Lumialza™ is a biological seed treatment that provides early season protection against listed plant parasitic nematodes.

**Active Ingredient By Wt**

<table>
<thead>
<tr>
<th>Bacillus amyloliquefaciens strain PTA-4838*</th>
<th>16.5%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Other Ingredients</td>
<td>83.5%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>100.0%</td>
</tr>
</tbody>
</table>

*Contains a minimum of 6.1 X 10^10 spores/mL of active ingredient.

**KEEP OUT OF REACH OF CHILDREN**

**CAUTION**

**PRECAUTIONARY STATEMENTS**

**HAZARDS TO HUMANS & DOMESTIC ANIMALS**

**CAUTION**

**PERSONAL PROTECTIVE EQUIPMENT (PPE)**

**Applicators and other handlers must wear:** long-sleeved shirt, long pants, socks and shoes, and chemical-resistant gloves made of barrier laminate, butyl rubber, nitrile rubber, neoprene rubber, polyvinyl chloride or Viton.

**Mixers/loaders and applicators must wear:** a NIOSH-approved particulate respirator with any P or R filter with NIOSH approval number prefix TC-84A or a NIOSH-approved powered air purifying respirator with a HE filter with NIOSH approval number prefix TC-21C. Repeated exposure to high concentrations of microbial proteins can cause allergic sensitization.

Follow the manufacturer’s instructions for cleaning/maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry.

**Engineering Controls:** When handlers use closed systems in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240(d)(4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS.

**IMPORTANT:** When reduced PPE is worn because a closed system is being used, handlers must be provided all PPE specified above for “applicators and other handlers” and have such PPE immediately available for use in an emergency, such as a spill or equipment breakdown.

**USER SAFETY RECOMMENDATIONS**

Users should:
- Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.
- Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

**ENVIRONMENTAL HAZARDS**

For terrestrial uses: Do not apply directly to water or to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment washwater or rinsate.

Do not discharge effluent containing this product into lakes, streams, ponds, estuaries, oceans, or other waters unless in accordance with the requirements of a National Pollutant Discharge Elimination System (NPDES) permit and the permitting authority has been notified in writing prior to discharge. Do not discharge effluent containing this product to sewer systems without previously notifying the local sewage treatment plant authority. For guidance, contact your State Water Board or Regional Office of the EPA.

**STORAGE AND DISPOSAL**

Do not contaminate water, food or feed by storage or disposal.

**PESTICIDE STORAGE**

Store in a dry place away from excessive heat.

Do not store near food or feed.

Store in original container only.

Not for use or storage around the home.

To close package, replace and tighten cap to form an airtight seal.

**PESTICIDE DISPOSAL**

To avoid wastes, use all material in this container by application according to label directions. If wastes cannot be avoided, offer remaining product to a waste facility or pesticide disposal program (often such programs are run by state or local governments or by industry).

**CONTAINER HANDLING**

Nonrefillable container. Do not reuse or refill this container. Clean container promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container 1/4 full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. Then offer for recycling if available or puncture and dispose of in a sanitary landfill or by incineration.

**Lot No.**

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Manufactured For:
E. I. DuPont de Nemours and Company
Chestnut Run Plaza
974 Centre Road
Wilmington, Delaware 19805

**NET CONTENTS: 15 GAL**
Lumialza™ is a biological seed treatment that provides early season protection against listed plant parasitic nematodes.

Active Ingredient...................................................................................................................... By Wt
Bacillus amyloliquefaciens strain PTA-4838* ............................................................................... 16.5%
Other Ingredients .................................................................................................................. 83.5%
Total ...................................................................................................................................... 100.0%

*Contains a minimum of $6.1 \times 10^{10}$ spores/mL of active ingredient.

KEEP OUT OF REACH OF CHILDREN

CAUTION

EPA Reg. No. 59639-220-352

EPA Est. 33762-IA-1
20028401 1908

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Manufactured For:
E. I. DuPont de Nemours and Company
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974 Centre Road
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PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS & DOMESTIC ANIMALS

CAUTION

HOT LINE NUMBER

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact 1-800-441-3637 for emergency medical treatment information.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Applicators and other handlers must wear: long-sleeved shirt, long pants, socks and shoes, and chemical-resistant gloves made of barrier laminate, butyl rubber, nitrile rubber, neoprene rubber, polyvinyl chloride or Viton.

