

Why Are Planes Using Pork Byproducts for Fuel?

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June 24, 2023

STORY AT-A-GLANCE

- › A study conducted by Cerulogy for Transport & Environment (T&E) revealed increasing pressure on animal fat supplies as its use in biodiesel has skyrocketed 40-fold since 2006
- › Demand for animal fats for biofuel may triple from 2021 to 2030, but in Europe, 46% of animal fat feedstocks are already used as biodiesel, suggesting supply won't keep up with demand
- › The study calculated that to fuel one transatlantic flight from Paris to New York, 8,800 dead pigs are needed – for one way
- › Unintended consequences from pouring animal fats into biofuel are likely and could affect many industries
- › Palm oil is a likely substitute to make up for animal fat shortages, but industrially produced palm oil produces environmental problems of its own

Rendered animal fats, a byproduct of raising animals on concentrated animal feeding operations (CAFOs), are commonly added to pet food and personal care products like soap and cosmetics. However, they're also a growing part of "sustainable aviation fuels" (SAF), to the extent that there's not enough to go around.

A study conducted by Cerulogy for Transport & Environment (T&E) revealed increasing pressure on animal fat supplies as its use in biodiesel has skyrocketed 40-fold since 2006.¹

8,800 Dead Pigs to Fuel One Transatlantic Flight

Animal fats are being touted as the latest sustainable biofuel, but as usage grows it's already appearing to be an unsustainable fuel source. According to the T&E report, demand for animal fats for biofuel may triple from 2021 to 2030.² However, in Europe, 46% of animal fat feedstocks are already used as biodiesel, suggesting supply won't keep up with demand.

The study calculated that to fuel one transatlantic flight from Paris to New York, 8,800 dead pigs are needed – for one way. In the European Union, animal fats are categorized into three groups depending on their risk levels for disease transmission. While categories 1 and 2 can only be used for heating, category 3 can be used in a wider range of applications, including pet food, oleochemical industries and biofuel.

With biofuel creating more demand for those category 3 fats, other industries may be pushed out of the market or find products being made with animal-fat substitutes, which are usually cheaper available oils.³ Nicole Paley, deputy chief executive of UK Pet Food, told BBC:⁴

"These [animal fats] are really valuable ingredients for us and they are hard to replace, and they're put to good use already in a very sustainable way ... So actually diverting these ingredients to biofuels is actually creating another problem. It would put us in competition with the aviation industry. And when it comes to the purse strings of the aviation sector, the pet food industry would find it really difficult to compete."

Dickon Posnett from Argent Energy, which produces biodiesel from wastes, added, "If you make a big incentive for use of these lipids, animal fats, and used cooking oils, in aviation, it will inevitably take it away from other things. So if you want to increase aviation sustainability, at the expense of truck sustainability, then crack on. But that's a decision for the government to make."⁵

UK Considers Ban on Animal Fats in Aviation Fuel

Unintended consequences from pouring animal fats into biofuel are likely and could affect many industries. Palm oil is a likely substitute to make up for animal fat shortages, but industrially produced palm oil produces environmental problems of its own. Matt Finch from T&E told BBC:⁶

"There's not a never ending supply of animals, or animal fat. So if you put on a massive extra demand source from anywhere from aviation, in this case, the industries where fat is currently being used, will have to look for alternatives. And that alternative is palm oil. So aviation indirectly, will be responsible for increasing the amount of palm oil being pulled through the European systems."

Palm oil, which is produced from the pulp of the fruit of the oil palm, is also controversial. It's so widely used that it's found in about half of frequently consumed foods and common consumer products,⁷ including biofuel, cosmetics and other personal care products, candles and pharmaceuticals.

