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Hemp Biodiesel: Myths & Facts

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What are some myths and facts when it comes to hemp biodiesel? Proponents say it's the answer to weaning the West off Saudi Arabia's oil. Critics say it's a pie-in-the-sky idea that doesn't conform to economic realities.

So what are the myths and facts regarding hemp biodiesel?

The inventor of the diesel engine, Rudolph Diesel, used peanut oil in his original design. He intended to liberate small business owners from their energy concerns, thereby decreasing the power and influence of big oil.

He said in 1911, "The use of plant oil as fuel may seem insignificant today. But such products can, in time, become just as important as kerosene and these coal-tar-products of today."

Instead, Diesel died under mysterious circumstances. Today, despite having the capital and technology to transition to cleaner sources, the average Westerner is still at the mercy of large energy conglomerates.

But as hemp and cannabis become more popular, people are looking at hemp biodiesel. The science is clear: it works.

But the question is: how well?

We can break down the myths and facts surrounding hemp biodiesel into two points.

- The land required to grow hemp to replace standard diesel sources
- The cost compared to other diesel sources

Regarding the first point, this is where the promise of hemp biodiesel is more myth than fact. However, critics make a more significant point of this than they should.

Hemp Biodiesel: Do We Have Enough Land?

When it comes to hemp biodiesel and its myths and facts, one critique that constantly comes up is whether we have enough land.

In a nutshell, critics argue we don't have enough land to grow hemp for diesel purposes. Not at our current rate of diesel use and not according to how we use the land to grow hemp.

According to Alberta's Ministry of Agriculture, we can get about 226 pounds of hemp oil from one acre.

In 2017, the United States used 11.9 billion pounds of biodiesel oil. That means 52 million acres of land (or about a quarter of all US farmland) would have to be devoted to producing hemp biodiesel.

Myth busted! Or is it? These numbers are based on the Katani strain of hemp. Consider earlier strains of wheat.

Like hemp and cannabis, wheat comes in various strains: Golden Drop, Red Chaff, Club, White Russia, Ladoga, etc.

Unfortunately, none of these strains grow well in Canada's cold climate. A strain called "Red Fife" was introduced into Canada in 1842, increasing land development for wheat farming.

But still, Red Fife wasn't perfect. It wasn't until Dr. William Saunders crossbred Hard Red Calcutta and Red Fife to make "Marquis."

Marquis wheat was superior in every sense of the word. It was hardy enough to survive in the Canadian prairies and matured earlier with larger yields.

Without Marquis, Canada's cold climate would never have become a bread basket for the world.

A Real-World Example

This is why claims about hemp's inability to overtake standard biodiesel fuels are a myth. Critics look at current strains, like Katani, and draw conclusions from there.

During the World Wars, Canada exported thousands of pounds of wheat to the UK, France, Belgium, and other allied nations.

Can you imagine crunching those numbers using an older wheat strain, like Red Fife? You'd conclude that Canadians would be unable to support the war effort without starving themselves in the process.

Yet, that isn't what happened.

If we took seriously the idea of using hemp to make biodiesel, the market for newer, high-yielding cold-resistant strains would incentive every agricultural scientist and hobbyist out there.

This "myth" reveals that hemp critics aren't thinking dynamically. In their minds, hemp is a static crop that cannot yield more than its current output.

Other things being equal, this myth becomes fact. Using the Katani hemp strain, we cannot produce enough hemp to replace fossil fuels.

But other things are not equal. And the idea that we'd cease producing newer strains of hemp is absurdly ignorant.

Hemp Biodiesel: How Much Does it Cost?

If hemp biodiesel critics don't understand how innovation in the market works, if debunked Malthusian traps bind their thinking, then what hope is there for an economic understanding?

Hemp biodiesel is more myth than fact, says the critic because it costs too much vis-a-vis diesel fuel alternatives.

And technically, this is true.

For hemp biodiesel to say competitive with standard diesel at current prices, it must stay under at least $5 a gallon.

Using the Katani hemp strain output, farmers get a per-acre yield of 226 pounds of oil. That yield plus current diesel prices indicates that farmers would be losing money.

But the fact that other crops, such as soybeans and corn, are subsidized conflates this issue.

For hemp biodiesel to be competitive, we would need new higher-yielding strains and a level playing

field with other commodities used to produce diesel.

But overall, when comparing hemp biodiesel to other fuels and checking out myths and facts, we should keep sight of what the economy is.

The market is the nexus of voluntary exchange. If the minds of the masses no longer consider petroleum diesel valuable, its price drops regardless of its relative scarcity.

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Another critique regarding hemp biodiesel's myths and facts is the pressure on the food supply. We can only get 226 pounds of oil per acre. Therefore, the United States will use a significant portion of their farmland to produce diesel instead of food.

But again, this fails to understand how market pressures incentive entrepreneurs to find workarounds.

For example, from the late 18th century to its peak in the 1820s, the whaling industry was dominant because we used whale oil for illumination and machine lubrication.

People hunted baleen whales to near extinction.

That is, until the discovery of mineral oils in the 1860s. Combined with the invention of kerosene in 1846 by Canadian geologist Abraham Pineo Gesner, capitalism prevented the extinction of whales for oil.

Today, we see proposals for vertical farms and other hydroponic systems that aim to produce food with less land and resources.

Never underestimate the potential of human creativity.

While hemp biodiesel may be unattainable given current hemp strains and counterproductive economic policies, the fact is, hemp biodiesel is far from a busted myth.

There may be better alternatives, and people may prefer electric engines in the future. But given everything we know, it is absolutely possible to have hemp biodiesel replace standard diesel without causing mass starvation.