

Biodiesel: The Speed Queen of Biofuels
The assumption that “newer is always better” is both dumb and dangerous
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By Joe Jobe

July 2026 marked an important milestone: the 20th anniversary of the word “biodiesel” entering the Merriam-Webster Dictionary. Its fellow inductees included “drama queen,” “unibrow” and “soul patch.” We were all very excited – the biodiesel folks, drama queens, unibrows and the soul patch dudes. It was reminiscent of the scene in “The Jerk” when Steve Martin’s character discovered his name in the phone book.¹

Renewable diesel (RD) has not yet reached that dictionary milestone. Perhaps because it was not built on a grassroots movement by visionary soybean farmers and entrepreneurs who shared their vision like biodiesel was. Rather, renewable diesel was built on a surreptitious strategy by a handful of oil giants to disrupt that movement. Specifically, this group is primarily made up of independent refiners whose core business is buying crude oil on the open market and refining it into finished products.

SABR predicted the cannibalization of biodiesel by renewable diesel before renewable diesel had significant volumes. This prediction was based on flawed policies that favor RD.² As new gallons of non-soy renewable diesel came online in California to fill the biomass-based diesel category in the Renewable Fuel Standard (RFS), gallons of soy biodiesel came offline elsewhere in the country. In October 2022, RD overtook biodiesel in volume. RD volumes are now roughly three times those of biodiesel.

Renewable diesel interests portray this cannibalization as a natural market transition from the first generation of technology to the next. While this narrative is effective because it is simple and seems plausible to the average person, *it could not be further from the truth*. Both biodiesel and renewable diesel only exist because of federal and state policies that promote them – primarily ag and carbon policy. As this article will show, biodiesel is the lowest cost biomass-based diesel and superior at carbon abatement, performance, health, safety and benefits to farmers.

[As SABR documented in this 2021 article](#), biodiesel is oxygenated, naturally lubricious and sulfur-free.³ The oxygen improves fuel combustion efficiency, making it burn cleaner with fewer emissions. B20 is a drop-in replacement fuel that has been fully integrated into the fuel supply and oxygenates and lubricates the rest of the nation’s fuel supply. RD has poorer lubricity properties than even conventional diesel fuel. B20 delivers the same miles per gallon, horsepower and cold temperature operability as diesel or renewable diesel.

¹ Author’s note: Younger readers, I don’t expect you to have seen “The Jerk” or to know what a phone book is. But you can watch this [clip](#) for context clues.

² [White Paper](#) on State Carbon Policy, 2019, Joe Jobe

³ [Renewable Diesel](#) and *The California LCFS – Impacts to the Soybean Industry*, Joe Jobe September 2021

B20's premium fuel qualities

Compared with petroleum diesel and renewable diesel (R100), B20 offers several premium diesel characteristics:

- Lower aromatics and other emissions.
- Higher conductivity, reducing fire hazards associated with static charges.
- Higher flashpoint, reducing fire hazards during handling and increasing vehicle safety.
- Natural solvency, acting as a detergent additive to keep fuel system/emission control systems cleaner.
- Lower maintenance costs and longer life of the fuel system and diesel particulate filters.

A 2021 independent study from the Netherlands compared benefits of biodiesel, renewable diesel, sustainable aviation fuel (SAF) and co-processed renewable diesel.⁴ The study concluded that *"...of all four pathways, biodiesel has the lowest production costs, the highest feedstock efficiency, the highest emission reduction performance and, consequently, the lowest carbon abatement costs."*

Several of America's most reputable lifecycle scientists peer reviewed this study. Yet, it was not covered in U.S. trade media outlets until SABR discovered it in 2024. This would seem to be the kind of study that biodiesel advocates would want to disseminate and maximize coverage. Why would this study be ignored in the U.S.? 2021 happens to be the year that traditional biodiesel industry groups and publications broadened their missions and constituencies beyond biodiesel to try to attract renewable diesel/SAF members and advertisers. Since then, those groups have stopped emphasizing B20 advantages to renewable diesel.

The "drop-in replacement" argument

Those same groups *do* talk a lot about the one advantage that renewable diesel has over biodiesel: that it is a drop-in replacement fuel at 100 percent concentration - that it is chemically indistinguishable from diesel fuel. Ok then, it is just diesel fuel, and most of the emissions, health, safety, performance, and maintenance benefits that biodiesel has over diesel fuel applies equally to renewable diesel. You can't have it both ways.

