofuels, land use can be significantly reduced, creating the opportunity to rewild land in appropriate places and restore degraded ecosystems. The goal is not active reforestation, as the biofuel lobby implies, but stopping human intervention as much as possible and allowing natural vegetation

to regrow. That way, regenerating ecosystems are adapted to local conditions and resilient. The [ifeu Institute](#) has calculated that allowing natural vegetation to regrow on an area the size of today's biofuel croplands could draw down significant amounts of carbon and make a contribution to climate action far greater than the purported CO₂ savings from crop biofuels.

There is scientific consensus that the restoration of natural ecosystems is urgently needed to tackle the climate and biodiversity crises. The German government's scientific advisory board, for example, calls for the massive expansion of the restoration of terrestrial ecosystems as part of a comprehensive [land use transformation](#). The EU is working on a [new law](#) to set binding targets for nature restoration. The potential is there: for Germany, a [study by NABU](#) has shown that there is considerable potential for ecosystem restoration on more than 20 per cent of the country's land area.

The fact that carbon storage in natural ecosystems is subject to natural fluctuations due to global heating and other influences is an argument for more ecosystem restoration – not less. It is cynical that the biofuel lobby uses the impacts of the climate crisis to argue against urgently needed climate measures.

Ecosystem restoration also directly contributes to meeting climate targets: in Germany, the Climate Protection Act sets legally binding targets for the land use sector to reduce greenhouse gas emissions by 25 million tonnes of CO₂ equivalents in 2030. There is no way to meet this target without large-scale restoration of natural carbon sinks.

Claim 9: "When emissions from production and battery manufacturing are included, electric cars are no better for the environment than combustion vehicles." Wrong!

There are numerous studies (e.g. by the [International Council on Clean Transportation](#) and [Transport & Environment](#)) that compare the carbon footprint of combustion vehicles with that of electric vehicles over their entire life cycle (i.e. including production, operation, maintenance and disposal). The results are clear: even with today's electricity mix – and even more so when using

green energy – electric vehicles come out on top. In addition, the smaller the car, the smaller its environmental impacts.

However, that does not mean that switching to electric drivetrains is a silver bullet; what is necessary is a fundamental reorganisation of our current transport system and a [large-scale shift to green mobility options](#). It would be entirely wrong to try to replace the current more than 240 million combustion cars in the EU with 240 million electric cars. Almost half of all car journeys in German cities, for example, are less than five kilometres long. A significant reduction in the number of cars and car traffic is needed, while at the same time boosting walking, cycling and public transport. Better conditions for cyclists and pedestrians and the expansion and improvement of public transport are key elements for achieving the climate targets in the transport sector. The use of crop biofuels only delays the urgent green mobility transformation.

Claim 10: "Crop-based biofuels are valuable for storing energy, which can be used any-time. In contrast, solar electricity, can only be generated when the sun is shining."

Misleading!

This claim is designed to distract from the fact that producing crop biofuels is extremely inefficient and wasteful: immense land areas are needed to produce small amounts of fuel. The [ifeu Institute](#) has calculated that producing solar electricity for electric cars requires 97 per cent less land than the production of biofuels for combustion vehicles, for the same mileage. And this comparison with solar power is still very favourable for crop biofuels – wind energy is even more land-efficient.

The fact that solar panels do not supply electricity 24 hours a day, seven days a week, does not change anything about this enormous advantage in efficiency. And, of course, solar energy can also be stored and electric vehicles can move on cloudy days. That is what the battery is for – an excellent energy storage tool that can also contribute to grid stabilisation in the future.

Endnotes

- 1 In Germany, about 2.4 million tonnes of grain were processed into bioethanol in 2021. Only part of the grain processed into crop biofuels is wheat and only about 80 per cent of the wheat can be used for baking. Grain that cannot be used for baking could be used as animal feed and replace part of the 7.5 million tonnes of wheat that is currently fed to animals. Since we consider that a high proportion of this feed wheat can also be used for baking, we assume that 2.4 million tonnes of wheat could be made available as food if crop biofuel use is halted. Assuming a daily ration of grain of 400 g per day (estimate based on Minimum Food Basket & the UN's "Operation Lifeline Gaza"), this amount of grain could feed about 16.44 million people for one year.
- 2 According to data from the Agency for Renewable Resources in Germany (FNR), 757,700 hectares of land were used in Germany to grow crops for biofuels in 2021. The total arable land in Germany amounted to 11.6 million hectares.



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