Late Blight Alert

By Gene McAvoy, County Extension Director and Extension Agent III, UF/IFAS Hendry County Extension Office

I am writing to inform you that Glades Crop Care has reported a confirmed finding of late blight on tomato in the Immokalee area on November 18, 2006. The infection is in a fairly large planting which has multiple infections widely scattered throughout the field. Numerous infected plants are present with symptoms ranging from single lesions to several hotspots throughout the field where plants display multiple late blight lesions.

The disease can easily devastate a tomato or potato field within a few weeks if it is not properly controlled.

Since the disease can spread so rapidly, growers should scout their fields thoroughly each day, especially when cool and wet conditions conducive to disease development prevail. Since late blight symptoms may be confused with symptoms of other diseases, the following diagnostic pointers may help growers distinguish between the late blight and other diseases.

Late blight symptoms on leaves appear as irregularly-shaped brown to purplish lesions with indefinite border lesions that can span veins. The lesions may be seen any time of day, on any stage of plant growth, and on leaves of any age. Velvety, white fungal growth may appear on the lower surface of affected leaflets early in the morning before leaves dry and/or in the lower canopy.
On stems, purplish lesions may be seen any time of day and may be found any where on the stem. Cottony, white growth of fungus on stems with lesions can often be seen early in the morning and/or in the lower canopy. Stems with lesions are brittle and break easily. Lesions are confined to epidermis and cortex. Leaf rolling and wilting is often associated with stem lesions, purpling of leaflets may occur in some varieties.

The disease thrives under cool and wet conditions. Temperatures between 50 and 80°F combined with moist conditions such as rain, fog, heavy dews, or relative humidity above 90 percent are conducive for disease development. Night temperatures in the mid-fifties with daytime temperatures from the mid-fifties to mid-seventies are ideal for this disease.

See [http://plantpath.ifas.ufl.edu/takepub/FactSheets/pp0006.pdf](http://plantpath.ifas.ufl.edu/takepub/FactSheets/pp0006.pdf) for more information and photos of the disease.

Currently, fungicides are the most effective means of controlling late blight and will remain the primary tool until cultivars with resistance to this disease become available. Fungicides slow the rate at which the disease develops in the field by creating a protective barrier on the foliage. Just applying a chemical, however, does not necessarily equate with effective disease control. Relative effectiveness of a product, coverage, and timing must be factored into the equation for maximum benefit.

Numerous fungicide products are registered for late blight control. Protectants, as the name implies, protect foliage from infection by spores. Protectant chemicals must be well distributed over the leaf surface and must be applied before spores land on leaves. They are ineffective against established infections.

Systemic products become distributed locally within plant tissues and protect foliage from infection by spores. Newer products such as Curzate (DuPont) boast “kick back” action that can help arrest infestation if applied within 48 –72 hours of initial infection. They may kill some established infections and may suppress production of new spores. Even a short break in spray schedules, despite what is said regarding some of the newer fungicides, can result in a dramatic increase in blight under the conditions we have had during the past two weeks.

In Florida, it has been observed that seldom does a widespread late blight epidemic occur on tomatoes in the Manatee-Ruskin area unless the disease was present in the Immokalee area and/or Dade County. Since late blight has been confirmed on tomato in Immokalee, growers in other areas are advised to adhere to a preventative spray program.

Growers are advised to be aware of the presence of the disease in southwest Florida and should be alert for the appearance of symptoms in their fields as well
as be sure to apply protective fungicides to help prevent possible infections. No other disease will find an unprotected field as rapidly as late blight.

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