

**E R G O F I T O   I N   A C T I O N**

Give Nature What Nature Wants

## Secondary Sewage Sludge - Land Farming



ERGOFITO

[www.ergofito.co.za](http://www.ergofito.co.za)

Tel: + 27 21 447 7114 / Email: [ergofito@telkomsa.net](mailto:ergofito@telkomsa.net)

## **Secondary Sludge:**

Large amounts of secondary sludge are produced by waste treatment plants on a yearly basis in every city in the world. Four options now exist for disposal or use of this sludge:

- Landfill placement
- Incineration
- Gasification
- Recycling through application to farm or forest

Although each of these options has its place, recycling efforts have increased in recent years due to growing recognition that our society cannot afford to throw away the valuable resources in sewage sludge.

Before sewage sludge's can be applied to farmland, however, they must be treated further to stabilize organic material and significantly reduce pathogens. Sewage sludge's that have undergone such treatment and are of sufficiently high quality to be used as an agricultural soil amendment are known as *bio solids*.

## **Land farming:**

Land farming consists of integrating by means of dispersing and diking-in the secondary sludge into the soil for natural decomposition purpose. The said decomposition can be accelerated by various means.

Land farming is an usual occurrence in most countries. Each country has its own rules and regulations on the applied quantum of secondary sludge per hectare and over what period of time.

In South Africa the norm is 10 tons of secondary sludge per hectare. Cape Town City Council seems prepared to run a test at 30 tons of secondary sludge per hectare, but needs to be confirmed by the latter. The norm In Italy, when **Ergofito** is applied on the secondary sludge, is 700 tons per hectare per 30 days.

During loading secondary sludge at each waste water treatment plant, a larvacide is sprayed over the auger loading the said sludge. This system is neither effective nor inexpensive

### **Ergofito in land farming:**

The **Ergofito** product used in and farming is **Ergostart Bio**, and its applied at a rate of 50 Kg per hectare minimum. This quantity is increased when the secondary sludge is also increased. The best allowable combination of the applied product and the amount of sludge will have to be formulated once the legal parameters allowable of secondary sludge applied are known.

### **Application:**

The two encountered problems when operating with secondary sludge are smell and fly control. Generally as described above, the fly larvacide is applied at the loading point at the waste treatment plant. To date, fly control has never worked, perhaps abated the problem but not to anyone's satisfaction.



It is recommended to apply **Ergostart Bio** simultaneously to the secondary sludge application.

This recommendation is to eliminate the smell, which could be offensive to nearby suburbs. A simple spray mounted at the back of the tractor during matter dispersion will be sufficient.

ERGOFITO

[www.ergofito.co.za](http://www.ergofito.co.za)

Tel: + 27 21 447 7114 / Email: [ergofito@telkomsa.net](mailto:ergofito@telkomsa.net)

## Quantity

| Bio Agent            | Sludge – Tone Per Hec-tare | Quantity |
|----------------------|----------------------------|----------|
| <b>Ergostart Bio</b> | 10 Tons                    | 50 Kg    |
| <b>Ergostart Bio</b> | 20 Tons                    | 100 Kg   |
| <b>Ergostart Bio</b> | 50 Tons                    | 250 Kg   |

The application of **Ergostart bio** quantity is proportional to the amount of secondary sludge applied. The dilution is 1:100; meaning that for every Kg of **Ergostart Bio**, 100 liters of water is used to dilute the product. The water is used as a penetrating agent, which ensures that the beneficial natural bacteria contained in **Ergostart Bio**, is evenly distributed on top of the secondary sludge. Odours will be immediately suppressed due the **Ergostart Bio** bacterial activity competing for food with the group of bacteria responsible for the NH<sup>3</sup> and H<sup>2</sup>S emission.

## Cover Crop:

It is recommended to seed a grass cover crop 15 days after the sludge and **Ergostart Bio**. The selected grass cover will produce cattle feed and absorb many nutrients from the ground thus avoiding accumulation over a long period.

## Pathogens`:

All pathogens contained in the secondary sludge are rapidly eliminated in the ground due to the beneficial effect of **Ergostart Bio**. The rapid natural decomposition occurring in the soil due to the effect of **Ergostart Bio** application makes life impossible for all pathogens to survive.



ERGOFITO

[www.ergofito.co.za](http://www.ergofito.co.za)

Tel: + 27 21 447 7114 / Email: [ergofito@telkomsa.net](mailto:ergofito@telkomsa.net)