B20 is also a drop-in replacement fuel. Over the past 30 years my family and I have used B20 year-round in all of our personal vehicles and boats which totals 14 diesel engines. In those 30 years and 14 diesel motors, we have not experienced a single fuel-related problem - not one. Even in the older vehicles (like the 1984 Mercedes we bought on Christmas Eve 1999 and named her Merry and 1995 Chevy conversion van that we named Van Morrison), when we started fueling them with B20 – there was not so much as a

⁴ [Conversion Efficiencies of Fuel Pathways](#), Studio Gear Up, 2021

clogged filter. The only difference was that the black exhaust smoke turned white and the diesel odor went away.

B20 has been fully integrated into the nation's fuel infrastructure so there are no logistics or blend wall barriers. It would require 12 billion gallons of biomass-based diesel to blend 20% BBD into the nation's roughly 60 billion gallons of middle distillate fuels. We are currently less than half of that number, so we have a long way to go before we *need* to do higher than 20% blends. And as we have demonstrated above, B20 is a superior fuel to R100 in nearly all aspects of performance, health, safety and maintenance. Renewable diesel has its place of course, but when you burn a gallon of R100, you've done nothing to enhance the rest of the nation's diesel fuel supply as biodiesel blends do to oxygenate and lubricate the diesel fuel supply. On a gallon-to-gallon comparison, a gallon of biodiesel that is used in a blend of B20 costs less and reduces more carbon and other emissions than a gallon of renewable diesel that is used as R100. From an overall energy policy perspective, using R100 to displace ULSD is good but in reality, R100 has been displacing B20 which has net public policy disbenefits.

Biodiesel has its own North American quality assurance program called BQ-9000. Renewable diesel has no such program to ensure quality. The U.S. Department of Energy's National Renewable Energy Laboratory (NREL) used to conduct an annual biodiesel quality survey. When BQ-9000 saw widespread participation, NREL's annual survey began to show that biodiesel surveyed in the field consistently met its quality specification more often than diesel fuel met its specification. For that reason, NREL discontinued the annual survey.

As a demonstration of B20's performance benefits, B20 set the diesel land speed record. In 2011, Brent Hajek set the Diesel Land Speed World Record running on ultra-low sulfur diesel at 171 mph on the Bonneville Salt Flatts with a Ford F250. On his second run, he drained the tank, replaced the diesel fuel with B20 and broke the record he had just set using the same truck – nothing was different except the fuel. The new record was 182 mph.

Newer does not mean better

Renewable diesel, SAF and co-processed renewable diesel are the newer fuels, produced in a more complicated, energy-intensive and expensive process, but does that make those fuels better than biodiesel? Absolutely not. As we've already demonstrated, B20 is the superior drop-in replacement fuel to R100. But biodiesel must overcome the stubborn myth that newer is always better. This is a dumb and dangerous assumption that must be opposed.

Recently our old washing machine stopped working. I called our repair guy and asked if it was worth fixing. His response surprised me: ordinarily it would not be worth fixing, but our machine was just old enough that as long as you can fix it, you should, rather than buying a new one. Through engineered obsolescence, most new machines only last about 2-5 years

(or immediately after the 3-year warranty has expired). The new machines have been loaded up with fancy circuit boards to run the electronics with touch screen user interfaces and Wi-Fi-enabled apps. That sounds like progress but when one thing on the circuit board goes out, it often takes the whole board out and bricks the machine. And they have made replacement parts for the new machines so expensive that you can't afford to fix them.

From the 60s through the 90s, washing machines had all mechanical parts with no elaborate electronics. They got clothes cleaner and lasted 20-30 years - often longer because replacement parts were affordable and available. In the 2000s, manufacturers changed their platforms to include intricate electronics. Most brands took out the mechanical agitators that would twist and squeeze the clothes clean and instead designed overly complicated electronics to essentially just slosh the clothes around in the bowl. Speed Queen, the market leader, was the lone holdout. They were the last to have a mechanical agitator until 2018 when they removed it and joined the herd. Their customers rejected this change and demanded the old machines back. Speed Queen responded by restoring the old-style mechanical platform and regained its rightful place as the market leader. Its 10-year warranty reflects a simple reality: their stuff works and lasts.

Biodiesel is the natural friend to the farmer

Soybean oil is the feedstock of choice for most biodiesel producers, but it is the feedstock of last resort for most renewable diesel (RD), SAF, and co-processed (CPRD) producers. This is because almost all renewable diesel is sold in California or one of the other three LCFS states that apply multiple anti-ag "guardrails" (aka penalties) against crop-based fuels. The traditional biodiesel groups that have broadened their mission to advocate for renewable diesel have pushed to expand California-style LCFS programs in other states. They have abandoned the effort to call out indirect land use change (or rather *imaginary* land use change) for the failed theory that it is. Instead, they have surrendered to it by hiring people who have gotten master's degrees in this fairy tale in the hopes that they can make anti-ag ILUC policy less bad. It isn't working.

