

2007 Florida Plant Disease Management Guide: Parsley¹

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Specific Common Diseases

Alternaria Leaf Spot (*Alternaria radicina*)

Symptoms: Infections begin with the appearance of small brown flecks on parsley leaflets. Lesions may develop yellow halos as they expand in size and number. The disease is usually most prevalent on the oldest leaves and lesions attacking the petiole may render the entire leaflet brown and appearing scorched.

Cultural Controls: Controls for Alternaria leaf spot should include planting in fields where parsley or carrots have not been planted for several years. The pathogen is sometimes associated with infected seed, so purchase high quality seed from a reputable source. Old plantings should be destroyed and disked in to avoid spread of inoculum to younger plantings.

Chemical Controls: Early buildup of Alternaria leaf spot may preclude multiple cuttings of this crop. In such cases, fungicidal sprays may be effective and economical. Scout fields regularly for early detection. Strobilurin fungicides offer the best efficacy in controlling this disease. See PPP-6.

Damping-off (*Pythium* spp. and *Rhizoctonia* spp.)

Symptoms: Seedlings may die at random or in rapidly lengthening sections of freshly seeded rows. Lesions may be observed well up on the petioles as well as at the soil line. Entire plantings may be lost unless adequate control measures are practiced.

Cultural Controls: Plant parsley on raised beds in well-drained soil.

Chemical Control: Ridomil Gold, applied as a band over seeded rows at the time of planting, may assist in the control of diseases incited by *Pythium* spp. This compound does not control *Rhizoctonia*. See PPP-6.

Root Rots (*Fusarium* spp. and *Rhizoctonia solani*)

Symptoms: Initial symptoms of root decay are the progressive yellowing and browning of older, lower leaves. Plants may wilt during mid-day. Ultimately, the entire plant may turn yellow, then necrotic, and die. Inspections of root systems may reveal a reddish discoloration and deterioration of

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small feeder roots. Longitudinal, reddish cankers frequently develop on the taproots. Exterior cortical tissues appear dry and rotted. With *Fusarium*, a reddish discoloration of the internal vascular system may also be observed, extending well up into the crown. On an annual basis, this is easily the most devastating disease of parsley in Florida.

Cultural Controls: Avoid planting parsley in fields previously planted to this crop. Crop rotations should exceed five years to be effective. Fallow flooding during the offseason may assist in reducing the impact of this disease, but cannot be relied on solely if parsley is planted in consecutive years. Excessive seeding densities should be avoided, as this has been observed to increase disease incidence.

Chemical Controls: Soil fumigation may assist in reducing the effects of these organisms but is seldom economical.

Septoria Leaf Spot (*Septoria petroselini*)

Symptoms: Lesions appear as sunken brown foliar spots with gray centers. As lesions age, minute black specks (fungal pycnidia embedded in the leaf tissues) may be observed under low magnification. These black specks distinguish *Septoria* leaf spot from the leaf spot caused by *Alternaria radicina*.

Cultural Controls: *Septoria* may survive for up to 2 years on infected seed. Plant seed that has been certified as being free of *Septoria* or store seed suspected as being infected for a period of two or more years. This reduces the viability of the pycnidia, rendering the pathogen incapable of infection. Avoid the use of overhead irrigation, as the pathogen is rain splash disseminated. Also, if an outbreak has been detected, the movement of equipment or workers through the field while the canopy is wet should be minimized.

Chemical Controls: Scout fields for early detection. The use of recently registered strobilurin fungicides should assist in reducing the impact of this disease. See PPP-6.