

THE DIFFERENCES BETWEEN C20™ & BIO-CHAR

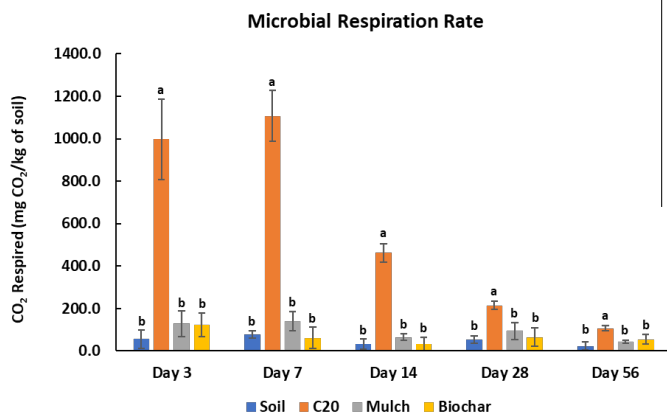
Room & Board for Soil Microbes

C20™ is a carbon food source for indigenous soil microbes. It is manufactured from locally produced grain byproducts with a 50/50 ratio of readily available to slow-release carbon. It increases microbial populations to create a thriving, living and productive soil that promotes root health.

Biochar is charcoal used as a soil amendment. Biochar is stable, solid, rich in carbon and can endure in soil for thousands of years. Like most charcoal, biochar is made from biomass via pyrolysis, the formal decomposition of material at elevated temperatures in an inert atmosphere.

Proponents of biochar suggest that biochar creates pore space in which soil microbes can live. In this case, we see biochar and C20 as companion products. C20 will feed the microbes that can use the biochar for their housing needs. A combination of the products creates “room and board” for soil microbes.

Figure 1. Microbial activity stimulated by C20 application as compared to bare soil, compost and biochar.



C20™

- C:N Ratio = 20:1
- Feeds microbes
- Active natural carbon source
- Readily decomposes
- Microbes create soil colloids
- Colloids increase pore space
- Microbes loosen & decompress treated soils
- Nutrient mineralization (7-Days to 1.5 years)
- Increases soil cation exchange capacity
- Season-long nutrient availability
- Enhances microbial utilization of biochar
- Apply any time during the growing season



Bio-Char

- C:N Ratio = Variable
- Recalcitrant natural carbon source
- Does not decompose readily
- Creates pore space by not decomposing
- Microbes utilize the pore space
- Mineralization (up to 100's years)
- Increases soil cation exchange capacity
- Possible long-term sequestration of carbon