



W10

CORN

PRODUCT PORTFOLIO

**biottrinsic**  
by indigo

 SATISFACTION  
GUARANTEE  
100% with replant policy.

# INDIGO'S BIOLOGICAL SEED TREATMENT

## Plant for Performance and Grow with Confidence

**CORN**  
biotrinsic® W10

biotrinsic® W10 enhances drought protection during the critical grain fill stage working with the corn plant to optimize root growth and help improve the amount of water the plant can take in and use.

### HOW OFTEN DO YOU EXPERIENCE LEAF ROLLING AND TIP BACK IN YOUR CORN DUE TO DROUGHT STRESS?



#### Effects of drought on ear development

Drought stress during the critical grain fill stage is becoming more common leading to decreased yields. What if there was a product that could help your corn plant withstand drought stress?

- W10 STARTS WORKING FROM THE MOMENT YOU PLANT THE SEED AND WORKS FROM THE ROOTS TO THE SHOOTS ALL SEASON LONG TO PREPARE THE PLANT TO BETTER WITHSTAND DROUGHT STRESS
- WHEN DROUGHT HITS AT THE WORST TIME POSSIBLE, MAKE SURE YOUR CORN IS PROTECTED WITH W10

**By the time tip back is visible you've already lost yield.**



■ W10 FORMS A SYMBIOTIC RELATIONSHIP WITH THE PLANT TO HELP PROVIDE DROUGHT PROTECTION DURING GRAIN FILL MAXIMIZING THE POTENTIAL OF A GREATER RETURN ON YOUR INVESTMENT

■ IMPROVED DROUGHT TOLERANCE THAT LEADS TO INCREASED YIELDS

- › Managing drought stress is a proactive strategy and starts the moment you plant your seed.
- › Grain fill is a critical growth stage and by the time drought occurs you've already lost yield. Tip back isn't always visible until it's too late. Be proactive in protecting your crop and make sure it's ready if drought hits.
- › Research spanning 3 years showed an increase in tolerance to drought stress during grain fill

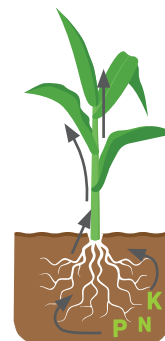
■ EASY TO USE FLOWABLE FORMULATION WHICH ALSO IMPROVES SEED FLOWABILITY AND CAN BE APPLIED DIRECTLY IN THE PLANTER BOX, PRO BOX, MINI BULK, OR SEED TENDER

**+4.3**  
Avg bu/a

Drought stress during  
grain fill

**3**  
years

Field data



Lab data under water deficit

**N** NITROGEN  
+4.2%N

**P** PHOSPHORUS  
+6.4%P

**K** POTASSIUM  
+5.1%K

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# CORN

## biotrinsic® W10

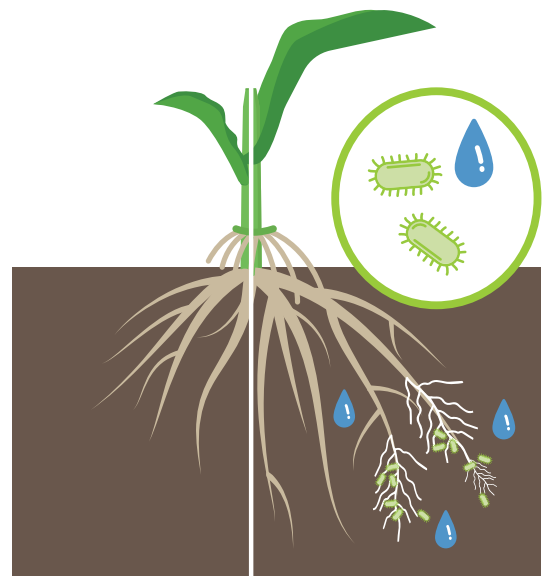
### IMPROVED DROUGHT PROTECTION

biotrinsic® W10 enhances drought protection during the critical grain fill stages. It improves root volume and surface area which allows the plant to intercept more water in the soil profile by giving the plant more opportunity for the roots more opportunity to encounter water.

