

# SPECIMEN

# Xanthion®

## In-Furrow Fungicide

**For soilborne/seedling disease control and plant health using in-furrow applications to corn (all types), cotton, dried shelled peas and beans, peanut, potato, soybean, sugar beet, and sunflower**

**Active Ingredient\*:** (Component A)

Bacillus amyloliquefaciens, strain MBI 600\*\* . . . . . 6.12%

**Other Ingredients:** . . . . . 93.88%

**Total:** . . . . . 100.00%

\* Contains not less than 2.2 x 10<sup>10</sup> viable spores per mL

\*\* Formerly named *Bacillus subtilis* strain MBI 600

**Active Ingredient\*:** (Component B)

pyraclostrobin: (carbamic acid, [2-[[[1-(4-chlorophenyl)-1H-pyrazol-3-yl]oxy]methyl]phenyl]methoxy-, methyl ester). . . . . 23.60%

**Other Ingredients\*\*:** . . . . . 76.40%

**Total:** . . . . . 100.00%

\* Equivalent to 2.09 pounds of pyraclostrobin per gallon

\*\* Contains petroleum distillates

**EPA Reg. No. 7969-368**

**EPA Est. No.**

**KEEP OUT OF REACH OF CHILDREN**

**WARNING/AVISO**

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle. (If you do not understand the label, find someone to explain it to you in detail.)

See inside for complete **First Aid, Precautionary Statements, Directions For Use, Conditions of Sale and Warranty**, and state-specific crop and/or use site restrictions.

**In case of an emergency endangering life or property involving this product, call day or night 1-800-832-HELP (4357).**

**Shake Well Before Using**

**Net Contents:**

BASF Corporation  
26 Davis Drive, Research Triangle Park, NC 27709

## FIRST AID

<b>If swallowed</b>	<ul style="list-style-type: none"> <li>• Call a poison control center or doctor immediately for treatment advice.</li> <li>• <b>DO NOT</b> give any liquid to the person.</li> <li>• <b>DO NOT</b> induce vomiting unless told to do so by a poison control center or doctor.</li> <li>• <b>DO NOT</b> give anything by mouth to an unconscious person.</li> </ul>
<b>If on skin or clothing</b>	<ul style="list-style-type: none"> <li>• Take off contaminated clothing.</li> <li>• Rinse skin immediately with plenty of water for 15 to 20 minutes.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>
<b>If in eyes</b>	<ul style="list-style-type: none"> <li>• Hold eyes open and rinse slowly and gently with water for 15 to 20 minutes.</li> <li>• Remove contact lenses, if present, after the first 5 minutes; then continue rinsing eyes.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>
<b>If inhaled</b>	<ul style="list-style-type: none"> <li>• Move person to fresh air.</li> <li>• If person is not breathing, call 911 or an ambulance; then give artificial respiration, preferably mouth to mouth if possible.</li> <li>• Call a poison control center or doctor for further treatment advice.</li> </ul>

**Note to Physician: Probable mucosal damage may contraindicate the use of gastric lavage.**

## HOTLINE 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 BASF Corporation for emergency medical treatment information: 1-800-832-HELP (4357).

## Precautionary Statements

### Hazards to Humans and Domestic Animals

**WARNING. Component B** may be fatal if swallowed. Causes substantial but temporary eye injury. Causes skin irritation. Harmful if absorbed through skin. Avoid contact with eyes, skin or clothing.

### Personal Protective Equipment (PPE)

#### Applicators and other handlers must wear:

- Coveralls over short-sleeved shirt and short pants
- Protective eyewear (goggles, face shield, or safety glasses)
- Socks
- Chemical-resistant footwear
- Chemical-resistant gloves made of any waterproof material (such as nitrile, butyl, neoprene and/or barrier laminate)
- Chemical-resistant headgear for overhead exposure
- Chemical-resistant apron when cleaning equipment, mixing and loading.

Mixers/loaders and applicators must wear a NIOSH-approved particulate respirator with any N, P or R filter with NIOSH approved 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 and maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry.

## Engineering Controls Statement

When handlers use closed systems or enclosed cabs 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.

## 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. As soon as possible, wash thoroughly and change into clean clothing.

