

THE NEW TECHNOLOGY FOR CORN NEMATODE PROTECTION



Lumialza™

NEMATICIDE SEED TREATMENT

Lumialza™ is a biological nematicide seed treatment that provides early season protection against plant parasitic nematodes, while cooperating with beneficial organisms in the soil. Lumialza seed treatment shields roots from harmful nematodes and provides more than 80 days of root protection across all root zones. Increased root biomass, plant vigor, and height uniformity result in improved plant performance. Because of their small size and patchy distribution pattern, nematodes are often overlooked for the yield-impacting problem they are. Whether in low or high nematode pressure environments, Lumialza seed treatment provides an extensive zone of root protection and peace of mind.



Colonization of roots by *Bacillus amyloliquefaciens*, strain PTA-4838.

Lumialza Seed Treatment Key Benefits

- Demonstrated an average 3.7 bu/a yield advantage even under low nematode pressure in U.S. field trials
- Expanding bio-barrier shields roots and provides enhanced protection from nematodes
- 80+ days of root protection in the upper, middle, and lower root zones
- Provides activity against all key corn nematode species
- Reduced nematode injury to roots and increased root biomass leads to optimized yield potential
- Significant reduction in root damage from lesion, stunt, and spiral nematodes at 80 days after planting
- Protects seedlings through most vulnerable stages of growth
- Improved plant vigor and crop height uniformity, in the presence of key nematode species
- Offers biological alternative to existing nematode management strategies

Lumialza Seed Treatment Key Attributes

- Biological nematicide using a naturally occurring soil bacterium, *Bacillus amyloliquefaciens*, strain PTA-4838
- Protects against root damage caused by nematodes and reduces nematode reproduction
- Colonizes roots throughout root profile, protecting both primary and secondary roots
- Forms biological barrier from nematode attack and paralyzes juvenile nematodes
- Efficacious at low use rate
- Safe, compatible with beneficial arbuscular mycorrhizal fungi (AMF) in the soil
- Excellent seed safety profile
- Highly compatible with other commercial seed treatment technologies
- Favorable environmental profile

Pest Spectrum

Lumialza™ nematocide seed treatment targets nematode pests including dagger (*Xiphinema americanum*), root-knot (*Meloidogyne incognita*), lance (*Hoplolaimus galeatus*), lesion (*Pratylenchus brachyurus*), and needle (*Longidorus sylphus*) nematodes.



Corn nematodes prefer to feed on new, succulent cell tissue where cells are actively dividing, however all root area is susceptible to damage.

Nematicidal Action

Absorption and Translocation

Lumialza seed treatment is a biological organism and as a result, will behave differently than synthetic nematicide treatments. The *Bacillus amyloliquefaciens* strain in Lumialza seed treatment colonizes roots near the seed and soil surface, but also throughout the soil profile, resulting in an extensive zone of root protection.

Mode of Action

Bacillus amyloliquefaciens, strain PTA-4838 is a gram-positive bacteria that provides nematode control by colonizing the roots to form a biological barrier from nematode attack, as well as causing paralysis of juvenile nematodes.

Environmental Profile

Lumialza seed treatment has a favorable environmental profile if applied according to label recommendations. It is safe and compatible with naturally occurring soil microorganisms and is effective on target nematode species at low use rates.



Lumialza seed treatment provides early season protection against plant parasitic nematodes, resulting in reduced feeding damage and increased root biomass.

Crop	Scientific Name	Common Name
corn	<i>Xiphinema americanum</i>	dagger nematode
	<i>Hoplolaimus galeatus</i>	lance nematode
	<i>Longidorus sylphus</i>	needle nematode
	<i>Pratylenchus brachyurus</i>	root lesion nematode
	<i>Belonolaimus longicaudatus</i>	sting nematode
	<i>Trichodorus allius</i>	stubby-root nematode
	<i>Meloidogyne incognita</i>	root-knot nematode

Partial listing of nematode pests susceptible to Lumialza seed treatment when used according to label.



Lumialza seed treatment increases aboveground plant vigor, height, and biomass when in the presence of nematodes.