

Bacterial wilt of beans

Curtobacterium flaccumfaciens pv. flaccumfaciens

Synonyms

- Bacterial wilt (*Phaseolus* beans)
- Bacterial tan spot (soybeans)

Plant hosts

Glycine max (soybeans), *Lablab purpureus* (hyacinth bean), *Phaseolus coccineus* (runner bean), *P. lunatus* (lima bean), *P. vulgaris* (common bean), *Pisum sativum* (pea), *Vigna angularis* (adzuki bean), *V. radiata* (mung bean), and *V. unguiculata* (cowpea) are all susceptible to bacterial wilt of beans.

Symptoms

Infected plants wilt during hot, dry weather or moisture stress, often recovering during evening hours when temperatures are lower. The bacteria multiply in the vascular system inhibiting the movement of water. Symptoms progress further as foliar interveinal chlorosis and necrosis. When the lower stem and root are cut longitudinally and observed, the vascular system is often discolored brown to black. The younger the plant becomes infected, the more severe the damage to the plant. Seedlings are frequently severely stunted or killed. If plants survive to maturity, seeds may show yellow or purple discoloration.



Symptomatic bean stem.



Symptomatic bean plant.

Images courtesy of Howard F. Schwartz

Transmission

The bacteria can overwinter on weeds or in crop debris in the field. Seed is the most important means of survival and spread.

Geographic distribution

Bacterial wilt of beans has been reported in North and South America, Europe, and Australia.

Applicable regulations

[603-052-0385](https://www.oregon.gov/ODA/Programs/PlantHealth/Pages/603-052-0385), Bean disease control area order: Malheur County