- IT IMPROVES THE PLANT'S ROOT ARCHITECTURE AND SURFACE AREA. EACH ROOT IS LIKE A WATER WELL SO THE MORE ROOTS THE PLANT HAS, THE MORE WATER RESOURCES IT CAN USE DURING TIMES OF DROUGHT.
- BUT, IT DOESN'T STOP THERE. IT HELPS TO INCREASE THE AMOUNT OF WATER THE PLANT CAN ABSORB AND UTILIZE TO SUPPORT GROWTH AND YIELD. THINK OF THE PLANT'S ROOTS AND XYLEM AS WATER PIPELINES. BIOTRINSIC W10 INCREASES THE NUMBER OF ROOTS (PIPELINES) AND THE SIZE OF THE PIPELINE LEADING TO INCREASED WATER ABSORPTION AND TRANSPORT TO THE LEAVES TO SUPPORT PHOTOSYNTHESIS.
- THIS ALLOWS THE PLANT TO INCREASE WATER UTILIZATION DURING THE GRAIN FILL STAGE WHICH INCREASES YIELDS.

**What if there was a product that could help your corn during these two drought critical developmental stages?**

**CORN** is not a compensatory crop like soybeans. Having one bad day in a water limited situation impacts yield because the moisture or yield that was lost cannot be made up by the plant the following day.



Untreated

biotrinsic® W10

### PROMOTES INCREASED ROOT AND PLANT GROWTH



Untreated    biotrinsic® W10



Untreated    biotrinsic® W10

### INCREASED SHOOT VOLUME UNDER DROUGHT STRESS

Making the most of every day from the time you plant the seed is important to maximizing your yield. biotrinsic® W10 starts working from the moment that seed is planted and on average we see a 12% increase under drought stress in shoot volume after emergence with bacillus simplex. That means it is improving the plant's ability to optimize yield throughout the rest of the season.

**+12%**

Shoot volume under drought with bacillus simplex

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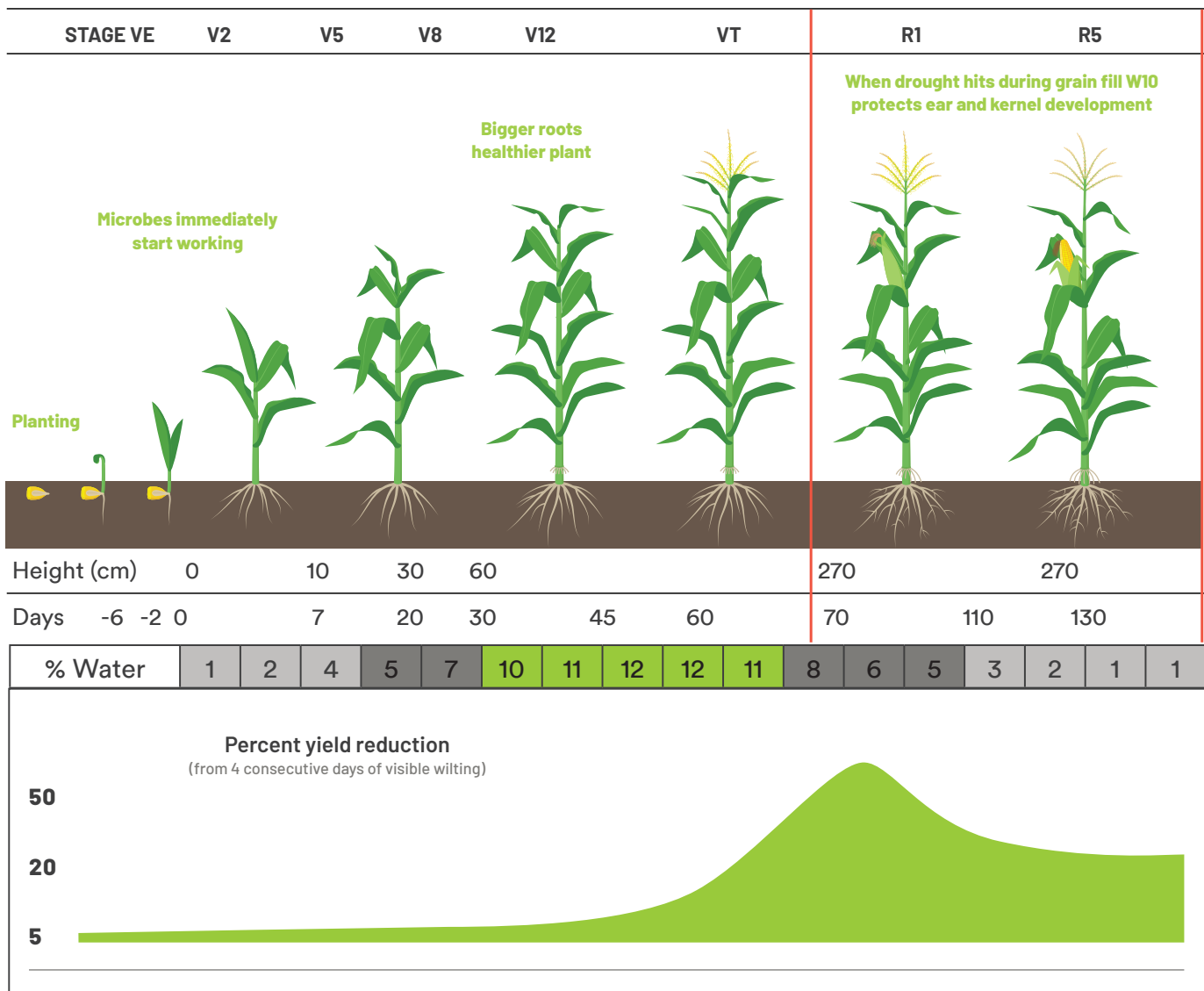
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### DROUGHT TOLERANCE DURING CRITICAL GRAIN FILL STAGE PROTECTS YIELD POTENTIAL

