16420 McCartyville Rd. | Kettlersville, Ohio 45336
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BioBuild®
BioCape

PCT | Sunrise® BioBuild® BioCape is a microbial inoculant plus an enzyme for dry fertilizer impregnation aimed at improving nutrient uptake and microbial soil health.

BioCape contains a microbial team aimed at improving nutrient use efficiency through solubilization, uptake and utilization of newly applied fertilizer and existing soil nutrients. BioCape is easily applied to dry fertilizer as an impregnated product.

BioCape's included enzyme functions by breaking down plant cell wall polysaccharides and other complex structures in soil organic matter and converting them into simple sugars. Simple sugars are a food source for soil microbes thus increasing overall microbial health and activity. Increased microbial health increases nutrient efficiency and plant health.

Role of Enzymes in Plants

Enzymes are catalysts produced by living organisms which act to bring about specific biochemical reactions. Enzymes are not a living organism but more resembles a chemical reaction.

- Enzymes will carry out their targeted processes repeatedly, regardless of environment.
- In soil environments, microbes produce various enzymes to carry out trillions of different reactions.
- Enzymes applied to the soil jump-start microbial activity and remove the lag in native microbial activity in the soil espically in cold, wet environments.

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Advantages of BioCape

- Improves micro and macro nutrient use efficiency through solubilization, uptake and utilization.
- Microbial team produces enzymes and organic acids that improve solubilization of fertilizer into plant available forms and release bound nutrients. Included enzyme drives the process to create simple sugars, a food source for soil microbes, thus improving soil health and microbial activity.

Usage Rates:

- 5 oz/acre for broadcast fertilizer applications up to 300 lbs/acre. For every 50 lbs/acre fertilizer application rate over 300 lbs/acre, the use rate should be increased and additional 0.83 oz.
- 2.5 oz/acre for banded applications
  - 50 lbs/acre minimum recommended fertilizer rate
- In a variable-rate fertilizer application, the product with the most consistent rate should be chosen for BioCape. Any variable-rate fertilizer that has a rate of 0 lbs/acre anywhere in a field should NOT be chosen for BioCape.
  - e.g. field application will receive a VRA of 100 lbs/acre of MAP and 100 lbs/acre flat-rate of potash. Apply BioCape to the potash for a uniform field application
- Shelf life is 24 months in concentrate and 18 months on dry fertilizer.

Application Method and Storage:

- Applied as part of impregnated dry fertilizer application
- Compatible with most nitrogen, phosphorous or potassium dry fertilizers
- Store in a dry area out of direct sunlight between 40°F - 95°F

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Digester

PCT | Sunrise® BioBuild® Digester is a highly concentrated blend of beneficial microorganisms specifically formulated to reduce recent crop residue. The Digester'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 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 are over 20 strains of beneficial microorganisms in Digester; all of which are naturally occurring in the soil. This product will increase activity compared to what slowly occurs naturally. Digester is specifically designed to improve the breakdown of cellulose, proteins, lipids, starches, lignins, and chitins.

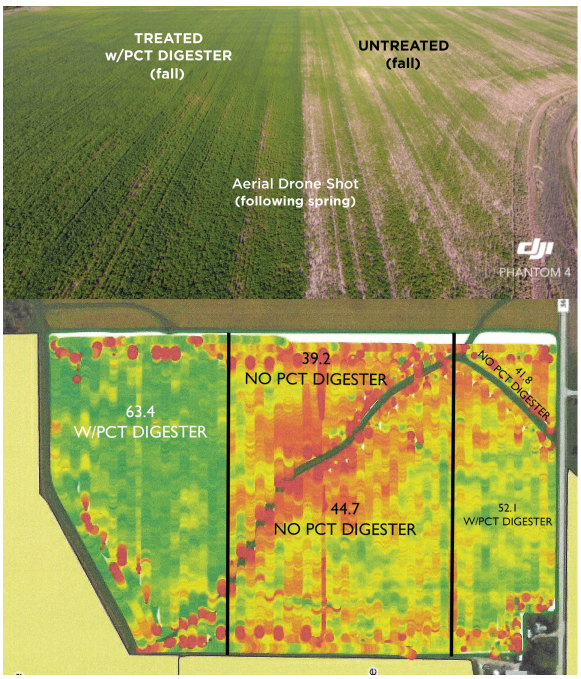
BioBuild Digester is applied at 1-2 pints per acre and will work best at temperatures over 40°F. If there is concern of temperatures dipping below 40°F for prolonged periods of time, it is recommended to add an additional food source for the microbes such as BioBuild Sun-5 at 8oz-16oz per acre to help increase microbial activity. Another option when temperatures are at risk of dropping below 40°F is adding a nitrogen fertilizer food source to increase microbial activity simply by adding a 10% volume to volume (v/v) of 28% UAN to water or by adding 8.5-17 lbs of ammonium sulfate per 100 gallons of water.

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

Example: A 15 gallon per acre spray solution would require 1.5 gallon of 28% UAN at a 10% v/v.

Digester 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 40°F
- Can be used with fall herbicide application



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