## Environmental Hazards

This product may contaminate water through drift of spray in wind. This product has a potential for runoff for several months or more after application. Poorly draining soils and soils with shallow water tables are more prone to produce runoff that contains this product. A level, well-maintained vegetative buffer strip between areas to which this product is applied and surface water features such as ponds, streams, and springs will reduce the potential for contamination of water from rainfall runoff. Runoff of this product will be reduced by avoiding applications when rainfall is forecast to occur within 48 hours. Sound erosion control practices will reduce this product's contribution to surface water contamination.

This pesticide is toxic to fish and aquatic invertebrates. Drift and runoff may be hazardous to aquatic organisms in water adjacent to treated areas.

**DO NOT** apply directly to water, areas where surface water is present, or to intertidal areas below the mean high water mark. **DO NOT** contaminate water when disposing of equipment washwaters or rinsate.

### Groundwater Advisory

This chemical has properties and characteristics associated with chemicals detected in groundwater. This chemical may leach into groundwater if used in areas where soils are permeable, particularly where the water table is shallow.

## Directions For Use

It is a violation of federal law to use this product in a manner inconsistent with its labeling. **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 agency responsible for pesticide regulation.

The separate components of **Xanthion® In-furrow fungicide** (also referred to as **Xanthion** on this label) are not for individual sale or use and are only to be used in combination as described on the label.

### AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard (WPS), 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), notification to workers, 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 **12 hours**. 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 any waterproof material (such as nitrile, butyl, neoprene, and/or barrier laminate)
- Shoes plus socks

## STORAGE AND DISPOSAL

**DO NOT** contaminate water, food, or feed by storage or disposal.

### Pesticide Storage

Store **Component A** and **Component B** only in their original containers. Store both containers together in the original box in a dry, temperature-controlled, and secure place. Keep containers closed when not in use. **DO NOT** store near food or feed.

### Pesticide Disposal

Wastes resulting from using this product may be disposed of on-site or at an approved waste disposal facility. If these wastes cannot be disposed of according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representatives at the nearest EPA Regional Office for guidance.

### Container Handling

**Nonrefillable Container. DO NOT reuse or refill this container.** Triple rinse or pressure rinse container (or equivalent) promptly after emptying; then offer for recycling, if available, or reconditioning, if appropriate, or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures approved by state and local authorities.

**Triple rinse containers small enough to shake (capacity ≤ 5 gallons) as follows:** Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank, or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times.

**Pressure rinse as follows:** Empty the remaining contents into application equipment or mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank, or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container and rinse at about 40 PSI for at least 30 seconds. Drain for 10 seconds after the flow begins to drip.

### In Case of Emergency

In case of large-scale spillage regarding this product, call:

- CHEMTREC 1-800-424-9300
- BASF Corporation 1-800-832-HELP (4357)

In case of medical emergency regarding this product, call:

- Your local doctor for immediate treatment
- Your local poison control center (hospital)
- BASF Corporation 1-800-832-HELP (4357)

## Steps to be taken in case material is released or spilled:

- In case of spill on floor or paved surfaces, mop and remove to chemical waste storage area until proper disposal can be made if product cannot be used according to label.
- Dike and contain the spill with inert material (sand, earth, etc.) and transfer liquid and solid diking material to separate containers for disposal.
- Remove contaminated clothing and wash affected skin areas with soap and water.
- Wash clothing before reuse.
- Keep the spill out of all sewers and open bodies of water.

---

## Product Information

---

This product contains two components in separate containers; **Component A** and **Component B**.

**Component A** contains bacteria that colonize germinating seeds and inhibit seed pathogens such as *Alternaria* spp. The same bacteria then colonize the developing root systems of plants and suppress disease organisms that attack such root systems (e.g., *Fusarium* spp., *Rhizoctonia* spp., and under some conditions, *Pythium* spp.). As root systems develop, the bacteria grow with the roots, extending the protection throughout the growing season. Because of this biological protection, vigorous root systems are established by plants, which often results in improved nutrient uptake, more uniform stands, and greater yields.

**Component B** contains an emulsifiable concentrate (EC) with the active ingredient pyraclostrobin. Pyraclostrobin is a member of the **strobilurin class of chemistry** and is derived from a natural antifungal substance. Preventive applications optimize disease control, resulting in improved plant health. The increase in plant health comes from the combined effect of disease control (including fungal diseases listed in **Table 1. Rates and Diseases Controlled**), improved growth efficiency and improved stress tolerance. Overall increased plant health may result in an improvement in crop growth and crop quality as well as increased crop yields.

