A Mark of Assurance in Seed Treatments





You choose a seed treatment package to help ensure a successful season. In turn, you should feel assured that those seed treatments perform as expected and work well with the genetics you're planting. LumiGEN® seed treatments are exclusive to the seed brands of Corteva Agriscience™, and represent the high performing, industry leading seed applied technologies that are available on Pioneer® seeds genetics.

Exclusive to Corteva Agriscience

LumiGEN seed treatments are designed, verified and proven to work with Pioneer seeds genetics, helping farmers establish healthy, uniform crops and maximize productivity.



Designed for our genetics



Verified on our genetics



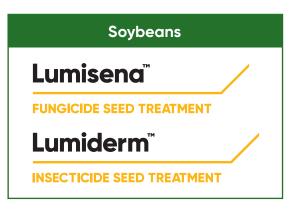
Proven in the field with our genetics

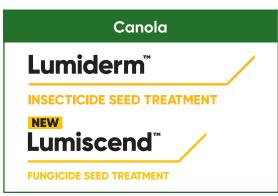
A Mark of Assurance in Seed Treatments

LumiGEN seed treatments are extensively tested across multiple years, geographies, and environments. LumiGEN seed treatments are selected and verified through our rigourous PASSER testing process that evaluates in 6 key areas: Plantability, Application, Seed Safety, Stewardship, Efficacy, and Regulatory. As a result, LumiGEN has become a trusted mark of assurance in seed treatments.

Look for the LumiGEN logo on your seed tag, and feel assured that you are using proven, industry-leading seed treatments that have been designed for your seed genetics.











LumiGEN® Corn Seed Treatments





LumiGEN® seed treatments are exclusive to the seed brands of Corteva Agriscience™, and represent the high performing, industry leading seed applied technologies that protect Pioneer® seeds genetics. LumiGEN seed treatments are designed, verified and proven to work with Pioneer seeds genetics, helping farmers establish healthy, uniform crops and maximize productivity.

The LumiGEN corn seed treatment portfolio provides proven, industry-leading protection from disease, insects and nematodes in corn.

Pioneer seeds **premium performance corn seed treatment package** includes our premium insecticide, fungicide and nematicide seed treatment. The premium high-rate insecticide package also includes our premium fungicide and premium nematicide.

| Premium Insecticide, Fungicide and Nematicide Package | | |
|---|----------|--|
| Product | Group | Disease and Insect Protection |
| NEW Lumiscend™ Pro | 4, 7, 22 | Pythium, Rhizoctonia, Fusarium, Corn head smut |
| Ipconazole | 3 | |
| NEW Lumialza™ | | Key nematode species including sting, needle, lance, stubby-root, root-knot, dagger and lesion |
| Lumivia™ | 28 | Wireworm, White grub, Seedcorn maggot, Black cutworm |

| Premium High-Rate Insecticide Package for High Wireworm Pressure Locations | | |
|--|-------|--|
| Product | Group | Disease and Insect Protection |
| Lumivia™ | 28 | Wireworm, White grub, Seedcorn maggot, Black cutworm |
| Clothianidin | 4 | Soil insect pests listed above including wireworm |







LumiGEN® Corn Seed Treatments







FUNGICIDE SEED TREATMENT

New Lumiscend™ Pro delivers multi-mode of action protection of early season diseases, adding a new level of protection against rhizoctonia and pythium species.



NEMATICIDE SEED TREATMENT

Lumialza™ nematicide seed treatment is a biological nematicide that shields corn roots from harmful nematodes for over 80 days while cooperating with beneficial organisms to enhance crop vigour and yield potential.

Key benefits

- New Lumialza[™] nematicide seed treatment is a biological nematicide that provides protection from key yield-robbing nematodes while cooperating with beneficial organisms for improved soil health
- Lumialza provides over 80 days of protection creating a large zone of protection, encompassing the entire area of root growth including lower, mid and upper root zones
- Enhances plant vigour and yield potential by creating an optimal environment for root growth, crop development & uniformity



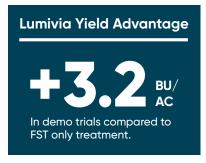
Lumivia

INSECTICIDE SEED TREATMENT

Key benefits

- Outstanding protection against key early season corn insect pests
- Provides seedling protection to develop uniform and healthy stands that maximize yield potential
- · Simplifies your seed treatment decision
- Offers a favourable environmental profile

Lumivia™ insecticide seed treatment delivers excellent broad-spectrum protection on key early season corn insect pests.











