

Memo in response to the proposed permit: PN22.0009785

Prepared by Ayana Curran-Howes

To address environmental pollution and ensure Vermont's dairy sector is economically, environmentally, and socially sustainable¹ (henceforth referred to holistically sustainable) into the future, policy should stop imposing costly and stringent regulations and help farmers transition from the industrial confined animal feeding operations (CAFOs), back into small-scale silvopasture dairy systems. Senator Leahy has been pushing for farms to leave the international dairy market in which Vermonters cannot feasibly compete, but climate change demands acting upon this shift today.

ISSUE: "Agriculture is also the most common source of pollution in Vermont's rivers and stream" - Vermont State Auditor (Hoffer, 2021). Since dairy is the most prolific agricultural sector and accounts for "78% of Vermont cropland treated with manure, 73% of cropland treated with fertilizer, and 78% of cropland treated for weed control" (Hoffer, 2021) addressing dairy's allowable discharge into surface waters through permits such as this proposed Medium Concentrated Animal Feeding Operation (CAFO) General Permit is necessary. Though it is slightly more stringent than the previous permit, it promotes 'business as usual' that keeps farmers in an economically precarious position and exacerbates the very water quality and environmental issues that the permit is supposed to address by codifying inadequate standards. Stakeholder comments were largely about the stringent and costly regulations for technological upgrades, fees, and time spent collecting data with each permit update. This is logical given that Vermont's dairy sector has been increasingly hard to make a profit in for farmers. They are being squeezed on all sides. Instead of a stringent permit, policies should allocate significant funds to farmers to transition away from the CAFO model of production back to smaller scale, sustainable operations. This way, effluent produced is manageable and farmers are paid for their environmental efforts instead of being punished for being unable to afford to take care of the environment in the first place.

RECOMMENDATION: Add a provision in the permit that **eliminates permitting cost for farmers who plant trees** as they transition to a silvopasture system, presenting a plan for full silvopasture conversion within five years for full fee removal. Furthermore, a **moratorium** should be put into place prohibiting construction of new CAFOs and expansion of existing ones immediately. *This would be an initial step to completely removing all sizes of CAFOs (i.e., all operations with 200+ cows that discharge into surface waters) from Vermont's iconic pastoral landscape by 2030.*

Only through a moratorium on further CAFO expansion and construction can 1) Vermont's small scale dairy industry become reinvigorated, 2) Vermont's dairy industry as a whole becomes holistically sustainable and 3) Vermont can stay on track with other state and regional policy initiatives. These initiatives include the Vermont Global Warming Solutions Act of 2020 to cut emissions by no less than 26% from 2005 levels within the next three years and the Vermont agriculture and food systems strategic plan of 2021-2030 goals to **"increase carbon sequestration and reduce food system-related greenhouse gas emissions"**. Farmers are vital to achieving all of these urgent climate and food systems goals, but are not able to under the current industrial CAFO model.

EVIDENCE: testimonials from farmers

"There are alternatives to industrial confinements," he said. "And most are better for the farmer, the pig and for getting the value created into local economies." – *John Gilbert, dairy and pork farmer and Iowa Farmers Union board member* (Eller, 2021)

"It's sharecropping -- that's what it is," – *Larry Holder, chicken farmer and president of the N.C. Contract Poultry Growers Association.* (Sill et al., 1995)

Policy should heed the warning in these farmers' words who live in states where the impacts of CAFOs are felt most.

¹ The same definition of sustainability used by the Vermont agriculture and food systems strategic plan of 2021-2030 goals

EVIDENCE for the problem

Why this process of regulation must change. While this permitting process is in place to protect waterways and impose reasonable means for farmers to comply with the protection regulations, it ultimately fails to do either, while also threatening these state climate goals². For instance, this permit allows for discharges of waste into surface water during weather events, which will become more frequent and extreme with climate change, ignoring the potential impact of more effluent reaching waterways as a result of climate change. These climate events are out of farmers' control, putting their ability to practice sustainably at risk. Under this current model of regulation, future permits that account for the increased climate change induced waste discharge into surface waters will only be harder for farmers to comply with. During Hurricane Florence in 2018, 110 lagoons in North Carolina either released hog waste into the environment or were at "imminent risk" of doing so – these type of events and their consequences are likely to increase with climate change (Pierre-Louis, 2018).

Why this industrial model of food production must change. The current CAFO model ensures that farmers have to increase size and cut costs at every corner. This is not sustainable. Consolidation allows agribusinesses to raising prices on consumers while paying farmers less and less (Nylen & Crampton, 2020) and the number of CAFOs are only expanding. For instance, the number of CAFOs in Iowa more than quadrupled from 1990 to 2019 while farming incomes have decreased (Nebeker, 2020). Farmers in the state of Vermont, as with national trends, face volatile market prices for their products and pressure to industrialize and grow, with consolidation forcing small scale farmers out of business. The number of farms with 700+ cows grew 16% in the last decade while the number of farms with less than 700 cows has decreased by ~30% (Claro et al. 2021).

