

Swine Production

BiOWiSH™ Manure and Odor (Swine and Poultry)

BiOWiSH™ Manure and Odor (Swine and Poultry) is a revolutionary product that breaks down organic waste and eliminates odor causing compounds at the source. It has a dual action (gaseous and substrate) and begins working in minutes to reduce Volatile Organic Compounds (VOCs), most notably Ammonia. BiOWiSH™ Manure and Odor (Swine and Poultry) does not mask odor, it rapidly accelerates the achievement of full decomposition by denaturing odor compounds to inert and smell-free end products.



Key Benefits

- Accelerates the decomposition of organic waste (sludge)
- Reduces the need for pump outs
- Removes rather than masks odors
- Reduces Biological Oxygen Demand (BOD) and Total Suspended Solids (TSS)
- Reduces fly numbers by removing organic attractants
- Improves nutrient availability if effluent is used to irrigate pasture

About BiOWiSH™

The result of over 18 years of research and development, BiOWiSH™ technology provides a solution to some of the most complex problems of our time, from food production to environmental pollution.

BiOWiSH™ is a powerful blend of biocatalysts that breaks down complex organic molecules to help eliminate waste, reduce odors, improve soil fertility and enhance water quality, among other uses.

100% natural and non-toxic, BiOWiSH™ is safe for everyday use in a wide range of consumer and industrial products. It has been proven to solve problems in environmental management (including wastewater, solid waste, soil and water remediation and industrial emissions), as well as agriculture.

BiOWiSH™ products are used extensively and available in Asia, Australia, Europe, North America and Latin America.

Site Specific Data Collection

Collection of the following site-specific information will assist in developing the most appropriate application program for use of BiOWiSH™ in a swine operation.

Lagoon:

- Type of facility, wastewater treatment and characteristics of effluent (composition)
- Volume of the lagoon OR lagoon length, width, depth & side slope calculation
- Design: Liner, aeration, mixing apparatus, flow through to other lagoons etc
- Daily inflow: Estimated daily inflow to the lagoon from the facility

In-Barn:

- Major issues of concern (e.g. Odor, Ammonia, cleaning)
- Size of sheds
- Number of swine per pen
- Number of pens per shed
- Effluent management system – Flush, deep pit or shallow pit
- Frequency of flushing or pumping out of pits
- Number and volume of sumps

Applications and Dosage

Swine Effluent Lagoons

Application Rate

Contact BiOWiSH™ technical support for a site specific protocol at techsupport@biowishtechnologies.com

Pre-activation

Follow these basic directions for the proper pre-activation of each dose of BiOWiSH™ Manure and Odor (Swine and Poultry).

- Mix the prescribed amount of BiOWiSH™ in water.
- Leave the container uncovered and exposed to ambient air—or use a mechanical aerator.
- Keep the container in a warm place above 15°C.
- Let the mix activate for a minimum of 12 hours.

Note:

- *The BiOWiSH™ carrier material may clog fine spray nozzles. This can be avoided by decanting the activated solution, using a filter bag of appropriate micron or using a larger nozzle.*
- *To reduce the risk of accidental pre-activation of the product always re-seal bags and avoid exposure to moisture.*

Application Method

Shock Doses

The use of BiOWiSH™ Manure and Odor Treatment (Swine and Poultry) in a swine lagoon should begin with a series of (weekly) relatively high “shock” doses designed to quickly stimulate a large amount of enzymatic activity. It is recommended that shock doses be applied weekly for the first 4 weeks, with the dose incrementally stepped down.

After 4 consecutive weekly shock doses it is necessary to continue to apply a monthly or periodic surface dose until organic solids are effectively cleared from the lagoon. To optimize the effectiveness of BiOWiSH™ Manure and Odor Treatment (Swine and Poultry), each dose should be allowed to “activate” as outlined above.

“Shock” doses are applied directly to the lagoon surface and should be distributed as widely as possible. For small lagoons a submersible pump or multipurpose tank with hand held hose will suffice, while larger lagoons will require the use of a larger storage with attached pump and spray device.

