Container Label

GROUP BM 02 FUNGICIDE

# FORETRYX<sup>™</sup> Biofungicide

# **Live Organism**

For suppression or partial suppression of labelled soil-borne diseases on field and greenhouse fruiting vegetables, squash, lettuce, field and greenhouse strawberries, greenhouse ornamentals and *Cannabis* produced commercially indoors.

### **COMMERCIAL**

Wettable Powder

ACTIVE INGREDIENTS: Contains a minimum of 5 x 10<sup>6</sup> colony forming units (CFU) of

Trichoderma asperellum strain ICC 012 and 5 x 106 CFU of

Trichoderma gamsii strain ICC 080 per gram.

#### **POTENTIAL SENSITIZER**

READ THE ATTACHED LABEL BEFORE USING KEEP OUT OF REACH OF CHILDREN

REGISTRATION NUMBER: 34575 PEST CONTROL PRODUCTS ACT

NET CONTENTS: 0.5 – 5 kg

Gowan Company, L.L.C. P.O. Box 5569 Yuma, AZ 85366-5569

Product Information: 1-800-960-4318

Lot No.

Date of Manufacture:

#### **PRECAUTIONS**

#### **KEEP OUT OF REACH OF CHILDREN**

Wash thoroughly with soap and water after handling. Remove contaminated clothing and wash before reuse. Avoid contact with skin, eyes, or clothing. Avoid inhaling/breathing spray mist or dust. May irritate eyes. May cause sensitization.

Apply only to agricultural crops when the potential for drift to areas of human habitation or areas of human activity such as houses, cottages, schools and recreational areas is minimal. Take into consideration wind speed, wind direction, temperature inversions, application equipment and sprayer settings.

# PERSONAL PROTECTIVE EQUIPMENT (PPE)

Wear a long-sleeved shirt, long pants, waterproof gloves, socks and shoes and a NIOSH-approved particulate filtering facepiece respirator with any N, R or P filter when handling, mixing/loading or applying the product and during all clean-up/repair activities. Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

#### **FIRST AID**

**If swallowed:** Call a poison control centre or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by a poison control centre 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 15-20 minutes. Call a poison control centre 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 by mouth-to-mouth, if possible. Call a poison control centre or doctor for further treatment advice.

**If in eyes:** Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control centre or doctor for treatment advice.

Take container, label or product name and Pest Control Product Registration Number with you when seeking medical attention.

### TOXICOLOGICAL INFORMATION

Treat symptomatically.

For Chemical Emergency Spill, Leak, Fire, Exposure, or Accident Call CHEMTREC Day or Night: 1-800-424-9300

#### **STORAGE**

Keep pesticide in original container. Store in cool, dry, and well ventilated place. Store this product away from food or feed. Do not store diluted spray. Foretryx should be used within 12 months from the date of manufacture when stored below 25°C.



# **DISPOSAL**

Do not reuse this container for any purpose. This is a recyclable container and is to be disposed of at a container collection site. Contact your local distributor/dealer or municipality for the location of the nearest collection site. Before taking the container to the collection site:

- 1. Triple- or pressure-rinse the empty container. Add the rinsings to the spray mixture in the tank.
- 2. Make the empty, rinsed container unsuitable for further use.

If there is no container collection site in your area, dispose of the container in accordance with provincial requirements.

#### For Returnable Containers:

Do not reuse this container for any purpose. For disposal, this empty container may be returned to the point of purchase (distributor/dealer).

#### For Returnable-Refillable Containers:

For disposal, this container may be returned to the point of purchase (distributor/dealer). It must be refilled by the distributor/dealer with the same product. Do not reuse this container for any other purpose.

For information on disposal of unused, unwanted product, contact the manufacturer or the provincial regulatory agency. Contact the manufacturer and the provincial regulatory agency in case of a spill, and for clean-up of spills.

#### **NOTICE TO USER**

This pest control product is to be used only in accordance with the directions on the label. It is an offence under the **Pest Control Products Act** to use this product in a way that is inconsistent with the directions on the label.



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#### **ENVIRONMENTAL PRECAUTIONS**

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 cleaning equipment or disposing of equipment wash waters or rinsate. To reduce runoff from treated areas into aquatic habitats avoid application to areas with a moderate to steep slope, compacted soil, or clay.