### Label statement required by the State of Oregon

Information regarding the contents and levels of metals in this product is available on the Internet at <http://www.aapfco.org/metals.htm>.

Because of its high specific activity, **Component B** has good residual activity against target fungi.

### Modes of Action

*Bacillus amyloliquefaciens* Strain MBI 600, the active ingredient of **Component A**, belongs to the group of microbial disrupters of pathogen cell membranes classified by the U.S. EPA and Canada PMRA as microbial (*Bacillus* spp.) or target site of action **Group 44** fungicides.

Pyraclostrobin, the active ingredient of **Component B**, belongs to the group of respiration inhibitors classified by the U.S. EPA and Canada PMRA as Quinone Outside Inhibitors (QoI) or target site of action **Group 11** fungicides.

## Resistance Management Recommendations

**Xanthion® In-furrow fungicide** is effective against pathogens resistant to fungicides with modes of action different from those of QoI fungicides (target site **Group 11**), such as dicarboximides, sterol inhibitors, benzimidazoles, or phenylamides.

Fungal isolates resistant to **Group 11** fungicides, such as pyraclostrobin, azoxystrobin, fluoxastrobin, trifloxystrobin, and kresoxim-methyl, may eventually dominate the fungal population if **Group 11** fungicides are used predominantly and repeatedly in the same field in successive years as the primary method of control for the targeted pathogen species. This may result in reduction of disease control by **Component B** or other **Group 11** fungicides.

### Resistance Management Advisory

The following recommendations may be considered to delay the development of fungicide resistance:

1. **Tank mixtures** - **Xanthion** provides more effective resistance management of most of its target pathogens, because it is a premix of two fungicides with different modes of action. If **Xanthion** is used in tank mixtures with fungicides from different target site of action groups that are registered/permitted for the same use and that are effective against the pathogens of concern, use at least the minimum labeled rates of each fungicide in the tank mix.
2. **IPM** - Integrate **Xanthion** into an overall disease and pest management program. Cultural practices known to reduce disease development should be followed. Consult your local extension specialist, certified crop advisor and/or BASF representative for additional IPM strategies established for your area.
3. **Monitoring** - Monitor efficacy of all fungicides used in the disease management program against the targeted pathogen and record other factors that may influence fungicide performance and/or disease development. If a **Group 11** target-site fungicide, appears to be less effective against a pathogen that it previously controlled or suppressed, contact a BASF representative, local extension specialist, or certified crop advisor for further investigation.

---

## Application Instructions

---

For all crops identified in **Table 1** with the exception of dried shelled peas and beans and peanuts, use 0.6 to 2.4 fl ozs of **Component A** and 3.0 to 12.0 fl ozs of **Component B** per acre.

- For dried shelled peas and beans, use 0.6 to 1.8 fl ozs of **Component A** and 3.0 to 9.0 fl ozs of **Component B** per acre.
- For peanuts, use 0.6 to 1.2 fl ozs of **Component A** and 3.0 to 6.0 fl ozs of **Component B** per acre.

For all crops maintain 1:5 ratio of **Component A** to **Component B**. Rate per 1000 row feet is dependent on the crop row spacing. Refer to **Table 2**, **Table 3**, and **Table 4**. for additional in-furrow application instructions.

Apply at planting as an in-furrow application by directing the spray into the furrow before the seed is covered. Use a minimum volume application of 2.5 gallons of water or liquid fertilizer carrier per acre.

Refer to the **Mixing Instructions** section when mixing this product in water without any other tank mix partners.

## Mixing Instructions

1. Carrier (**water**) - Agitate a thoroughly clean sprayer tank three-quarters full of clean water.
2. **Agitation** - Maintain constant agitation throughout mixing and application.
3. **Inductor** - If an inductor is used, rinse it thoroughly after each component has been added.
4. **Component A** (contains *Bacillus amyloliquefaciens*)
5. **Component B** (contains pyraclostrobin)
6. **Remaining quantity of water**

**DO NOT** store mixed slurries for longer than 48 hours.

## Mixing Instructions for Using Liquid Fertilizer as a Carrier

When liquid fertilizer is used as the carrier, **Xanthion**<sup>®</sup> **In-furrow fungicide** quickly falls out of suspension. The recirculation rate in fertilizer tank is not frequent enough to maintain suspension. Therefore, **Xanthion** must be applied via a direct injection system, such as a Dosatron<sup>®</sup> unit with a recirculation pump on the tank. Adding other products into the direct injection unit tank could result in application error.

