

Bacterial Diseases - IPM Guideline for Common Bean (dry, snap, fresh market, seed)

Note: this guideline may be applicable to other legume crops including:

Cool Season (chickpea, lentil, field pea)

Warm Season (cowpea, lima bean, soybean)

Disease Diagnostic Confirmation

Work with local crop consultants, field specialists and disease diagnosticians to confirm identity of disease causes. Provide background information on the field and problem, and deliver representative samples (including healthy appearing to badly affected tissue and plants) to qualified experts for diagnosis and confirmation. <http://wiki.bugwood.org/PIPE:Legume>

Vegetative Growth Stages

Bactericide applications during V3 – R 3 may reduce the initiation and severity of bacterial disease outbreaks (e.g., halo blight, bacterial brown spot, common bacterial blight, bacterial wilt) in regions with a history of the disease(s) and following periods of favorable weather (storms, rain, low to moderate temperatures). Refer to bactericide labels for specific directions and restrictions, and check with local extension specialists and pest management personnel.

Reproductive Growth Stages

Bactericide applications during V3 – R 3 may reduce the initiation and severity of bacterial disease outbreaks in regions with a history of the disease(s) and following periods of favorable weather (storms, rain, low to moderate temperatures). Refer to bactericide labels for specific directions and restrictions, and check with local extension specialists and pest management personnel for specific recommendations.

- Rotate to exclude susceptible host crops (i.e., common bean volunteers) for 3 + years; examples of non-host crops include small grains and corn
- avoid planting in fields with a history of disease during the last 3 years
- plant resistant or less susceptible varieties if available
- follow recommended plant population - row & plant spacing
- soil test and use a moderate fertility program; e.g., not to exceed 75 - 100 lb N/A
- incorporate fall and/or spring tillage to eliminate carryover seed and volunteer beans in last year's bean fields, promote root health and moisture drainage in this year's bean fields
- monitor irrigation scheduling to avoid flowering-period deficiency but avoid late-season saturation
- utilize timely scouting, disease forecasting, and weather monitoring services
- if a susceptible variety is planted and the pathogen and/or disease are confirmed in the field, use timely applications of recommended bactericides at 30 – 45 days post-emergence, maintain protection throughout flowering and early pod set
- treatment with a labeled bactericide as a protectant should be considered during the rapid vegetative (V – 3) to the early seed fill (R – 5) growth stages
- follow a 7 to 10 day interval between sprays, depending upon disease pressure until the R – 5 growth stage is reached
- Pesticide Information available at: <http://www.highplainsipm.org/>