TECHNICAL
Data Sheet

Crop Residue Decomposer (CRD)

BIO·GREEN PLANET®
environmental products for a greener planet

- **Accelerates Residue Breakdown:** Harnesses beneficial microbes and enzymes to digest stover, straw, and stubble into stable organic matter before the next planting.
- **Releases Tied-Up Nutrients:** Converts the N, P, K, and micronutrients locked in crop residue back into plant-available forms for the following crop.
- **Improves Seedbed and Planter Performance:** Softened, reduced residue means less hairpinning, better seed-to-soil contact, and more uniform emergence.
- **Reduces Nitrogen Tie-Up:** Speeds the carbon cycle so high-C:N residue immobilizes less soil nitrogen during early crop growth.
- **Builds Soil Health:** Feeds the residue back into the soil as humus, improving structure, water infiltration, and microbial activity year over year.
- **Alternative to Burning and Extra Tillage:** Cuts residue biologically, saving fuel and passes while keeping carbon and nutrients in the field.

Product Description

Crop Residue Decomposer (CRD) is a microbial residue digester that accelerates the natural breakdown of post-harvest crop residue, offering growers a biological alternative to burning, aggressive tillage, or waiting a full season for stubble to rot down. This microbial and enzymatic formulation combines beneficial bacteria and fungi that produce cellulase, xylanase, and laccase enzymes to break down the lignin, cellulose, and hemicellulose in corn stover, wheat and rice straw, soybean stubble, and other crop residues. As the residue softens, these microbes convert it into stable humic compounds, returning nutrients to the soil and improving soil structure, water infiltration, and biological activity. By digesting tough, high-carbon residue in the field, CRD leaves a cleaner seedbed for the next crop, improves planter performance, and builds soil organic matter instead of losing it to fire or erosion.

Applications

- Corn Stover & Grain Stubble
- Sugarcane Trash & Stubble
- Wheat, Barley & Rice Straw
- Soybean & Pulse Residue
- Cotton Stalks & Sorghum Stubble
- Cover Crop Termination Residue
- No-Till & Reduced-Till Systems

Concentration (CFU/g):

- Powder: 100 billion CFU/g bacteria; 5 billion CFU/g fungi dry powder
- Custom concentrations available upon request

Packaging Options

- Powder: Supplied in
  - 15 lb (6.8 kg) pails
  - 25 lb (11.3 kg) pails
  - 210 lb (95 kg) drums

Shelf Life & Storage

- 6 months at room temperature
- 18 months refrigerated
- Store in a cool, dry location away from direct sunlight.
- Reseal container tightly after each use.

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Application Guidelines

	Range	Optimal
pH Range	4.5 – 9.5	5.5 – 7.5
Temperature	45°F – 113°F (7°C – 45°C)	68°F – 95°F (20°C – 35°C)

Application Rates

Residue load	Rate per acre	Rate per hectare	Typical residue
Standard	20 g	50 g	Soybean, pulse, light small-grain residue
Heavy	40 g	100 g	Corn stover, wheat and rice straw, cotton stalks

- To ensure complete hydration, first shake the powder with a small amount of water in a closed container until fully dispersed, then add the mixture to the spray tank.
- Apply 20 to 40 grams per acre (50 to 100 grams per hectare) thoroughly with water or a compatible liquid fertilizer carrier in spray tank and apply directly onto crop residue after harvest. Use sufficient spray volume for uniform coverage: a minimum of 10 gallons per acre (95 liters per hectare) by ground, or 3 to 5 gallons per acre (30 to 50 liters per hectare) by air. For heavy residue loads, use the higher rate.
- CRD is compatible with many liquid fertilizers and is commonly added to a fall fertilizer pass. Fertilizers should be fully diluted to their final spray concentration before CRD is added to the tank.

Recommended Method (Chop and Incorporate):

- Apply CRD as part of a chop and incorporate pass. Spray the residue immediately after it has been chopped with a stalk chopper, flail mower, or combine chopper-spreader, then lightly incorporate with a disk or vertical tillage pass. Freshly cut residue exposes more surface area for microbes to colonize, and shallow incorporation mixes microbes, residue, and soil moisture together where decomposition is fastest.

Other Application Methods:

- Boom sprayer, backpack sprayer, aerial application, or irrigation and fertigation systems. In no-till and reduced-till systems, spray directly onto evenly spread residue and time the application ahead of rainfall or irrigation to wash microbes into contact with the residue.
- Fall application after harvest gives the longest working window before planting. Spring application ahead of seedbed preparation is also effective.

Application Notes:

- Maintain gentle but continuous agitation during application to keep microbes evenly suspended.
- Apply when residue is moist or ahead of moisture. The microbes work slowly from about 45°F (7°C), pick up speed above 60°F (15°C), and work fastest between 68°F and 95°F (20°C to 35°C).

Chemical Compatibility:

- Do not tank-mix CRD with fungicides. CRD contains live Trichoderma and Aspergillus fungi, so allow 7 days between a systemic fungicide and a CRD application, or 3 days for a contact fungicide. If a fungicide is applied within that interval, a second application of CRD is recommended to restore full activity.
- Herbicides pose much less risk to the microbes. Separate applications where practical. If a herbicide must be tank-mixed with CRD, the product remains effective, though initial activity may be slower.

Product passes easily through a 100-mesh sieve for use in standard sprayers and irrigation systems.

Disclaimer: Results may vary depending on environmental conditions, application rates, and management practices. The manufacturer makes no guarantee of specific results. Seller's liability is limited to replacement of product or refund of purchase price. Manufacturer is not responsible for misuse, mishandling, or application under adverse conditions beyond its control. This product is not registered for pesticidal use with the U.S. Environmental Protection Agency. It is intended as a microbial inoculant only. Keep out of reach of children.

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