OHP DISEASE SOLUTIONS®

GREENHOUSE & NURSERY PRODUCTION

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Alternaria

Alternaria on Poinsettia

Anthracnose

Anthracnose on Hydrangea

Bacterial Blight/Speck

Pseudomonas on Tomato

Botrytis

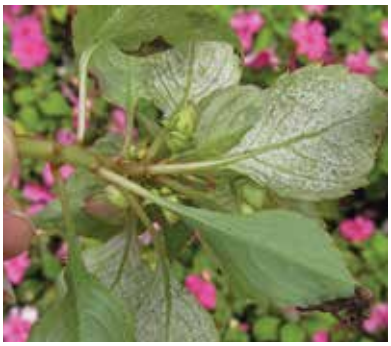
Botrytis Sporulation on Geranium

Cercospora

Cercospora on Ligustrum

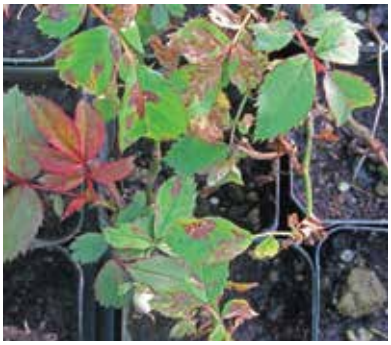
Downy Mildew

Downy Mildew on Basil



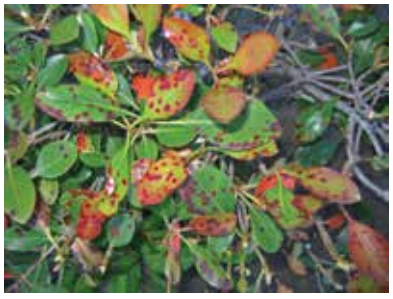
Downy Mildew on Impatiens

Downy Mildew on Snapdragon



Downy Mildew on Rose

Entomosporium



Entomosporium on Raphiolepis

Fusarium

Fusarium on Mum

Leaf Spots

Septoria on Rudbeckia

Phytophthora

Phytophthora on Lily

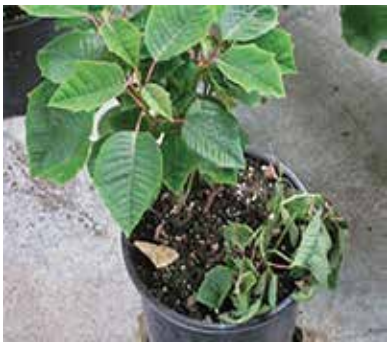
Phytophthora on Annual Vinca

Powdery Mildew

Powdery Mildew on Oregano

Powdery Mildew on Hydrangea Foliage

Pythium



Pythium on Poinsettia

Pythium on Pansy

Rust

Rust on Daylily

Rust and Anthracnose on Rose

Rhizoctonia

Rhizoctonia on Fern

Xanthomonas

Xanthomonas on Geranium

Xanthomonas on Ivy

Xanthomonas on Rosemary

RESISTANCE MANAGEMENT: Use the following chart to develop a resistance management strategy. ✓ = labeled

As with other pesticides, fungicides must be used in a program to avoid or delay resistance. Do not rely on products with the same mode of action. Rotation of products with different modes of action, and using product combinations with different modes of action are parts of a resistance management strategy. Be especially careful when using products

TRADE NAME	Areca®	Astun®	Grotto®	Kalmor®	OHP Chipco® 26019	OHP 6672®	Segway® O
CLASS	Phosphonate	SDHI	Inorganic	Inorganic	Dicarboximide	Benzimidazoles	Cyano-imidazole
MOA	P 07	7	M 01	M 01	2	1	21
PATHOGEN							
Alternaria			✓	✓	✓		
Anthracnose			✓	✓		✓	
Bacterial Blight/Speck	✓		✓	✓			
Black Spot			✓	✓		✓	
Botrytis		✓	✓	✓	✓	✓	
Botrytis Storage Rot				✓	✓	✓	
Bulb Rot / Crown Rot			✓	✓			
Cercospora Leaf Spot			✓	✓		✓	
Cylindrocladium					✓		
Downy Mildew	✓		✓	✓			✓
Entomosporium Leaf Spot				✓		✓	
Fusarium					✓	✓	
Leaf Spot			✓	✓	✓	✓	
Myrothecium Leaf Spot			✓			✓	
Ovulinia Flower Blight						✓	
Phyllosticta Leaf Spot			✓				
Phytophthora Root Rot	✓						✓
Phytophthora Aerial	✓		✓	✓			✓
Powdery Mildew			✓	✓		✓	
Pythium	✓						✓
Rhizoctonia			✓	✓	✓	✓	
Rust			✓	✓		✓	
Scab			✓	✓		✓	
Sclerotinia			✓			✓	
Septoria Leaf Spot			✓	✓		✓	
Thielaviopsis						✓	
Tip Blight			✓	✓		✓	

