biotrinsic



Bionematicide

for Corn and Soybean

PRODUCT INFORMATION





Biological Seed Treatment

Plant for Performance & Grow with Confidence

biotrinsic° Z15

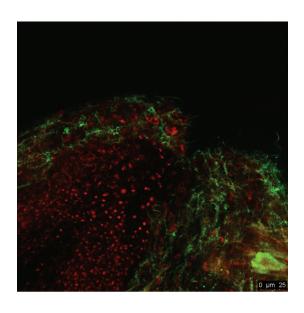
Bionematicide

Isolated from corn, **biotrinsic**° **Z15** contains a naturally occurring proprietary strain of Streptomyces sp. that works by combining multiple microbially enhanced plant defenses to combat the ongoing threat from plant-parasitic nematodes, promotes plant health and vigor, and boosts yield performance.

Combines induced systemic resistance, root colonization, repellency, paralysis of juveniles, and enhanced plant vigor. Creates an expanding living microbial zone of

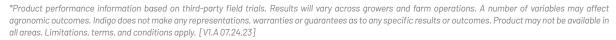
- Creates an expanding living microbial zone of nematode protection.
- Produces geosmin, a natural nematode repellent.
- Inhibits the reproductive life cycle of plant parasitic nematodes.
- Does not impact beneficial nematodes in the soil.
- No phytotoxic effects, eliminating risk of product induced plant injury and stress.
- Enhances root and plant growth to sustain crop development during times of drought stress and promote yield improvement.





- The Streptomyces sp. strain in biotrinsic° Z15 FP is a living non-sporulating bacteria that remains in a dormant state until treated seeds are planted.
- Growing by means of filamentous cellular formation, the bacteria forms an interlocking root colonizing shroud of defensive protection against nematodes, reducing their ability to enter and damage roots.
- Working in harmony with plants from the moment of seed germination, biotrinsic° Z15 triggers induced systemic resistance through which the plant goes through biochemical and biophysical changes.
- Through the production of geosmin and other secondary metabolites, biotrinsic Z15 works to repel and partially paralyze nematodes, limiting their access to roots and working to reduce nematode reproduction.
- biotrinsic° Z15 promotes the growth and development of roots and aboveground vegetation enhancing the crops resistance to nematode attack and promoting season-long health benefits and yield performance.



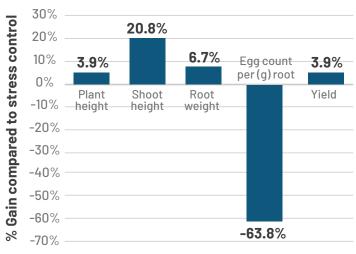


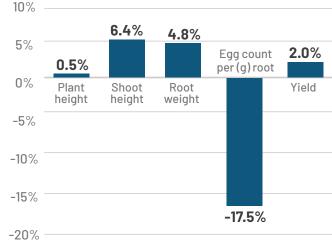


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In soybean field trials biotrinsic® Z15 reduced soybean cyst eggs by an average of 18% in roots and reniform nematode eggs by and average of 64% in soil samples, while elevating plant vigor, vegetative performance, and increasing yield by an average 6.4 percent.





Reniform nematode trial, Auburn Unversity, 2019

Soybean cyst nematode trial, University of Nebraska, 2019

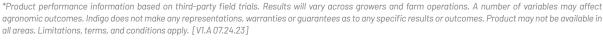
Beta-field Intensive trial - Toluca, IL

Field inspection – 66 days after planting (DAP)

- biotrinsic[®] Z15 seed treatment greatly improved plant vigor and growth as shown by better root development and shoot growth, compared to plants grown from non-biotrinsic treated seeds¹
- Early soybean cyst formation on roots from control while roots were clear, better developed, as were stems, from biotrinsic® Z15 treated plants²
- With nematodes the damage and impact on yield can often go unseen until it's too late, but when you dig deeper and look at the roots the difference is obvious³









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Beta-field Intensive trial - Benton, MO

Field inspection - 19, 48, & 90 days after planting (DAP)

- biotrinsic® Z15 had a 7% increase in stand count, greatly improved plant vigor and growth as shown by better root development and shoot growth¹
- biotrinsic° Z15 produced larger ears with greater consistency in kernel formation and better pollination towards the tips²
- biotrinsic[®] Z15 was visibly greener with the plants showing greater vigor and development compared to the control³

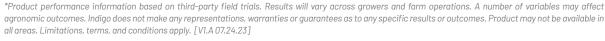




Formula	Pkg Treats	Pkgs/ Case	Case	Case Treats	Unit Measures
FP	20 units	5	5x1x20	100 units	50 lbs or 240,000 seeds

FP Application Rate: 1 vol oz/CWT







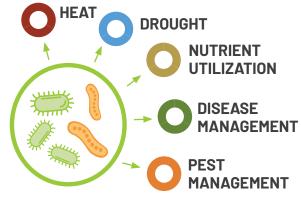
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Microbiomes, or communities of microbes, help maintain internal processes for all living things. Indigo focuses on identifying microbes that have evolved in conjunction with plants over time to optimize their health and maximize their productivity.

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 Indigo's biological products 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 36,000 naturally-occurring microbial strains 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 produce products to a specific crop and set of stresses.

