

Downy Mildew on Basil

Description and Damage

Downy mildew of basil is a serious new disease in the U.S, caused by the fungus-like Oomycete, *Peronospora*. Originally found in Uganda and then Europe, basil downy mildew was detected in Florida in 2007 and the northeast U.S. in 2008. The pathogen was reported in both field and greenhouse grown basil. **Downy mildew was confirmed on basil from a horticultural retail outlet in Sussex County Delaware on June 10, 2009. It was later confirmed on field grown basil in New Castle County.** The most noticeable symptom on affected plants is yellowing on the top leaf surface in between the veins. Due to this symptom, it was originally thought to be a nutritional problem. Blackening of the affected leaf margins occurs as the disease progresses. Upon close examination, grayish dark sporulation of the downy mildew pathogen occurs on the undersides of the leaves. Basil downy mildew spores are produced in abundance and can be spread on by air currents, as well as on infected leaf material and seeds.

Downy mildew on basil has been confirmed in Delaware on potted plants shipped in from suppliers in the southeastern U.S. It has been reported in PA, NJ, NY, NC, and other Eastern states. The University of Delaware has joined with other universities in a monitoring program to determine whether this pathogen becomes established in outdoor plantings. There is no harmful effect to humans from contact with the downy mildew pathogen on basil.

Control

Affected potted plants should have infected leaves removed or be discarded. The pathogen probably will not over-winter in Delaware, but could over-winter in a greenhouse or sheltered location. Control on plants in gardens may be accomplished by using phosphorus acid salts fungicides such as ProPhyt or K-Phite. The bio-rational fungicide, Actinovate, is also labeled on herbs, containing the bio-control micro-organism, *Streptomyces*. Any chemicals should be applied preventatively, according to the label, and may not provide good control once the disease can be seen sporulating on leaf tissue. Any reference to trade names is for information only and does not imply endorsement.



Images above courtesy of Margaret McGrath, Cornell University



Image: Nancy Gregory, University of Delaware

<http://ag.udel.edu/extension>

It is the policy of the Delaware Cooperative Extension System that no person shall be subjected to discrimination on the grounds of race, color, sex, disability, age, or national origin.