




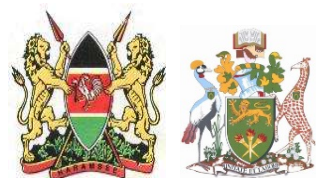
Tomato Yellow leaf curl

Tomato yellow leaf curl virus

	Prevention	Monitoring	Direct Control	Direct Control	Restrictions
 <p>Small upright curved leaves showing interveinal chlorosis. Source: QUEENSLAND Government. Department of Agriculture, Forestry and Fisheries</p>  <p>Whiteflies(adults) on Tomatoes Source: Queensland Government ,Department of Agriculture, Forestry and Fisheries</p>  <p>Pirate bug feeding on whitefly nymphs. Source Jack Dykinga USDA</p>	<ul style="list-style-type: none"> ◆ Use resistant varieties e.g. Kilele F1, Prostar F1 and Tylka F1. ◆ Use disease and pest free seedling raised in a protected nursery. ◆ Ensure the field and nursery are free of weeds and volunteer crops including alternate hosts (black night shade, pepper and beans) ◆ Rotate with non-solanaceae crops e.g. maize, onions., ◆ Avoid planting new fields near older fields ◆ Remove and destroy old crop residues 	<ul style="list-style-type: none"> ◆ Scout for plants showing bushy appearance, stunted and upright growth with short internodes ◆ Check for small leaves that curve upright showing strong crumpling and interveinal yellowing ◆ Look for flower abortion, small dry fruits and reduced fruit production ◆ Routinely check field margin and inside the field for whitefly adults, nymphs and eggs on the underside of the leaves. ◆ If there are more than 1 adult per plant in the nursery or 5 nymphs/ 10 leaflets consider direct control 	<ul style="list-style-type: none"> ◆ Rogue out infected plants and bury deep. ◆ Use yellow sticky traps or 2 M x 75 cm yellow sheet coated with any sticky product e.g. Vaseline ◆ Spray with 5 table spoonful of dish washing soap in 20 litres of water ◆ Use Beauveria bassiana products to control whiteflies (e.g. Botanigard ES) ◆ Spray azadirachtin (0.03%) e.g. Neemraj siper 3000 or nimbecidine EC. ◆ Use 20 – 50 g neem seed cake / litre water. ◆ Use <i>Encarsia formosa</i> products (Encartech) Minimum 2000 adult parasitic wasps/ 400ml (WHO U) 	<ul style="list-style-type: none"> ◆ Note that viral diseases are transmitted by vectors. Early control of whiteflies is necessary to avoid further spread ◆ Foliar spray with Buprofezin 400g/l (Applaud 40% SC at a rate of 20ml/20litres water.) ◆ Foliar spray with Imidacloprid 700g/kg (Confidor at a rate of 5g/20litres of water) ◆ Lambda cyhalothrin 25g/kg e.g. Karate 2.5 WG or Halothrin 2.5 WG at a rate of 20ml in 20 litres of water) ◆ When using a pesticide (even a botanical home-brew), 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. 	<ul style="list-style-type: none"> ◆ WHO toxicity class III (caution) ◆ PHI- 3 days max 3 sprays per season. ◆ It is toxic to fish and aquatic invertebrates but no harm to honey bees ◆ WHO toxicity class II (moderately hazardous). ◆ PHI 3 days

Kenya

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