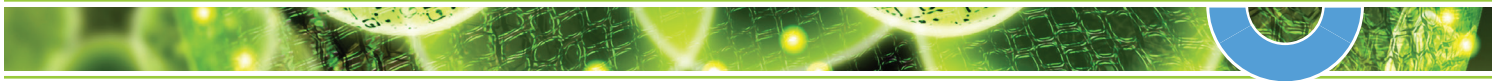
Farmers are no strangers to drought. But the past few years have seen extreme lulls in rain at the growing season's critical moments. Every year across the corn belt, fields are impacted by drought and heat stress.

A farmer's greatest vulnerability to drought stress occurs during the flowering and grain fill stages. Your yield potential during these critical growth stages can be compromised as much as 10-40% during flowering and 20-30% during grain fill. biottrinsic® W10 is helping to provide drought protection during the grain fill stage.



Classen, M.M., and R.H. Shaw. 1970. Water deficit effects on corn. II. Grain components. Agron. J. 62:652

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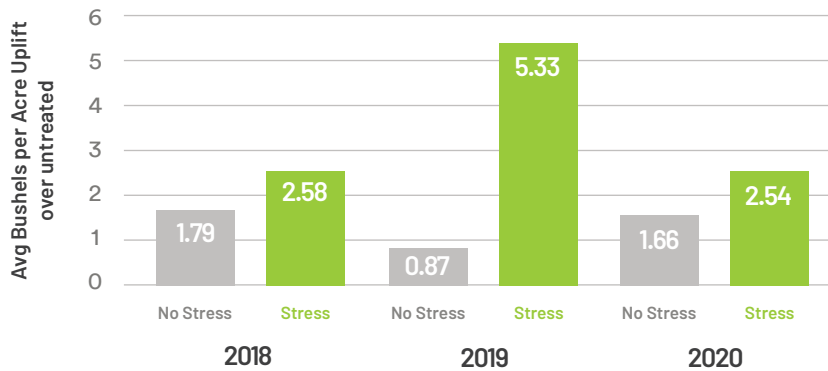
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## biotrinsic® W10

### CONSISTENT YIELD ADVANTAGES

biotrinsic® W10 has proven to consistently generate an improved yield response. In trials spanning **3 years**, W10 delivered an increase of as much as **5.3 bushels** per acre, showing the best performance in low yielding environments with drought stress.

**biotrinsic® W10 - 3 Year Avg Uplift**  
under stress and no stress conditions



When you experience drought during grain fill, W10 helps to protect your yield, but if you don't experience drought stress your crop can still see a potential benefit.

### EAR AND KERNEL DEVELOPMENT

Incomplete ear fill problems resulting from drought stress may also be related to kernel abortion. If plant nutrients are limited during the early stages of kernel development, then kernels at the tip of the ear may abort. Kernels at the tip of the ear are the last to be pollinated and cannot compete as effectively for nutrients as kernels formed earlier<sup>1</sup>. biotrinsic® W10 works during the reproductive stages to help shield the plant from drought stress.



