



Biocatalyst
Technology

Extract

POWERED BY **Accomplish**[™]

Biocatalyst for Nutrient Release

BENEFITS

- Maximizes nutrient release from crop residues and the soil
 - Extends existing nutrient availability later into the season
 - Supports easier plantability in the spring
 - Promotes more even crop emergence
 - Optimizes yield potential for the next crop
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Unlock the Full Nutrient Value of Your Fertilizer Investment

Extract Powered by Accomplish™ (Extract PBA) (6-0-0-13S) is a biocatalyst specifically formulated to maximize nutrient release from a grower's fertilizer investment. It is optimized to help growers easily and effectively manage nutrients tied up in the soil and in crop residue by accelerating release of existing nutrition while also increasing nutrient availability. Nutrients locked in the soil from previous fertilizer applications or locked in crop residue are more quickly able to re-enter the soil profile in an available form for the next crop's use, leading to enhanced nutrient efficiency and outstanding ROI for growers.

By accelerating nutrient cycling, Extract PBA also increases the ease of planting the next crop. In addition, by enhancing nutrient release from previous crop residue, an application of Extract PBA can result in a more even emergence, a healthier stand and the potential for increased yields.

Extract PBA is labeled for both pre-emerge broadcast applications and residue management applications.



Pre-Emergence Applications

- Spring broadcast fertilizer applications
- Pre-emerge herbicide applications

Residue Management

Extract PBA is compatible with fall herbicides and can be used in any residue situation, including:

- Corn going to soybeans
- Wheat going to soybeans
- Wheat to wheat acres
- No-till/minimum till corn on corn acres

DO NOT use in-furrow or 2x2



Flexible and Easy to Use

With Extract PBA, growers have the flexibility of making a fall or spring application, and they don't have to make a special trip across the field. Extract PBA can be tank mixed with herbicides, including glyphosate, and applied with fall or spring burndown. It can also be broadcast with liquid fertilizers in the spring.

Extract PBA will continue to hasten residue decomposition and nutrient release even during cooler outdoor temperatures (< 50° F), which offers growers the convenience of flexible application timing.

Compatible with All Tillage Practices

Extract PBA is compatible with all tillage practices, from conventional to no-till. It offers growers an excellent, cost-effective way to increase residue breakdown and recover more of their previous nutrient investment, regardless of tillage practice.

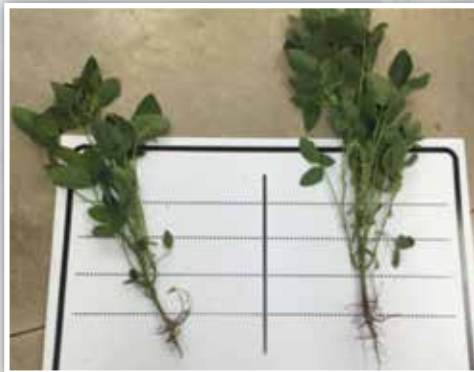
Powered by Accomplish with ATS

Extract PBA combines the powerful biochemistry of Accomplish® LM with the carbon-to-nitrogen (C:N) ratio-balancing power of ammonium thiosulfate (ATS). These products work together to speed nutrient cycling and optimize nutrient release—returning nutrients to the soil profile for uptake by the next crop.

- **Accomplish LM** biochemistry jump starts the process of nutrient release and residue breakdown to optimize nitrogen, phosphorus and potassium availability for the next crop. The biochemistry works independently of microorganisms in the soil system, meaning that nutrient release and residue decomposition continue to occur during colder temperatures.
- **ATS** creates a beneficial environment for microorganisms essential for nutrient cycling and residue breakdown. ATS provides nitrogen (which helps balance high C:N ratios) and sulfur, while also lowering pH on the residue's surface. This increases soil microbial activity and further expedites nutrient return to the soil profile.

Soybeans - Northern Ohio (2016)

Extract PBA applied at 1 gallon per acre



Untreated

Treated with



Note: Previous crop was corn.

