

# BioBuild® Digester II



PCT | Sunrise® BioBuild® Digester II is a highly concentrated blend of beneficial microorganisms specifically formulated to reduce recent crop residue. The Digester II's objective is to naturally break down the current year's residue and aid in returning trapped nutrients within the residue, to the successive year's crop.

The process will assist in increasing organic matter and improve Cation Exchange Capacity (CEC) levels within the soil. Digester II etches corn stalks' surface, which in turn allows an entrance for oxygen, water and beneficial microorganisms to penetrate the hard cuticle on the stalks' exterior.

There is a strong team of bacillus microorganisms in Digester II; all of which are naturally occurring in the soil. This product will increase activity compared to what slowly occurs naturally. Digester II is specifically designed to improve the breakdown of cellulose, proteins, lipids, starches, lignins, and chitins.

BioBuild Digester II is applied at 1 pint per acre and will work best at temperatures over 32°F. If there is concern of temperatures dipping below 32°F for prolonged periods of time, it is recommended to add an additional food source for the microbes such as BioBuild Sun-5 at 8oz-16oz per acre to help increase microbial activity.

Product carrier volume should be enough to ensure adequate coverage of crop residue (i.e. 15-20 gallons per acre spray solution).



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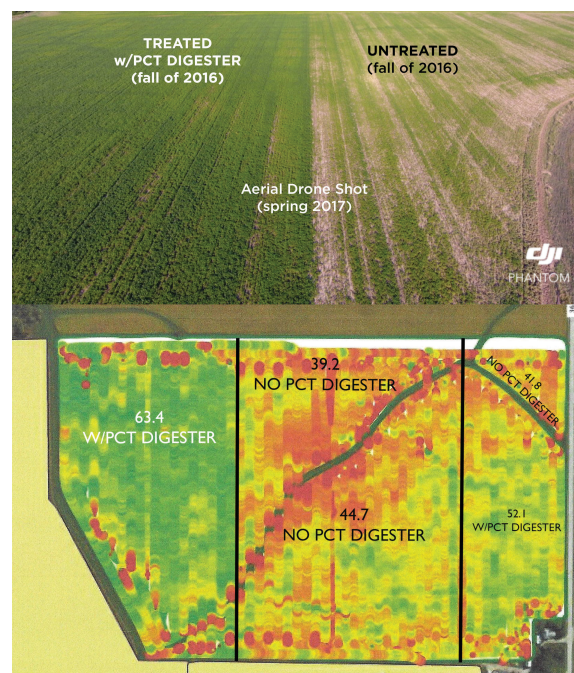
## Digester II Benefits

- ↳ Increases nutrient availability
- ↳ Many modes of action - complex blend of microorganisms
- ↳ Increases organic matter (OM) and CEC levels
- ↳ Decreases germination potential of volunteer corn-seed left on soil surface from harvest
- ↳ Reduces tire damage from rigid stalks
- ↳ Works over winter, although activity slows when temperatures are below 32°F
- ↳ Can be used with fall herbicide application
- ↳ Two year shelf life when stored in a cool location; refrigeration not required
- ↳ Reduces pathogen food source (residue) to reduce the potential for pathogens to overwinter



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**Croprotek®**

# Soybean Seed Overtreatment



**Fuel the tank for early season vigor with added nutrition via seed overtreatment setting the stage for improved yield.**

PCT | Sunrise® Croprotek® Soybean Seed Overtreatment provides early season nutrition and other beneficial attributes leading to improved uniformity in emergence, vigor and overall seedling health. Overtreatment is applied “on top” of a previously applied fungicide and insecticide seed treatment.

Soybean Seed Overtreatment is for seed in bulk quantities. Once “overtreatment” has been applied to the respective seed’s commercial treatment, there are NO returns, refunds or implied warranties.

## Treatment Timing

Treatment will be professionally applied “down-stream” at any of our Sunrise Agronomy Seed locations with treating capabilities. Selected soybean seed to be “overtreated” will be treated as a result of orders placed before February 1st. No orders will be accepted for overtreatment after February 1st. Only bulk soybean seed will be treated. No bagged seed will be accepted for overtreatment.

## Key Performance Benefits

Early season nutrition to assist in root and shoot development, uniform emergence and vigor as well as some additional fungicidal properties.



### Zinc (Zn)

- ↳ aids in the activation of enzymes, synthesis of photosynthetic pigments and chlorophyll. Zinc metabolizes the plant hormone auxin.
  - Due to enzyme activity zinc is essential in regulating functions of the cell membrane.
- ↳ in the presence of other heavy metals helps to mitigate their impact

## Key Performance Benefits (*continued*)

### Manganese (Mn)

- ↳ aids in structure of photosynthetic protein and enzymes
- ↳ Mn is easily transported into root cells and translocated to the shoots
- ↳ at the root rhizosphere (narrow zone of soil immediately surrounding roots) both nutrient mobilization and immobilization occurs
  - organic acids released from the roots help to chelate Mn
- ↳ contributes to lignin formation and assimilation of nitrate

### Copper (Cu)

- ↳ one of eight essential plant micronutrients.
- ↳ required for many enzymatic activities in plants for chlorophyll and seed production
- ↳ offers fungicidal properties for plant protection

### Iron (Fe)

- ↳ involved in synthesis of chlorophyll and in other enzymatic and metabolic processes without which plants cannot carry out their lifecycle

### Seaweed Extract

- ↳ this Seaweed Extract is fortified with organic acids in combination with amino acids and a soil penetrating agent formulated to help mitigate plant stress

### Plant Growth Regulators

- ↳ encourage early plant germination and emergence
- ↳ increase surface area of root systems
- ↳ larger leaves and thicker stems
- ↳ Gibberellic Acids control cell elongation and division in plant shoots and aids in seed germination
- ↳ Cytokinin's affect cell division, cell enlargement, senescence, and transport of amino acids in plants
- ↳ Indolebutyric Acid (IBA) stimulates root formation and development, and increases cell elongation

### Chitosan

- ↳ naturally occurring compounds that have potential with reducing plant diseases and nematodes
- ↳ induce host defense responses in both corn and soybeans
- ↳ exhibits a variety of antimicrobial activities

### Polymer

- ↳ seals “overtreated” ingredients to the seed and assists in “flowability” for handling ease across multiple planter manufacturer platforms