Untreated

biotrinsic® W10



Untreated

biotrinsic® W10

<sup>1</sup><https://agcrops.osu.edu/newsletter/corn-newsletter/ear-development-impacted-drought-conditions>



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### PRODUCT DETAILS

#### CAN BE USED ON

- › Dryland fields where rain fed crops are limited by moisture
- › Irrigated fields where irrigation is limited in amount of water that can be applied or efficiency of applied water
- › Fields where elevation changes make water infiltration into the soil profile difficult
- › Fields where soil texture limits water holding capacity
- › Crops that are planted in an ideal or late planting window
- › All corn hybrids and traits, including hybrids with drought technology

#### HOW TO USE IT

- › Can be applied to corn seed at any time in the pro box, mini bulk bag, seed tender, or planter hopper (always follow recommended on seed stability guidelines).
- › The low use rate allows additional room on the seed so it can be applied with other products like talc and graphite due to its low use rate.
- › The low dust formulation allows it to be used with equipment and operators where dust off is a problem.
- › No expensive additional equipment is needed to apply and it can be used with any planter.
- › Application to the seed creates an immediate team between microbes and plants positively improving plant and root growth with no wasted time. Our seed treatment starts working the moment you plant because it's on the corn seed. With other in-furrow treatments on the market, the roots must grow to the treatment which could take many days.
- › 365 days on-seed stability provides the flexibility you need during the planting season.
- › Broad chemical compatibility so it can be used with your existing treatments. Always reference Indigo's compatibility guide.
- › By applying it directly to the seed, the microbes are adhered to the roots where it starts to work immediately supporting plant health and nutrition. You don't have to worry about weather events stripping away your investment.

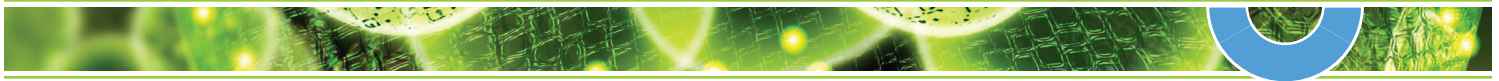


Pkg Treats	Pkgs/ Case	Case	Case Treats	Unit Measures
20 units	5	5x1x20	100 units	50 lbs
50 units	5	5x1x50	250 units	50 lbs

FP Application Rate: 1 vol oz/CWT



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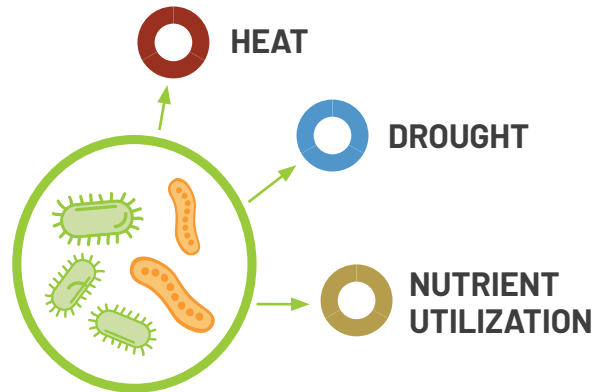
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### THE SCIENCE BEHIND THE DIFFERENCE

Microbiomes, or communities of microbes, help maintain internal processes for all living things – Indigo focuses on identifying microbes that have evolved in conjunction with plants over time to optimize their health and maximize their productivity.

At Indigo, we identify which of these microbes are most beneficial to a plant’s health through the application of algorithms and machine learning. We further prove their performance at our research laboratories and greenhouses in Boston, Massachusetts, and Research Triangle Park, North Carolina along with extensive field trials throughout the United States. Our resulting seed treatment products complement a plant’s natural process to improve health and development across each phase of life, while boosting crop yields.



### WHAT MAKES BIOTRINSIC® DIFFERENT

#### More Beneficial for Your Crop

Microbes are selected to address the key stresses that limit crop yield potential. This allows you to select the right biotrinsic® products based on the stresses that have the greatest impact on your farm.

#### From Plants for Plants

biotrinsic® is a collection of over 30,000 naturally occurring microbes that have been extracted from plants thriving in stressful conditions. We isolate microbes that are abundant in plants that are thriving under stress while other plants around them are not. This allows us to tailor our products to a specific crop and set of stresses.

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