



LSP *Myth Buster* #60

An ongoing Land Stewardship Project series on ag myths and ways of deflating them.

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→ **Myth: CAFO Digesters are a Good Public Investment**

→ **Fact:**

It's an enticing concept to take a waste product and transform it into something useful. For example, an on-farm digester breaks down manure and generates a biogas. That biogas is made up mostly of methane, which is the primary component of natural gas, a valuable part of our energy infrastructure.

Any method that can keep a nasty greenhouse gas like methane out of the atmosphere is a big deal. Methane is more than 25 times as potent as carbon dioxide at trapping heat in the atmosphere, according to the Environmental Protection Agency. Methane concentrations in the atmosphere have more than doubled the past 200 years, and that's largely as a result of human-related activities.

Agriculture makes up 9.6% of total U.S. greenhouse gas emissions and the liquid manure systems utilized by concentrated animal feeding operations (CAFOs) are a big reason food production is such a major contributor to climate change. Overall, emissions from manure jumped over 60% between 1990 and 2019, according to the Environmental Protection Agency. Methane emissions alone increased almost 68% during this period. The majority of the increased methane production was from swine and dairy cattle manure.

It's no accident that methane production by agriculture coincides with the boom in large CAFOs. In these industrialized systems, liquid manure is managed by storing it in large lagoon systems in liquid form, which creates an anaerobic (no oxygen) situation, creating the perfect broth for cooking up methane emissions. In such a system, manure is no longer a source of fertility, it's a waste product to be gotten rid of.

Methane digesters offer a way to make that waste into something useful, in the process "greening up" the factory farm industry. Currently, there are 273 manure digesters in operation on U.S. livestock farms, according to the EPA's AgSTAR program, which promotes biogas production from livestock waste. Of those, 216 are strictly dairy operations and 37 focus on swine.

Wisconsin has 39 manure digesters, Minnesota has six, and Iowa has five. What's striking when one scans the AgSTAR database is how large the operations are. Most are raising thousands of head of livestock in one location. One estimate is that a dairy would need 2,500 cows to support a standalone digester — the average dairy farm in the U.S. has around 240 cows. Riverview Dairy, which is based out of Morris, Minn., and has operations in several states, is operating digesters on two operations in Minnesota — one has 7,665 cows, the other 6,300.

There's a reason that digesters tend to be on mega-farms — they cost mega-bucks. The price tag can typically be around \$1.2 million, according to AgSTAR. Through grants, cost-share funding, low-interest loans, and tax breaks, agencies like the Minnesota Department of Agriculture, the EPA, and the USDA are supporting the construction of methane digesters on CAFOs.

The government's excitement around digesters is beginning to smell a lot like yet another subsidy for factory farm livestock production. *Civil Eats* recently documented how an analysis in California showed government grants typically covered 40% of the costs of building digesters. Ninety-three percent of the projected revenue from the manure digester operations studied by University of California-Davis came from selling government-created environmental credits.

In an open market situation, a digester wouldn't even come close to making sense economically once a farmer burns through government funding to set one up. But a relatively recent development has altered the math. Traditionally, digesters were used to produce energy that was used right on the farm. But promoters of this technology are particularly excited about the potential to pipe the gas off the farm to other states and regions and provide income via offset carbon markets. Smithfield Foods, the largest pork producer in the country, is getting into biogas in a big way, and

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has partnered with Dominion Energy to sell natural gas into California's Low Carbon Fuel Standard market. Amp Americas is working with Riverview at three of its dairies to produce biogas that can also tap into the California market. In 2020, the Minnesota Public Utilities Commission approved CenterPoint Energy's proposal to create an infrastructure for supplying biogas generated from manure, among other waste products.

Propping up a Dysfunctional System

It remains to be seen where the market for manure-generated biogas goes. But one thing remains clear: subsidizing the construction of methane digesters — and providing a bit of taxpayer funded greenwashing in the bargain — for factory farms is bad news not just for our public coffers. It also helps prop up a system that has proven to be a major burden on the public in the form of water and air pollution. Those impacts also decimate rural Main Streets that owe their economic survival to the families that run small and medium-sized farms. Subsidizing mega-sized digesters is just one more way to help the Riverviews of the world crush their smaller neighbors.

And this is not the case of a methane digester on a CAFO providing a net gain in the battle to reduce greenhouse gas emissions. Much of the methane

produced by a 7,000-cow dairy would not be there in the first place if it wasn't for the fact that it relied on a massive liquid manure system. A problem was created by this system and now the public is being asked to pay for solving it on massive operations that only make this, and numerous other environmental and economic problems, worse.

That's particularly hard to swallow when one realizes there are better ways to raise livestock. Buried in EPA's most recent "Inventory of U.S. Greenhouse Gas Emissions and Sinks" report is a line describing how when manure is "handled as a solid" and deposited on pasture, it tends to decompose aerobically, producing little or no methane. In a nutshell, the report is describing why livestock production systems that rely on rotational grazing of cattle or straw bedding for hogs are a climate-smart way to raise animals.

Much of the money that's been going into building manure digesters comes out of the USDA's Environmental Quality Incentives Program (EQIP). There have been calls by the Land Stewardship Project and its allies to bar CAFOs from using EQIP funds. That would free up more resources for kick-starting the kind of regenerative livestock production systems that don't treat manure as a waste product, but as a source of biologically-rich fertility.

More Information

- EPA Inventory of U.S. Greenhouse Gas Emissions and Sinks (1990-2019), <https://bit.ly/3E7zYII>
- *Civil Eats*: "Are Biogas Subsidies Benefiting the Largest Animal Farms?" <https://bit.ly/3ne6Y5f>
- EPA AgSTAR Livestock Anaerobic Digester Database, <https://bit.ly/3m2NTU8>

More Myth Busters

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