

Cooperative Extension---The Pennsylvania State University

## *Plant Disease Facts*

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# PACHYSANDRA DISEASE

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<b>Disease</b>	<b>Symptoms</b>	<b>Pathogen/Cause</b>	<b>Management</b>
Volutella blight	Brown to tan spots on the leaves are small at first but enlarge and may cover the entire leaf. Concentric line patterns form within the brown spots as leaves yellow and fall. Infected stems become dark brown to black in color and die. Under moist conditions, salmon to pink masses of fungal spores form on the surface of dead stems. Large patches of plants are killed.	<i>Pseudonectria pachysandricola</i> ( <i>Volutella</i> )	Inspect transplants carefully and discard infected material. Avoid planting in areas of heavy shade or areas where moisture will be retained on leaves for prolonged periods. In established beds, remove diseased plants and thin the bed. Remove fallen leaves and other debris that inhibits good air circulation. Protect plants from winter injury and deicing salt runoff. Control oystershell and euonymus scales. Fertilize plants moderately to prevent nutrient deficiencies. Avoid using sprinkler irrigation but protect plants from drought stress. Apply copper hydroxide, chlorothalonil, mancozeb, or thiophanate methyl + mancozeb to protect plants when the weather is wet.



Stem infection (Photo courtesy of M. Masiuk). Leaf infection.

**Active Ingredients and Trade Names of the Chemicals**

FRAC Group	Risk Level	Class	Active ingredient	REI Interval	Trade names (EPA Reg. no.)
M	1	Chloronitrile	chlorothalonil	48	Daconil (50534-9)
				12	Echo (60063-7), PathGuard (60063-7-499), Concorde (72167-24-1812), Pegasus (72167-24-1812)
		Copper, fixed Dithiocarbamate	copper hydroxide	48	Kocide (352-656), Champion (55146-1)
			mancozeb	24	Dithane (707-180), FORE (707-87)-Pentathlon (1818-251)
		manganese + zinc	24	Protect T/O (1001-65)	
Combined products 1 + M	1		thiophanate methyl + mancozeb		Zyban (58185-31)

**Fungicides and Fungicide Resistance Management** - Certain fungicides, usually systemic fungicides, are said to be ‘at risk’ to the development of resistance if they are used repeatedly. See the Risk Level in the above table (1 = low risk; 3 = high risk). The Fungicide Resistance Action Committee has developed a numbering system in which chemicals with the same FRAC Group number have the same mode of action (See <http://www.frac.info/frac/index.htm>). It is recommended that chemicals at high risk be used sparingly and in rotation or mixed with chemicals with different modes of actions (different FRAC number).

NOTICE: THE USER OF THIS INFORMATION ASSUMES ALL RISKS FOR PERSONAL INJURY OR PROPERTY DAMAGE. WARNING! PESTICIDES ARE POISONOUS. READ AND FOLLOW ALL DIRECTIONS AND SAFETY PRECAUTIONS ON LABELS. HANDLE CAREFULLY AND STORE IN ORIGINAL LABELED CONTAINERS OUT OF THE REACH OF CHILDREN, PETS, AND LIVESTOCK. DISPOSE OF EMPTY CONTAINERS RIGHT AWAY, IN A SAFE MANNER AND PLACE. DO NOT CONTAMINATE FORAGE, STREAMS OR PONDS.

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