



**DRIVING FAST, EARLY
PLANT GROWTH**

NEXT GENERATION STARTER PROGRAMS
THE MERISTEM PLANTER PASS SYSTEM



MERISTEM
CROP PERFORMANCE

DRIVING FAST, EARLY PLANT GROWTH

NEXT GENERATION STARTER PROGRAMS THE MERISTEM PLANTER PASS SYSTEM

This system starts with residue management to create the best possible seed bed for the lowest possible cost (less tillage, less fuel, less skips, more healthy plants per acre - while building soil health. It includes helping farmers get the most value out of their residue left from the previous crop by more quickly releasing plant ready nutrients and carbon into the soil profile.



3:1 Return on Investment



Breaking down residue faster will allow faster planting, stronger stands and fewer skips

\$25/ac



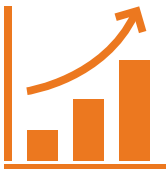
More nutrients available early

\$39/ac



Less tillage required

\$18/ac



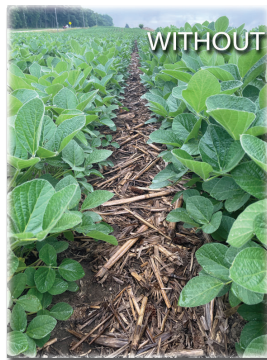
Improve soil health

12%+
in soil health index



DRIVING FAST, EARLY PLANT GROWTH

NEXT GENERATION STARTER PROGRAMS THE MERISTEM PLANTER PASS SYSTEM



WITHOUT



WITH TREATMENT



WITHOUT



WITH TREATMENT



WITHOUT



WITH TREATMENT

BRINGING ALL THE PIECES TOGETHER



DRIVING FAST, EARLY PLANT GROWTH

NEXT GENERATION STARTER PROGRAMS THE MERISTEM PLANTER PASS SYSTEM

Once the seed bed is prepared and residue is managed, this system seeks to promote the development of large root systems, build biological activity to fix nitrogen and make nutrients available so farmers get a complete stand of big healthy plant factories early. The Meristem portfolio provides this through the most efficient, effective and operational convenient products and the market.

FOR FARMERS WITHOUT LIQUID IN-FURROW SYSTEMS

[Ultimate coverage on every seed.]

Industry-Leading Bio-Fertility & N-Fixing Microbes
Azotobacter chroococcum
Azotobacter vinelandii
Bacillus amyloliquefaciens
Bacillus licheniformis
Bacillus megaterium
Bacillus pumilus
Bacillus subtilis
Trichoderma harzianum
CFU count 65 Billion
100x increase from previous version

6 oz Terrasym®
Proven, Industry-Leading BioStimulant
PPFM strains that generate massive root structures.

1.35 lbs Zinc

80/20 Talc/Graphite + Mn & Fe



Industry-Leading RACEREADY™ Bradyrhizobia Inoculant
Proprietary Triple-Stack
Accelerates early-season nodulation for maximum nutrient uptake.

6 oz Terrasym®
Proven, Industry-Leading BioStimulant
PPFM strains that generate massive root structures.

80/20 Talc/Graphite + Mn & Fe



[Safeguard the **vigor** and **vitality** of microbes all the way to the furrow.]

FOR FARMERS WITH LIQUID IN-FURROW SYSTEMS

3 gal water

3 oz REVLINE™ ADVANCED

1 qt HOMESTRETCH™ ZINC 9



BRINGING ALL THE PIECES TOGETHER



DRIVING FAST, EARLY PLANT GROWTH

NEXT GENERATION STARTER PROGRAMS THE MERISTEM PLANTER PASS SYSTEM



INDUSTRY-STANDARD
TALC/GRAPHITE
SEED FLUENCY

REVLINTM
HOPPER THROTTLETM
CORN
POWERED BY TERRASYM[®]
POWERED BY **BIO-CAPSULE
TECHNOLOGY**



BRINGING ALL THE PIECES TOGETHER

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CROP PERFORMANCE

DRIVING FAST, EARLY PLANT GROWTH

NEXT GENERATION STARTER PROGRAM VALUE ANALYSIS

WHEN YOU USE HOPPER THROTTLE AND EXCAVATOR TOGETHER, YOU HAVE THE STARTER PROGRAM OF THE FUTURE. BELOW IS AN EXAMPLE SCENARIO EXPRESSING VALUE IN THE MARKET.