Once **Component A** is added to direct injection unit tank, turn on the recirculation and add **Component B**. Keep agitation running until unit is emptied. If stopped or rained out (have to shut off agitation), restart recirculation pump and run for at least five minutes until in suspension prior to resuming planting.

**DO NOT** store mixed slurries for longer than 48 hours.

When applying **Xanthion** with any other in-furrow product, observe the most restrictive labeling limitations and precautions of all products used in mixtures. **DO NOT** apply **Xanthion** with any other in-furrow product that bears a label prohibition against such mixing.

## Cleaning Spray Equipment

Spray equipment must be cleaned thoroughly before and after applying this product, particularly if a product with the potential to injure crops was used prior to **Xanthion**.

---

## Additives Information

---

**Xanthion** can be applied with most recommended fungicides, insecticides, herbicides, liquid fertilizers, biological control products, adjuvants, and additives. All varieties and cultivars have not been tested with possible tank mix combinations. Local conditions can also influence crop tolerance and may not match those under which BASF has conducted testing. BASF has not tested all possible combinations and rates of additives or adjuvants. Physical

incompatibility, reduced disease control, or crop injury may result from mixing **Xanthion** with other products. Always follow the most restrictive label.

Before mixing a new combination of products or additives in the spray tank or applying with other products or additives that are in the liquid fertilizer tank, perform a compatibility (jar) test.

## Compatibility (Jar) Test

- Begin with a quart-sized jar. Add products in the same order as listed in the **Mixing Order for Tank Mix Partners** section. Start with 3.5 cups of water (or liquid fertilizer) from the intended source at the source temperature. For each dry product, add 2 tsp per pound of product per acre. For each liquid product, add 1 tsp per pint of product per acre.
- Cap the jar and invert 10 cycles between component additions.
- When the components have all been added to the jar, let the solution stand for 15 minutes.
- Evaluate the solution for uniformity and stability. The spray solution should not have free oil on the surface, fine particles that precipitate to the bottom or thick (clabbered) texture. **DO NOT** use any spray solution that could clog spray nozzles.

## Mixing Order for Tank Mix Partners

- Carrier (**water**)
- Wettable granules (dry flowables)
- Wettable powders
- **Component A** (contains *Bacillus amyloliquefaciens*)
- Aqueous suspension concentrates
- Solutions
- **Component B** (contains pyraclostrobin)
- Emulsifiable concentrates
- Adjuvants

Refer to the **Mixing Instructions for Using Liquid Fertilizer as a Carrier** section when mixing this product in liquid fertilizers with other products.

---

## Restrictions and Limitations

---

- **DO NOT** exceed the maximum product rate per acre per calendar year:
  - 2.4 fl ozs/A **Component A** (except dried shelled peas and beans 1.8 fl ozs/A and peanuts 1.2 fl ozs/A)
  - 12.0 fl ozs/A **Component B** (except dried shelled peas and beans 9.0 fl ozs/A and peanuts 6.0 fl ozs/A)
- **DO NOT** exceed the maximum product rate per acre per calendar year of pyraclostrobin including in-furrow and foliar applications.
  - For corn (all types) and potato, **DO NOT** exceed 1.18 lbs ai of pyraclostrobin. The in-furrow application of **Component B** in this product uses 0.049 to 0.196 lb ai of pyraclostrobin in corn and potato.
  - For cotton, **DO NOT** exceed 0.58 lb ai of pyraclostrobin. The in-furrow application of **Component B** in this product uses 0.049 to 0.196 lb ai of pyraclostrobin in cotton.
  - For dried shelled peas and beans, **DO NOT** exceed 0.29 lb ai of pyraclostrobin. The in-furrow application of **Component B** in this product uses 0.049 to 0.147 lb ai of pyraclostrobin in dried shelled peas and beans.
  - For peanut, **DO NOT** exceed 0.73 lb ai of pyraclostrobin. The in-furrow application of **Component B** in this product uses 0.049 to 0.098 lb ai of pyraclostrobin in peanut.
  - For soybean and sunflower, **DO NOT** exceed 0.39 lb ai of pyraclostrobin. The in-furrow application of **Component B** in this product uses 0.049 to 0.196 lb ai of pyraclostrobin in soybean and sunflower.
  - For sugar beet, **DO NOT** exceed 0.78 lb ai of pyraclostrobin. The in-furrow application of **Component B** in this product uses 0.049 to 0.196 lb ai of pyraclostrobin in sugar beet.
- **Crop Rotation Restriction** - Crops listed on the **Xanthion® In-furrow fungicide, Cabrio® EG fungicide, Headline® fungicide, and Pristine® fungicide** labels may be planted immediately following the last application. For all other crops, **DO NOT** plant sooner than 14 days after the last application.

