

WHAT'S AT STAKE

Some 6 people in 10 worldwide, or 4.5 billion, lack safely managed sanitation, according to the latest WHO/UNICEF Joint Monitoring Programme (JMP) report, Progress on drinking water, sanitation and hygiene: 2017 update and Sustainable Development Goal baselines. ("Safely managed" sanitation refers to services that include the final disposal of excreta.)

According to the Water Environment Research Foundation, an individual generates at least between 0.5 and 1 lbs. of fecal and food waste daily. Because they enable the propagation of pathogens, poor sanitation and contaminated water put the health of all people—especially young children— at risk for diseases such as diarrhea, cholera, dysentery, hepatitis A, and typhoid. At a minimum, bad odors can negatively impact communities, including preventing economic development as in the case of this small town in Tennessee.

Small communities, but also rural areas and temporary camps for displaced persons are especially vulnerable to such issues due to the **cost and/or logistic challenges of deploying the necessary sanitation and sewage treatment infrastructure**.

U.N. Sustainable Development Goal 6

"To ensure availability and sustainable management of water and sanitation for all."

Target 6.2: By 2030, achieve access to ${\bf adequate}$ and equitable sanitation and hygiene for all (\ldots)

=> adequate (target language normative interpretation): Implies a system which hygienically separates excreta from human contact as well as safe reuse/treatment of excreta in situ, or safe transport and treatment off-site.



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Will you partner with Drylet to launch our first latrine trial?

DRYLET'S UNIQUE APPROACH: ELIMINATING BIOLOGICAL WASTE

Drylet provides a patented solution that effectively eliminates biological waste by converting it into water and gas safely. It uses a proprietary technique for loading Class 1 non-GMO microorganisms onto engineered, chemically inert particles in very high concentrations. The particles contain and shield beneficial microbes, promoting their growth and supporting their effective delivery in the surrounding environment:

- Septic tanks and pit latrines: Reduces accumulation of fecal matter while eliminating odors.
- **Sanitation**: Reduces coliform content in sewage through altering the microbial community.
- Wastewater & sewage: Eliminates biological waste, allowing the contaminated water to be returned safely to the environment or amenable for reuse.
- Water storage: Helps prevent septicity, spoilage and odors.
- Restaurants, canteens, commissaries, etc.:
 Liquefies fats, reduces odor from grease traps and
 waste food.

BENEFITS

Drylet's dry-to-the-touch product is:

- Safe to transport and store: Because the dry product maintains microbes in their dormant state, no cold chain or special storage conditions are required for their preservation. In fact, Drylet's product can withstand a wide range of temperatures and conditions and can simply remain stored in the pails in which it is delivered. When kept dry and away from moisture, it retains all of its power over its 4-year guaranteed shelf life.
- Extremely easy to use: Microbes are activated as soon as the product in added into latrines, septic tanks or wastewater treatment facilities, requiring no prior mixing or culturing. Households can even apply the product to their own sanitation system.
- Economical: Each gram of product delivers over 100 billion colony-forming units (CFU) of microbes, meaning that a very small amount goes a long way.

Purdue University Report ("Drylet M2® H2S/Odor Reduction Study," January 2016) found that using ManureMagic® in simulated swine manure pits led to odor and H2S **reductions** up to 43% and 50% respectively. See **http://www.drylet.com/ products/manuremagic/** for details.

The impact of our solution is clear, as demonstrated in this manure lagoon case study:

Over 60% solids reduction in one year

In May 2016, 125 pounds of ManureMagic® were applied to the test lagoon fed by four 1,000-head hog barns at a major hog production company. Another 50 pounds were also applied to the barns' pull-plug pits over the course of four months. Lagoon sludge levels were measured in June, then in September, at nine identical locations in both the treated and control lagoons. The levels of the lagoon treated with ManureMagic were down 10% within a month, with each point falling between 6 and 12 inches. By the end of September, they had dropped 42% on average, with individual levels dropping 18 to 30 inches (see Figure 1). Measurements taken nine months later, in June 2017, revealed a further 44% drop average, with no product added over that timeframe, bringing the total reduction rate to over 60% in one year. Meanwhile, the control lagoon remained unchanged over the whole period.

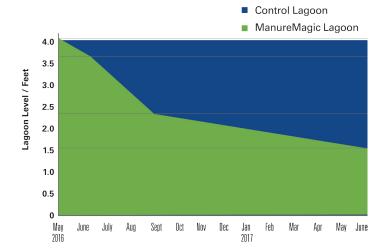


Figure 1. ManureMagic field trial compared two identical lagoons at 7-million gallon capacity at a major hog production company for a 4-month period. The biological process remained active after the end of the trial, with a drastic drop in sludge levels over 9 months after the last dose of product was added—this despite more solids being flushed into the lagoon on a weekly basis.







