



Wisconsin Manure Lagoon Nutrient Improvement for Irrigation

Pit Puck® contains Animal Waste Treat (AWT) microbes and is a high-CFU drop-in microbial tablet designed for livestock manure pits and lagoons operating under mixed aerobic and low-oxygen conditions. The bacterial formulation accelerates digestion of manure solids, reduces sludge buildup, and improves manure handling. Fast-dissolving sinking tablets allow simple application with no mixing or equipment required.

- **Liquefies Manure Solids:** Accelerates breakdown of manure and sludge to reduce crusting and buildup
- **Improves Agitation and Pumping:** Creates a more uniform slurry for easier agitation and pump-out
- **Reduces Odors:** Helps control ammonia, hydrogen sulfide, volatile fatty acids, and mercaptans
- **Enhances Nutrient Uniformity:** Improves nitrogen retention and consistency for land application
- **Reduces Equipment Plugging:** Limits solids accumulation in pumps, lines, and injectors
- **Simple Drop-In Use:** Tablets dissolve quickly and deliver bacteria directly into the manure

Problem: A Wisconsin farm storing manure in a lagoon faced sludge buildup, surface scum, and strong odors that reduced lagoon efficiency and made agitation and pumping difficult. Nutrient testing showed relatively low plant-available nitrogen and potassium, while phosphorus limited field application rates. The farm needed to improve lagoon performance and increase the fertilizer value of its manure.



Before: The lagoon showed clear signs of biological imbalance, including heavy sludge accumulation and a persistent surface scum layer. These conditions increased odors, complicated agitation, and reduced pumping efficiency. Nutrient analysis indicated relatively low plant-available nitrogen and potassium, while phosphorus levels limited how much manure could be applied to fields.

After: Following treatment with Pit Puck microbial tablets, the lagoon became more biologically active with reduced sludge, less surface scum, and noticeably lower odors during storage and agitation. Nutrient analysis showed improved manure fertilizer value, including **64.6 additional lbs of plant-available nitrogen per acre** and **71.6 more lbs of potassium per acre** at a 20,000-gallon application rate. **Phosphorus decreased by 13.4 lbs per acre**, providing greater flexibility within nutrient management limits, while sulfur declined slightly by 5.8 lbs per acre.