**Table 1. Rates and Diseases Controlled**

Crop	Soilborne/Seedling Diseases	Product Use Rate per Application (fl ozs product per Acre)
<b>Corn (all types)</b>	Fusarium seed rot, seedling blight ( <i>Fusarium</i> spp.)	0.6 to 2.4 <b>Component A</b>
<b>Cotton</b>		
<b>Potato</b>	Rhizoctonia seed and seedling rot ( <i>Rhizoctonia solani</i> )	3.0 to 12.0 <b>Component B</b>
<b>Soybean</b>	<b>Suppression Only</b>	
<b>Sugar Beet (roots and tops)</b>	Pythium damping off ( <i>Pythium</i> spp.)	
<b>Sunflower</b>		
<b>Dried Shelled Peas and Beans (except soybean)</b> Broad bean Chickpea Guar Lablab bean Lentil Pigeon pea <b>Lupinus spp.</b> Grain lupin Sweet lupin White lupin <b>Phaseolus spp.</b> Field bean Kidney bean Lima bean Navy bean Pink bean Pinto bean Tepary bean <b>Vigna spp.</b> Adzuki bean Black-eyed pea Catjang Cowpea Crowder pea Moth bean Mung bean Rice bean Southern pea Urd bean <b>Pisum spp.</b> Field pea		0.6 to 1.8 <b>Component A</b>  3.0 to 9.0 <b>Component B</b>
<b>Peanut</b>		0.6 to 1.2 <b>Component A</b>  3.0 to 6.0 <b>Component B</b>

At maximum rate, the entire case of **Xanthion® In-furrow fungicide** will treat 53 acres for all crops identified in **Table 1** except dried shelled peas and beans (will treat 71 acres) and peanuts (will treat 106 acres). **DO NOT** apply to crops using a ratio other than 1:5 of **Component A** and **Component B** on a per acre basis.

**Table 2. In-furrow Rate Calculation Table for Corn (all types), Cotton, Potato, Soybean, Sugar Beet, and Sunflower**

Rate per Acre* (fl ozs)	Rate per 1000 row feet (fl ozs)									
	7-inch rows	15-inch rows	20-inch rows	22-inch rows	30-inch rows	32-inch rows	34-inch rows	36-inch rows	38-inch rows	40-inch rows
<b>Component A</b> 0.6	0.008	0.017	0.023	0.025	0.034	0.037	0.039	0.041	0.044	0.046
<b>Component B</b> 3.0	0.040	0.086	0.115	0.126	0.172	0.184	0.195	0.207	0.218	0.230
<b>Component A</b> 1.2	0.016	0.034	0.046	0.051	0.069	0.074	0.078	0.083	0.087	0.092
<b>Component B</b> 6.0	0.080	0.172	0.230	0.253	0.344	0.368	0.390	0.413	0.436	0.459
<b>Component A</b> 1.8	0.024	0.052	0.069	0.076	0.103	0.110	0.117	0.124	0.131	0.138
<b>Component B</b> 9.0	0.121	0.258	0.344	0.379	0.517	0.552	0.585	0.620	0.654	0.689
<b>Component A</b> 2.4	0.032	0.069	0.092	0.101	0.138	0.147	0.156	0.165	0.174	0.184
<b>Component B</b> 12.0	0.161	0.344	0.459	0.505	0.689	0.736	0.781	0.826	0.872	0.918

If other row spacing is used, maintain the rates of **Component A** (0.6 to 2.4 fl ozs/A) and **Component B** (3.0 to 12.0 fl ozs/A) at a 1:5 ratio (A:B).

\* In-furrow rate calculation and row spacing conversion for **Xanthion® In-furrow fungicide**.

