



CONTROL OF APHIDS IN POTATO

KALRO/CHP Fact Sheet No: 090



Healthy potato crop (Source: Brian Luckhurst, AGRICO PSA-Kenya)

Aphids on the lower side of potato leaf

Potato mosaic due to PVY and PVX (Source: Miriam Mbiyu, Kalro Tigoni)

Description

- Aphids are plant sucking insects
- Apart from causing direct physical damage to potato plants when they puncture leaf tissues to suck sap, they also act as vectors for viruses e.g. potato leaf roll virus (PLRV).
- Aphids have a wide host range including potato, tobacco, tomato, eggplant, pepper, banana, peanut and beans, thorn apple and night-shade.

Diagnosis/Identification

Symptoms

- A colony of aphids on the lower side of the leaves.
- Sticky sap drops (honey dew) and excreta appearing on the upper surface leaves.
- Distorted appearance of foliage due to transmission of non-persistent viruses such as PVY and PLRV.
- Aphids transmit viruses during feeding and are passed to seed and show viral disease symptoms when planted that appear as leaf roll, mosaics or general plant stunting resulting in declining potato tuber yields.

<p>Conditions prevailing that contribute to success</p>	<ul style="list-style-type: none"> - Aphids are generally favored by temperatures above 20°C and drought spells or low rainfall.
<p>Management Strategy</p>	<p>The following management options are recommended:</p> <p>Monitoring</p> <ul style="list-style-type: none"> - A weekly regular monitoring program is needed for the early detection of aphids (Randomly inspect plants in production areas and near aphids immigration areas. 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 aphids populations. <p>Cultural practices:</p> <ul style="list-style-type: none"> - Start the crop with using certified seed. - Remove and destroy infested plants and tubers. - Bury infested plant debris (2 feet deep) to reduce survival in the field. - Adopt rotations with pastures, cereals and non-solanaceous crops. - Use of predators such as lady bird, lace wigs and fall midge. - 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. <p>Chemical management:</p> <ul style="list-style-type: none"> - Sprays as soon as pest is spotted alternated with systemic insecticides. - Spray with organophosphate chemicals such as Cyclone 505EC, Agropyrifos 48EC, Thiamethoxam (ENGEO 247 SC).
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