

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

Give Nature What Nature Wants

ErgoPlus & ErgoGrow Natural Soil Washing



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PREAMBLE:

Soil washing often implies an ex-situ operation whereas the soil is washed of contaminants and then brought back to its point of origin.

In our case all the soil washing is done in-situ without the need of excavation or soil transport.

All inert organic matter, un-assimilable or insoluble fertilizers will be decomposed the way nature intended.

It is imperative to spring clean all land but especially agricultural land which has been submitted to growing cycles for a period.

ErgoPlus and **ErgoGrow** will wash the cleanse the soil naturally thanks to its complement of earth derived active carbons.

SOIL:

Soil consists of a solid phase of minerals and organic matter (the soil matrix), as well as a porous phase that holds gases (the soil atmosphere) and water (the soil solution).

Accordingly, soil is a three-state system of solids, liquids, and gases. Soil is a product of several factors: the influence of climate, relief (elevation, orientation, and slope of terrain), organisms, and the soil's parent materials (original minerals) interacting over time.

Soil continually undergoes development by way of numerous physical, chemical and biological processes, which include weathering with associated erosion.

Given its complexity and strong internal connectedness, soil ecologists regard soil as an ecosystem.

SOIL POLLUTION IN AGRICULTURE:

Pollution of agricultural soils is so intense that out of the 80 countries substantially affected by land degradation (soil pollution, inclusive) in the world, 36 are found in Africa, mostly in Sub Saran Africa (SSA).

Pollution of soils has resulted into a significant reduction in their ability to support crop growth and yield, apart from jeopardizing safety and security of agricultural produce in SSA.

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Consequences of pollution of soils on human health in the region are inadequately reported, they range from non-fatal and life-changing effects like skin damage due to acute and invariably fatal incidences of exposure to milt.

While science and advancement in technology has provided a multitude of alternative techniques to pollution control and remediation of affected soils, such techniques are largely inaccessible to most SSA countries.

There is also lack of coordination on development, enforcement and implementation of legal and political instruments to tackle the growing risk of pollution to human health from soil contamination across the SSA region.

THE LEGAL ASPECT OF SOIL WASHING:

In South Africa, the Department of Environmental Affairs, published their Framework for the management of contaminated soils as early as 2010.

In the Preface it states:

PREFACE:

The remediation of contaminated land forms part of a comprehensive environmental strategy for the sustainable management of environmental resources in South Africa and reflects the constitutional rights of all South Africans to an environment that is not harmful to human health.

At present, although remediation of contaminated land is well established in South Africa, there is not a single consistent set of guidelines or legally applied regulations to assess the status and risk posed by contaminated land or to provide the basis for the acceptance of remediation plans.

ERGOPLUS & ERGOGROW:

Agricultural soil health is vital for plant health and growth.

Over time residues accumulate in soil from chemical fertilizers and other sources.

Those residues need to be decomposed to allow the rhizosphere to function properly, hence soil washing.

ErgoPlus and **ErgoGrow** are specifically formulated to address natural soil washing to reset agricultural land the way nature designed it.

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Both products are not a fertilizer or a bio stimulant, the products are able to rapidly decompose all that is not supposed to be in soil that hinders plant growth. The rhizosphere is a very balanced layer of soil, it's functionality and efficiency depend on its health just like any living matter on earth.

Years of chemical fertilization affect the said balance to the point that it can become unproductive.

Often there is a lack of organic matter, organic carbon and humus. This is when soil washing becomes a necessity, adding fertilization or products will not help due to residual accumulation.

There is a saying that God stopped making land on earth long time ago, we need to take care of the soil we have, there is no available replacement.

APPLICATION:

ErgoPlus and **ErgoGrow** are simply applied in the irrigation system at a rate of 10 kg per hectare. It is advisable to re-apply once year to ensure maximum soil performance.

If an irrigation system is not available, the product can be applied with any other mean able to deliver the above uniformly over the treated area.

There is no need to disturb the soil mechanically, like ploughing or disking.

However, if the product is applied by a planter while planting or seeding this will also work.

Note: ErgoPlus and ErgoGrow prior to application needs to be diluted with water at a minimum of 1:200

CONCLUSION:

Nature has its own immune system for soil, it can take care of many difficult situations from droughts to flooding to phytoplasma attacks and so on.

However, soil is ill prepared for chemical residues, this is where the mix of natural carbons in our products comes into play.

As we all know carbon is used to purify water, to counter poison ingestion etc. In soil we need a more complex carbon mix which only nature can assemble.

Thus, **ErgoPlus** and **ErgoGrow** are the carrier for the perfect natural carbon balance able to face the most severe chemical soil toxicity that chemical fertilizers regrettably leave behind when applied to soil.



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