Vegetarian Newsletter

A Horticultural Sciences Department Extension Publication on Vegetable Crops

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Downy Mildew on Basil

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Downy Mildew has been reported on basil in at least three locations around south Florida. It has also been confirmed at the UF/IFAS Plant Disease Clinic in Immokalee.

Downy mildew is a new disease on field-grown basil in Florida and may be related to a downy mildew that has been seen in Europe on greenhouse-grown basil in Italy and Switzerland.

Symptoms initially appear as a faint yellowing of leaves concentrated around the middle vein. On the underside of leaves, a gray, fuzzy growth or russetted appearance may be apparent. Although symptoms may appear relatively mild in the field, the disease causes major post harvest problems causing the leaves to blacken and become un-saleable once the crop is harvested and packed.

The greenhouse industry has also reported that a new downy mildew that affects coleus has recently been discovered in multiple locations around the United States and is causing alarm for both coleus growers and researchers. This new coleus downy mildew disease is caused by a microorganism that may be new to North America.

Tests of coleus downy mildew DNA, however, have indicated that it is a different species — one that has previously been seen in Europe on greenhouse-grown basil in Italy and Switzerland. For now, the coleus pathogen can be referred to as Peronospora sp. It is known that it can infect both coleus and basil, but the possibility it can go to additional plant hosts certainly exists.

Growers should be aware that downy mildew can be explosive when the weather is wet and humid. The downy mildew pathogen requires free moisture from condensation or watering on the plant surface to germinate. Reports indicate that some growers have had difficulty achieving satisfactory control.
Downy mildew has the bad habit of changing and becoming resistant to the systemic fungicides. Alternating systemic and protectant materials with different activities will help guard against the development of pesticide resistance in this downy mildew.

Dr Rick Raid, Pathologist EREC in Belle Glades and Dr Pam Roberts, Pathologist SWFREC are currently investigating this disease and are conducting fungicide tests with a number of materials to determine efficacy against this pathogen.

Fungicide efficacy trials on coleus reported in Greenhouse Product News indicates that many of the products labeled for downy mildew in other crops provide good control of this pest. Be sure to check the label to make sure it is registered for use on basil.

For additional info and photos go to http://pestalert.ifas.ufl.edu/pdr-1029.htm

Excerpted from South Florida Vegetable Pest and Disease Hotline – October 26, 2007