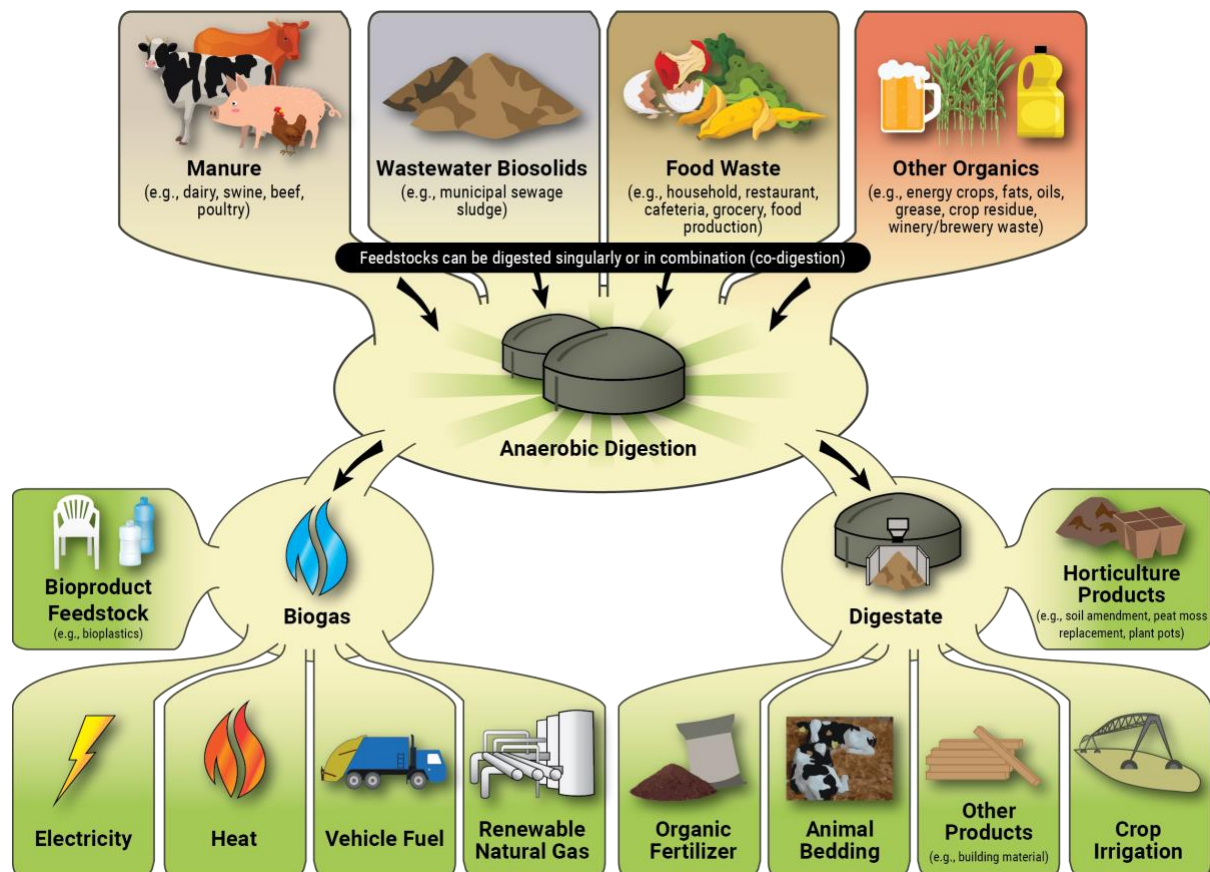


Anaerobic Digesters

An anaerobic digester diverts waste materials like livestock manure, food waste, yard clippings, leaves, fats, oils and greases (inputs/fuel) from going into landfills, and turns them into usable products:

1. Biogas that can be used for heating, electrical generation, or transportation fuel
2. Nutrient rich fertilizer that can naturally grow crops and promote healthy soils

Anaerobic digestion is something that happens in nature: the breakdown of natural materials, caused by biological conditions without oxygen. No additional chemicals are involved and even the closest neighbors typically do not experience odor.



Graphic courtesy of [U.S. Environmental Protection Agency](#)

A community digester is just a “crowd sourced” anaerobic digester, collecting inputs/fuel from sources like manure from nearby farms of all sizes, food waste from local restaurants, schools, or other businesses, or even yard clippings and leaves from adjacent neighborhoods. Community digesters make digestion accessible to businesses and people that otherwise could not afford to build and operate their own.

Benefits of Community Digesters

- Reduce greenhouse gas emissions by capturing methane gas and by replacing fossil fuels used for heating, electricity, and transportation.
- Enhance the circular economy by diverting food waste from landfills and making beneficial, nutrient rich products to help grow our food supply.
- Reduce pathogens like E. coli from food waste, livestock manure and other natural materials, so when they are used to fertilize crops or gardens, it protects human health and water quality.
- Help support businesses and communities of all sizes to meet their sustainability goals by giving them climate-smart outlets for natural waste materials like food waste, yard clippings and leaves, while producing renewable energy.

Digester Mythbuster:

Do digesters make farms bigger to supply more manure?