California has put a 20% cap on crop-based feedstocks and the other three states are likely to follow. Those four states now make up nearly half of the RVOs in the national market. Currently 11 more states have initiatives to follow California's lead on adopting LCFS programs. The traditional biodiesel trade groups support these new initiatives even though they don't result in a single additional gallon of demand – they only further restrict soy as a feedstock and biodiesel as a fuel from competing fairly in the market.

The vast majority of renewable diesel is produced by a handful of major oil refineries on the Gulf and West coasts who are publicly anti-RFS. Some have said openly in their earnings calls that if they are successful at killing the RFS, they will simply convert their RD refineries back to petroleum by changing the solid catalysts. Biodiesel producers by contrast are mostly small businesses located in farm country, formed from farmer investors and sourcing their feedstock from local farmers while providing good-paying jobs to rural

communities. Biodiesel producers have unwaveringly stood with farmers to strengthen and grow the RFS.

Soybean farmers and biodiesel producers came together to build this industry and now they are the two groups who are being strong-armed out of it.

The policy debate

To understand the dynamics of why the new fuels are cannibalizing biodiesel, you must understand that the annual RVOs in the RFS serve as both a floor and a ceiling – making it a zero-sum game. If the RVOs are exceeded, RINs crater and the incentive dries up. Thus, as the new fuels come online in anti-ag LCFS states they don't replace a gallon of petroleum, they replace a gallon of soy biodiesel in the RVOs. Biodiesel producers are pro-soybean farmer and pro-RFS. RD/SAF/CPRD producers are made up by a handful of major oil companies who oppose the RFS. As we continue to hand over our markets to these oil majors, the political sustainability of the RFS goes with it.

Renewable diesel is not cannibalizing biodiesel because of a competitive advantage or consumer preference. It is doing so because of flawed policy that inadvertently favors RD and is creating market distortions. There are multiple examples of these policy flaws so I will only briefly cover a few here. One of the flaws was the inflated equivalence values (EqV) for RD. SABR alone fought to have EPA correct these inflated values and in the final rule EPA did that by lowering the default EqV from 1.7 to 1.5. The EPA used language lifted almost directly from SABR's comments. The correction will go into effect Jan. 1, 2027. Until then, RD will continue to improperly receive 40 to 60 cents per gallon more in RIN value than biodiesel.

Another flaw involves byproducts. Although biodiesel's byproduct glycerin displaces millions of tons of petroleum in hundreds of consumer products, glycerin does not generate RINs because it is not a transportation fuel. Renewable diesel, on the other hand, can generate D5 RINs for its naphtha coproduct, as well as 45Z and Low Carbon Fuel Standard (LCFS) credits associated with that naphtha.

One of the largest remaining market-distorting policy flaws is the fact that the 45Z credit structure dramatically penalizes biodiesel producers compared to renewable diesel producers. Biodiesel producers are nearly all LLCs, so they cannot claim an income tax credit. They must sell the credits at approximately 85 cents on the dollar. To do that, they must take out loans to cash flow the credits for the year, paying millions of dollars for legal reviews, independent verifiers and insurance on the credits. RD producers don't have to do any of that. They simply transfer their credits to their refinery divisions who claim the full credit value against their income tax liability with none of the additional compliance costs.

A policy proposal

This last distortion would be virtually eliminated if the 45Z credit were made into a refundable income tax credit in the way that the 40A biodiesel blenders tax credit was a refundable excise tax credit. A “refundable” credit is one that can be claimed even if the claimant does not have a tax liability to claim it against. This change would not have an additional cost to the federal government - known as a “score” by the Joint Committee on Tax (JCT). This is because under the current structure, the buyers of the 45Z credits are claiming the full value of the credits anyway. Making the credits refundable would allow biodiesel producers to claim the full value of the credits. It would streamline the process, dramatically reduce unnecessary compliance costs, and address the disadvantage that is placed on biodiesel producers compared to RD producers.

A fighting chance

SABR predicted the policy-driven cannibalization of soy biodiesel by non-soy renewable diesel from LCFS states and tried to persuade other national biofuel groups to address these policy flaws. The groups refused to acknowledge that there was a problem, let alone agree to a solution. Therefore, it is up to SABR to pick up the voice of biodiesel stakeholders and work to advocate sound policy that puts biodiesel on a more level playing field.

Biodiesel is the Speed Queen of advanced biofuels. It needs to reclaim its rightful place as the market leader but needs a fighting chance to compete. And when it comes to fighting, biodiesel folks have always lived by Mark Twain’s axiom: *“It’s not the size of the dog in the fight, it’s the size of fight in the dog.”*