Consuming palm oil in ultraprocessed foods will not do your health any favors, but from a health standpoint, palm oil for cooking is preferable to seed oils like soybean and sunflower because of its lower percentage of **linoleic acid**. However, palm oil cultivation has been blamed for deforestation and destruction of habitat for orangutans and other wildlife, along with environmental damage from monoculture plantations.⁸

Even "sustainable" palm oil has been described as misleading, but if you do use this oil, palm oil scorecards can help you to navigate the companies that are leading the way toward more sustainable production.⁹ For use in biofuel, however, palm oil is linked with direct deforestation as well as poses a high risk of "indirect land use change," which T&E described as "land clearance to allow for the expansion of overall agricultural area to meet additional demand for land for energy."¹⁰

"While palm oil biofuels from areas deforested after 2008 are not eligible under RED [the EU's Renewable Energy Directive], these indirect emissions still undermine the main objective of using biofuels, which is to reduce CO₂ emissions." The T&E report continued:¹¹

"If unsustainable materials are replacing the current uses of animal fats, the shift in uses can therefore significantly undermine the climate benefits of using animal fats biofuels.

In the oleochemicals industry and pet food industry for example, palm oil is considered as the most likely substitute because of it having the most similar properties to animal fats and being the cheapest option available. If virgin palm oil were to substitute animal fats, CO₂ emissions of animal fats biofuels could be up to 1.7 times worse than conventional diesel."

Considering the potential negative environmental consequences of broadening the use of animal fats in aviation fuel, the U.K. is considering putting a ban or limit on the types of animal fats and cooking oils used in jet fuel.¹² With restrictions likely, this means flights refueling in Britain are likely to use only small amounts of animal fats for fuel. However, BBC reported:¹³

"In the EU, airlines will have a 6% sustainable aviation fuel target for 2030 of which 1.2% must come from e-kerosene. Assuming the remaining 4.8% is derived entirely by animal fat, that would require around 400 pigs per transatlantic flight."

A Similar Story to Ethanol?

Making use of a byproduct to create biofuel seems like a good idea, until the unintended consequences occur. We've seen a similar story with ethanol. Ethanol is advertised as an environmentally friendly solution, but it's actually part of the problem because it's driving valuable grassland to be converted into chemical-heavy corn crops.

Between 2008 and 2013, wild bees declined 23% in the U.S., particularly in the Midwest, Great Plains and the Mississippi valley, where grain production, primarily corn for biofuel, nearly doubled during the same period.¹⁴ Further, according to the Environmental Working Group (EWG), more than 8 million acres of grassland and wetlands were converted to corn from 2008 to 2011.¹⁵

Overall, since the U.S. government began requiring ethanol in fuel in 2007, more than 1.2 million acres of grassland have been lost to corn (and soy) crops.¹⁶ Converting more diverse grasslands into corn crops for biofuels is the opposite of what's needed to save the environment.

A 2022 study published in Proceedings of the National Academy of Sciences (PNAS) revealed the industrial farming required to produce corn for ethanol makes it at least 24% more carbon-intensive than gasoline.^{17,18}

Yet, aggressive expansion of corn ethanol biofuel production remains a key part of the Renewable Fuel Standard (RFS2) in the Energy Independence and Security Act of 2007. Referring to the PNAS study, a PNAS commentary by Jason Hill, Department of Bioproducts and Biosystems Engineering at the University of Minnesota, explains:¹⁹

"Ethanol proponents have argued that this reduces greenhouse gas (GHG) emissions, but as Lark et al. show in PNAS, the opposite occurs. The authors find that the life-cycle GHG emissions of the ethanol produced to meet RFS2 are no less than those of gasoline, and are likely even greater. This is because using more corn for biofuel has led to an increase in the intensity and the extent of corn farming in the United States.

Thus, RFS2 not only fails to mitigate climate change but is actually counterproductive. Furthermore, the authors conclude that RFS2 has exacerbated other environmental problems commonly associated with row crop production, including poor water quality and soil erosion."

Is the Push for 'Sustainability' Part of the Problem?

