

Root Rots on Houseplants

Brian Hudelson, UW-Madison Plant Pathology and Laura Jull, UW-Horticulture

What is root rot? Root rot is a general term that describes any disease where the pathogen (causal organism) causes the deterioration of a plant's root system. Most plants are susceptible to root rots, including both woody and herbaceous ornamentals. Root rots can be chronic diseases or, more commonly, are acute and can lead to the death of the plant.



Wilting of poinsettia associated with *Pythium* root rot.

How do you know if your plant has a root rot? Homeowners often become aware of root rots when they note that a plant is wilted, even though the soil is wet. Plants with root rots are also often stunted, and may have leaves with a yellow or red color, symptoms that suggest a nutrient deficiency. Careful examination of the root systems of these plants reveals roots that are soft and brown. These roots may have a bad odor.

Where does root rot come from? A large number of soil-borne fungi cause root rots. *Pythium* spp., *Phytophthora* spp., *Rhizoctonia solani*, and *Fusarium* spp. are the most common root rot fungi. These fungi have wide host ranges, and thus can cause root rots on a wide variety of plants. Most root rot fungi prefer wet soil conditions and some, such as *Pythium* and *Phytophthora* produce spores that can survive for long periods in soil or plant debris.

How do I save a plant with root rot? Often the best and most cost effective way of dealing with a plant with root rot is to throw it out. If you decide to

keep a plant with root rot, **REDUCE SOIL MOISTURE!** Provide enough water to fulfill the plant's growth needs and prevent drought stress, but **DO NOT** over-water. We **DO NOT** recommend use of chemical fungicides for control of root rots on houseplants because of the limited availability of products for use by homeowners, and because those products that are available tend to be expensive.

How do I avoid problems with root rots? First, buy plants from a reputable source and make sure they are root rot-free prior to purchase. Second, replant your houseplants properly. Use a pot with drainage holes, but **DO NOT** put rocks or gravel at the bottom of the pot. The presence of rocks or gravel can actually inhibit drainage. Use a pasteurized commercial potting mix, **NOT** soil from your garden. Garden soils often contain root rot fungi. Add organic material (e.g., peat moss) to heavy potting mixes to increase drainage. Third, minimize potential contamination of your plants with root rot fungi. **DO NOT** reuse potting mix from your houseplants, or water that has drained from your plants, as both potentially can contain root rot fungi. After working with plants with root rot problems, disinfect tools, working surfaces and clay pots with a 10% bleach or detergent solution, or alcohol. **DO NOT** reuse plastic pots as they are often difficult to disinfect adequately. Finally and most importantly, moderate plant moisture. Provide enough water to fulfill your plants' needs for growth and prevent drought stress, but **DO NOT** over-water. In particular, **DO NOT** allow plants to sit in drainage water. **REMEMBER**, root rot fungi grow and reproduce best in wet soils.

For more information on root rots: Contact your county Extension agent.

© 2001 by the Board of Regents of the University of Wisconsin System doing business as the division of Cooperative Extension of the University of Wisconsin Extension.

An EEO/Affirmative Action employer, University of Wisconsin Extension provides equal opportunities in employment and programming, including Title IX and ADA requirements. This document can be provided in an alternative format by calling Brian Hudelson at (608) 262-2863 (711 for Wisconsin Relay).

References to pesticide products in this publication are for your convenience and are not an endorsement or criticism of one product over similar products. You are responsible for using pesticides according to the manufacturer's current label directions. Follow directions exactly to protect the environment and people from pesticide exposure. Failure to do so violates the law.

Thanks to Karen Delahaut, Ann Joy and Sharon Morrisey for reviewing this document.

A complete inventory of University of Wisconsin Garden Facts is available at the University of Wisconsin-Extension Horticulture website: whort.uwex.edu.