FOLLOWING IS AN EXAMPLE OF A TRADITIONAL CORN STARTER PROGRAM:



Less labor	More value from nutrients tied up in crop residue
Less fuel	Improved soil health
Less compaction	Fast emergence, stronger stands and healthier plants
Less skips	Season-long stress mitigation

TRADITIONAL STARTER + BIOLOGICAL PROGRAM				
6-24-6	PGR	ZINC 9%	PIVOT BIO	
\$30	\$6	\$7	\$20	\$63/ac
MERISTEM NEXT GENERATION STARTER PROGRAM				
EXCAVATOR™ POWERED BY MICROBILIZE™		REVLINE™ HOPPER THROTTLE POWERED BY BIO-CAPSULE TECHNOLOGY™		
\$14		\$12		\$26/ac

INCREDIBLE VALUE *for your customers*



EXCAVATOR™

CROP RESIDUE BREAKDOWN
& NUTRIENT RELEASE AID

POWERED BY **MICROBILIZE™**

MICROBE TECHNOLOGY DELIVERY SYSTEM


EXCAVATOR™ by Meristem Crop Performance™ is specifically designed to break down crop residue in the field, improving planter performance, creating stronger stands and releasing valuable nutrients to feed the crop.


The patent-pending formulation of EXCAVATOR™ is powered by the MICROBILIZE™ Microbe Technology Delivery System. This system provides the ideal carrier to ensure that microbes stay alive in the jug and have the optimum conditions to begin multiplying and breaking down residue.


The consortium of microbes included in EXCAVATOR™ are specifically designed to digest crop residue and cycle nutrients back to the soil profile. Additionally, these microbes build improved soil tilth, reduce disease pressure and generate overall increased biological activity.


3:1 Return on Investment

Through multi-location/multi-state research trials, EXCAVATOR™ has proven to deliver a 3:1 return on investment through one or a combination of the following benefits.

- 

Breaking down residue faster will allow faster planting, stronger stands and fewer skips **\$25/ac**
- 

More nutrients available early **\$39/ac**
- 

Less tillage required **\$18/ac**
- 

Improve soil health **12%+**
in soil health index

GUARANTEED ANALYSIS

**PATENT-PENDING*

Alkyl Polyglucoside (surfactant)	35.00%
Organic acids (pH buffer)	5.00%
Rheology and dispersant agents	5.00%
Fulvic Acid	1.00%

Bacillus licheniformis	3.9 x 10 ⁵ CFU/Gm
Bacillus coagulans	3.9 x 10 ⁵ CFU/Gm
Bacillus subtilis	3.9 x 10 ⁵ CFU/Gm
Bacillus pumilis	3.9 x 10 ⁵ CFU/Gm
Bacillus megaterium	3.9 x 10 ⁵ CFU/Gm
Bacillus amyloliquefaciens	3.9 x 10 ⁵ CFU/Gm

In the final liquid form, contains 700 billion total colony forming units (CFU's) per gallon (7 x 10¹¹ CFU/gal) of the above soil health microbes (1 gm = 1 ml).

DIRECTIONS FOR USE

Apply EXCAVATOR™ to any crop residue.

Fall Applications

Apply immediately after harvest for best performance.

Spring Applications

Apply with early herbicide application or in the termination of cover crops.

Summer Applications

Ideal for breaking down wheat stubble.

Specific timing for optimal use varies based on tillage practices, fertility levels and other factors. Contact your agronomist or Meristem for specific recommendations.

Works well with irrigation systems.

RECOMMENDED USE RATE

Apply 12.8 oz per acre with a minimum 10 gal of water. Highly compatible tank mix partner with most herbicide and fertility programs.