Finding uses for byproducts of CAFO farming ignores the underlying systemic damage caused by industrial agriculture. CAFOs remain a top polluter worldwide. Even the CDC notes, "The agriculture sector, including CAFOs, is the leading contributor of pollutants to lakes, rivers, and reservoirs. It has been found that states with high concentrations of

CAFOs experience on average 20 to 30 serious water quality problems per year as a result of manure management problems."²⁰

Rather than reverting to regenerative agriculture, in which livestock and crops are integrated into a symbiotic, complementary system that mimics the way nature works, agrochemical companies are intent on creating "biofuels" and using gene editing, genetic engineering, chemicals and other "technologies" to create hybrid seed lines, crops resistant to winds, flooding and droughts and other lab-created agricultural elements.

These are all passed off as part of a better "sustainable" future, but are they really? While the notion of a "greener" pollution-free world is an attractive one, ultimately this isn't about the environment – it's all about creating a control system in which the world's resources are owned by the richest of the rich, while the rest of the population can be controlled through the allocation of those resources, including energy.

Some even argue that the war against carbon emissions is misguided. As noted by [A Midwestern Doctor](#) on Substack:²¹

"As a longtime environmentalist, one of the most depressing things I have watched in my lifetime has been major polluters hijacking the environmental movement and transforming it from something that fought to against the destruction of our air and water to a fanatical crusade against (harmless) carbon dioxide.

Sadder still, this crusade has gradually become a war and has adopted the same playbook used by the parties which lust for complete power over the citizenry."

It's important to keep an eye on the bigger picture of events unfolding when considering "green" biofuels like pig fat and corn ethanol. If there were a truly sustainable option for fuel, hemp may be a top contender, but even this could run into the same pitfalls we've already seen when trying to produce anything – be it crop or farm animal – at a massive

scale. Further, it would likely require subsidies to make it economically viable. As A Midwestern Doctor explained:²²

"A variety of options exist for converting crops to energy. The most common one is deriving ethanol from corn, which I do not support. This is because ethanol damages car engines (excluding ones specially designed for it), lowers gas mileage, and is only used because government subsidies (used to get votes from the Midwest, where much of our corn is grown) incentivize the practice.

Another common approach is directly utilizing waste biomass and (typically) burning it to generate energy. Many believe that the best case for biofuels can be made if industrial hemp (which is similar, but not the same as marijuana) is used. This is because the plant is easy to grow and produces a large amount of fiber (cellulose) and oil. These can then be utilized to produce paper, textiles (fabric), concrete, plastic, food, and biofuels.

Hemp was initially a very popular raw material (e.g., Henry Ford made a car from hemp that ran on hemp oil). Sadly, numerous industries threatened by hemp's potential economic impact successfully worked together to create a hysteria around marijuana (e.g., Reefer Madness) so hemp would also be taken off the market.

There are a lot of important applications of hemp-based materials. I believe the most critical application of hemp (and why it needs to be widely grown) is the plastics that can be made from it, as the ones we currently derive from oil are immensely damaging to the environment. At this point however, I am not sure if, without subsidies similar to the ones ethanol receives, an economically viable hemp-based fuel can make it to the market."

Sources and References

- ¹ [Transport & Environment May 31, 2023](#)
- ^{2, 3, 11} [Transport & Environment May 2023, Pigs do fly!, Summary](#)
- ^{4, 5, 6, 12, 13} [BBC News May 30, 2023](#)
- ⁷ [Bull World Health Organ. 2019 Feb 1; 97\(2\): 118–128](#)

- ⁸ Nutrients. 2019 Sep; 11(9): 2008
- ⁹ WWF Palm Oil Buyers Scorecard
- ¹⁰ Transport & Environment May 2023, Pigs do fly!, Page 15
- ¹⁴ Biological Conservation April 2019, Volume 232, Pages 8-27
- ¹⁵ Environmental Working Group May 29, 2014
- ¹⁶ Fox News November 13, 2013
- ¹⁷ Reuters February 14, 2022
- ¹⁸ PNAS February 14, 2022
- ¹⁹ PNAS March 9, 2022
- ²⁰ U.S. CDC, Understanding Concentrating Animal Feeding Operations and Their Impact on Communities, Page 4
- ^{21, 22} Substack, A Midwestern Doctor May 14, 2023