

BETTER CONTROL Of Powdery Mildew And More

Cygnus® fungicide offers economical, effective control of powdery mildew, rusts, scab diseases and leaf spot diseases in greenhouse, retail nurseries, non-residential landscape ornamentals and nursery crops. In fact, it is one of the top performing fungicides for powdery mildew on the market. When used as directed, **Cygnus**:



- Delivers excellent, long-term protection from powdery mildew.
- Provides highly effective control of rust diseases, scab diseases and fungal leaf spots.
- Has demonstrated excellent crop safety. **Cygnus** can be applied to petunia, pansy and impatiens species, apples, crabapples and Yoshino cherries for control of foliar pathogens, as compared to trifloxystrobin and azoxystrobin where species-specific crop injury is an issue.
- Employs a unique uptake and transport method for kresoxim-methyl, the active ingredient in **Cygnus**, by combining Surface Systemic Activity™ and translaminar movement within the leaf tissue.
- Provides control of infecting fungi by inhibiting spore germination and surface mycelial growth on or just below the leaf surface. The antispore activity of **Cygnus** contributes to long residual activity.
- Can be applied as a spray or drench in protective or early curative applications.

Diseases Controlled

- Anthracnose on Dusty Miller
Colletotrichum spp.
- Carnation Rust
Puccinia dianthi
- Chrysanthemum Rust
Puccinia horiana
- Leaf Spot-Causing Fungi
Diplocarpon rosae, *Alternaria* spp.,
Didymellina spp., *Septoria* spp.,
Blumeriella jaapii, *Drepanopeziza* spp.,
Mycosphaerella spp., *Phyllosticta* spp.
- Ornamental Apple and Pear Scab
Venturia inaequalis, *Venturia pirina*
- Powdery Mildew Pathogens
Erysiphe, *Microsphaera*, *Oidium*,
Phyllactinia, *Podosphaera*, *Sphaerotheca*,
Uncinula
- Rose Rust
Phragmidium spp.
- Rose and Snapdragon Downy Mildew
Peronospora sparsa, *Peronospora*
antirrhini
- Snapdragon Rust
Puccinia antirrhini



Technical Brief

Description: **Cygnus** is a broad-spectrum, long-lasting fungicide for the control of several foliar pathogens on greenhouse and nursery crops.

Use Sites:

Ornamentals: Commercial greenhouses, shadehouses, lathhouses and outdoor container- or field-grown nurseries, retail nurseries and non-residential landscape areas

Formulation: 50% WG (Wettable Granule)

Packaging: 1 lb bottle (6 x 1 lb case)

Use Rates: 1.0 to 6.4 oz per 100 gals

Active Ingredient: Kresoxim-methyl

Chemical Family: Strobilurin

Mode of Action: Inhibits mitochondrial respiration at the cellular level.

EPA Target Site of Action: Group 11 fungicide

Behavior in Plant: Acts as a local penetrant with translaminar movement following foliar applications.

Control Symptoms: Inhibits spore germination, surface mycelia and sporulation.

Signal Word: Caution

REI: 12 hours

PPE: Long-sleeved shirt and long pants; chemical-resistant gloves; shoes and socks

Keys to Success: For best results, use **Cygnus** preventively when environmental conditions are favorable for disease development. Apply foliar spray solution to runoff. Thorough foliar coverage is important to ensure adequate plant protection. Use of organosilicone-based spray adjuvants in tank mixes with **Cygnus** carries a higher potential of injury on certain ornamentals. Use of non-organosilicone adjuvants may improve rust and powdery mildew control. **Cygnus** can be tank-mixed with other fungicides to broaden the spectrum of control or to limit disease resistance. Since the compatibility of **Cygnus** with all other pesticides has not been fully investigated, it is advisable to perform a compatibility test prior to mixing products together in a tank mix. Refer to specimen label for additional information.

Crop Phytotoxicity: **Cygnus** has shown excellent crop safety in research trials. The label lists a few plants that are intolerant to **Cygnus**: several sweet cherry cultivars and Asian pear 'Olympic.' Refer to product label for a complete list of tested plants. Users should conduct small-scale tests under local growing conditions prior to wide-scale use.

Research Brief

Partial data shown.

EFFICACY ON ALTERNARIA LEAF SPOT OF IMPATIENS Florida

Fungicide Treatment	Rate oz per 100 gal	DISEASE SEVERITY	
		5 DAT-3	20 DAT-3
		Number of Spots	Number of Spots
Cygnus 50 WG	3.2	1.9	9.9
Cygnus 50 WG + Latron	3.2 + 2	1.4	13.3
Chipco 26019	2	0.1	0.5
Untreated		15.3	48.8

3 applications

Plants started as plugs, 'Super Elfin White' variety; at time of application approx. 7 inches tall.

No significant differences were observed in treatments applied with **Cygnus** vs. Chipco.

Chipco 26019 left residue on leaves; **Cygnus** left no residue.