As each lagoon will differ in size, a site specific application protocol should be used to determine the optimal dosing regimen. Application methods are outlined below.

Week 1

- Mix the required amount of BiOWiSH™ in water.
- Allow 12 hours (overnight) for activation and spray onto surface of lagoon.

Week 2, 3 & 4

- Mix the required amount of BiOWiSH™ in water.
- Allow 12 hours (overnight) for activation and spray onto surface of lagoon.

Regular Surface Dose (every month or as needed)

- Mix the required amount of BiOWiSH™ in water.
- Allow 12 hours (overnight) for activation and spray onto surface of lagoon.

Treatment of Inflow

To ensure optimal effectiveness of BiOWiSH™ Manure and Odor Treatment (Swine and Poultry) it is recommended to dose the wastewater inflow daily from the start of the treatment. The daily dose should be continued indefinitely to continually treat wastewater as it enters the lagoon. After the shock doses are discontinued, the daily dose will serve to constantly replenish BiOWiSH™ in the lagoon. Application methods are outlined below.

Mix the required amount of BiOWiSH™ in water.

The daily dose should be gradually applied directly to the inflow pipe, to a pump station, holding tank or at the site where the effluent enters the lagoon. A simple gravity fed drum, pod or tank system with outlet valve and hose is ideal for this purpose.

Swine Pen Application

Application Rate

- 1 kg per 1,000 m²

Pre-activation

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- Leave the container uncovered and exposed to ambient air—or use a mechanical aerator.
- Keep the container in a warm place above 15°C.
- Let the mix activate for a minimum of 12 hours.

Note:

- *The BiOWiSH™ carrier material may clog fine spray nozzles. This can be avoided by decanting the activated solution, using a filter bag of appropriate micron or using a larger nozzle.*
- *To reduce the risk of accidental pre-activation of the product always re-seal bags and avoid exposure to moisture.*

Application Method

- Dilute 1 kg into a minimum of 1,000 L of water to achieve optimal dispersion of BiOWiSH™ throughout the barn.
- Activate as above.
- Spray onto pen floor as required for odor reduction and ease of cleaning.

Swine Deep Pit

Application Rate

Contact BiOWiSH™ technical support for a site specific protocol at techsupport@biowishtechnologies.com

Pre-activation

Follow these basic directions for the proper pre-activation of each dose of BiOWiSH™ Manure and Odor (Swine and Poultry).

- Mix the prescribed amount of BiOWiSH™ in water.
- Leave the container uncovered and exposed to ambient air—or use a mechanical aerator.
- Keep the container in a warm place above 15°C.
- Let the mix activate for a minimum of 12 hours.

Note:

- *The BiOWiSH™ carrier material may clog fine spray nozzles. This can be avoided by decanting the activated solution, using a filter bag of appropriate micron or using a larger nozzle.*
- *To reduce the risk of accidental pre-activation of the product always re-seal bags and avoid exposure to moisture.*

Application Method

- WEEKLY: Mix the required amount of BiOWiSH™ in water.
- Mix well in a drum, pod or tank system and allow to stand for a minimum of 12 hours (overnight).
- Following activation, the solution should be applied directly to the pit. It is recommended that you distribute the dose as widely as possible throughout the pit. The use of a pump and spray device would be ideal; alternatively, manually washing the dose into several areas throughout the pit will be effective.

How will I know that BiOWiSH™ is working?

The collection of data is critical to tracking the progress of BiOWiSH™ in meeting key objectives. We recommend that before implementing a program of dosing, first establish a thorough baseline to measure against. You should consider tracking the following parameters dependant on the application:

Lagoon/Pit:

- Total Suspended Solids (TSS)
- Biological Oxygen Demand (BOD)
- Total Kjeldahl Nitrogen (TKN)

In-barn:

- Anecdotal odor measurement
- Ammonia
- Volatile Organic Compounds (VOCs)

Contact Us

For further advice and assistance please contact:

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Biological help for the human race



www.biowishtech.com

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