PRODUCT AVAILABILITY

Available in both 2.5 gallon jugs, 250 gallon totes and bulk.

Please visit MeristemAg.com for more information.

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1-833-637-4783 (MERISTEM)

REVLINE™ HOPPER THROTTLE™ CORN POWERED BY TERRASYM®

POWERED BY

**BIO-CAPSULE
TECHNOLOGY**

PLANTER BOX INNOVATION DELIVERY SYSTEM
PATENT-PENDING

PLANTER BOX TREATMENT & MICROBIAL SYSTEM FOR BUILDING ROOT MASS & OPTIMIZING NUTRIENT UPTAKE

REVLINE™ HOPPER THROTTLE CORN™ (RHTC) is a best-in-class 80/20 talc/graphite combination that ensures optimum performance in today's high-speed planters. Can take the place of any seed fluency agent.

The base product also includes 1.35 pounds of Zinc plus Iron and Manganese. These micronutrients are essential building blocks to drive fast emergence and strong, healthy plants.

RHTC is powered by BIO-CAPSULE TECHNOLOGY™ (BCT) - a patented delivery system that helps farmers save time, labor and fuel. The BCT carrier system allows for the addition of multiple biological solutions safely packaged for convenient deployment at planting.

The RHTC BIO-CAPSULES are charged with Terrasym® and an industry-leading consortium of bio-fertility & N-fixing microbes. See diagram below.

[Ultimate coverage on every seed.]



- **MOST CONVENIENT METHOD TO DELIVER A HIGH-VOLUME LOAD OF ZINC TO THE FURROW**
- **GENERATES MASSIVE ROOT STRUCTURE**
- **INCREASES EARLY-SEASON IRON, MANGANESE AND ZINC UPTAKE**
- **PUTS CORN PLANTS IN THE POSITION TO MANAGE SEASON-LONG STRESSORS AND OPTIMIZE GENETIC POTENTIAL**

For best results, use in conjunction with EXCAVATOR™ to manage residue, build stronger stands and unlock early-season nutrients.

HOPPER THROTTLE CORN 80/20 Talc, Graphite and Micronutrient Blend

GUARANTEED ANALYSIS

Talc	51.40%
Graphite	20.00%
Zinc (Zn)	27.00%
Iron (Fe)	0.70%
Manganese (Mn)	0.90%

*Derived from Manganese Oxide and Ferrous Oxide

Azotobacter chroococcum
Azotobacter vinelandii
Bacillus amyloliquefaciens
Bacillus licheniformis
Bacillus megaterium
Bacillus pumilus
Bacillus subtilis
Trichoderma harzianum
CFU count 65 Billion+

REVLINE HOPPER THROTTLE CORN Powered by Terrasym

Soil amending ingredient	
Microbial content	2%
Methylobacterium gregans	1x10 ⁹ CFU/g
Inert Ingredients	98%

DIRECTIONS FOR USE & RECOMMENDED USE RATE

Once ready to plant, remove the red stoppers from the BIO-CAPSULES. Push down on the buttons atop the pail to activate the biologicals and release them into the base. Cap the jug and shake aggressively to blend. The combined products treat 50 units of corn at 80k seeds per unit. **Do not activate BIO-CAPSULES until ready to use. If activated, product is good for 7-10 days.**

PRODUCT AVAILABILITY

Sold in 2-jug cases to treat 100 units of corn. Each jug is capable of treating 50 units of corn.

**Data available for additional information*

Please visit MeristemAg.com for more information.

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REVLINTM

HOPPER THROTTLETM

SOYBEAN

POWERED BY TERRASYM[®]

POWERED BY

**BIO-CAPSULE
TECHNOLOGY**

PLANTER BOX INNOVATION DELIVERY SYSTEM
PATENT-PENDING

PLANTER BOX TREATMENT & MICROBIAL SYSTEM FOR BUILDING ROOT MASS & OPTIMIZING NUTRIENT UPTAKE

REVLINTM HOPPER THROTTLE SOYBEANTM (RHTS) is a best-in-class 80/20 talc/graphite combination that ensures optimum performance in today's high-speed planters. Specifically designed to fix Nitrogen and enhance overall crop performance while taking the place of any seed fluency agent.