Soybeans - Iowa (2016)

Extract PBA applied at 1 gallon per acre in spring with pre-emerge herbicide



180 pods
5 plants:
36 pods/plant

Untreated



215 pods
5 plants:
43 pods/plant

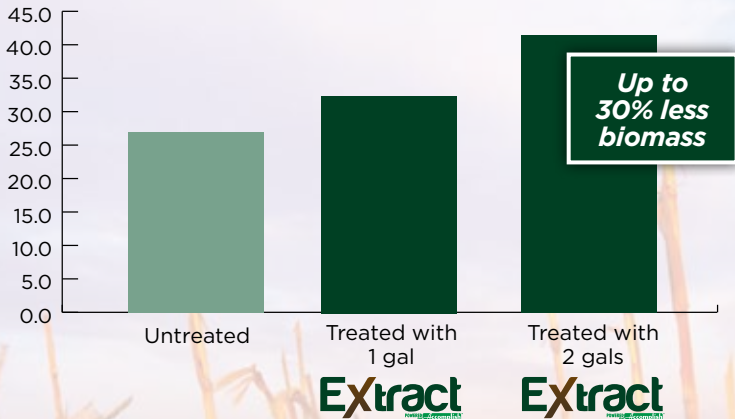
Treated with



Straw Residue Management Trial

Extract PBA applied at 1 and 2 gals per acre with UAN

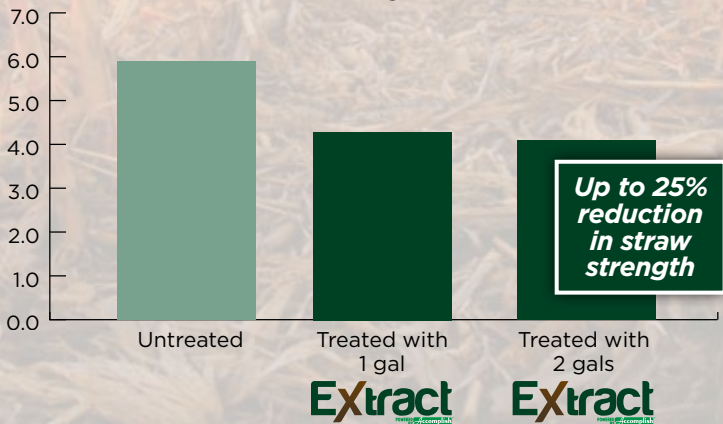
% Biomass Reduction



Straw Residue Management Trial

Extract PBA applied at 1 and 2 gals per acre with UAN

Straw Strength (PSI)



Corn Stalks - Fairbury, IL (2015)



Untreated

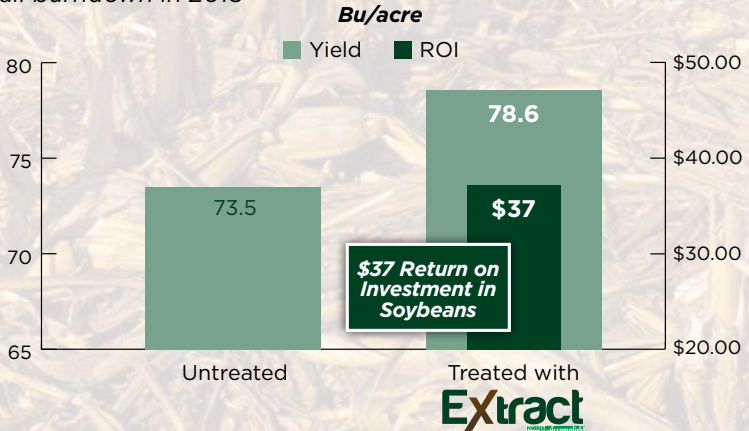
Treated with

Extract
Energy & Commodity

Note: Extract PBA applied in late September. Photo taken approximately 8 weeks after application.

Soybeans - West Lebanon, IN (2016)

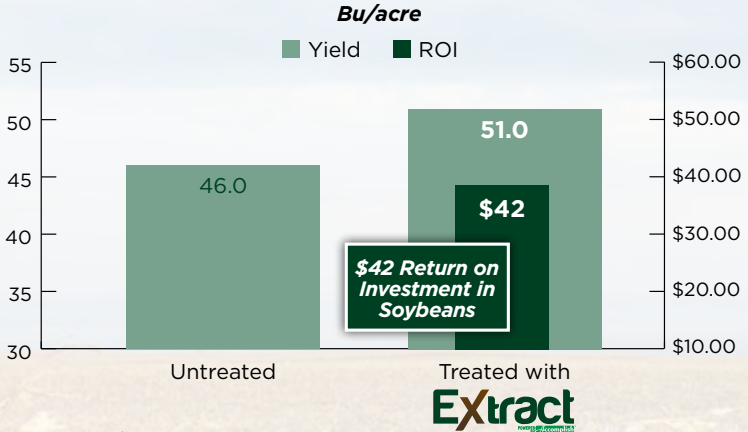
Extract PBA applied at 1 gallon per acre with Fall burndown in 2015