LumiGEN® Soybean Seed Treatments





LumiGEN® seed treatments are exclusive to the seed brands of Corteva Agriscience™, and represent the high performing, industry leading seed applied technologies that protect Pioneer® seeds genetics. LumiGEN seed treatments are designed, verified and proven to work with Pioneer seeds genetics, helping farmers establish healthy, uniform crops and maximize productivity.

The LumiGEN soybean seed treatment portfolio provides proven, industry-leading protection from disease, insects and nematodes in soybeans.

Pioneer seeds **premium performance soybean seed treatment package** includes our premium foundation fungicide package and Lumiderm™ insecticide seed treatment. A nematicide and inoculant package can be added to this package for further protection.

| Premium Fungicide Package | | |
|----------------------------|--------------|---|
| Product | Group | Advanced Disease Protection |
| LumiGEN FST with Lumisena™ | 3, 4, 11, 49 | PhytophthoraPythiumRhizoctoniaFusarium |

| Premium Insecticide Package | | | |
|-----------------------------|-------|--|--|
| Product | Group | Advanced Insect Protection | |
| Lumiderm™ | 28 | Bean leaf beetle Seed corn maggot European chafer Masked chafer June beetle Wireworm Soybean aphid | |

| Nematicide Package | | |
|--------------------|-------|--|
| Product | Group | Insect & Nematode Protection |
| ILevo® | 7 | Sudden death syndromeSoybean cyst nematodesRoot lesion nematodes |

| Inoculant Package | | |
|----------------------------|-------|--|
| Product | Group | Inoculation |
| Nodulator® PRO + Integral® | 44 | Prolongs rhizobia up to 225 days after application |





LumiGEN® Soybean Seed Treatments





Lumisena[™]

FUNGICIDE SEED TREATMENT

Lumisena[™] fungicide seed treatment provides the best protection against phytophthora for healthier, more vigorous soybean stands and higher yield potential.

Protection against phytophthora

- Lumisena is the most advanced seed applied technology to protect against phytophthora
- It is the only seed applied technology that delivers residual protection across multiple stages of the phytophthora pathogen's life cycle: preventative, eradicative, curative and antisporulant
- Lumisena is a group 49, a new class of chemistry for superior disease protection

Lumisena Yield Advantage In demo trials compared to

More vigorous growth and enhanced emergence

Lumisena enhances emergence, vigour and root growth, improving soybean stands and maximizing yield potential.

Lumiderm[™]

INSECTICIDE SEED TREATMENT

Lumiderm™ insecticide seed treatment provides broad spectrum protection from early season insect pests including bean leaf beetle, soybean aphid and now registered for cutworms.

Excellent Seedling Protection

- Lumiderm provides soybean seedlings with extended protection against soybean aphid, bean leaf beetle, seedcorn maggot, European chafer, Japanese beetles, white grub, wireworm, and cutworm
- This protection delivers a uniform, healthy stand that maximizes yield potential

Lumiderm + Lumisena Yield Advantage

+1.5 BU AC

In demo trials compared to standard IST + FST treatment.

competitor FST

treatment

Lumiderm complements Lumisena fungicide seed treatment and completes the LumiGEN soybean package. Add Lumiderm to maximize your soybean protection.

Lumiderm Target Pest:
Bean Leaf Beetle
Ontario Soybean Plot Site

BLB Damage

FST = Fungicide Seed Treatment IST = Insecticide Seed Treatment FST only

Standard IST + FST

Lumiderm + Lumisena + FST





LumiGEN® Canola Seed Treatments





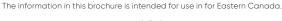
LumiGEN® seed treatments are exclusive to the seed brands of Corteva Agriscience™, and represent the high performing, industry leading seed applied technologies that protect Pioneer® seeds genetics. LumiGEN seed treatments are designed, verified and proven to work with Pioneer seeds genetics, helping farmers establish healthy, uniform crops and maximize productivity.