CAFOs can provide cheap milk, eggs, and meat, however this is entirely due to the externalization of environmental and health externalities paid for by the local community in the billions (American Public Health Association, 2019). These processed and animal based products are also foodstuffs that are linked to heart disease, diabetes, and other health risks, which not only costs the state money in the long-term, but is highly resource intensive (Grout et al., 2020; Papier et al., 2021; Srouf & Touvier, 2020). The Intergovernmental Panel on Climate Change and the EAT-Lancet commission on sustainable diets both recommend a

primarily plant-based diet because of the greenhouse gas emissions of animal agriculture (IPCC, 2022; Willett et al., 2019), especially dairy which contributes about 30% of agriculture's total greenhouse gas impact via their manure storage, enteric fermentation, and their needed feed crops of soy and corn that release large amounts of methane, nitrous oxide, and carbon dioxide (Figure 1; Gerber et al., 2013; Grossi et al., 2019). Lastly, CAFO profits go outside the community, contribute less to the economy than locally owned and controlled farms, do not provide many jobs as technology is opted for over human labor and hiring mostly migrants that they can exploit (American Public Health Association, 2019).

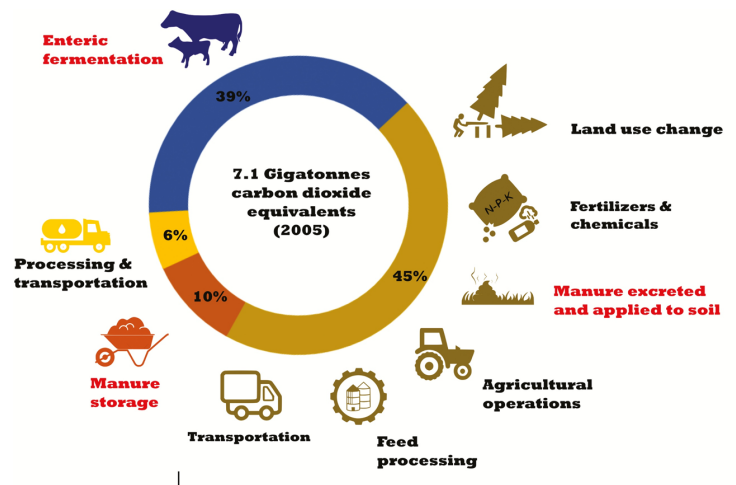


Figure 1. Adapted from Grossi et al. (2019)

² Though Vermont is a small state, no impact is too small when it comes to addressing climate change and these Vermont climate policies were set in accordance with national and global climate strategies set by the US Climate Alliance and the International Panel on Climate Change.

EVIDENCE for this solution

Why incentivized silvopasture. Through state incentives for farmers to transition to silvopasture forms of dairying, policy can both support the protection of the environment and ensure farmers remain economically viable, as well as position Vermont to be incredibly resilient to climate change. Silvopasture supports carbon sequestration that farmers could potentially get ecosystem credits for through integration of cows into forestry systems (Nair, 2012). From these forestry systems farmers can produce timber and other products from, providing them a more diversified and resilient income stream as milk prices fluctuate (Grado et al., 1989). The property tax rates for silvopasture systems are also more favorable than conventional forestry and livestock systems separately (Chizmar et al., 2021). Furthermore, trees mitigate heat stress for cows with more extreme temperatures caused by climate change (Karki & Goodman, 2010; Skonieski et al., 2021).

Why a moratorium. In a national poll 57% of respondents were supportive of greater government oversight of CAFOs, 80% were concerned about air and water pollution, worker safety and health problems caused by CAFOs, and more than half of respondents in Iowa and North Carolina (where CAFOs are most prolific) favor a ban on construction of new CAFOs (Martin, 2019). Consequently, Iowa passed the 2022 CAFO Moratorium Bill to stop the expansion of factory farming which has led to the extreme pollution of a river that more than half a million Iowans drink from (Galt, 2022). Similarly, there has been a recent string of moratoriums for the construction and expansion of CAFOs throughout the U.S. In Illinois the Rural Residents for Responsible Agriculture united farmers, activists, and other rural residents across party lines to block the construction of a CAFO (Ashwood, 2013). The Sustain Rural Wisconsin Network put forth a resolution to block the construction and expansion of new CAFO that has been used by 15 counties/municipalities in Wisconsin to date (Sustain Rural Wisconsin Network, 2022). Similar policies have been put forward by the American Public Health Association (American Public Health Association, 2019), and members of senate (*S.2332 - Farm System Reform Act of 2021*, 2021) to halt expansion of CAFOs given their economic, social, and environmental impacts. Policy should be proactive, avoiding further climactic and economic downturn for agriculture and impose a moratorium on the construction and expansion of confined animal feeding operations (CAFOs) in Vermont immediately. The ultimate goal should be the phasing out of all CAFOs and support for smaller scale farmers that can employ more farmers, producing enough milk for the state, and/or region while allowing farmers to become economically and ecologically resilient.

IMPLEMENTATION: There has been news coverage of the inefficient 'collaboration' between the two agencies imposing regulations as well so the efficacy of such permit measures is dubious regardless of the content of the permit. The loss of funds to the state through the proposed silviculture provision will be made up through the costs mitigated from reduced cleanup costs and climate change costs. These changes will provide a better functioning ecosystem and finally rectify the externalized costs to the environment never accounted for by CAFOs.

FUTURE POLICY RECOMMENDATION TO ENSURE EQUITY: Lastly, expanding the definition of stakeholders to include all those affected by medium sized CAFOs is necessary for fair agricultural policy. Those affected include residents around the CAFOs, small-scale farmers, especially dairy operations, and other groups such as Vermont Healthy Soils Coalition, New England Feeding New England, Vermont Sustainable Jobs Fund, Regeneration Vermont, and others working actively to keep Lake Champlain and other waterways free of pollution. Engaging these groups from the outset is crucial to speeding up the policy process and will ensure equitable and effective policy in Vermont.

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