

CASE STUDY

Biotifx® ULTRA Treats Dairy Lagoon Wastewater for a Reduction in Odors, Solids and Crust

SUMMARY

Treatment of a five million gallon lagoon using Biotifx® ULTRA was able to significantly reduce odors, floating and settled solids. Prior to treatment odors were very strong in both the lagoon and during land application and high solids made this water very challenging pump during land application. Biotifx® ULTRA helped reduce or even eliminate the odors by eliminating hydrogen sulfide and volatile fatty acids (VFA's) in the wastewater while also digesting manure, which improved its consistency and made it much easier to irrigate.

BACKGROUND

The dairy industry uses lagoons for containment and treatment of manure, urine and wash-down water within the dairy facility. Solids separation is often done before entering the lagoon, but when it is not done there is potential to have significant accumulation of floating (crust) and settled solids in the lagoon (**Figure 1**). Crust on the surface and subsurface can be between 1-3 feet thick.

OBJECTIVE

The treatment objective was to reduce odors, solids, crust and to make the solids easier to pump from the wastewater treatment lagoon for use in land application.

MATERIALS AND METHODS

3.5kg of Biotifx® ULTRA was dosed into a localized area (approximately 1/3 of the 5 million gallon lagoon), after four weeks the lagoon was re-surveyed for improvements.

RESULTS

After four weeks, the crust became liquified and was able to be pumped for field application. The crust before treatment was 1.5 feet thick and after treatment was reduced to 2 inches (**Figure 2**). The odors were reduced to an unnoticeable level, and when the wastewater is used for land application there was virtually no odor present.



Figure 1: Manure lagoon before treatment 1.5ft thick



Figure 2: Manure lagoon after treatment 2 in thick after four weeks