VERDYOL

Biotic Earth™

AN ORGANIC APPROACH TO SOIL BUILDING

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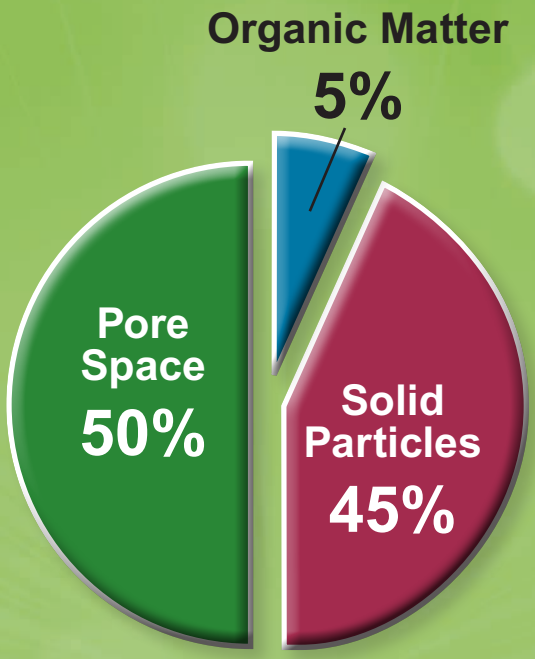
Biotic Earth™ Black

Why Import Topsoil *or* Compost?

Soil Components



IMPORTING TOP SOIL MEANS

- *Higher Costs*
- *Higher Erosion Risk*
- *Higher Liability*
- *More Work*
- *More Time*
- *Less Profit*

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The Conventional Approach to Erosion Control Starts by Adding Topsoil

Why import topsoil if after construction the only soil component that is missing is organic matter?

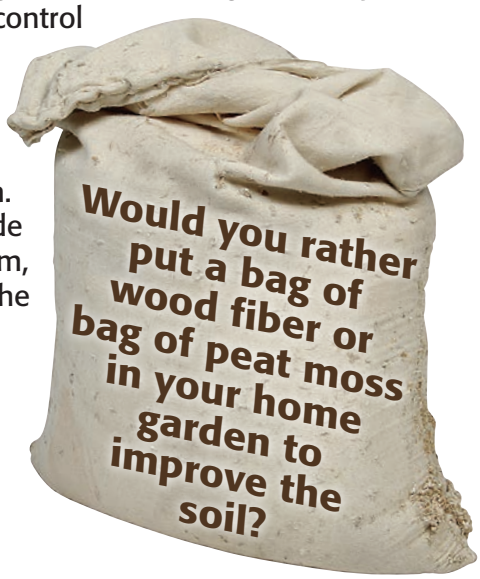
Traditionally, the erosion control work starts by properly preparing the seed bed. Onsite topsoil is best if it can be removed and replaced. Often there is little to no salvageable topsoil so the option to import topsoil is deemed to be required or seeding takes place on the poor subsoil for marginal results. If topsoil is brought in, the effort and cost associated with the haul and the potential for the introduction of weed seeds, pathogens, pesticides and even heavy metals is a risk. If no topsoil is used then usually a longer lasting and more expensive erosion control material is required to control erosion until/if vegetation establishes. There is a more logical solution!

Natural soil is composed as shown in the top left hand graph. Topsoil and subsoil are made from 95% of the same substance and only the organic structure is missing. When we haul in topsoil we are hauling in 95% of the material we already have on site only to get the 5% organic material. Can we place just the correct organic material to kick start the building of topsoil from the subsoil we have? The answer is YES. Biotic Earth Hydraulic Growth Mediums are a Biotic soil amendment, designed just for that purpose.

The Biotic Earth™ Approach

A system that works

The Biotic Earth™ approach follows the design criteria of minimizing the impact on the environment by reducing the amount of earthwork and hauling required while reducing the risks of poor vegetation establishment. Biotic Earth uses agronomical expertise that looks at combining the best organic matter, erosion control fibers, micro and macro nutrients, beneficial bacteria and fungi that make up the biotic approach to improve the existing subsoil. We bring soil and plant science, chemistry, and erosion control expertise to your project to improve vegetation growth which reduces your risk. Canadian peat moss is the base organic used in Biotic Earth. Used by green houses world wide as their preferred growth medium, peat moss comes directly from the earth, is weed free, consistent and the preferred choice of master gardeners and turf specialists.



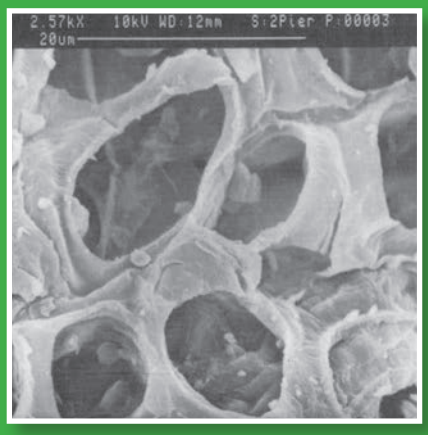
Biotic Approach Means Building a Soil

While conventional erosion systems rely on imported topsoil to prepare a "seed bed", the biotic approach consists of refurbishing the existing soil with tillage, if necessary, and on the addition of a Biotic Earth™ Growing Medium and Soil Stabilizers to mimic, and restore the O horizon.

Biotic Earth™ is Based on Peat Moss and rebuilding the soil's microbial population and structure.

Peat Moss is the best source of organic matter. The reason is the honeycomb structure of the peat moss particles that make this growing medium act as a natural sponge. Peat Moss holds water and nutrients inside its structure.

Photomicrograph of a peat moss particle



Biotic Earth™ Biomimicry

The agronomical strategy is to mimic Mother Nature. This picture shows the Milner Ridge project cross section of the Biotic Earth Black on a sand subsoil and how the Biotic approach established exceptional vegetation on a sand subsoil.

Biotic Earth™ is a Cost Effective Solution

Manitoba Infrastructure and Transportation (MIT) saved hundreds of thousands of dollars using the Biotic Earth approach on the Milner Ridge Correctional Facility's waste water pond.
(Read Case study on our website www.bioticearth.com/casestudies)

Harry Schroeder, P.Eng, LEED AP said "Our expectations of the finished product has been far exceeded", "Vegetation growth was rapid and consistent across the entire area".

Tim Lasuik P.Eng from J.R. Cousins Consulting said "This was the most economical solution given the challenge at this site, that is important in today's cost conscious world".

Below: the sandy soil of Milner Ridge, Manitoba impound area and the result, a complete vegetation cover after seven weeks.

The combination of Flexible Flax Fibers with Straw plus a specialized binding agent creates the ***Biotic Earth***™ *Growing Medium. A very stable matrix that stays in place after moderate to heavy rains.*

Flexible Flax Fiber

+

Agricultural Straw

+

Canadian Peat Moss and other Proprietary Agronomic Materials

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P.O. Box 69, Riverton, MB, Canada R0C 2R0
Tel: 1-866-280-7327 Fax: 1-866-757-7327
www.bioticearth.com