The base product also includes Iron and Manganese. These micronutrients are essential building blocks to drive fast emergence and strong, healthy plants.

RHTS is powered by BIO-CAPSULE TECHNOLOGYTM (BCT) - a patented delivery system that helps farmers save time, labor and fuel. The BCT carrier system allows for the addition of multiple biological solutions safely packaged for convenient deployment at planting.

The RHTS BIO-CAPSULES are charged with TERRASYMTM and a proprietary triple-stack RACEREADYTM Bradyrhizobia inoculant. See diagram below.

[Ultimate coverage on every seed.]



- **DRIVES EARLY-SEASON TAPROOT NODULATION AND NITROGEN FIXATION**
- **BUILDS STRONG, HEALTHY PLANTS FAST**
- **GENERATES MASSIVE ROOT STRUCTURE**
- **PUTS SOYBEANS IN THE POSITION TO MANAGE SEASON-LONG STRESSORS AND OPTIMIZE GENETIC POTENTIAL**
- **HERBICIDE TOLERANT BRADYRHIZOBIA STRAIN (PATENT # 8772576)**

HOPPER THROTTLE SOYBEAN 80/20 Talc, Graphite and Micronutrient Blend

GUARANTEED ANALYSIS

Talc	78.40%
Graphite	20.00%
Iron (Fe)	0.70%
Manganese (Mn)	0.90%

*Derived from Manganese Oxide and Ferrous Oxide

Proprietary Triple-Stack RACEREADYTM Bradyrhizobia Inoculant ONE MILLION CELLS PER SEED

REVLIN HOPPER THROTTLE SOYBEAN Powered by Terrasym

Soil amending ingredient	
Microbial content	2%
Methylobacterium hispanicum	1x10 ⁹ CFU/g
Inert Ingredients	98%

DIRECTIONS FOR USE & RECOMMENDED USE RATE

Once ready to plant, remove the red stoppers from the BIO-CAPSULES. Push down on the buttons atop the pail to activate the biologicals and release them into the base. Cap the jug and shake aggressively to blend. The combined products treat 40 units of soybeans at 140k seeds per unit. **Do not activate BIO-CAPSULES until ready to use. If activated, product is good for 7-10 days.**

PRODUCT AVAILABILITY

Sold in 2-jug cases to treat 80 units of soybeans. Each jug is capable of treating 40 units of soybeans.

For best results, use in conjunction with EXCAVATORTM to manage residue, build stronger stands and unlock early-season nutrients.

**Data available for additional information*

Please visit MeristemAg.com for more information.

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RACEREADY™ COMPLETE SEED TREATMENT

Put Plants on the Fast Track to Higher Yields

MAKE SURE YOUR SOYBEANS ARE RACEREADY™

RACEREADY™ Complete seed treatment from Meristem™ Crop Performance gives your soybeans unsurpassed protection against harmful early-season pests through a best-in-class fungicide and insecticide package. Combined with a unique blend of inoculants, biologicals and polymers, RACEREADY™ Complete drives exceptional early-season plant health and plantability. All at a value that just makes sense.

YOUR CHOICE IN SOYBEAN SEED SHOULDN'T DICTATE YOUR CHOICE IN SEED TREATMENT

RACEREADY™ Complete allows you to buy your seed treatment based on its total agronomic value for disease and insect protection. Above that, RACEREADY™ Complete offers a proprietary triple-stack inoculant, a proprietary liquid Trichoderma biological for better root development and starch-based extender/polymers for easier planting. For top performance and value pricing that leaves the competition in the dust, run with RACEREADY™ Complete.

PACKING OPTIONS, USE RATE & APPLICATION INSTRUCTIONS

RACEREADY™ Complete is a co-pack. The co-pack (Part A), a liquid premix, available in a 30 gallon mini-drum or a 240 gallon tote. The pre-mix contains the fungicide, insecticide, FloRite¹ and a colorant.

