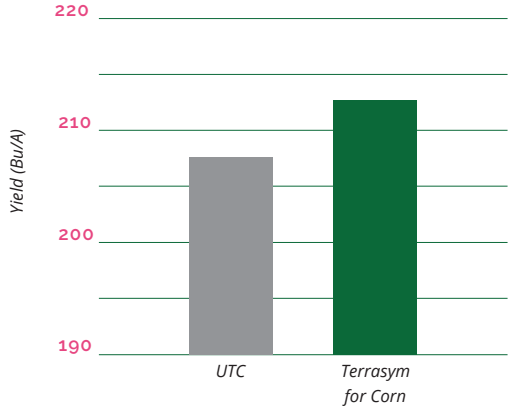
# IMPROVE SEED FLOW, NUTRIENT UPTAKE, ROOT DEVELOPMENT & YIELD – NATURALLY

NewLeaf Symbiotics® and Low Mu Tech™ have combined proprietary Terrasym® microbial technology with a micro-plastic free, patented DUST™ seed flow lubricant to bring farmers a convenient, one-of-a-kind planter box application!

**Terrasym® 450 + DUST™ for corn** is designed to improve seed lubrication and seed flow during planting and deliver improved nutrient uptake leading to robust early season root development, enhanced tolerance of abiotic stress throughout the growing season, and higher yields at harvest.

## IN-FIELD PERFORMANCE


| | | |
|---|---|---|
| ***+4.5 BU/A*** average yield advantage* | ***80%*** win rate* | ***20*** total large-scale trials, across 20 unique locations* |




*SOURCE INFORMATION: *2020 IN10T FarmerTrials®; All untreated checks and PPFM treatments have base fungicide and insecticide application*

SCAN THE QR CODE FOR ADDITIONAL INSTRUCTIONS

## PRODUCT BENEFITS

- Terrasym® 450 contains a unique strain of beneficial microbes called pink pigmented faculative methylotrophs (PPFMs), specially selected for use in corn.
- Flow properties equal to or better than existing offerings.
- Reduces overall dustiness and residue transfer to skin and clothing.
- Micro-plastic free, reducing health risks of the farmer and environment.
- Proven to reduce static
- Shows improved development of corn root area by 6.7% and increased nodal root length by 9.6%, which in turn enhances nutrient acquisition.**
- Enhances nutrient uptake, showing improved leaf tissue nutrient concentration with a +17.5% increase in iron and +12.6% increase in manganese over an untreated control.***
- PPFM microbes consume methanol (a waste byproduct in plants), which can lower the energy cost for the plant to host them as symbionts.
- Features broad compatibility with 90 days on-seed stability when applied as a planter box application.
- DUST™ product is supported by the United Soybean Board and made from 100% U.S. soybeans with the support of farmers' Soy Check-Off Dollars.

*SOURCE INFORMATION: *SGS Labs Study **Combination data set from 2020 IN10T Farmer Trials® & 2021 Ag Ingenuity Partner Trials; All untreated checks and PPFM treatments have base fungicide and insecticide application. *** 2020 IN10T FarmerTrials data*

# VALIDATION OF TERRASYM® 450 + DUST™ PLANTER BOX APPLICATION

In 2021, a partnership with independent data company Ag Ingenuity Partners (AIP) – a division of Advanced Agrilytics, LLC – and their expansive trial network brought commercial-scale data and validation on the feasibility and efficacy of planter box applications of Terrasym® + DUST™ technology.

## SEED SINGULATION

- Data pulled directly from the planters' monitors data came back showcasing these planter box applications had no negative impact to singulation.
- To cross check this result, once the crop had emerged AIP agronomists walked each trial with a POGO stick to manually calculate stand – again confirming no negative impact.

**FINAL RESULT**

Terrasym® 450 + DUST™ planter box application does not negatively impact seed singulation and can be use in all corn planter types.

## COLONIZATION & COMPATIBILITY

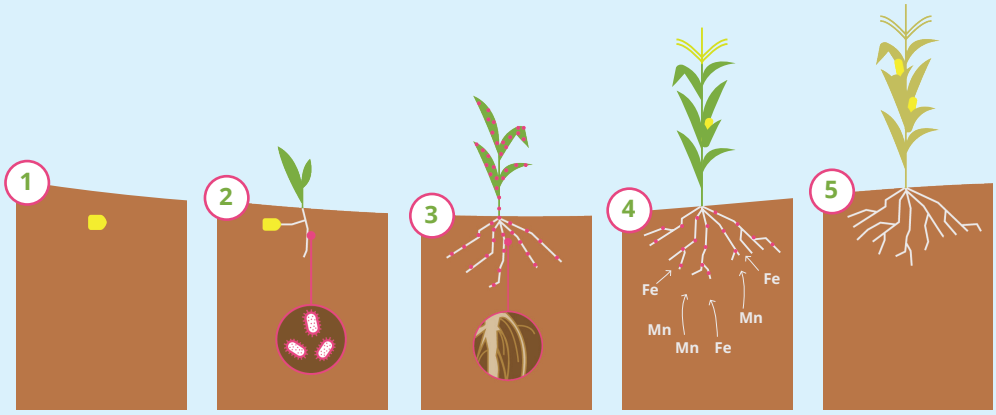
- To confirm even product distribution, AIP agronomists collected seed samples as trials were being planted.
- Using these collected samples, NewLeaf scientists confirmed through analysis there were robust populations of PPFMs per seed.
- Even more, planter box applications show 54X more live PPFMs per seed with planter box applications (compared to liquid overseed treatment).*

**FINAL RESULT**

Terrasym® 450 + DUST™ planter box application distributes evenly on seed across large-scale fields.

*SOURCE INFORMATION: 2021 Ag Ingenuity Partner Trials*

## HOW DOES TERRASYM® 450 + DUST™ WORK?




1. DUST™ provides seed lubrication and seed flow aid at planting ensuring seed passes through the planter and is placed into the ground as the farmer intends.
2. As broad, season-long plant colonizers, PPFMs spread from the seed surface across a plant's roots and leaves.
3. PPFMs improve nutrient uptake by populating plant roots, which promotes higher numbers of root tips and overall root mass in turn enhancing nutrient acquisition.
4. They also secrete beneficial molecules into the root zone that can bind and transport yield-enabling micronutrients.
5. PPFM colonization throughout the growing season and increased nutrient uptake result in increased chlorophyll content and enhanced photosynthetic efficiency, both of which contribute to increases in yield.

| ACTIVE INGREDIENTS | PACKAGING | APPLICATION INFORMATION |
|---|---|---|
| Microbial content 2%<br>*Methylobacterium gregans* 1 x $10^9$ cfu/g<br>Inert ingredients 98% | Quantity of 4 individual 50-unit corn packets per case*<br>**Each case treats 200 units or 470 acres @ 34K population* | 0.5 oz. of Terrasym 450 + DUST™ per unit of corn (@80K) |