

SCD Probiotics®

Case Study Summary – SCD ScentGuard™ Applied to Reduce Odor of a Dairy Manure Lagoon

Wastewater – Odor control (CSS-025-09)

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Industry: Wastewater (dairy lagoon)
Application: SCD ScentGuard™ applied to dairy-manure lagoon
SCD Product: SCD ScentGuard (formerly sold as SCD Odor Away™)

Highlight

- Odor instantly reduces through SCD ScentGuard application by efficiently reducing 2.3 folds of D/T values.

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 ScentGuard 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 ScentGuard in reducing odor in a dairy manure lagoon through Dilution Threshold (D/T) values. D/T values are also known as "Odor Units":

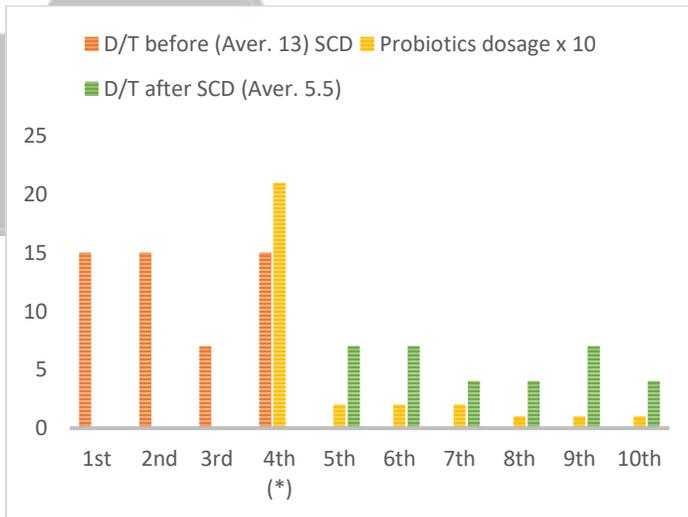
Volume of Carbon-Filtered Air / Volume of Odorous Air = D/T

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 ScentGuard. Data after treatment was then taken six times. In general, D/T data was taken either from 10am-12pm or 2-4pm for 10 days.



Figure I: D/T Ranges for 10 Days.



Prior to treatment, data ranged from 7 D/T - 15 D/T (Figure I). Within three days from first treatment the dilution ratio had dropped. As a result, dosage application was adjusted to maintenance application level (1:5,000).

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 ScentGuard application by efficiently reducing D/T values.

Conclusions

From the results of this experiment, it has been shown that the product SCD ScentGuard is very effective in reducing D/T values, characterized by the presence of odor, from manure in dairy lagoons.