Read label directions and cautions before use.

considered to be high risk for resistance development. Most fungicides work more effectively to prevent disease from becoming established, rather than eradicating disease that is already present. Constant monitoring – and modification where possible – of environmental conditions and scouting crops for signs of disease symptoms are vital parts of effective fungicide use and resistance management.

Seido™	Terraclor® 400	Terraguard® SC	Terrazole® Liquid & 35% WP	Triact® 70	Triathlon® BA	TRADE NAME
Benzoylpyridine	Aromatic Hydrocarbons	Imidazole	Aromatic Hydrocarbons	Oil	Biopesticide	CLASS
50	14	3	14	NC	BM 02	MOA
						PATHOGEN
		✓		✓	✓	Alternaria
				✓	✓	Anthracnose
					✓	Bacterial Blight/Speck
				✓	✓	Black Spot
		✓		✓	✓	Botrytis
						Botrytis Storage Rot
	✓				✓	Bulb Rot / Crown Rot
					✓	Cercospora Leaf Spot
		✓				Cylindrocladium
				✓	✓	Downy Mildew
					✓	Entomosporium Leaf Spot
		✓			✓	Fusarium
		✓			✓	Leaf Spot
					✓	Myrothecium Leaf Spot
						Ovulinia Flower Blight
	✓					Phyllosticta Leaf Spot
			✓		✓	Phytophthora Root Rot
					✓	Phytophthora Aerial
✓		✓		✓	✓	Powdery Mildew
			✓		✓	Pythium
	✓	✓			✓	Rhizoctonia
		✓		✓	✓	Rust
		✓				Scab
	✓				✓	Sclerotinia
						Septoria Leaf Spot
		✓				Thielaviopsis
				✓		Tip Blight

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Plant Disease Management

To keep plants healthy and minimize plant problems, production systems and cultural practices must be in place to minimize environmental stress by providing plants with their basic requirements for growth and development in terms of quality and quantity of space, light, air, water and nutrients. Under intense crop production systems and under unfavorable weather conditions, protecting crops from plant diseases may require the application of fungicides, bactericides and other agricultural chemicals. Not all products work against all plant diseases; problem identification is critical in the selection of the right chemical solution.

Plant diseases may cause symptoms in all plant parts. Foliar diseases including leaf spots and blights are the most common and affect leaves and shoots. Diseases may also affect the vascular tissues of the plant, those responsible for water and nutrient uptake or the crown and the roots of the plants. Avoid foliar diseases by restricting overhead irrigation to the morning hours to allow leaves and shoots to dry; leaf wetness of 4 to 6 hours may be enough to allow infection by disease-causing microorganisms. Avoid crown and root diseases by allowing soil to dry between irrigation events and avoid over-fertilization. Preventive applications may be required when weather conditions are favorable for disease development in susceptible crops. Consult the table below for conditions that favor common plant diseases, when they typically occur during the year and what OHP products are effective against these diseases.

