

THE BioChar SOLUTION

As farmers and Ag people we are always looking for a way to better manage soil, water, plant growth and production to give us the opportunity to thrive and be more sustainable. A solution that provides water saving, clean air and soil resiliency will be a win for all farming entities.

One solution is BioChar –

BioChar is a solid material obtained from the carbonization of biomass through a process called Pyrolysis or gasification. This is NOT incineration! The process requires that the biomass be heated in the absence or near absence of oxygen. The manufacture of Biochar has several key benefits:

WATER CONSERVATION

- Carbon Sequestration
- Soil Improvement
- Waste Stream Reduction
- Environmental Remediation
- Clean Waste to Heat Energy Production

Research shows that Biochar has several effects in soil including:

- Increased water infiltration and water holding capacity
- Improved Soil structure, tilth and stability
- Increased cation exchange capacity (CEC)
- Increased soil pH buffering and stability
- Increased nutrient retention over ordinary organic matter
- Increased Soil biology and diversity
- Enhanced and denser root development
- Reduced fertilization runoff, especially nitrogen and phosphorus
- Reduced total fertilization requirements
- Decreased emissions of nitrous oxide by 50% – 80%
- Increased absorption of ammonium, nitrate, phosphate, and calcium ions

When a bio char blend is amended into the soil a number of positive attributes are effected:

The porosity of the Bio-Char retains up to 5 times its weight in water naturally securing it for the use of the plants as needed.

The porosity also has a unique ionic structure that allows the carbon to capture volatile organic chemicals such as Co₂ and methane then sequester them from the atmosphere safely

