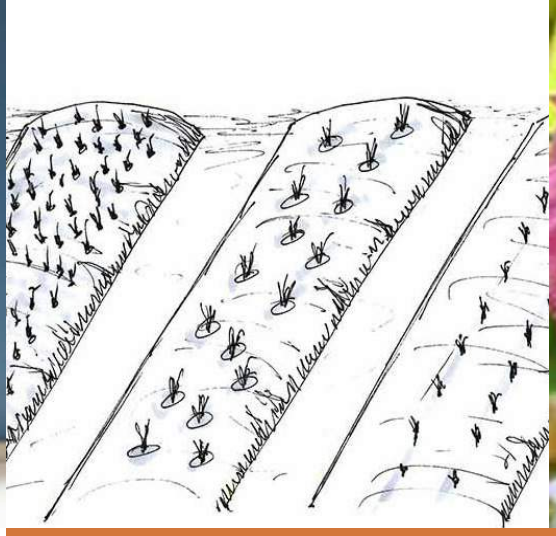
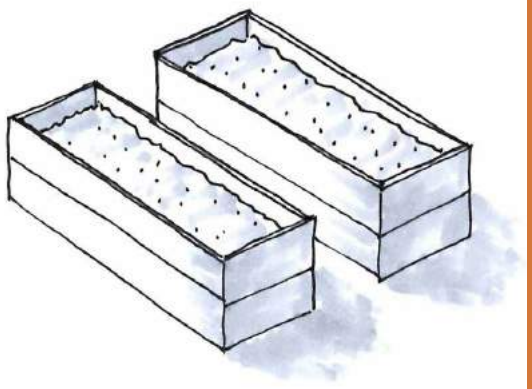




CharGrow

BioGranules™

Probiotics for Plants

CharGrow BioGranules is a highly concentrated plant probiotic, fortified with beneficial soil microbes, microbial foods and carefully selected biochar.

IT'S ALL ABOUT THE BIOLOGY!

From old growth forests to the most productive cropland of the world, plant health is directly linked to a diverse community of beneficial microorganisms that inhabit the soil. With modern management practices, much of this support network has been eliminated.

With CharGrow BioGranules we now have a unique tool that can rejuvenate the biodiversity of soils and rebuild communities of essential organisms that were lost.

When added to growing media and native soils, BioGranules have been shown to enhance biological activity and increase nutrient cycling. In turn, this increases plant performance and productivity.

After 6 years of university trials, we now believe these "Biological Tools" will totally change the way crops are grown in the future. In many ways, they already have.

"When the right set of organisms are present and performing their functions, plant health and productivity soar."

THE SCIENCE

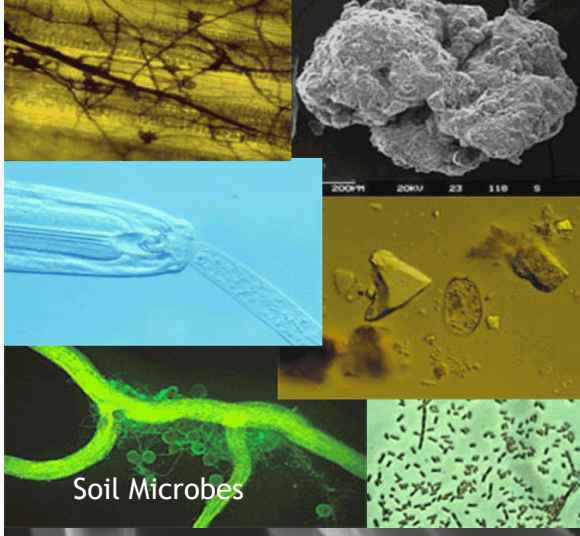
At CharGrow, we create biochar products that optimize plant performance and increase water and nutrient holding capacity of soil. The process begins with wood being transformed into biochar under carefully controlled high temperature conditions. Biochar is a charcoal like substance that is specifically designed to enrich the soil. To finish the process, we inoculate our biochar with beneficial soil microorganisms and plant foods.