Major Disease Control

Disease Pathogen	Seasonal timing	Conditions	OHP Product Controls	
Bacterial Blight/Speck	summer	72-95 F high humidity over-irrigation	**Areca®** **Grotto®**	**Kalmor®** **Triathlon® BA**
Botrytis	year-round	38-77 F high humidity, cloudy poor air circulation	**Astun®** **Grotto®** **Kalmor®** **OHP 6672®**	**OHP Chipco® 26019** **Terraguard®** **Triact® 70** **Triathlon® BA**
Bulb rot/crown rot	year-round	infected bulbs or liners stress	**Grotto®** **Kalmor®**	**Terraclor® 400** **Triathlon® BA**
Downy mildew	year-round depending on plant	high humidity cloudy poor air circulation	**Areca®** **Grotto®** **Kalmor®**	**Segway® 0** **Triact® 70** **Triathlon® BA**
Fungal leaf spots	spring through fall	wet leaves moderate temperatures	**Grotto®** **Kalmor®** **OHP 6672®**	**OHP Chipco® 26019** **Terraguard® SC** **Triathlon® BA**
Powdery mildew	spring and fall	high humidity cool nights and warm days	**Grotto®** **Kalmor®** **OHP 6672®** **Seido™**	**Terraguard® SC** **Triathlon® BA** **Triact® 70**
Phyllosticta	spring to fall	moderate temperatures wounding stress	**Grotto®**	**Terraclor®**
Phytophthora	summer	wet soils high temperatures overgrown plants	**Areca®** **Segway® 0**	**Terrazole®** **Triathlon® BA**
Pythium	year-round	wet soils cool temperatures excess soluble salts	**Areca®** **Segway® 0**	**Terrazole®** **Triathlon® BA**
Rhizoctonia	summer	wet leaves high temperatures	**Grotto®** **Kalmor®** **OHP 6672®** **OHP Chipco® 26019**	**Terraclor®** **Terraguard® SC** **Triathlon® BA**
Rust	spring and fall	high humidity cool nights and warm days	**Grotto®** **Kalmor®** **OHP 6672®**	**Terraguard® SC** **Triathlon® BA** **Triact® 70**
Thielaviopsis (Black root rot)	year-round	temperature stress high pH	**OHP 6672®**	**Terraguard® SC**

OHP Disease Solutions®

DISEASE PROBLEM	CROP	OHP SOLUTIONS

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OHP QUICK REFERENCE

Fungicides Product Rate Guide

OHP Products	Rate per 100 gallons	Rate per 1 gallon
Areca®	1.25, 2.5, 5 pounds (567.5, 1135, 2270 g)	1¼ tsp, 2½ tsp, 5 tsp (5.7, 11.4, 22.7 g)
Astun®	10 to 17 fluid ounces (296 to 503 mL)	3 to 5 mL
Grotto®	0.5 to 2 gallons	3¾ tsp to 15 tsp (5 TBS) (19 mL to 76 mL)
Kalmor®	0.5, 1.0, 2 lbs. per acre	1 TBS to 1½ TBS per 1,000 sq ft
Kopa™ Insecticidal Soap	1% (1 gallon) to 2% (2 gallons)	3¾ tsp to 7½ tsp to 15 tsp (5 TBS) (19, 38, 76 mL)
OHP Chipco® 26019	1 to 2 pounds (454 to 908 g)	1⅓ tsp to 2⅔ tsp (4.5 to 9.1 g)
OHP 6672® 4.5 F	10.75 to 20 fluid ounces (319.1 to 593.8 mL)	⅗ tsp to 1⅕ tsp (3.2 to 5.9 mL)
OHP 6672® 50 WP (WSP)	8 to 16 ounces	NA
Segway® O	1.5 to 6 fluid ounces (44.5 to 178.1 mL)	⅛ tsp to ⅓ tsp (0.4 to 1.8 mL)
Seido™	4 to 5 fluid ounces	1.18 mL to 1.48 mL
Terraclor® 400	6 to 12 fluid ounces (178.1 to 356.3 mL)	⅜ tsp to ¾ tsp (1.8 to 3.6 mL)
Terraguard® SC	2 to 8 to 16 fluid ounces (59.4, 237.5, 475 mL)	⅛ tsp, ½ tsp, 1 tsp (0.6, 2.4, 4.8 mL)
Terrazole® L	2.5 to 7 fluid ounces (74.2 to 207.8 mL)	⅛ tsp to ⅜ tsp (0.7 to 2.1 mL)
Terrazole® 35% WP	3.5 to 10 ounces (99.3 to 283.8 g)	NA
Terrazole® L CA	3 to 4 fluid ounces (89.1 to 118.8 mL)	⅕ tsp to ¼ tsp (0.9 to 1.2 mL)
Triact® 70	0.5 gallon, 1 gallon, 2 gallons (1900, 3800, 7600 mL)	3¾ tsp to 7½ tsp to 15 tsp (5 TBS) (19, 38, 76 mL)
Triathlon® BA	0.5 quarts, 4 quarts, 6 quarts (475, 3800, 5700 mL)	1 tsp, 7⅔ tsp, 11⅕ tsp (4.8, 38, 57 mL)

Users should read the entire label for full information and application instructions.
If you have any questions contact your local OHP representative.

TBS = tablespoon tsp = teaspoon mL = milliliter g = grams 1 fl oz = 29.6 mL 1 tsp = 5 mL 1 TBS = 15 mL

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