To determine fl ozs/1000 row feet:

$$\frac{\text{total fl ozs of product/A}}{\text{row feet per acre based on row spacing}} \times 1000 \text{ row ft} = \frac{\text{fl ozs of product}}{1000 \text{ row ft}}$$

Row spacing conversion:

7 inches = 74,682 row ft; 15 inches = 34,848 row ft;  
 20 inches = 26,136 row ft; 22 inches = 23,760 row ft;  
 30 inches = 17,424 row ft; 32 inches = 16,315 row ft;  
 34 inches = 15,374 row ft; 36 inches = 14,520 row ft;  
 38 inches = 13,754 row ft; 40 inches = 13,068 row ft



**Table 3. In-furrow Rate Calculation Table for Dried Shelled Peas and Beans**

Rate per Acre* (fl ozs)	Rate per 1000 row feet (fl ozs)									
	7-inch rows	15-inch rows	20-inch rows	22-inch rows	30-inch rows	32-inch rows	34-inch rows	36-inch rows	38-inch rows	40-inch rows
<b>Component A</b> 0.6	0.008	0.017	0.023	0.025	0.034	0.037	0.039	0.041	0.044	0.046
<b>Component B</b> 3.0	0.040	0.086	0.115	0.126	0.172	0.184	0.195	0.207	0.218	0.230
<b>Component A</b> 1.2	0.016	0.034	0.046	0.051	0.069	0.074	0.078	0.083	0.087	0.092
<b>Component B</b> 6.0	0.080	0.172	0.230	0.253	0.344	0.368	0.390	0.413	0.436	0.459
<b>Component A</b> 1.8	0.024	0.052	0.069	0.076	0.103	0.110	0.117	0.124	0.131	0.138
<b>Component B</b> 9.0	0.121	0.258	0.344	0.379	0.517	0.552	0.585	0.620	0.654	0.689

If other row spacing is used, maintain the rates of **Component A** (0.6 to 1.8 fl ozs/A) and **Component B** (3.0 to 9.0 fl ozs/A) at a 1:5 ratio (A:B).

\* In-furrow rate calculation and row spacing conversion for **Xanthion® In-furrow fungicide**.

To determine fl ozs/1000 row feet:

$$\frac{\text{total fl ozs of product/A}}{\text{row feet per acre based on row spacing}} \times 1000 \text{ row ft} = \frac{\text{fl ozs of product}}{1000 \text{ row ft}}$$

Row spacing conversion:

7 inches = 74,682 row ft; 15 inches = 34,848 row ft;  
 20 inches = 26,136 row ft; 22 inches = 23,760 row ft;  
 30 inches = 17,424 row ft; 32 inches = 16,315 row ft;  
 34 inches = 15,374 row ft; 36 inches = 14,520 row ft;  
 38 inches = 13,754 row ft; 40 inches = 13,068 row ft

**Table 4. In-furrow Rate Calculation Table for Peanut**

Rate per Acre* (fl ozs)	Rate per 1000 row feet (fl ozs)									
	7-inch rows	15-inch rows	20-inch rows	22-inch rows	30-inch rows	32-inch rows	34-inch rows	36-inch rows	38-inch rows	40-inch rows
<b>Component A</b> 0.6	0.008	0.017	0.023	0.025	0.034	0.037	0.039	0.041	0.044	0.046
<b>Component B</b> 3.0	0.040	0.086	0.115	0.126	0.172	0.184	0.195	0.207	0.218	0.230
<b>Component A</b> 1.2	0.016	0.034	0.046	0.051	0.069	0.074	0.078	0.083	0.087	0.092
<b>Component B</b> 6.0	0.080	0.172	0.230	0.253	0.344	0.368	0.390	0.413	0.436	0.459

If other row spacing is used, maintain the rates of **Component A** (0.6 to 1.2 fl ozs/A) and **Component B** (3.0 to 6.0 fl ozs/A) at a 1:5 ratio (A:B).

\* In-furrow rate calculation and row spacing conversion for **Xanthion**.