The LumiGEN canola seed treatment portfolio provides proven, industry-leading protection from diseases and insects in canola.

Pioneer seeds foundation canola seed treatment package includes our premium fungicide and insecticide packages.

| Premium Insecticide and Fungicide Package | | |
|---|----------|--|
| Product | Group | Disease and Insect Protection |
| Lumiderm™ | 28 | Enhanced crucifer and striped flea beetle protection Excellent early season cutworm control Exceptional early season seedling stand establishment, vigour and biomass Up to 35 days of protection through critical early stages |
| Thiamethoxam | 4 | Early season flea beetle protection |
| NEW Lumiscend™ | 7 | A unique new active ingredient for powerful airborne blackleg protection Seed decay/pre-emergence damping-off, post-emergence damping-off, seedling blight and root rot |
| Ipconazole Picoxystrobin Metalaxyl | 3, 4, 11 | Seed and soil-borne blackleg Seed-borne alternaria Seed and seedling diseases: damping-off, seedling blight, seed rot, root rot caused by Rhizoctonia, Fusarium and Pythium spp. |





LumiGEN® Canola Seed Treatments





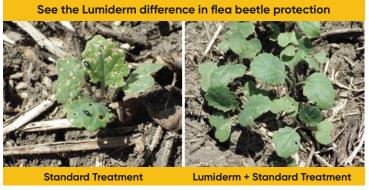
Lumiderm

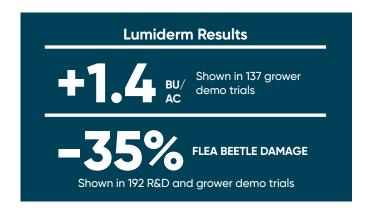
INSECTICIDE SEED TREATMENT

Lumiderm™ insecticide seed treatment provides excellent plant protection against both flea beetles and cutworms in one convenient bag.

Key benefits

- Enhanced crucifer and striped flea beetle protection
- Excellent control of early season cutworms
- Excellent early season seedling stand establishment, vigour and biomass
- Up to 35 days of protection through the critical stages of seedling growth
- · Group 28 chemistry provides an additional mode of effective action for flea beetle and cutworm control





Lumiderm protects canola from cutworm feeding for up to 35 days. Source: Lumsden, SK 22 Days After Seeding

NEW

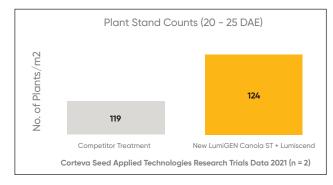


FUNGICIDE SEED TREATMENT

New Lumiscend[™] fungicide seed treatment adds powerful airborne blackleg protection to the new LumiGEN[®] canola disease package.

Key benefits

- A component of the NEW LumiGEN canola disease package is Lumiscend™ fungicide seed treatment, a unique new active ingredient for powerful airborne blackleg protection
- The New LumiGEN canola fungicide seed treatment contains four effective active ingredients for industry leading, broad spectrum disease protection















For more information on LumiGEN® seed treatments, ask your seed supplier or visit corteva.ca/contact to find your local Pioneer Territory Manager.

For corn, the Premium Insecticide, Fungicide and Nematicide Package includes Indiflin, Metalaxyl, Ethaboxam, Ipconazole, B. amyloliquefaciens PTA-4838 and chlorantraniliprole. The High-Rate Insecticide Package includes chlorantraniliprole and clothianidin.

For soybeans, the Premium Fungicide Package includes oxathiapiprolin, picoxystrobin, ipconazole, and metalaxyl. The Premium Insecticide Package contains cyantraniliprole. The Nematicide Package contains fluopyram. The Inoculant Package contains Bradyrhizobium japonicum, bacillus subtilis.

For canola, the Premium Fungicide and Insecticide Package includes inpyrfluxam, ipconazole, picoxystrobin, metalaxyl, cyantraniliprole and thiamethoxam.

Components of LumiGEN:

Nodulator® PRO + Integral® (BASF); Lumisena™, Lumiderm™, Lumivia™, Lumialza™, Lumiscend™, Lumiscend™ Pro (Corteva Agriscience™)