Mixers/loaders and applicators must wear: a NIOSH-approved particulate respirator with any P or R filter with NIOSH approval number prefix TC-84A or a NIOSH-approved powered air purifying respirator with a HE filter with NIOSH approval number prefix TC-21C. Repeated exposure to high concentrations of microbial proteins can cause allergic sensitization.

Follow the manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry.

Engineering Controls: When handlers use closed systems in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 153.155], the handler PPE requirements may be reduced or modified as specified in the WPS.

IMPORTANT: When reduced PPE is worn because a closed system is being used, handlers must provide all PPE specified above for “applicators and other handlers” and have such PPE immediately available for use in an emergency, such as a spill or equipment breakdown.

USER SAFETY RECOMMENDATIONS

Users should:
• Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.
• Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
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STORAGE AND DISPOSAL

Do not contaminate water, food or feed by storage or disposal.

PESTICIDE STORAGE

Store in a dry place away from excessive heat. Do not store near food or feed. Store in original container only. Not for use or storage around the home. To close package, replace and tighten cap to form an airtight seal.

PESTICIDE DISPOSAL

To avoid wastes, use all material in this container by application according to label directions. If wastes cannot be avoided, offer remaining product to a waste facility or pesticide disposal program (often such programs are run by state or local governments or by industry).

PESTICIDE TOPICAL USE

Keep unprotected persons out of treatment area until seeds have dried or stay off treated areas. When working around treated seeds wear the appropriate PPE. Do not apply this product, unless expressly stated on the container, to seeds prior to planting.

STORAGE AND DISPOSAL (Cont.)

CONTAINER HANDLING
Nonrefillable container. Do not reuse or refill this container. Clean container promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container 1/4 full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. Then offer for recycling if available or puncture and dispose of in a sanitary landfill or by incineration.

DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling.

READ ENTIRE LABEL. USE STRICTLY IN ACCORDANCE WITH PRECAUTIONARY STATEMENTS AND DIRECTIONS AND WITH APPLICABLE STATE AND FEDERAL REGULATIONS.

Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your State or Tribe, consult the State or Tribal agency responsible for pesticide regulation.

AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR Part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE) and restricted-entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

Do not enter or allow worker entry into treated areas during the restricted-entry interval (REI) of 4 hours.

Exceptions: If the treated seeds are planted in the soil, the Worker Protection Standard, under certain circumstances, allows workers to enter the treated area if there will be no contact with anything that has been treated.

PPE required for early entry to treated areas (that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil or water) is: coveralls; chemical-resistant gloves made of barrier laminate, butyl rubber, nitrile rubber, neoprene rubber, polyvinyl chloride, or Viton; and shoes plus socks.

NON-AGRICULTURAL USE REQUIREMENTS

The requirements in this box apply to uses of this product that are NOT within the scope of the Worker Protection Standard (WPS) for agricultural pesticides (40 CFR Part 170). The WPS applies when this product is used to produce agricultural plants on farms, forests, nurseries, or greenhouses.

Keep unprotected persons out of treatment area until seeds have dried or been packaged.

APPLICATION INSTRUCTIONS

RESTRICTIONS

Lumialza™ must be used only in accordance with use instructions on this label utilizing commercial liquid, slurry or mist-type seed treating equipment, provided that the equipment can be calibrated to accurately and uniformly apply the product to the seed. This product is for both commercial and on-farm application. Do not apply this product in a hopper-box or planter-box at planting time. Always mix product thoroughly before use.

As stated by regulations specified in 40 CFR 153.155, all seed treated with Lumialza™ must be colored with an EPA-approved dye or colorant to visually distinguish seed treated with a pesticide. It is mandatory that such dye or colorant be added into the slurry mixture containing Lumialza™, prior to...
to application. This regulation is necessary to prevent treated seed from accidental use as a food for man or feed for animals.

**SEED QUALITY AND STORAGE OF TREATED SEED**

Seed treatments applied to low vigor or poor quality seed or to mechanically damaged seed may result in loss of seed germination or reduced seedling vigor. To verify seed safety, treat a small portion of seed with the desired slurry mixture (Lumialza™ alone or in combination with other commercial seed treatment products) prior to treatment of an entire seed lot. Utilize standard seed germination methodologies to determine and verify seed safety. Use proper storage conditions for treated seed. Due to seed quality and seed storage conditions beyond the control of DuPont, no claims are made to guarantee the germination of carry-over treated seed.

