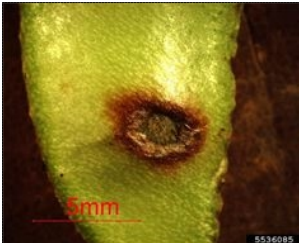



# Cercospora Leaf spot on Green grams

*Cercospora canescens*

	Prevention	Monitoring	Direct Control	Direct Control	Restrictions
 <p>5536085</p>	<ul style="list-style-type: none"> <li>Plant resistant and disease free seeds from KALRO Katumani (N26).</li> <li>Intercrop with tall growing cereals like maize and sorghum to avoid transmission between rows.</li> </ul>	<ul style="list-style-type: none"> <li>Look out for leaves showing small, brown, water soaked, circular spots surrounded with yellowish halo which turn necrotic (dark brown) with reddish brown margins.</li> </ul>	<ul style="list-style-type: none"> <li>Ensure good field hygiene by removing all plant residues and burn them.</li> </ul>	<ul style="list-style-type: none"> <li>When using a pesticide, always wear protective clothing and follow the instructions on the product label.</li> </ul>	
<p>Brown spots with yellow hallos (Cesar Calderon, USDA APHIS PPQ, Bugwood.org)</p>	<ul style="list-style-type: none"> <li>Practice crop rotation with non-host plants such as maize.</li> </ul>	<ul style="list-style-type: none"> <li>Check for infection on older leaves as severe leaf spotting can lead to heavy defoliation during flowering and pod formation.</li> </ul>	<ul style="list-style-type: none"> <li>Remove and destroy the old plants and weeds to reduce disease incidence.</li> </ul>	<ul style="list-style-type: none"> <li>Do not use chemicals with the same mode of action year after year as this can lead to resistance.</li> </ul>	<ul style="list-style-type: none"> <li>WHO Class U (unlikely to cause acute harm), PHI: 7 days intervals, REI: 24 hrs. Spray Oshothane every 7 days and alternate with Dithane M45 to prevent development of resistance.</li> </ul>
 <p>5499817</p>	<ul style="list-style-type: none"> <li>Remove all volunteers to reduce the incidence of the disease as it can survive in soil on plant material.</li> <li>Plant early to prevent damage of floral structures.</li> <li>Mulch plants to avoid transmission of fungi to lower leaves.</li> <li>Avoid working in the field when plants are wet.</li> </ul>	<ul style="list-style-type: none"> <li>Take action when spots first appear (30-40 days after sowing).</li> </ul>	<ul style="list-style-type: none"> <li>Space the plants about 2-3 feet apart to optimize aeration.</li> <li>Apply 2 tablespoon (20 g) of 70% neem oil in 4 litres of water to reduce disease severity.</li> <li>Spray the plants by using Trianium-P (<i>Trichoderma harzianum</i>) at a rate of 15 g in 5 L or Trichotech (<i>Trichoderma asperellum</i>) at a rate of 2.5 g in 20 L of water.</li> </ul>	<ul style="list-style-type: none"> <li>Spray Mancozeb such as Oshothane, Fantic, Dithane at the rate of 50 ml/20 L of water.</li> <li>Apply copper based fungicide such as Vitra 40 wg, Champflo at 50 g/20 L of water. Start spraying when you notice brown spots on the leaves.</li> </ul>	<ul style="list-style-type: none"> <li>WHO Class II (moderately hazardous), PHI: 7 days intervals, REI: 24 hrs. Repeat every 7-10 days for as long as needed.</li> </ul>
<p>Dark brown necrotic spots at later stages of the disease (Cesar Calderon, USDA APHIS PPQ, Bugwood.org)</p>					

## Kenya

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