




# Common bacterial blight on Bean

*Xanthomonas axonopodis* pv. *phaseoli* Chiwawu cha nyemba

	Prevention	Monitoring	Direct Control	Direct Control	Restrictions
 Symptoms on bean crop (Howard F. Schwartz, Colorado State University, Bugwood.org)	<ul style="list-style-type: none"> <li>• Use disease free certified seed</li> <li>• Practice crop rotation with non host crops like maize and groundnuts for at least 2-3 years to break disease cycle</li> <li>• Remove volunteer bean plants after harvest and before planting as they act as a source of inoculum</li> <li>• Deep ploughing after harvest to bury the infected crop debris and encourage decomposition</li> <li>• Suspend field operation when plants are wet to avoid spreading the disease</li> <li>• Do not save and use seeds from the previous infected fields</li> </ul>	<ul style="list-style-type: none"> <li>• Start monitoring two weeks post seedling emergence and weekly until pod formation</li> <li>• Look for water soaked dark spots under the leaf</li> <li>• Leaf spots enlarge and merge to form a large brown irregular lesion with a yellow margin</li> <li>• Stems rot at the first node where cotyledons are attached causing the plant to break</li> <li>• On pods look for sunken lesions with reddish brown boarder</li> <li>• Under wet conditions look for yellow slimy bacterial exudates that ooze out of the lesion</li> <li>• Carry out direct controls as soon as symptoms are seen</li> </ul>	<ul style="list-style-type: none"> <li>• Uproot and burn all infected plants</li> <li>• Spray recommended insecticides indicated in the Yellow Direct Control section</li> </ul>	<ul style="list-style-type: none"> <li>• Use personal protective equipment when handling and applying pesticides, follow the label recommendations. Do not eat, drink, smoke when mixing or applying pesticides.</li> <li>• Foliar application of Copper oxychloride 860g/Kg WP (Kocide) at 300-400g per 100 litres of water. Copper oxychloride is a bactericide with contact, multisite action. FRAC group: M1</li> </ul>	<ul style="list-style-type: none"> <li>• WHO Class II (Moderately Hazardous). Apply at 14 day intervals. Do not breathe spray. Harmful if swallowed. Very toxic to aquatic organisms.</li> </ul>
 Symptoms on bean leaf (Phil Taylor, CABI)					
 Symptoms on pods (Howard F. Schwartz, Colorado State University, Bugwood.org)					



## Malawi

CREATED/UPDATED: July 2018

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