The second component of the co-pack (Part B) is a case that includes three separate parts:

- 1 bladder containing the inoculant (247.5 fluid oz)
- 2 cylinders of the liquid Trichoderma (22.5 fluid oz each)
- 2 cylinders of the extender/polymer

See reverse side for additional information, use rate and application instructions.

ACTIVE INGREDIENTS PER CWT

FUNGICIDES

Fludioxonil* 4#	0.08 oz
T-methyl* 4.5#	0.28 oz
Metalaxyl* 2.65#	0.75 oz

INSECTICIDE

Imidacloprid* 5#	1.60 oz
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ROOT ENHANCEMENT

Bradyrhizobia Inoculant	1.10 oz
Trichoderma	0.10 oz

PLANTING EASE

Extender/Polymer	0.25 oz
Flo-Rite 1706 ¹	0.80 oz

* EPA registered active ingredients

AGRONOMIC BENEFITS

Fludioxonil: a non-systemic fungicide with control of Rhizoctonia damping off, rhizoctonia seed rot, pythium, phytophthora and fusarium

T-methyl: a systemic fungicide with control against rhizoctonia damping off and phomopsis

Metalaxyl: a systemic fungicide used to control pythium damping off and phytophthora

Imidacloprid: a systemic insecticide proven to effectively protect beans from a broad range of harmful insects

Bradyrhizobia Inoculant: an inoculant including three proprietary strains that accelerate early-season nodulation for maximum nutrient uptake

Trichoderma: an active biological that creates more robust root systems and improves photosynthetic efficiency

Extender/Polymer: starch-based (non-sticky) extender reduces bridging and improves on-seed life of Bradyrhizobia and overall performance

Flo-Rite 1706¹: a polymer coating designed to improve plantability, reduce dust-off of actives, and improve seed flow

¹BASF, Inc.

Please visit MeristemAg.com for more information.

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MAINTAIN™

ELITE NITROGEN MANAGEMENT SYSTEM

/// IMPROVED FORMULATION

/// MORE CALCIUM

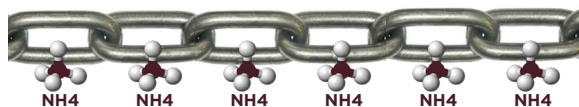
/// ORGANIC ACIDS

/// ENHANCED POLYMER TECHNOLOGY

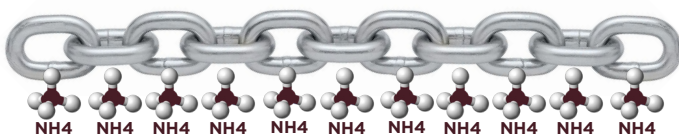
Farmers that drive for consistent profits know that season-long availability of nitrogen is critical to maximizing corn yields. Maintain ELITE by Meristem™ Crop Performance utilizes an **improved formulation** to extend nitrogen availability and uptake in addition to reducing nitrogen loss. Maintain ELITE provides **more calcium** and **enhanced polymer technology**. It is intended for use as an additive to anhydrous ammonia and liquid fertilizer applied below ground.

Meristem's **MICRO-CHAIN technology** captures and maintains more nitrogen in the upper root-zone, increasing nitrogen uptake and utilization.

OLD POLYMER



MICRO-CHAIN TECHNOLOGY



ACTIVE INGREDIENTS

Calcium	10.0%
Polyoxethylene Glycol, Co-Polymer	28.0%
Other Proprietary Ingredients	62.0%
Total	100.0%

ALSO CONTAINS NON PLANT FOOD INGREDIENTS:
Carboxylic and Organic Acids

PRODUCT BENEFITS

- Does not kill biologicals or beneficial bacteria
- Reduces leaching
- Does not corrode equipment
- Manages nitrogen during key growth stages
- No planting restrictions

APPLICATION INSTRUCTIONS & USE RATES

ANHYDROUS AMMONIA:

Use 6 oz. of Maintain Elite per 50 units of Nitrogen

Operator must follow all anhydrous safety precautions. Inject Maintain Elite through liquid II valve. If pressure exceeds 150 psi, inject Maintain Elite through liquid withdraw valve. Proper maintenance is required. Flush valve thoroughly with anhydrous. Coat II valve thoroughly with a petroleum or silicone based lubricant. Apply treated anhydrous using conventional anhydrous application equipment.

