



Extension

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University of Wisconsin Garden Facts

Phytophthora Root Rot

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What is Phytophthora root rot? Phytophthora root rot is the most serious root disease of American ginseng (*Panax quinquefolium*) in Wisconsin. Left untreated, this disease can totally destroy a ginseng crop during a typical three to four year production cycle.



Healthy (left) and *Phytophthora cactorum*-infected (right) ginseng roots.

What does Phytophthora root rot look like?

Ginseng plants with Phytophthora root rot show signs of wilting, often combined with a reddish discoloration in their foliage. Roots of affected plants are tan and watery, and often disintegrate when handled. Infected roots often also have a pungent, bitter, earthy odor.

Where does Phytophthora root rot come from?

Phytophthora root rot is caused by *Phytophthora cactorum*, a common soil fungus. This fungus is most active during wet periods, particularly during May and early June in Wisconsin. However Phytophthora root rot can occur anytime during the growing season.

How do I save ginseng with Phytophthora root rot?

Once a ginseng plant has been infected by *Phytophthora cactorum*, little can be done to save the plant.

If infected plants occur in patches, attempt to localize the area by carefully removing a 1 to 2 ft. wide swath of healthy plants, about 5 ft from the edges of the affected area.

How do I avoid problems with Phytophthora root rot? Site selection and maintenance are critical for control of this disease. Select a site with topography and a soil type that ensures good drainage, and plan gardens so that older gardens DO NOT drain into younger gardens. In wetter sites, dig trenches to drain standing water. Also, DO NOT move soil or plant material from an infested garden into a non-infested garden. Disinfest tools, boots and spray equipment with a 10% bleach or detergent solution when moving from garden to garden. Fungicide treatments are also important for management of Phytophthora root rot. A combination of Ridomil Gold GR and Aliette WDG provides the best control and should help prevent the development of fungicide-insensitive strains of *Phytophthora cactorum*.

For more information on Phytophthora root rot: See the UW-Madison Ginseng Home Page (www.plantpath.wisc.edu/ginseng) or contact your county Extension agent.

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A complete inventory of University of Wisconsin Garden Facts is available at the University of Wisconsin-Madison Division of Extension Plant Disease Diagnostics Clinic website: <https://pddc.wisc.edu>.

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