To determine fl ozs/1000 row feet:

$$\frac{\text{total fl ozs of product/A}}{\text{row feet per acre based on row spacing}} \times 1000 \text{ row ft} = \frac{\text{fl ozs of product}}{1000 \text{ row ft}}$$

Row spacing conversion:

7 inches = 74,682 row ft; 15 inches = 34,848 row ft;  
 20 inches = 26,136 row ft; 22 inches = 23,760 row ft;  
 30 inches = 17,424 row ft; 32 inches = 16,315 row ft;  
 34 inches = 15,374 row ft; 36 inches = 14,520 row ft;  
 38 inches = 13,754 row ft; 40 inches = 13,068 row ft

## Conditions of Sale and Warranty

The **Directions For Use** of this product reflect the opinion of experts based on field use and tests. The directions are believed to be reliable and must be followed carefully. However, it is impossible to eliminate all risks inherently associated with the use of this product. Crop injury, ineffectiveness or other unintended consequences may result because of such factors as weather conditions, presence of other materials, or use of the product in a manner inconsistent with its labeling, all of which are beyond the control of BASF CORPORATION ("BASF") or the Seller. To the extent consistent with applicable law, all such risks shall be assumed by the Buyer.

BASF warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes referred to in the **Directions For Use**, subject to the inherent risks, referred to above.

**TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, BASF MAKES NO OTHER EXPRESS OR IMPLIED WARRANTY OF FITNESS OR MERCHANTABILITY OR ANY OTHER EXPRESS OR IMPLIED WARRANTY.**

**TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, BUYER'S EXCLUSIVE REMEDY AND BASF'S EXCLUSIVE LIABILITY, WHETHER IN CONTRACT, TORT, NEGLIGENCE, STRICT LIABILITY, OR OTHERWISE, SHALL BE LIMITED TO REPAYMENT OF THE PURCHASE PRICE OF THE PRODUCT.**

**TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, BASF AND THE SELLER DISCLAIM ANY LIABILITY FOR CONSEQUENTIAL, EXEMPLARY, SPECIAL OR INDIRECT DAMAGES RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT.**

BASF and the Seller offer this product, and the Buyer and User accept it, subject to the foregoing **Conditions of Sale and Warranty** which may be varied only by agreement in writing signed by a duly authorized representative of BASF.

1108

***Cabrio, Headline, Pristine, and Xanthion** are registered trademarks of BASF.*

***Dosatron** is a registered trademark of Dosatron International, Inc.*

© 2017 BASF Corporation  
All rights reserved.

007969-00368.20161101d.**NVA 2014-04-488-0306**  
Supersedes: NVA 2014-04-488-0201

BASF Corporation  
26 Davis Drive  
Research Triangle Park, NC 27709



We create chemistry



We create chemistry

# Component A of Xanthion® In-furrow fungicide

## EPA Reg. No. 7969-368

For soilborne/seedling disease control and plant health using in-furrow applications to corn (all types), cotton, dried shelled peas and beans, peanut, potato, soybean, sugar beet, and sunflower

<b>Active Ingredient*</b> : (Component A) Bacillus amyloliquefaciens, strain MBI 600**	6.12%
<b>Other Ingredients</b> :	93.88%
<b>Total</b> :	100.00%

\* Contains not less than 2.2 x 10<sup>10</sup> viable spores per mL  
\*\* Formerly named *Bacillus subtilis* strain MBI 600

EPA Est. No.

### KEEP OUT OF REACH OF CHILDREN

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle. (If you do not understand the label, find someone to explain it to you in detail.)

**Precautionary Statements. 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. See leaflet for complete **Environmental Hazards. FIRST AID: HOTLINE 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 BASF Corporation for emergency medical treatment information: 1-800-832-HELP (4357).

#### 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. As soon as possible, wash thoroughly and change into clean clothing.

**Directions For Use:** It is a violation of federal law to use this product in a manner inconsistent with its labeling. **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 agency responsible for pesticide regulation.

**STORAGE AND DISPOSAL: DO NOT** contaminate water, food, or feed by storage or disposal. **Pesticide Storage:** Ensure container closures are tight. Store in a cool, dry place. **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 disposal 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.** Triple rinse container (or equivalent) promptly after emptying. See leaflet for complete container handling directions including triple rinsing instructions.

See leaflet for complete **First Aid, Precautionary Statements, Directions For Use, Conditions of Sale and Warranty,** and state-specific crop and/or use site restrictions.