Dr. Dave Norman, IFAS, University of Florida, CFREC-Apopka, FL, 1998

POWDERY MILDEW ON GREENHOUSE CROPS New York

Fungicide Treatment	Rate oz per 100 gal	DISEASE SEVERITY	
		Poinsettia Bracts % Infection ¹	Veronica % Infection ²
Cygnus	6.4	0	0.3
Sterol Inhibitors:			
Strike 25 W	4	0.1	0.2
Eagle (Systane)	4		0
Pipron	8	0	
Untreated Inoculated		76.4	5.5

¹ Powdery mildew (*Sphaerotheca pannosa*) on Poinsettia bracts; 6 applications 7-d interval

² Powdery mildew (*S. humuli*) on veronica; 2 applications, 14-d interval

Margery Daughtrey, Long Island REC, Riverhead, NY, 1996

Always read and follow label directions.

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Research Brief

Partial data shown.

POWDERY MILDEW CONTROL ON GREENHOUSE CUT ROSES California

Fungicide Treatment	Rate oz per 100 gal	Application Interval (days)	DISEASE SEVERITY ¹
			Leaves Infected Rating
Decree 50 WDG	24	7	1.1
Compass O 50 WG	1	7	1
Compass O 50 WG	2	14	1
Cygnus 50 WG	1.6	7	1.1
Cygnus 50 WG	3.2	14	1.2
Heritage 50 WG	1	7	1
Heritage 50 WG	2	14	2.2
Insignia 20 WG	8	7	1.1
Insignia 20 WG	16	14	1.2
Untreated			2.6

¹ All fungicides provided similar level of control except Heritage on 14-day interval = untreated control
Rating scale is number of leaflets on two plants with at least one powdery mildew lesion.
Steven Tjosvold, Univ. of CA-Santa Cruz and Monterey Counties, Watsonville, CA, 2001

DISEASE CONTROL ON LANDSCAPE PLANTS TRUGREEN CHEMLAWN TECHNICAL CENTER Ohio

Fungicide Treatment	Rate oz per 100 gal	Flowering Crabapple ¹ Defoliation from Applescab 12 DAT-2	Flowering Crabapple ¹ Defoliation from Applescab 75 DAT-2	Common Lilac ² Powdery Mildew Disease – Prevention Application
Cygnus 50 WG	1.6	3.8	2.8	1
Cygnus 50 WG	3.2	1.3	0.8	1.8
Compass 50 WG	2	2.3	2.5	0.3
Heritage 50 WG	2	2	2	1.8
Eagle 40 WP	3	4	5.5	0
Untreated		7.3	9	2.5

Percent Defoliation Rating Scale: 0 = 0-9% disease, 9 = 90-99% disease

¹ Trial received 2 applications at full bloom and 6 weeks later for control of apple scab (*Venturia inaequalis*).

² Lilac trial conducted as preventive application with 25% disease evident in the untreated controls at the trial conclusion.

One application was made June 2000 and plants were evaluated September 2000 for control of lilac powdery mildew (*Microspora penicillata*). Curative trial resulted in no product providing control with >60% infection at beginning of trial. It is not recommended to apply **Cygnus** for curative control of powdery mildew.

Dr. Mary Ann Rose, Research Scientist, TruGreen Chemlawn, Delaware, Ohio, 2000

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Research Brief

Partial data shown.

SCAB CONTROL ON FLOWERING CRABAPPLE TRUGREEN CHEMLAWN TECHNICAL CENTER Georgia

Landscape Plant Fungicide Treatment	Rate oz per 100 gal	Flowering Crabapple ¹ Defoliation from Applescab	Flowering Crabapple ¹ Defoliation from Applescab
Cygnus 50 WG	1.6	0.9	1.9
Cygnus 50 WG	3.2	0.8	1.7
Cleary's 3336 + Banner MAXX	16 + 2	2.4	2.4
Untreated		4.2	5.2

Percent Defoliation Rating Scale: 0 = 0-9% disease, 9 = 90-99% disease. Therefore, the greatest amount of scab at last rating in July was 52%.

¹ Trial received 3 applications on a 6-week interval beginning in late April for control of apple scab (*Venturia inaequalis*). Researcher reported **Cygnus** treatments resulted in greater fall color and retention of leaves than Cleary + Banner treatment. Tom Eckberg, Research Scientist, TruGreen Chemlawn, Douglasville, Georgia, 2000

LEAF SPOTS ON VARIOUS LANDSCAPE PLANTS New Hampshire

Fungicide Treatment	Rate oz per 100 gal	DISEASE SEVERITY ¹ (SCALE 0 – 10)					
		Iris (<i>Didymellina</i> spp.)	Spider wort (<i>Alternaria</i> spp.)	Phlox (Unidentified Leaf Spot)	Daylily (Unidentified Leaf Spot)	Tickseed (<i>Erysiphe cichoracearum</i>)	Marigold (<i>Septoria</i> spp.)
Cygnus	6.4	2.8	3.8	3.2	0.8	0.9	2.6
Heritage	2	1.4	1.9	2.6	0.2	0.6	0.8
Untreated Inoculated		7.6	7.0	9.2	7.7	4.1	7.8

Scale: 0 = no disease, 10 = 100% infection

¹ Iris, Spiderwort and Phlox received 2 applications; Daylily, Tickseed and Marigold received 3 applications. Trials were performed in Milford, NH, 1996.

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