



Introduction

Have you ever seen a forest come alive after a forest fire? It is the picture of a lush green growing environment.

How It Works

Biochar brings benefits to your soil by adding a matrix system where nutrients and moisture are stored and where beneficial microbes thrive. Together, nutrients, moisture, microbes, and fungi work to feed plant roots more effectively. Fungi such as mycorrhizal fungi thrive in these environments adding further nutrient uptake support for plant roots. AirTerra's SoilMatrix™ Biochar adds just this kind of helpful matrix to your soil.

Long Lasting Soil Benefits

Since biochar is durable and doesn't decompose quickly, it stays in your soil for hundreds of years, which means when you have enough you don't need to keep adding it. A 10-20% concentration by volume is plenty.

With SoilMatrix™ in your soil, you will need to apply less fertilizer since biochar holds onto nutrients like a magnet (surface adsorption at work) and prevents rains from leaching nutrients into the water table.



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SoilMatrix BIOCHAR

A LIFETIME SOIL SUPPLEMENT



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Provide your soils with a matrix
for better root and plant health

Help The Planet Store Carbon

In the same way a forest fire adds carbon to soils and removes CO₂ from the atmosphere, you can help the planet reduce its CO₂-overloaded atmosphere by amending biochar into your soil. The production of biochar actually prevents CO₂ from re-entering the atmosphere because of the way it is made. When biomass is carbonized, most of the carbon in the original biomass is preserved in the form of charcoal (biochar). When added to soils, it remains stored there for 100's to 1000's of years. The United Nations recognizes biochar as a CO₂ mitigation strategy.



A Recipe for Success: Microbes and Nutrient-Populated Biochar

SoilMatrix™ Biochar provides a “matrix” that has yet to be populated with microbes and nutrients. One way to accomplish this is to blend your biochar with a mature compost from your back yard garden and some high carbohydrate content food, like flour or rice bran. You need only a small amount of these ingredients by volume, say 5 to 10% compost and 5% flour or bran along with 85 to 90% SoilMatrix by volume. Moisten your SoilMatrix evenly and then blend these 3 ingredients together until they are evenly mixed. Let this mixture form a culture over a 2-week period. During this time additional microbes will populate your SoilMatrix biochar. Nutrients from the compost and flour will be stored in the biochar pores for easy access by plant roots.

When you blend this mix into your soil - 1 inch of your mix top dressed and then blended into 9 inches of soil depth - it will stimulate mycorrhizal fungi spores to grow and reach into the pores of the biochar where the fungi transfers the nutrients stored in the biochar to your plant's roots. Roots in turn feed the fungi by excreting carbohydrates. Thus roots and fungi have a mutually beneficial relationship. The result is healthy plants and long lasting vibrant soils.

Give it a try and let us know how it works for you. Try different variations on this theme. Gardening is a creative and rewarding activity.

For a more detailed recipe, please fill out our information request form at www.AirTerra.ca

