

# Common bacterial blight in beans

*Xanthomonas axonopodis* var. *phaseoli*



Necrotic areas surrounded by yellowings on leaves (Howard F. Schwartz, Colorado State University, Bugwood.org)



Necrotic areas of dark greenish colour (Howard F. Schwartz, Colorado State University, Bugwood.org)

Prevention	Monitoring	Direct Control	Direct Control	Restrictions
<ul style="list-style-type: none"> <li>Plant certified seed of disease resistant varieties from IITA</li> <li>In high rainfall areas, plant in mid-January to avoid disease outbreaks.</li> <li>Do not save and re-use seeds from previously infected fields as they carry over the disease.</li> <li>Avoid movement through the field when plants are wet to prevent blight spread.</li> <li>Remove re-grown beans after harvest because they are potential sources for the bacterial disease.</li> <li>Plough after harvest to bury debris and encourage decomposition (note that, once the field is infected, the disease also survives in the soil)</li> <li>Rotate with non-leguminous crops for at least 2-3 years to break the cycle of the disease.</li> </ul>	<ul style="list-style-type: none"> <li>Start checking two weeks after seedling emergence and weekly until pods form.</li> <li>Check for signs of small water-soaked dark spots on underside of leaves and pods shortly after seedling emergence.</li> <li>Check for narrow lemon-yellow ring around small necrotic lesion on both leaves and pods. Act when more than 4 rings on 5 to 10 out of 50 plants are found</li> </ul>	<ul style="list-style-type: none"> <li>Prevention is the most effective control measure for the bacterial blight disease. There are no known green direct control measures that can completely control bacterial diseases</li> </ul>	<ul style="list-style-type: none"> <li>There are no other pesticides than copper, which can be used against bacterial plant diseases. Thus, do not buy and spray fungicides as they will not work.</li> <li>When using a pesticide, always wear protective clothing. Follow the instructions on the product label, such as dosage, timing of application, pre-harvest interval, max number of sprays, restricted re-entry interval. Do not empty into drains.</li> <li>WHO class II pesticides might not be allowed in local IPM schemes.</li> <li>Always consult recent list of registered pesticides (ZEMA).</li> </ul>	<ul style="list-style-type: none"> <li>WHO toxicity class II (moderately hazardous) but very toxic to aquatic organisms so don't spray near water source. Pre-harvest interval (p.h.i.) 1 week; restricted re-entry interval (r.e.i.) 1 day after spray. When used too much, copper(II)-ions can accumulate in soil and water. It can burn leaves. Do not use during fruit set.</li> </ul>

## Zambia

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