

Benefits of algae as a soil amendment	Dead algae	Live algae
<b>Increases organic carbon content in soil</b> Improves soil fertility and nutrient holding capacity	✓	✓
<b>Increases yields</b> Increases crop value per acre	✓	✓
<b>Increases soil porosity</b> Increases water and nutrient storage capacity; allows for easier root growth	✗	✓
<b>Utilizes native algae species</b> Algae is adapted to environment	✗	✓
<b>Increases water retention capacity of soil</b> Enhances water use efficiency	✓	✓
<b>Offsets synthetic fertilizer needs</b> Increases sustainability of farming practices	✓	✓
<b>Has a symbiotic Relationship to other microbes (bacteria, yeast, fungi)</b> Increases beneficial microbial populations – healthier soil generally	✗	✓
<b>Produces CO2 carbonic acid to loosen soil</b> Increases soil porosity	✗	✓
<b>Secretes polysaccharides</b> Increased soil aggregation, water and nutrient retention	✗	✓
<b>Provides nutrition for microbial community</b> Increases microbial activity	✓	✓
<b>Reduces salt stress</b> Increased productivity in saline soils	✓	✓
<b>Stabilizes soil aggregates</b> Reduces soil particle breakdown	✓	✓
<b>Increases populations of beneficial organisms</b> Increases microbial diversity - healthier soil generally	✓	✓
<b>Secretes substances that can protect root systems</b> Increases plant resilience to stressors	✗	✓
<b>Exudes nutrients and other valuable compounds into the soil</b> Better nutrient use	✗	✓
<b>Secondary metabolites release phosphorus in soil</b> Enhanced nutrient usage	✗	✓
<b>Produce phytohormones that can influence plant growth</b> Increased plant growth	✗	✓
<b>No associated supply chain costs</b> Direct grower savings	✗	✓
<b>Promotes soil crust formation</b> Healthier soil	✗	✓
<b>Increases hypotonicity</b> Longer fruit shelf-life	✓	✓
<b>Increases brix</b> Better produce and increased market value	✓	✓
<b>Binds soil particles</b> Reduces soil erosion	✓	✓