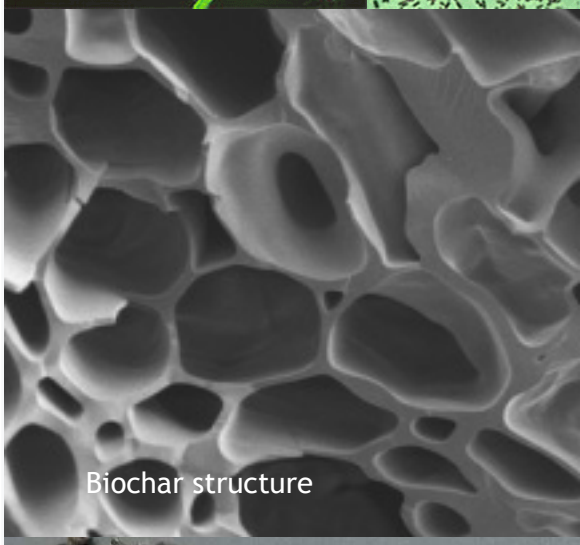
When the right set of organisms are present and performing their functions in the soil, both plant health and profitability soar. The biology of the soil can work to your benefit to increase nutrient cycling and help plants ward off "disturbances" when we grow crops.

Plants and organisms depend on each other to survive. The by-products of growing plants include plant residues as well as root exudates. These provide important food sources for organisms, which in turn feed the plant as they decompose organic matter and cycle nutrients. Through their activities in the soil, it is the beneficial soil organisms that do the real work of building soil structure, influencing crop pests and helping ward off disease.

Microbiologists have discovered that soils containing stable carbon are better at supporting crop production. The Terra Preta soils of the Amazon have shown that by adding charcoal to soils we can actually increase their capacity to hold nutrients, water and biology!

CharGrow has stacked the deck with BioGranules. The product contains a high concentration of microbs and substraits, in a light-weight dry formulation with an extended shelf life. Compared to other products, BioGranules is easy to handle, used at low application rates and produces tangible, profitable results.


Soil Microbes


Biochar structure


CharGrow BioGranules


(L) BioGranule growing results

results

Six years of field studies with univeristies and commerical growers have shown better plant productivity when CharGrow BioGranules is added at 2-3% by volume (in growing mixes) or 15 – 20 lbs. per acre in row crops.

Factors that have contributed to increased plant growth when BioGranules is added to soils include:

- Increased plant health due to colonization of roots by beneficial organisms
- Increased cycling of soil nutrients when the transplant is established in the field
- Better utilization of nutrients from cover crops that were tilled in prior to planting
- Earlier plant maturity (earlier flowering & fruit set)
- Greater yield at first pick and through the growing season
- Increased resistance to drought

R: BioGranules-inoculated (2.5%)

Virginia Tech

Tomatoes

Over 3 growing seasons, BioGranules was used at 2.5 cups per 5 gallons of potting soil (3% by volume). First pick was earlier and first pick yield averaged 51% greater than non-inoculated plants

INCREASED YIELD AND TALLER PLANTS

- Transplants were greener and approximately 25% taller at field setting
- Earlier fruiting yield was increased by 51%
- Earlier fruiting did not compromise yield potential of plants

12 week-old Vinca Pacifica

University of Florida

Hibiscus and Vinca

Researchers concluded that when incorporated at 20 lbs/yd, BioGranules significantly improved plant growth, color retention, and soil nitrate retention over that of untreated controls.

INCREASED NITRATE RETENTION

- BioGranules significantly improved hibiscus (Rosa-sinensis 'President') growth and soil nitrate retention in 3-4 month trials
- Longer-term color retention and reduced nutrient runoff measured by soluble salts and nitrate-N analyses

top: BioGranules-inoculated

Potomac Vegetable Farms

Eggplant

> "We found that using the BioGranules in our greenhouse mix consistently produced better, sturdier transplants."

