

## SCD Probiotics®

### Case Study Summary – SCD Odor Away™ applied to reduced odor of a dairy manure lagoon in Wisconsin, USA

Wastewater –Odor control (CSS-025-2009)

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<b>Industry:</b>	Wastewater (dairy lagoon)
<b>Application:</b>	SCD Odor Away™ applied to dairy-manure lagoon
<b>Where:</b>	Midwestern United States
<b>When:</b>	June 2009
<b>SCD Product:</b>	SCD Odor Away
<b>Customer:</b>	Dairy Farmer

## Background

Recent trials using SCD Probiotics® Technology for odor reduction in dairy-manure lagoon indicated that SCD Odor Away can be used to successfully manage odor from the waste lagoon. Odor control of manure requires a high degree of management including proper storage and treatment. The trial dairy farm has 450 dairy cows with 1.1 million-gallon waste lagoon capacity. When product was used on the lagoon, it showed a 2.36 folds reduction in Dilution Threshold (D/T).

## Introduction

Odor and gas released from lagoons due to waste treatment affects air quality in neighboring communities. There are several products in the market that promote efficient ways to manage this problem, but not all products are equal. Things to consider during product selection would be the correct product to use, the product's ingredients, how effective it is and if it will provide long-term effect or improvement towards the operation.

The researchers of this trial used SCD Odor Away that is effective in reducing odor in dairy manure lagoon operations. The product is produced using SCD Probiotics Technology that is made through a natural fermentation process and is not chemically synthesized or genetically engineered. Microorganisms in the product work using a natural process to populate and consume odor-causing compounds in almost any environment. The main objective of this trial is to test the efficiency of SCD Odor Away in reducing odor in a dairy manure lagoon through Dilution Threshold (D/T) values. D/T values are also known as "Odor Units":  
Volume of Carbon-Filtered Air / Volume of Odorous Air = D/T

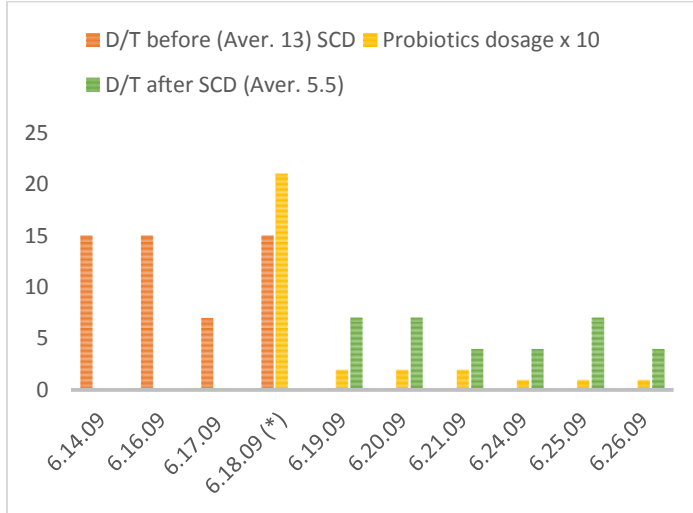


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## Methodology

The dairy farm has 450 dairy cows with 1.1 million-gallon waste lagoon capacity. Data (D/T) was collected four times prior to the initial introduction of SCD Odor Away. Data after treatment was then taken six times. In general, D/T data was taken either from 10am-12pm or 2-4pm each day at the same location each time.

**Figure 1:** D/T ranges of dates from 14<sup>th</sup> June to 26<sup>th</sup> June.



Prior to treatment, data ranged from 7 D/T - 15 D/T (Figure 1). Treatment began on June 18, 2009 and within three days the dilution ratio had dropped. As a result, dosage application was adjusted to maintenance application level (1:5,000), which started on June 22<sup>nd</sup>.

## Results

Average D/T result prior to the treatment was 13 D/T, while post treatment data averaged to 5.5 D/T. This represents approximately 2.36 folds in D/T reduction. It is known that odor strength is inversely proportional to the dilution ratio. A strong odor will have a high D/T value, while a weak odor will have a low D/T value. So in this case, odor instantly reduces through SCD Odor Away application by efficiently reducing D/T values.

## Conclusions

From the results of this experiment, it could be implied that the product SCD Odor Away is very effective in reducing D/T values, characterized by the presence of odor, from manure in dairy lagoons.