Avoid application when heavy rain is forecast. Contamination of aquatic areas as a result of runoff may be reduced by including a vegetative filter strip between the treated area and the edge of the water body. DO NOT allow effluent or runoff from greenhouses containing this product to enter lakes, streams, ponds or other waters.

#### **RESTRICTIONS AND LIMITATIONS**

DO NOT apply using aerial application equipment. Apply **FORETRYX** when the soil temperature is at least 10°C.

Apply **FORETRYX** to moist soil or growth media, but not to saturated or waterlogged soil. Soil or growth media must remain moist after application of **FORETRYX** to provide adequate control of soilborne fungal diseases listed on this label.

**FORETRYX** may be applied to sterilized or fumigated soil, but must be applied after the sterilizing agent or fumigant has dissipated.

**FORETRYX** has no curative effect and therefore is not effective against plants infected with disease at the time of application.

In case of applications on or to dry soils, pre-irrigate until soil is moist. Then irrigate again immediately after application.

#### **DIRECTIONS FOR USE**

As this product is not registered for the control of pests in aquatic systems, **DO NOT** use to control aquatic pests.

**DO NOT** contaminate irrigation or drinking water supplies or aquatic habitats by cleaning of equipment or disposal of wastes.

**Preharvest interval (PHI)**: **FORETRYX** can be used up to and including the day of harvest. PHI=0 days.

#### PRODUCT INFORMATION

**FORETRYX** is a biofungicide containing naturally occurring and selected strains of antagonistic fungi, *Trichoderma asperellum* strain ICC 012 and *Trichoderma gamsii* strain ICC 080.

**FORETRYX** prevents disease in the root system and collar region of susceptible crops by the following phytopathogenic fungi: *Phytophthora* spp., *Sclerotinia sclerotiorum*, *Sclerotinia minor*, *Verticillium dahliae*. After application, *Trichoderma* species colonize the soil and roots of the host plant and compete with plant-pathogenic fungi for space and nutrients. Moreover, the antagonists also attack the cell walls of pathogens with enzymes.

It is essential to apply **FORETRYX** before colonization of fungal pathogens occurs.

For greenhouse uses, **FORETRYX** should be applied up to 7 days before planting to initiate soil colonization before the crop is planted and reapplied at planting. **FORETRYX** should then be reapplied at least once to augment the *Trichoderma* colony to protect new growth.

**FORETRYX** may be applied as needed throughout the greenhouse crop production cycle in order to maintain a high colonization of the root zone.



**FORETRYX** may be applied through fertigation systems in combination with the most common fertilizers.

**FORETRYX** may be used on field and greenhouse fruiting vegetables (including peppers and tomatoes), squash, field and greenhouse strawberries, lettuce, greenhouse ornamentals and *cannabis* produced commercially indoors.

# **SPRAYER PREPARATION**

Prepare a suspension at 12 to 24 hours before the application to allow for germination. Combine 0.45 kg of **FORETRYX** for every 4.7 litres of water, and mix at approximately 6 hour intervals in order to promote the germination of conidia and obtain faster soil colonization. Subsequently, dilute the suspension in the amount of water that is stated in the Labeled Crops and Use Rates table. Constant agitation during application will ensure **FORETRYX** remains in suspension.

#### **FORETRYX TANK MIXTURES**

**FORETRYX** is not compatible with the following fungicides: imazalil, dichloran, mancozeb, propiconazole, tebuconazole, thiram, and triflumizole. Do not tank mix with, or apply **FORETRYX** within 3 days before or after use of these products.

Tank mixture compatibility is relative to both physical formulation compatibility and biological - chemical compatibility.

## **Tank Mixture Compatibility Testing**

Before tank mixing **FORETRYX** with other pesticides or materials, it is recommended that a compatibility or jar test would be performed. In order to perform the compatibility test, the relative proportions of the materials being considered for tank mixture should be added to a clear quart jar. After addition to the jar, invert or shake the jar numerous times to ensure complete mixing then observe the jar for at least one-half hour. If precipitates (sludges, layers, flakes, balls, etc.) form, the tank mixture combination is not compatible and should not be used.

#### Order of Mixing

- 1. Fill the tank at least one-half full of water and begin agitation.
- 2. Add materials in the following order: **FORETRYX**, dry flowables (DF), wettable powders (WP), aqueous suspensions (AS), flowables (F), and liquids (L).
- 3. Allow each material to completely disperse before adding the next material.
- 4. While continuing agitation, fill the tank to three-fourths full.
- 5. Add any solution (S) formulations and surfactants.
- 6. Bring the tank to final volume.
- 7. Maintain agitation during the filling process and until the application is complete. If agitation and application are stopped, suspended materials may settle out to the bottom of the tank. It is very important to re-suspend all materials in the tank before applications are resumed. Sparger-type agitators are useful for these circumstances. Do not allow tank mixtures to remain in the spray tank overnight.

