

Piggeries Ponds

Biological Treatment



PREAMBLE:

Disposing of hog's waste worldwide as a sustainable and economic solution has not been available until now.

Many systems utilizing aerobic and anaerobic lagoons been mostly used. Algae conversion, reverse osmosis, digesters and many other systems have achieved various levels of success or failure.

Simplicity, sustainability and reverting back to nature proves that a long-term economic solution does exist.



PIGGERIES INTERNAL PRE-TREATMENT:

When spraying water for the purpose of cleaning piggeries, it is advisable to use water mixed with **Ergofito Ammonfree 10-10-5** at a dilution of 2%.

The above will abate ammonia (NH_3) as well as eliminating pathogens. The benefits of keeping ammonia (NH_3) below 5 ppm are well known in the industry. Improves the quality of the pig's life, growth and quality of the meat. In addition, it immediately provides manure decomposition facilitating the breakdown in the pond or the closed waste water reservoir (as practiced in colder countries).

When spraying water with 2% **Ergofito Ammonfree 10-10-5** ensure to spray walls and rafters to fully abate the ammonia (NH_3).

It also important to spray below the slits on the floor and reach all places where excrement has splashing or accumulated.

TRANSFER POND AND SOLIDS SEPARATOR:

There are many designs of transfer ponds, solids separators and holding tanks. For the simplicity of explanation, we will use the following:

1: Transfer Pond, which receives all effluent from the piggery. Normally there is an agitator in the transfer pond.

Most transfers ponds are around 20 cubic meters.

2: Solid separators, that can be any design, form or shape



3: Main Pond, this can be a closed concrete or an open pond, lined or not etc. The main pond can also be a series of smaller ponds as in lagoons.

ERGOFITO BIO PRODUCTS:

Ergofito Ammonfree 10-10-5 is the product required in dairy farms waste water ponds to assure natural remediation.

The product is totally safe for animal and human utilization.

Please refer to MSDS and our website www.ergofito.co.za.

REMEDIATION PROTOCOL:

FIRST APPLICATION, TRANSFER POND:

- 1: Calculate the pond's volume in cubic meters (1000 liters).
- 2: The applied **Ergofito Ammonfree 10-10-5** dosage per cubic meter per day is 7 grams.
- 3: Multiply the pond's volume by 7 grams **Ergofito Ammonfree 10-10-5**.

Example:

If the pond is 20 m³ then multiply 20 X 0,07 = 0,140 Kg.

Therefore, 140grams of **Ergofito Ammonfree 10-10-5** is required to apply to the transfer pond each time the transfer pond is full.

Mix 140grams of **Ergofito Ammonfree 10-10-5** with 10litres of water. Mix well, then let it stand for a few hours to activate.

Spray the above mix into the transfer pond.



Each time the transfer pond is full, apply the above, you can mix sufficient product with water in advance for a few days at the time, for not more than 3 to 5 days. As the premixed product will spoil after 5 days.

If the transfer pond is equipped with an agitator, please stir for 30 minutes prior pumping its contents to the separator.

Once the contents of the transfer ponds have gone through the separator, the solids will have no smell and are pathogens free.

SECOND APPLICATION, TO THE POND OR TANK:

The waste water pond or tank could also be a series of ponds or tanks. In this case treat each pond or tank in parallel as you would a single tank.

The following application is only performed once or twice depending on the condition of the dam, once **Ergofito Ammonfree 10-10-5** is applied upstream, meaning sprayed in the sties and transfer ponds, it will not be necessary to treat the pond or tank again as it will have received the product upstream.



Crust on Surface Waste Water Pond Remediation Protocol:

If a crust has formed on the surface of the waste water pond, then apply the following:

- 1: Calculate the pond's volume in cubic meters (1000 liters).
- 2: The dosage per day of **Ergofito Ammonfree 10-10-5** is 10 grams per cubic meter.
- 3: Multiply the pond's volume per 10 grams **Ergofito Ammonfree 10-10-5**.

Example:

If the pond is 2000 m³ then $2000 \times 0,01 \text{ Kg} = 20 \text{ Kg}$ of **Ergofito Ammonfree 10-10-5** is required to apply to the pond,

- 1: Mix 20 Kg of **Ergofito Ammonfree 10-10-5** with 1000 liters of water. Mix well, then let it stand for a few hours to activate.
- 2: With a pump, spray with normal water or water from the pond the full crust until well wet.
- 3: Once the crust is very wet, spray at least 300 liters of the **Ergofito mix** and spray the full area of the crust.
- 4: Take 200 liters of the **Ergofito mix** and spray all around the edges of the pond.
- 5: Take the last 500 liters of the above Ergofito mix and pour it at the pond's inlet.



6: The same application as per above can be applied to a close waste water tank.

No Surface Crust Waste Water Pond Remediation Protocol:

If the pond has no crust, you can use the above protocol. Instead of performing step 5 & 6, apply the above to the water surface.

CONCLUSION:

Controlling pathogens in waste water is vital for animal health.

Ergofito natural biological treatment is efficient and safe for all humans and animals.

Ergofito is sustainable and excels in the quality of the waste water as well as eliminating odour.