




Early blight of tomato

Alternaria solani Chiwawu

	Prevention	Monitoring	Direct Control	Direct Control	Restrictions
 <p>Dark lesion and yellow colouration on leaf (AVRDC - The World Vegetable Center)</p>	<ul style="list-style-type: none"> Practice a two year crop rotation with cereal crops (e.g. maize or sorghum) Burn or bury tomato crop residues after harvest Transplant at a correct spacing: 60 x 60 cm for larger headed varieties and 50 x 45 cm for small headed varieties Stake and desucker to reduce humidity and minimize favourable conditions for disease development Prepare the nursery away from a previously infected crop 	<ul style="list-style-type: none"> Additional relevant crops: Irish potatoes, nightshade, capsicum and eggplant Check plants for symptoms of the disease twice a week Look for dark spots with concentric rings surrounded by a yellow border on older leaves and also on fruit Look for dead leaves and girdled stems Carry out green direct controls if more than one plant is affected Consider using fungicide treatment as a preventative measure 	<ul style="list-style-type: none"> Remove and burn all severely infected plants to avoid spread of the disease 	<ul style="list-style-type: none"> Use personal protective equipment when handling and applying pesticides, follow the label recommendations. Do not eat, drink, smoke when mixing or applying pesticides. 	
 <p>Lesion on a tomato fruit (AVRDC - The World Vegetable Center)</p>				<ul style="list-style-type: none"> Mix 20g of Mancozeb (Emthane M45, Dithane M-45 800 WP, Uthane 800 WP, Mancozeb 800 WP) per 10 litres of water 	<ul style="list-style-type: none"> WHO Class U - Unlikely to present acute hazard in normal use. Full cover spray shortly after transplanting and continue at 7-14 days interval in wet weather conditions
 <p>Lesion on leaf showing concentric rings (Clemson University - USDA Cooperative Extension Slide Series, Bugwood.org)</p>				<ul style="list-style-type: none"> Mix 180 - 230ml of chlorothalonil (Daconil, Bravo) per 10 liters of water 	<ul style="list-style-type: none"> WHO Class U - Unlikely to present acute hazard in normal use. Apply as soon as you see the disease or as required at 7-14 days intervals. Use the higher rate if disease pressure is high.
				<ul style="list-style-type: none"> Mix 20g of Mancozeb + metalaxyl 800 WP (e.g. Ridomil Gold MZ 68WG or Mascot, Tsunami Kick Back 700 WP) in 10 litre of water 	<ul style="list-style-type: none"> Mancozeb WHO Class U - Unlikely to present acute hazard in normal use; Metalaxyl WHO Class II - Moderately hazardous. spray full cover at 7-14 days intervals
				<ul style="list-style-type: none"> Mix 30-50g of copper oxychloride per 10 litres of water as a full cover spray 	<ul style="list-style-type: none"> WHO class II - Moderately hazardous. Start spraying shortly after transplanting when plants are about 15 cm high before symptoms appear. Spray every 7 to 10 days (more applications during cold and wet weather and less during dry weather)



Malawi

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