Ellen Polishuck
Potomac Vegetable Farms

20% yield increase in field corn

Commercial Grower, Ohio

Sweet Corn

When applied at 10 lbs BioGranules per acre, (applied down the row) the grower achieved an average 20% increase in yield.

MICROBIAL POPULATION INCREASES

Bacteria	17%
Total Fungi	43%
Flagellates	66%
Amoebae	206%
Mycorrhizal Fungi	522%

packaging & pricing

CharGrow BioGranules is a highly concentrated biological source of beneficial soil microorganisms, enriched substrates and microbial foods.

Applied at low rates, a small quantity of BioGranules goes a long way, whether seed starting, potting plants or planting row crops.

Unit sizes include 32 OZ (1.3 LB), 10 LB and 50 LB

application

BioGranules is applied at 2.5% by volume mixed into potting soils, 1 LB per 100 SQ FT mixed into top 4 inches of soil, and 20 LBS per acres in the furrow for row crops.

The value of using biochar-based BioGranules include:

- High Stability
- Increases soil fertility
- Increases water holding capacity and structural stability
- Increases nutrient retention and cation exchange capacity
- Increases beneficial soil microorganisms
- Reduces nutrient run off, absorbs ammonia

BioGranules™

BioGranules is a highly concentrated plant probiotic made from biochar, beneficial microorganisms and microbial foods. When added to growing media and native soils, BioGranules have been proven to enhance biological activity and plant performance.

Suggested Application Rates

Potting Soil: Mix 2 - 3 cups BioGranules per cu. ft. of growing media. At the time of transplant, use low salt fertilizer such as fish emulsion as starter fertilizer. Best results have been achieved where a cover crop is worked in prior to setting transplants.

Turfgrass: Mix 10 lbs. of BioGranules per 1000 sq. ft. when seeding. Work into 4 inches of existing soil. Add seed, rake and water thoroughly. Maintenance: Following aeration, dethatching or scarification, apply 5 lbs. per 1000 sq. ft. and mix into the top 4 inches of soil. Water in.

Vegetable Gardens: Mix 10 lbs. of BioGranules per 1000 sq. ft. of planting area or apply a pinch with each seed. Work into top 4 – 6 inches of soil; add seed or transplant, and water in.

Trees and Shrubs: Mix 1-2 cups of BioGranules per cu. ft. of soil from the planting hole. Place mixture into hole at 6-inch depth. Place tree or shrub into planting hole and fill with remainder of mix.

Flower Beds: Mix 10 lbs. per 1000 sq. ft. of planting area or incorporate 2-3 cups BioGranules per cu. ft. of soil .

Vegetable and Flower Transplants: Add ¼ - ½ inch layer BioGranules to bottom of transplant hole.

House Plants:

Size of Pot	For repotting, mix thoroughly in the new potting soil	To charge up your current potted plants, work into the top 2 inches of the soil
4 - inch	2 Teaspoons	1/2 Teaspoon
5 - inch	2 1/2 Tablespoons	2 Teaspoons
6 - inch	3 1/2 Tablespoons	2.5 Teaspoons
8 - inch	4 1/2 Tablespoons	3.5 Teaspoons
12 - inch	1 - 2 Cups	½ Cup
14 - inch	2 - 3 Cups	¾ Cup

Notice

Product can be dusty. Wear a dust mask and eye protection at all times when handling this product. Due to the active and dormant microbial populations, under certain environmental conditions this product may gain or lose weight. With this type of biological activity, it is impossible to eliminate all risks associated with this product. Unintended consequences may result due to factors beyond the control of CharGrow or the seller. The buyer shall assume all such risks.

Warranty Disclaimer

For best results product should always be mixed into native soil or potting mixtures. When applied to soil surfaces, incorporate properly and water in. CharGrow, llc warrants that this product conforms to the description on its label and is reasonably suited for the purposes as stated. In no event shall CharGrow or the seller be held liable for any incidental, consequential, or special damages resulting from the use or handling of this product. The exclusive remedy of the buyer or user for all claims shall be the return of the purchase price of the product.

Ingredients

Biochar, beneficial soil microorganisms and microbial foods

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