

2006 Florida Plant Disease Management Guide: Pea, English and Snow¹

Tom Kucharek and Ken Pernezny²

Specific Common Diseases

Damping-off (*Pythium* spp., *Rhizoctonia* spp., *Fusarium* spp.)

Symptoms: Several soilborne fungi will rot pea seed and seedlings from planting time through emergence. This condition is aggravated by deep planting, excess moisture, and by the presence of newly incorporated green plant material such as weeds or cover crops. Later stages of infection by these fungi often produce root rots.

Cultural Controls: Control of root rots and damping-off can be aided by preventing saturation of the soil and by chopping all cover crops and allowing them to dry thoroughly before disking or plowing under. Green cover crops should be turned under 6 to 8 weeks before planting time, and the land should be kept disked in order to prevent a new grass/weed cover from developing. See Plant Pathology Fact Sheet PP-1.

Chemical Controls: See PPP-6.

Powdery Mildew (*Oidium* sp.)

Symptoms: The characteristic sign is the white, powdery-like fungal mycelium that covers portions of leaves, stems and pods. Heavy infection can result in leaf death. Occasionally small, black, dot-like fruiting structures (cleistothecia) may form on the older areas of white fungal mycelium. This disease can be serious during the cool winter months when peas are grown.

Chemical Controls: See PPP-6.

Pythium Root Rot (*Pythium* spp.)

Symptoms: This disease is worse in wet seasons, on low, poorly drained fields. This fungus can cause a pre-emergent and post-emergent damping-off problem. Older plants become infected through small feeder roots. The infection proceeds into the taproot producing a soft, gray to brownish-black surface rot up to the soil surface or slightly beyond. A diagnostic field symptom is the way the outer root tissue "sloughs off" leaving the central core, when the root is slipped between two fingers. Infected plants appear

-
1. This document is PDMG-V3-44, one of a series of the Department of Plant Pathology, 2006 Florida Plant Disease Management Guide, Florida Cooperative Extension Service, Institute of Food and Agricultural Sciences, University of Florida. Date Revised: December 2005. Please visit the EDIS Web site at <http://edis.ifas.ufl.edu>.
 2. T.A. Kucharek, professor emeritus, Plant Pathology Department, K. L. Pernezny, professor, Plant Pathology Department, Everglades Research and Education Center--Belle Glade, FL; Florida Cooperative Extension Service, Institute of Food and Agricultural Sciences, University of Florida, Gainesville, FL 32611.

The Institute of Food and Agricultural Sciences (IFAS) is an Equal Opportunity Institution authorized to provide research, educational information and other services only to individuals and institutions that function with non-discrimination with respect to race, creed, color, religion, age, disability, sex, sexual orientation, marital status, national origin, political opinions or affiliations. U.S. Department of Agriculture, Cooperative Extension Service, University of Florida, IFAS, Florida A. & M. University Cooperative Extension Program, and Boards of County Commissioners Cooperating. Larry Arrington, Dean

stunted and pale yellow-green above ground. In very moist weather, a foliar blight may occur as the (*Pythium*) fungus infects the apical or axillary buds. Affected foliage appears watersoaked, dying and desiccating rapidly. The disease progresses down the plant canopy, girdling stems and killing all foliar parts beyond the point of girdling.

Cultural Controls: Avoid low-lying, wet fields. Do not plant too deep. See Plant Pathology Fact Sheet No. 53.

Chemical Controls: The damping-off phase may be controlled by seed treatment fungicides.

Rhizoctonia Stem Canker (*Rhizoctonia solani*)

Symptoms: *Rhizoctonia solani* may infect peas in the seed, seedling or mature plant stage. Seed may fail to germinate or young seedlings may fall over at soil line due to fungal invasion. Seedlings as well as mature plants exhibit a reddish-brown lesion or canker on the lower stem that will enlarge to a point of girdling the plant causing plant death.

Cultural Controls: Avoid planting in soil containing plant debris that has not fully decomposed. Plant seed properly to encourage rapid germination and establishment.

Chemical Control: Use a seed treatment fungicide.