**SEED BAG TAG**

The Federal Seed Act requires that the containers of seed treated with Lumialza™ must be labeled with the following statements:
- This seed has been treated with Lumialza™ that contains Bacillus amyloliquefaciens Strain PTA-4838.
- Do not use for food, feed or oil purposes.

In addition, the U.S. Environmental Protection Agency requires the following statements on the containers of seed treated with Lumialza™:
- Store treated seed away from foods and other foodstuffs.
- Wear long-sleeved shirt, long pants, and protective gloves when handling treated seed.
- Dispose of all excess treated seed. Leftover treated seed may be double-sown around the headland or buried away from water sources in accordance with local requirements.
- Do not contaminate water bodies when disposing of planting equipment washwaters.
- Dispose of seed packaging or containers in accordance with local requirements.

**APPLICATION DIRECTIONS**

Accurate application of Lumialza™ to seed is required for best performance. Apply as a water-based suspension of adequate volume to distribute product uniformly over seed surface area. The volume of suspension will vary according to seed type and whether companion seed treatments are used.

Thoroughly pre-mix Lumialza™ with water to assure a uniform suspension. Mix the necessary amount of Lumialza™ with a portion of the desired final volume of water.

To verify compatibility with other seed treatment products, pre-test tank mixtures to evaluate formulation and proper physical compatibility of products. When tank mixing this product, observe the most restrictive mixtures to evaluate formulation and proper physical compatibility of the product uniformly over seed surface area. The volume of suspension will vary according to seed type and whether companion seed treatments are used.

**SEED TREATMENT APPLICATION RATES**

<table>
<thead>
<tr>
<th>Pests (Including Field, Sweet and Pop) Not for Use in California</th>
<th>Lumialza™ Application Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Pests</strong></td>
<td><strong>Lumialza™ Application Rate</strong></td>
</tr>
<tr>
<td>Dagger Nematode</td>
<td>0.1 fl oz per 80,000 seeds</td>
</tr>
<tr>
<td>Lance Nematode</td>
<td></td>
</tr>
<tr>
<td>Needle Nematode</td>
<td></td>
</tr>
<tr>
<td>Pin Nematode</td>
<td></td>
</tr>
<tr>
<td>Ring Nematode</td>
<td></td>
</tr>
<tr>
<td>Root Knot Nematode</td>
<td></td>
</tr>
<tr>
<td>Root Lesion Nematode</td>
<td></td>
</tr>
<tr>
<td>Spiral Nematode</td>
<td></td>
</tr>
<tr>
<td>Sting Nematode</td>
<td></td>
</tr>
<tr>
<td>Stubby Root Nematode</td>
<td></td>
</tr>
<tr>
<td>Stunt Nematode</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Pests</th>
<th>Lumialza™ Application Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Soybean Not for Use in California</strong></td>
<td><strong>Lumialza™ Application Rate</strong></td>
</tr>
<tr>
<td>Reniform Nematode</td>
<td>0.1 fl oz per 140,000 seeds</td>
</tr>
<tr>
<td>Root Knot Nematode</td>
<td></td>
</tr>
<tr>
<td>Soybean Cyst Nematode</td>
<td></td>
</tr>
</tbody>
</table>

**LIMITATION OF WARRANTY AND LIABILITY**

NOTICE: Read this Limitation of Warranty and Liability before buying or using this product. DuPont will not be responsible for losses or damages resulting from the use of this product in any manner not specifically directed by DuPont user assumes all risks associated with such non-directed use. If the terms are not acceptable, return the product at once, unopened, and the purchase price will be refunded.

It is impossible to eliminate all risks associated with the use of this product. Such risks arise from weather conditions, soil factors, off target movement, unconventional farming techniques, presence of other materials, the manner of use or application, or other unknown factors, all of which are beyond the control of DuPont. These risks can cause: ineffectiveness of the product, crop injury, or injury to non-target crops or plants. WHEN YOU BUY OR USE THIS PRODUCT, YOU AGREE TO ACCEPT THESE RISKS. DuPont warrants that this product conforms to the chemical description on the label thereof and is reasonably fit for the purpose stated in the directions for use, subject to the inherent risks described above, when used in accordance with the directions for use under normal conditions.

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