Refer to the companion pesticide label(s) for all applicable use directions, restrictions, and precautions. When applied as a tank-mix combination, read and observe all label directions, including rates, personal protective equipment, restrictions and precautions for each product



used in the tank-mix. Always use in accordance with the most restrictive label restrictions and precautions.

# **CROP SPECIFIC USE RATES AND RECOMMENDATIONS**

Greenhouse/Indoor Crop	Disease	Application instructions for Greenhouse/Indoor Crops		
		Application Type	Rate of Foretryx	Comments
Ornamentals	Partial suppression of:  Post-emergence damping off (Phytophthora spp.)  Suppression of:  Verticillium wilt (Verticillium dahliae)	Chemigation	2.8 kg product/ha	Apply FORETRYX through listed irrigation/chemigation systems up to 1 week prior to planting and immediately after planting or transplanting. FORETRYX may be applied every 14 to 21 days as long as the potential for disease development persists. Use the 14 day interval under higher disease pressure. See specific instructions under "Chemigation Applications"  Restricted Entry Interval (REI) for Drip Chemigation: Entry to the treated area is not restricted following application.
Fruiting vegetables (CG 8)*	Suppression of:  Post-emergence damping off (Phytophthora capsici)  Verticillium wilt (Verticillium dahliae)	Chemigation	2.8 kg product/ha	
Strawberries	Partial suppression of:  Post-emergence damping off (Phytophthora cactorum)  Suppression of:  Verticillium wilt (Verticillium	Chemigation	2.8 kg product/ha	



	dahliae)			
Cannabis	Partial suppression of:	Chemigation	2.8 kg product/ha	
	Post-emergence damping off ( <i>Phytophthora</i> spp.)			
	Suppression of:			
	Verticillium wilt (Verticillium dahliae)			

Field/Outdoor Crop	Disease	Application instructions for Field/Outdo		
		Application Type	Rate of Foretryx	Comments
Squash (summer and winter)	Suppression of:  Phytophthora blight ( <i>Phytophthora</i> spp.)	Diluted Broadcast spray application to the soil surface in a minimum of 100 L water per ha	2.8-5.6 kg product/ha	Apply once at sowing. If rainfall is not expected, follow the treatment with light irrigation of 1.5 - 3.2 mm of water per hectare. Thorough and uniform coverage of the soil surface is necessary. Immediate incorporation of the FORETRYX is necessary either by watering in using sufficient water to wet the upper 2.5 cm of soil or using light cultivation to incorporate the treatment into the seeding or rooting zone.  Restricted Entry Interval (REI) for
Fruiting vegetables (CG 8)*	Suppression of:  Post-emergence damping off (Phytophthora capsici)  Verticillium wilt (Verticillium dahliae)	Diluted broadcast spray application to the soil surface in a minimum of 100 L water per ha	2.8 kg product/ha	
Strawberries	Partial Suppression of:  Post-emergence damping off	Diluted broadcast spray application to the soil	2.8 kg product/ha	



	(Phytophthora cactorum)  Suppression of:  Verticillium wilt (Verticillium dahliae)	surface in a minimum of 100 L water per ha		Diluted Broadcast Spray: DO NOT enter or allow worker entry into treated areas for 4 hours or until sprays have settled, unless wearing waterproof gloves, long-sleeved shirt, long pants and socks with shoes.
Lettuce	Partial Suppression of:  Sclerotinia drop/white mould (Sclerotinia sclerotiorum, S. minor)	Diluted broadcast spray application to the soil surface in a minimum of 100 L water per ha	2.8-3.4 kg product/ha	

# \* Fruiting Vegetable (Crop Group 8) Crop List:

Eggplant, groundcherry, pepino, pepper (includes bell pepper, chili pepper, cooking pepper, pimento, sweet pepper), tomatillo, tomato

# **BROADCAST APPLICATIONS**

For broadcast applications, apply **FORETRYX** as a spray at a minimum volume of 100 L of water per hectare at planting. Thorough and uniform coverage of the soil surface is necessary. Immediate incorporation of the **FORETRYX** is necessary either by watering in using sufficient water to wet the upper 2.5 cm of soil or using light cultivation to incorporate the treatment into the seeding or rooting zone.

