



CONTROL OF WHITEFLIES IN POTATO

KALRO E-mimea Plant Clinic
KALRO/NAVCDP Factsheet No. 089



Healthy potato leaf

Source: Brian Luckhurst, AGRICO PSA, Kenya

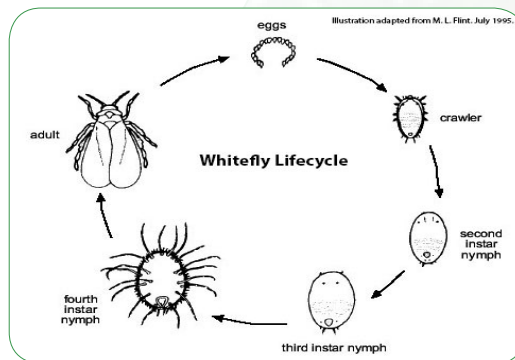


Adult stage of white fly



Adult on the lower surface of potato leaf

Source: Miriam Mbiyu KALRO Tigonj



Whitefly lifecycle (Source: <https://geekgardener.in/2015/06/05/how-to-control-whitefly/>)

Description

Whiteflies are sucking insects that feed on plant sap. The adults are small, powdery insects with four white wings. Both the adults and immature stages are found on the underside of the leaves. If heavy populations develop, plants become weakened with less vigor. Female produce over 160 eggs, a complete development lifecycle takes 2.5 to 7 weeks depending on temperature.

White fly attacks a wide range of crops including potato, tomato, cucurbits, eggplant, night shade, straw berries among others.

Diagnosis/Identification	<p>Symptoms</p> <ul style="list-style-type: none"> • Whiteflies are sucking insects and excrete honeydew, a sweet sugary sap onto the plant's foliage. This can cause sooty mold to develop and interfere with photosynthesis. • Plant's foliage become yellowed and mottled
Conditions prevailing that contribute to success	<ul style="list-style-type: none"> - Prolonged dry weather favors pest's development - The pest is spread by flying from one plant to the other - Infested plant residues in the field serve as a source of future infestations.
Management Strategy	<p>The following management strategies are recommended:</p> <p>Monitoring</p> <ul style="list-style-type: none"> - A weekly regular monitoring program is needed for the early detection of whiteflies (Randomly inspect plants and assess them for whitefly infestation) Weekly inspections will help you determine which life stage (egg, crawler, pupae or adult) is present) - Use of yellow sticky cards for quick plant inspections: Keep track of population trends to determine if populations are increasing or decreasing. - Use pest-infested indicator plants to monitor whitefly populations. <p>Cultural practices</p> <ul style="list-style-type: none"> - Use of certified seed - Use of yellow sticky cards: can be placed in the greenhouse at the rate of approximately one per 1000 sq. ft. Place additional cards near doors and vents. - Scout 1-2 times a week for initial symptoms and timely control - Practise field sanitation by removing infested foliage from plant or fallen plant residues on the ground - Use of natural enemies e.g lady beetle, ants <p>Biological Control</p> <ul style="list-style-type: none"> - Biopesticides e.g. <i>Beauveria Bassiana</i> (Biopower 1.5 Liquid, Bio-Power 1.15WP) <p>Chemical management</p> <ul style="list-style-type: none"> - Apply insecticides during vegetation emergence, flowering and at senescing. - Apply insecticides with active ingredients such as Imidacloprid (e.g. Confidor, Bamako 700WG), Acetak Top 700 WG <p>Note: <i>Agro-chemicals should be used in consultation with professional practitioners and considering existing cautionary/safety measures, particularly the manufacturer's instructions.</i></p>
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