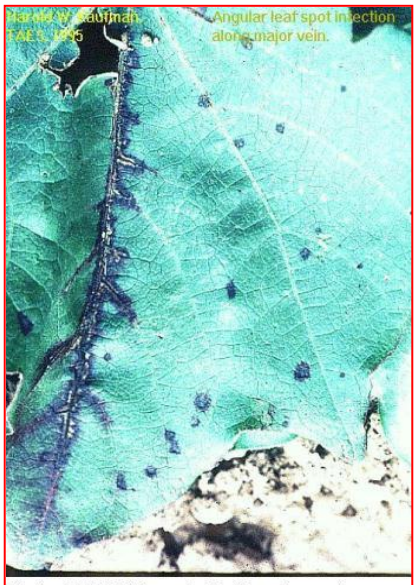
BACTERIAL BLIGHT OF COTTON



Bacterial blight (angular leaf spot) symptoms.
Courtesy Harold Kaufman, TAEX, 1996.

Causal Organism: *Xanthomonas citri* subsp. *malvacearum*.

Bacterial blight, sometimes called angular blight, angular leaf spot, vein blight, black arm and boll rot, depending on the portion of the plant infected.

It occurs on cotton in most parts of the cotton production areas of the world.

The extent to which bacterial blight will impact cotton yield in infested fields will depend on environmental conditions during the season. High rainfall, and humidity as well as warm temperatures favor disease development.

It is an important and potentially destructive bacterial disease. Yield losses of greater than 10% have been reported.

Cotton yield losses in excess of 10% have been reported in the past.

SYMPTOMS

1. On cotyledons, bacterial blight causes small, quarter-inch-diameter lesions that are initially dark green turning to dark brown.

2. Bacterial blight starts out as angular leaf spot with a red to brown border.
3. The angular appearance is due to restriction of the lesion by fine veins of the cotton leaf.
4. Spots on infected leaves may spread along the major leaf veins. As disease progresses, leaf petioles and stems may become infected resulting in premature defoliation.
5. Black cankers may girdle the stem or branches causing the portions to die above the canker.
6. A white waxy crust containing the bacterium may form on old leaf spots or cankers.

7. Bolls may become infected causing boll rot which results in rotted seed and discolored lint. Infected bolls have round, rather than angular, lesions that initially may appear water-soaked. As infection proceeds, bolls lesions will be sunken and dark brown or black.

MANAGEMENT

- Fields that have bacterial blight this year should be planted to a blight-resistant variety next year or rotated to a different crop.
- Rotating cotton with soybean or corn plantings for one or more years will help reduce the severity of bacterial blight on the next cotton crop.
- Plant only acid-delinted seed produced in fields free of this disease.
- Plant resistant varieties.
- Keeping the canopy as open as possible to reduce humidity and promote drying of the foliage may prove beneficial in limiting the progress of this disease.