LIQUID FERTILIZER:

Use 2 quarts of Maintain Elite per ton of UAN (28%, 30%, 32%) *See dealer for specific recommendations

Liquid fertilizers containing high levels of phosphate should not be used with Maintain Elite. If pesticides are added to the tank mix in conjunction with liquid fertilizers, a compatibility jar test should be performed prior to large scale application to field.

LIQUID MANURE:

Use 24-32 oz. of Maintain Elite per acre.

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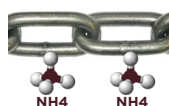
PREMIUM ABOVE AND BELOW GROUND BIO-FRIENDLY NITROGEN MANAGEMENT SYSTEM

N-GEAR™ DUAL ACTION by Meristem Crop Performance™ gives you flexibility of both above and below ground nitrogen protection. N-GEAR™ DUAL ACTION is specifically formulated for use in urea and UAN scenarios.

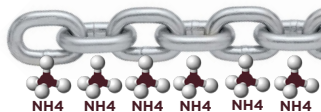
PRODUCT BENEFITS

- DUAL ACTION PROTECTION
 - Up to three weeks of above-ground protection from volatilization
 - Reduces nitrogen loss below ground
- MICRO-CHAIN Technology

OLD POLYMER



MICRO-CHAIN TECHNOLOGY



- Increases nitrogen efficiency, availability and uptake
- Formulated to help build soil biological activity.
- Non-toxic with no detrimental effects on soil bacteria and non-corrosive to equipment
- Specifically formulated for urea and UAN, and can be used with multiple fertilizer sources

N-GEAR™ DUAL ACTION is intended to be used as a management tool to improve nitrogen availability and uptake as an additive to a regular fertilizer program. N-GEAR™ DUAL ACTION is not intended to provide the nutrients normally required by agricultural crops.

PRODUCT AVAILABILITY

N-GEAR™ is available in 2x2.5 gal packaging, 250 gal totes and bulk tankers.

INGREDIENTS

NBPT (N-(n-butyl)-thiophosphoric triamide) Solution (CAS No. 94317-64-3)	20.0%
Propylene Glycol, 1-methyl-2-pyrrolidone and copolymer surfactant	80.0%
Total	100.0%

ALSO CONTAINS NON PLANT FOOD INGREDIENTS:
Carboxylic and Organic Acids

RECOMMENDED USE RATE & APPLICATION INSTRUCTIONS

SUGGESTED USE RATES

- UREA (46-0-0):** 2-3 quarts per ton of urea
- UAN Solutions (28-32%):** 1.5 quarts per ton of total solution
- LIQUID MANURE:** 13.5-18 oz per acre

DIRECTIONS FOR USE

Urea Blending: N-GEAR™ DUAL ACTION may be used to treat urea prior to application in the field—including pre-treatment. Under certain temperature and humidity conditions, urea blended with N-GEAR™ DUAL ACTION may stick together. Application of urea to the field is recommended soon after treatment for best results.

UAN Solutions: N-GEAR™ DUAL ACTION may be mixed with liquid fertilizers such as aqua ammonia or other liquid ammoniacal or urea nitrogen fertilizers. Liquid fertilizers containing high levels of phosphate should not be used with N-GEAR™ DUAL ACTION. If pesticides are added to the tank mix in conjunction with liquid fertilizers, a compatibility jar test should be performed prior to large scale application to the field.

Liquid Manure: N-GEAR™ DUAL ACTION may be mixed with liquid animal manures. N-GEAR™ DUAL ACTION may be applied to slurry pit or through an injection system as material is loaded into applicator.

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