Use the higher application rates when the weather conditions are expected to be conducive for disease development, if the field has a history of disease development, or if minimum/low till programs are in place.

#### **CHEMIGATION APPLICATIONS**

**FORETRYX** should be applied to moderately moist soils using irrigation volumes (typically 0.64 to 1.27 cm (0.25 to 0.50 inches) of water delivered to the surface of the substrate) that do not cause runoff from the treated area. Agitation during the application process should be continuous and application volume constant in order to apply the specified application rate evenly to the treated area.

**FORETRYX** may be premixed in a supply tank with water when fertilizer or other allowed tank mixed agricultural chemicals are needed. Constant agitation is necessary.

Mix **FORETRYX** into at least 190 L of water while maintaining continuous agitation and inject through a 50 mesh screen (0.3 mm) into the irrigation line. Alternatively, a suspension may be formed using a smaller volume of water. This may be performed by combining 1 kg of **FORETRYX** for every 10 L of water and mixing thoroughly. Next, pour the suspension through a 50 mesh screen (0.3 mm) into the final volume of water for injection into the chemigation system.



Apply **FORETRYX** immediately and do not allow the product to remain for prolonged periods (i.e. overnight) in the chemigation system as settling of the suspension may occur.

Injection of the **FORETRYX** suspension should be performed only after the system has become fully pressurized with water (normally 30 to 60 minutes after start-up) to allow uniform distribution of the product over the target area.

After application, rinse the system with clean water for another 15 to 20 minutes to clear the irrigation lines and prevent fouling.

# Requirements for Chemigation

Apply **FORETRYX** only through drip (trickle) chemigation systems. Do not apply this product through any other type of irrigation system.

Crop injury or lack of effectiveness can result from non-uniform distribution of treated water.

If you have questions about calibration, you should contact the equipment manufacturers or other expert.

Do not connect an irrigation system (including greenhouse systems) used for pesticide application to a public water system unless the pesticide label-prescribed safety devices for public water systems are in place.

A person knowledgeable of the chemigation system and responsible for its operation or under the supervision of the responsible person, shall shut the system down and make necessary adjustments should the need arise.

# Requirements for Chemigation Systems Connected to Public Water Systems

Public water system means a system for the provision to the public of piped water for human consumption if such system has at least 15 service connections or regularly serves an average of at least 25 individuals daily at least 60 days out of the year.

Chemigation systems connected to public water systems must contain a functional, reduced-pressure zone (RPZ), back flow preventer or the functional equivalent in the water supply line upstream from the point of pesticide introduction. As an option to the RPZ, the water from the public water system should be discharged into a reservoir tank prior to pesticide introduction. There shall be a complete physical break (air gap) between the flow outlet end of the fill pipe and the top or overflow rim of the reservoir tank of at least twice the inside diameter of the fill pipe.

The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.

The pesticide injection pipeline must contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.

The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops, or in cases where there is no water pump, when the water pressure decreases to the point where pesticide distribution is adversely affected.

Systems must use a metering pump, such as a positive displacement injection pump (e.g., diaphragm pump), effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.



Remove scale, pesticide residues, and other foreign matter from the chemical supply tank and injector system and rinse with clean water before use. Failure to provide a clean tank, free of scale or residues may reduce effectiveness of this product.

# Requirements for Drip (Trickle) Chemigation

The system must contain a functional check valve, vacuum relief valve, and low pressure drain appropriately located on the irrigation pipeline to prevent water source contamination from back flow.

The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.

The pesticide injection pipeline must also contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.

The system must contain functional inter-locking controls to automatically shut off the pesticide injection pump when the water pump motor stops.

The irrigation line or water pump must include a functional pressure switch, which will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected.

Systems must use a metering pump, such as a positive displacement injection pump (e.g., diaphragm pump), effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.

#### **STORAGE**

Keep pesticide in original container. Store in cool, dry, and well ventilated place. Store this product away from food or feed. Do not store diluted spray. Foretryx should be used within 12 months from the date of manufacture when stored below 25°C.

#### DISPOSAL

Do not reuse this container for any purpose. This is a recyclable container and is to be disposed of at a container collection site. Contact your local distributor/dealer or municipality for the location of the nearest collection site. Before taking the container to the collection site:

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