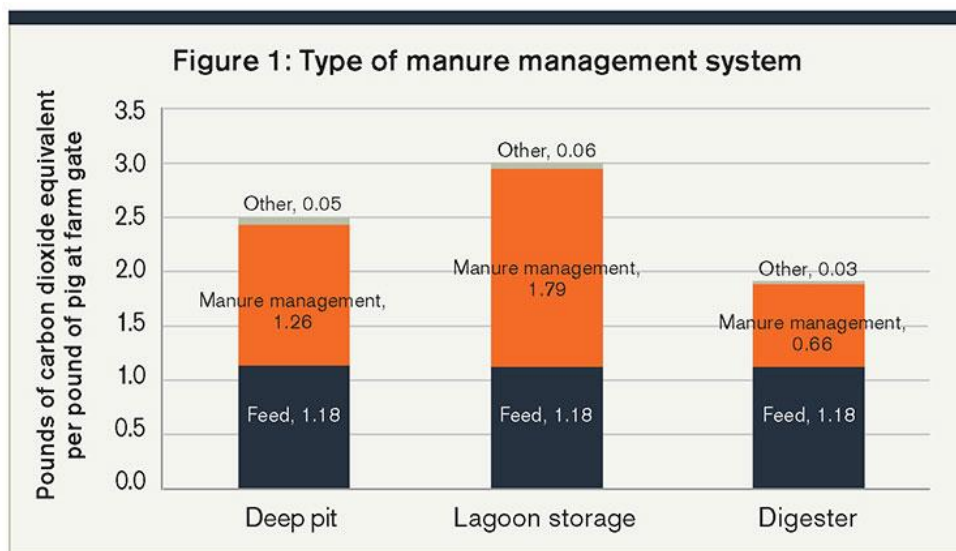
NO, a study at UC-Davis showed no relationship between farm size and digester support or construction

Do digesters smell bad?

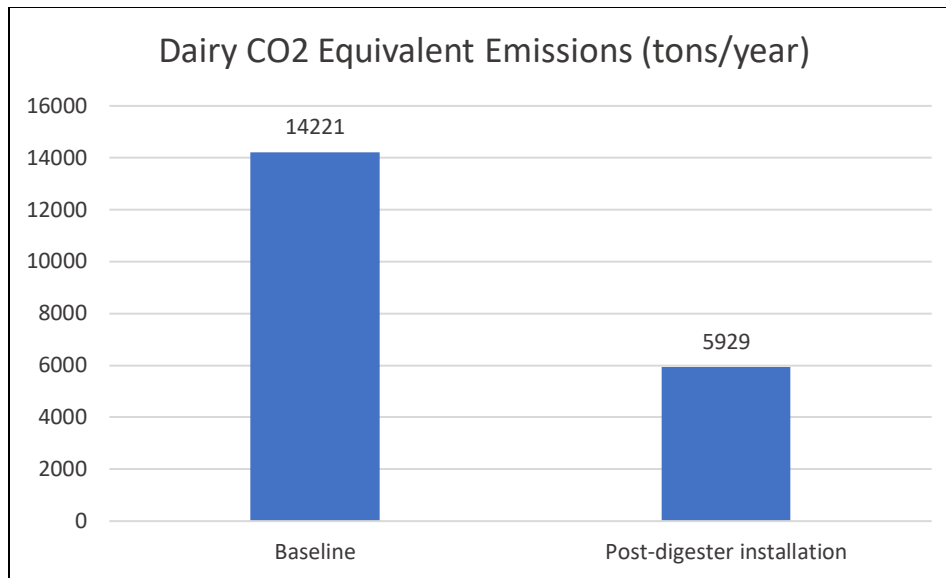
NO, if feedstocks and digestate are managed properly, digesters REDUCE odors by capturing microbial breakdown

Do digesters increase greenhouse gas emissions?

NO, they reduce GHGs by reusing methane and keeping carbon in the soil cycle, reducing fossil fuel need



GHG production per pig at swine farm, courtesy of [Journal of Nutrient Management](#)



GHG emissions from dairy farm manure, adapted from report developed for [U.S. Environmental Protection Agency](#)

Challenges of Building Community Digesters

Green investors are rapidly building community digesters in other states, but Michigan is missing out. Michigan's solid waste laws currently do not support community digesters – they limit the ability of community members to share these costs by restricting the mixing of materials, requiring complicated and overlapping permits and even making cooperators liable for digesters they do not own. When community digesters cannot operate, family farms, small businesses and local communities lose out on their environmental and local economic benefits.

Solutions to Bring More Community Digesters to Michigan

A broad group of partners is working to modernize Michigan law to allow community digesters to be built, while adding important safeguards for their operation. The partners involved know community digesters will be a vital part of Michigan reaching its climate and sustainability goals, empowering communities to create green energy while reducing carbon footprints.

Additional Resources:

[American Biogas Council](#)

[EPA AgSTAR Biogas Recovery in the Agriculture Sector](#)

[Michigan State University Anaerobic Digestion Research and Education Center](#)

[Michigan Department of Environment, Great Lakes, and Energy FAQ for Part 31 Permitting for Anaerobic Digesters](#)

[MFB Policy #44, Renewable and Biomass Products](#)

[MFB Policy #45, State Energy policy](#)