

Organic Fundamentals



Sand into Topsoil

The Perfect Blend Miracle

Technical Series



Perfect Blend Organics

SAND INTO TOPSOIL - THE PERFECT BLEND MIRACLE

The purpose of this experiment was to determine the following:

- If the application of a biotic fertilizer could alter the nature of a pure sand soil from sand into a sandy loam.
- To see how effectively different applications of Perfect Blend biotic fertilizers could grow turf grass in pure sand.
- To provide visual proof of the growth of soil microorganisms fed by biotic fertilizers.

These tests were to confirm or deny reports by Perfect Blend growers who had indicated that a soil change was occurring after applications of 100% organic Perfect Blend biotic fertilizers. The growing medium was pure glass-grade silica sand. This material, commonly used to manufacture glass is completely void of the nutritional elements normally associated with the growth of plants. Lawn grass seed common to the Pacific Northwest was purchased from a retail store and was mixed into the sand at the top of each cylinder along with a half teaspoon of active topsoil to inoculate the sand with living soil microorganisms. Each cylinder then received a measured application of the 4-4-4 formulation of Perfect Blend biotic fertilizer. The cylinders were provided water periodically.

The Control Cylinder

The cylinder shown in *Photo 1* is the control cylinder - which was filled with silica then seeded and then watered at the same interval as the other cylinders. No Perfect Blend was applied in this cylinder. *Photo 1* cylinder was taken a year after the initiation of the experiment. Only one seed germinated and grew in the cylinder. Notice that there is some evidence of organic activity in the cylinder. We believe that the reason for this is the decomposition of the grass seed.

The Perfect Blend Cylinders - 120 Days

Two of the cylinders were seeded and then fertilized with a rate equivalent to standard application rates of Perfect Blend 4-4-4 Biotic Fertilizers. *Photo 2* cylinder on the left was fertilized with the equivalent rate of two tons per acre of Perfect Blend. The cylinder showing on the right in *Photo 2* was fertilized with the equivalent rate of one ton per acre of Perfect Blend. *Photo 2* shows the cylinders 120 days after planting and fertilizing.

The Perfect Blend Cylinder - 1 Ton/ Acre Equivalent Rate - 1 Year

The Perfect Blend cylinder which received the equivalent rate of one ton of fertilizer application rate is shown in *Photo 3* after one year. On the anniversary date of the planting another application of Perfect Blend 4-4-4 Biotic Fertilizer was applied at the same application rate as was originally applied. Notice the dark areas in the root zone. This is actually visible evidence of a change in the silica from sand into a sandy loam.

The Perfect Blend Cylinder - 2 Ton/ Acre Equivalent Rate - 1 Year

The Perfect Blend cylinder which received the equivalent application of two tons per acre of Perfect Blend shown in *Photo 4*. This cylinder was inadvertently subjected to several days of freezing temperatures which caused the grass to die and turn brown on the surface. It regenerated in the Spring but several brown grass blades are still evident. As can be seen from this cylinder there has been considerable biotic growth and change in the aerobic segment of the soil.



Photo 1



Photo 2



Photo 3



Photo 4

OBSERVATIONS / POSTULATIONS

1. Perfect Blend Biotic 4-4-4 fertilizer has the ability to effect visible change in a pure sand medium.
2. Pure silica sand can be changed into a sandy loam by the addition of the correct form of biological nutrients and by the natural biological action of growing plants. This test confirms observations and reports from Perfect Blend growers.
3. The Perfect Blend biotic fertilizer test cylinders now hold water up to the rim of the cylinder for hours at a time. This is evidence of the growth of soil acids and soil acid gels which have expanded in the sand column and block the passage of water. This allows better moisture utilization and absorption within the topsoil layer. This observation leads to the conclusion that the addition of Perfect Blend biotic fertilizers can increase water holding capacity in soils thus the need for irrigation water. Each test cylinder has a 1/4" weep hole in the center of the bottom plate which allows water to drain from the cylinder.
4. This test proves that the addition of Perfect Blend Biotic Fertilizers can grow healthy plants while effecting soil improvement and change at the same time.



Photo 4 - Close-up

ALAN BORNT'S OBSERVATIONS - SAND AND HARDPAN INTO SANDY LOAM

Alan Bornt is a Perfect Blend biotic fertilizer grower close to the California / Mexico border. During a visit with Alan after his first year of using Perfect Blend fertilizers he expressed his satisfaction with the Perfect Blend biotic custom formulations he uses to grow his seven annual rotations of organic spring salad mix. As an afterthought, he added another observation. "It's changed the nature of my soils," he said. When asked how, he explained. "My narrow field lays North-South. At one end of my field is blow sand. At the other end is hard pan. I used to know where I was in the field simply by how my tractor was pulling. If the tractor engine was laboring I was getting near the North end of the field. If the engine was working easily I knew I was in the South end. That allowed me to think about other things without paying a lot of attention to exactly where I was in the field. Now, I can't do that. All of the soil in my field has changed into sandy loam. Both the hardpan end and the sand end are now the same. They are both sandy loam."



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Unique Process Uses Kinetic, Chemical, and Infrared Treatment to Eliminate Any Possibility of Human Pathogens Such As E. Coli Completely Free of Weed Seeds, Insect Eggs, and Insect Casements

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