**In case of an emergency endangering life or property involving this product, call day or night 1-800-832-HELP (4357).**

**Not for individual sale or use.**

**Shake Well Before Using**

**Net Contents:** \_\_\_\_\_ (Component A)

BASF Corporation  
26 Davis Drive, Research Triangle Park, NC 27709



We create chemistry

# Component B of Xanthion® In-furrow fungicide

## EPA Reg. No. 7969-368

For soilborne/seedling disease control and plant health using in-furrow applications to corn (all types), cotton, dried shelled peas and beans, peanut, potato, soybean, sugar beet, and sunflower

<b>Active Ingredient*</b> : (Component B) pyraclostrobin: (carbamic acid, [2-[[[1-(4-chlorophenyl)-1H-pyrazol-3-yl]oxy]methyl]phenyl]methoxy-, methyl ester)	23.60%
<b>Other Ingredients**</b> :	76.40%
<b>Total</b> :	100.00%

\* Equivalent to 2.09 pounds of pyraclostrobin per gallon  
\*\* Contains petroleum distillates

EPA Est. No.

### KEEP OUT OF REACH OF CHILDREN

## WARNING/AVISO

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle. (If you do not understand the label, find someone to explain it to you in detail.)

**Precautionary Statements: Hazards to Humans and Domestic Animals. WARNING.** May be fatal if swallowed. Causes substantial but temporary eye injury. Causes skin irritation. Harmful if absorbed through skin. Avoid contact with eyes, skin or clothing. **Environmental Hazards:** This product may contaminate water through drift of spray in wind. This product has a potential for runoff for several months or more after application. Poorly draining soils and soils with shallow water tables are more prone to produce runoff that contains this product. A level, well-maintained vegetative buffer strip between areas to which this product is applied and surface water features such as ponds, streams, and springs will reduce the potential for contamination of water from rainfall runoff. Runoff of this product will be reduced by avoiding applications when rainfall is forecast to occur within 48 hours. Sound erosion control practices will reduce this product's contribution to surface water contamination. This pesticide is toxic to fish and aquatic invertebrates. Drift and runoff may be hazardous to aquatic organisms in water adjacent to treated areas. See leaflet for complete **Environmental Hazards and Groundwater Advisories. FIRST AID: If swallowed:** Call a poison control center or doctor immediately for treatment advice. **DO NOT** give any liquid to the person. **DO NOT** induce vomiting unless told to do so by a poison control center or doctor. **DO NOT** give anything by mouth to an unconscious person. **If on skin or clothing:** Take off contaminated clothing. Rinse skin immediately with plenty of water for 15 to 20 minutes. Call a poison control center or doctor for treatment advice. **If in eyes:** Hold eyes open and rinse slowly and gently with water for 15 to 20 minutes. Remove contact lenses, if present, after the first 5 minutes; then continue rinsing eyes. Call a poison control center or doctor for treatment advice. **If inhaled:** Move person to fresh air. If person is not breathing, call 911 or an ambulance; then give artificial respiration, preferably mouth to mouth if possible. Call a poison control center or doctor for further treatment advice. **Note to Physician: Probable mucosal damage may contraindicate the use of gastric lavage. HOTLINE 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 BASF Corporation for emergency medical treatment information: 1-800-832-HELP (4357).

#### 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. As soon as possible, wash thoroughly and change into clean clothing.

**Directions For Use:** It is a violation of federal law to use this product in a manner inconsistent with its labeling. **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 agency responsible for pesticide regulation.

**STORAGE AND DISPOSAL: DO NOT** contaminate water, food, or feed by storage or disposal. **Pesticide Storage:** Store in original containers only. Keep containers closed when not in use. **DO NOT** store near food or feed. **Pesticide Disposal:** Wastes resulting from using this product may be disposed of on-site or at an approved waste disposal facility. If these wastes cannot be disposed of according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representatives at the nearest EPA Regional Office for guidance. **Container Handling: Nonrefillable Container. DO NOT reuse or refill this container.** Triple rinse or pressure rinse container (or equivalent) promptly after emptying; then offer for recycling, if available, or reconditioning, if appropriate, or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures approved by state and local authorities. See leaflet for complete container handling directions including triple rinsing and pressure rinsing instructions.

See leaflet for complete **First Aid, Precautionary Statements, Directions For Use, Conditions of Sale and Warranty,** and state-specific crop and/or use site restrictions.

**In case of an emergency endangering life or property involving this product, call day or night 1-800-832-HELP (4357).**

**Not for individual sale or use.**

**Net Contents:** \_\_\_\_\_ (Component B)

BASF Corporation  
26 Davis Drive, Research Triangle Park, NC 27709