

Mega-Dairies and Oregon's Methane Emergency

With every day that the status quo continues, the chance of keeping global temperature rise below the 1.5-degree Celsius tipping point slips further and further away.¹ Much focus remains on cutting carbon dioxide (CO₂) emissions, the largest source of greenhouse gas emissions and warming.² But reducing its more insidious counterpart, methane, is even more essential in stabilizing global climate and reducing short-term warming. Banning the largest source of methane emissions — industrial mega-dairy expansion — is the quickest and only way to secure Oregon's future.

Methane's Importance

Since the Industrial Revolution, greenhouse gas emissions have skyrocketed, filling the air with an overabundance of gases and amplifying the Earth's natural warming effect.³ Methane is responsible for a third of total warming since then,⁴ with a warming effect 86 times stronger than CO₂ on a 20-year timescale.⁵ A short-term pollutant, methane stays in the atmosphere for only around 12 years.⁶ Despite this shorter lifespan, it traps significantly more atmospheric heat than CO₂ and contributes to the formation of other greenhouse gases, giving it a higher global warming potential than CO₂.⁷ This means that reducing the rate of emissions is essential to stabilizing long-term temperature rises,⁸ while providing more immediate climate-cooling effects.⁹

Factory Farms

In Oregon, agriculture is the leading source of methane emissions.¹⁰ For the past three decades, emissions across the state's agricultural sector have remained consistent.¹¹ A major source of these emissions is Oregon's mega-dairies, which house over 98,000 cows.¹² Food & Water Watch (FWW) estimates that the state's mega-dairies^a produced over 31,900 metric tons of methane in 2022.¹³ This is equivalent to nearly 653,300 cars driven for a year, or 7 billion miles driven.¹⁴

Most of this methane production comes from manure management emissions. FWW estimates that Oregon's mega-dairy manure management generated up to 17,300 metric tons of methane in 2022.¹⁵ In comparison, manure deposited in fields by grazing cattle releases little to no methane. The rapid industrialization of U.S. agriculture systems and the collapse of family-scale farms are to blame for a more than doubling of U.S. methane emissions from dairy manure over the past thirty years, while total dairy cows remained about the same.¹⁶ Oregon's mega-dairy populations rose 60 percent over the last two decades.¹⁷

^a In this analysis, mega-dairies are defined as those with 500+ head.

The remaining cattle emissions come from enteric fermentation, a process within the digestive system of ruminants.¹⁸ FWW estimates that enteric fermentation from cows on Oregon's mega-dairies in 2022 produced over 14,500 metric tons of methane,¹⁹ equivalent to 140.8 million gallons of gasoline burned.²⁰ The largest mega-dairy in operation in Oregon is Threemile Canyon Farms (TMCF). Located in Boardman, TMCF houses more than 55,000 dairy cows just for milking — and over 14,000 additional animals that serve as “fattening cattle” on feedlots.²¹ As mega-dairies like TMCF open, smaller, family-scale dairies disappear across the state, unable to compete with these factory operations.²² Over the last two decades, Oregon has lost 57 percent of its family-scale farms (those under 500 head).²³

Rather than scaling back these operations, the state has leaned into factory farm biogas and digesters, a false solution peddled by Big Ag and Big Oil. “Biogas” or “renewable natural gas (RNG)” refers to the mixture of gases that are produced after organic materials like factory farm manure are broken down in a process called anaerobic digestion.²⁴ Waste goes into an oxygen-free space called a digester, and even more waste and gas (mostly methane and CO₂) come out.²⁵ Once upgraded, this gas is often interchangeable with fossil or fracked natural gas, used primarily for vehicle fuel.²⁶

While sold by industry as a transformative opportunity,²⁷ digesters cannot tackle enteric fermentation emissions.²⁸ They leak methane at higher rates than oil and gas supply chains,²⁹ and produce the same pollutants as fossil fuels when burned as fuel.³⁰ Nonetheless, facilities in Oregon can reap profits from multiple subsidy and tax credit programs both in Oregon and in California. For example, TMCF and its digester project received nearly \$7.9 million in tax credits from Oregon's previous Bovine Manure Tax Credit program,³¹ another \$10 million in tax-exempt financing from Oregon Private Activity Bonds, and potentially millions more from the California Low Carbon Fuel Standard program.³² Oregon should require mega-dairies to reduce pollution, not incentivize them to expand despite known harms to the environment and communities.

Factory farms are often located in communities of color and low-income communities — making them an issue of environmental racism and justice.³³ Morrow County in eastern Oregon houses nearly 70 percent of all Oregon's cows living on mega-dairies.³⁴ The county has over twice the proportion of Hispanic/Latinx residents as the state as a whole — 38 percent compared to 13 percent, respectively. In the city of Boardman, home to TMCF, more than two-thirds of the residents are Latinx.³⁵

Urgent Need to Reduce Methane

Because of structural racism and a lack of government regulation, surrounding communities are burdened with contaminated air caused by pollution from factory farm operations.³⁶ Methane emissions help form ground-level ozone, an unhealthy pollutant that poses respiratory and circulatory mortality risks.³⁷ Even just a few hours of exposure increase a person's risk of worsening illness, hospital admission, or death.³⁸

To protect Oregonians and their futures, Food & Water Watch recommends:

- The Oregon legislature and governor must enact an immediate moratorium on new and expanding factory farms.

- Oregon must stop supporting and incentivizing factory farm gas, a dangerous industry scam which will only allow the climate crisis to worsen and methane emissions to continue.
- Oregon regulators must use existing authority to start regulating factory farm methane emissions and other air pollution which is currently completely unregulated.

Endnotes

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