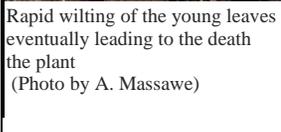


Bacterial wilt on tomatoes

Ralstonia solanacearum

	Prevention	Monitoring	Direct Control	Direct Control	Restrictions
 <p>Rapid wilting of the young leaves eventually leading to the death of the plant (Photo by A. Massawe)</p>	<ul style="list-style-type: none"> ◆ Carry out soil testing to determine the presence of bacterial wilt before planting ◆ Avoid planting crop in infested soil. ◆ Rotate with non-solanacea plants e.g. maize, beans, garden peas, cabbage, and sweet potatoes to reduce the bacterial inoculum ◆ Plant tolerant and certified varieties if available. 	<ul style="list-style-type: none"> ◆ Begin scouting for presence of bacterial wilt symptoms throughout the growing crop cycle. ◆ Look out for rapid wilting of the entire plant without yellowing ◆ Look out for dropping of vegetative parts of the entire plant. Infected plants are still green but have lost turbidity even after watering 	<ul style="list-style-type: none"> ◆ Uproot and destroy by burning and burying all infected plants. ◆ Diseased plants should be carried away in a container to avoid spilling the affected soil 	<p>Bacterial diseases have no known cure. However the use of Copper based fungicides have been found to suppress further spread of the disease in the field. The following fungicides can be used to minimize bacterial infection in Tomato (copper oxychloride or copper hydroxide at 60gm/20 of water) e.g Amicop 50WP, Cobox 50WP, Cuprocaffaro Micro 37.5 WG Kocide etc)</p> <ul style="list-style-type: none"> ◆ FRAC code M1 Toxic to aquatic organism 	<ul style="list-style-type: none"> ◆ WHO II (Moderately hazardous) ◆ PHI 7 days
 <p>Brown discolouration of the vascular system (Photo by: www.seedquest.com)</p>	<ul style="list-style-type: none"> ◆ Avoid planting in low wet areas that are prone to run-off ◆ Destroy alternative hosts of Solanaceae family growing near the tomato crop, such as night shades and Irish potato ◆ Clean all farm implements before moving from one field to the next 	<ul style="list-style-type: none"> ◆ Cut the stem of the affected plant and check for a darkened water soaked appearance ◆ Cut the affected stem place in a glass of water and check for a milky slimy ooze to confirm presence of bacterial wilt ◆ Initiate disease control immediately after one plant is affected 	<ul style="list-style-type: none"> ◆ Apply wood ash in the affected holes after uprooting plants 	<ul style="list-style-type: none"> ◆ Disinfect all farm implements/tools after they have been used in fields with bacterial wilt. Dipping of farm tools in a Jik solution (500ml for every 10 litres of water) for at least 5 minutes is recommended 	
				<ul style="list-style-type: none"> ◆ 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 ◆ WHO class II pesticides might not be allowed in local IPM schemes ◆ Always consult recent list of registered pesticides (PCPB) 	

Kenya

CREATED: July 2013

AUTHORS: Miriam Otupa (KARI), Rose Kamau (MOA), Maina Gekone (MOA), Nancy Murage (MoA), Dora Kilalo Dr (Nairobi University), Alfayo Ombuya (KEPHIS), Willis Ochilo (CABI), Eunice Ringera (KEPHIS), Margaret Mula (CABI), Mary Lucy Oranje (CABI)

EDITED BY: Melanie Bateman (CABI) and Erica Chernoh (CABI)

REVISED BY: Edward Okonjo (Dudutech), Hannah Oduor (MOALF), Martha Kariuki (MOALF)