ROI assumes \$9.50 Cash Beans

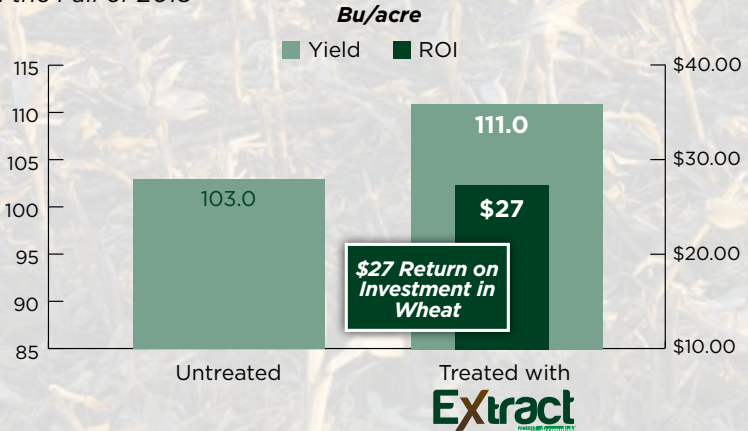
Double Crop Soybeans - Attica, IN (2016)

Extract PBA applied at 1 gallon per acre on soybean stubble in the Fall of 2015



Wheat - Attica, IN (2016)

Extract PBA applied at 1 gallon per acre on soybean stubble in the Fall of 2015



How It Works

Extract
POWERED BY ACCOMPLISH

Untreated:

- ✓ Slow process of nutrient release and residue breakdown
- ✓ Valuable nutrients remain locked in residue and in soil
- ✓ Applied nutrients less available for plant due to N immobilization

With Extract PBA:

- ✓ Nutrients more quickly released and available for the next crop to use
- ✓ Rapid residue breakdown and nutrient release, even in cooler temperatures
- ✓ Easier plantability, more even emergence, and strong, healthy plants

Possibility for uneven or slow emergence and other consequences of nutrient tie up

Healthier plant and greater nutrient efficiency for the grower

Slow, temperature-dependent breakdown may immobilize nutrients

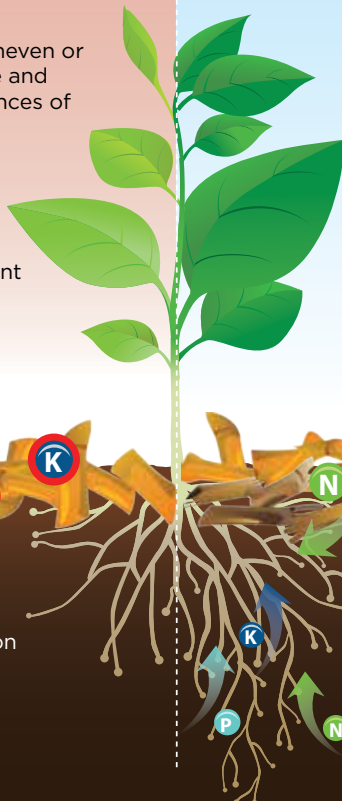
Increased nutrient cycling

Nutrients locked up in soil or residue

Immobilization of applied N

Improved nutrient mineralization

More nutrients available for plant uptake during growing season



At a Glance

Application	<ul style="list-style-type: none">• Broadcast applications
Key Ingredients	<ul style="list-style-type: none">• Accomplish LM biocatalyst• Ammonium thiosulfate (ATS)
Key Features	<ul style="list-style-type: none">• Labeled for pre-emergent and residue applications• Maximizes nutrient release from crop residue and the soil• Supports easier plantability in the spring• Promotes more even crop emergence• Enhances nutrient use efficiency• Optimizes yield potential of the next crop• Compatible with liquid broadcast fertilizers• Compatible with glyphosate and other herbicides

NOTE: DO NOT use in furrow or 2x2 at planting.

Uses and Rates

Pre-Emergent Applications

- Apply at 1-2 gallons/acre
- Can be mixed with glyphosate, other herbicides and liquid broadcast fertilizers
- Recommended: Add at least 1 gallon of UAN
- Minimum spray solution volume: 10 gallons/acre

Residue Applications

- Apply at 1-2 gallons/acre
- Add at least 1 gallon of UAN
- Minimum spray solution volume: 10 gallons/acre

NOTE: DO NOT use in furrow or 2x2 at planting.

Contact Your Nutrien Ag Solutions Retailer

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