



Natural Resources Base Management

AGRICULTURAL PESTS



FALL ARMYWORM

Fall Army Worm (*Spodoptera frugiperda*) is a pest native to the Americas and is currently wreaking havoc throughout the world particularly throughout Africa. The caterpillar mainly feeds on young maize plants but is known to feed on more than 80 different crops including sugar cane, sorghum, rice, wheat and vegetables



Image Credit: CropWatch Africa

MANAGEMENT

Scouting, detection and pest identification

Pheromone traps can be placed in fields to monitor moth flights and arrivals. Moths are grey or brown with irregular markings. Moths can be seen at night in crop fields. Moths are also active before sunrise and after sunset, depending on infestation levels, moth activity has been recorded to occur during the day.

Early detection is crucial; it is important to monitor crops every 2 days starting from the current wind direction, checking borders and centres of crop fields. Look for egg masses and windowing on the maize leaves.

Control

Spray insecticides as soon as the pest is noticed or if 5 - 10% of plants show infestation, e.g. 5 or 10 plants per 100 plants inspected. Use those active ingredients that have already been approved for the fall army worm by the Registrar of Act No. 36 of 1947. Insecticides are only effective when larvae are young, up to 3rd instar. When larvae enter the plant, effective insecticide application becomes a problem.

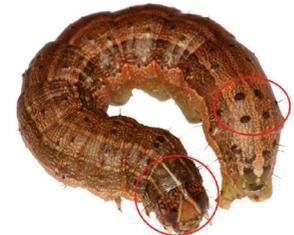
IDENTIFICATION

Properly identifying the FAW is the first critical step in its management. The FAW could be confused with different caterpillars (Lesser armyworm, Semi-loopers, Maize stem borer, African bollworm etc) throughout its lifecycle from larvae to moth. In particular the cotton bollworm (*Helicoverpa armigera*) often shows a similar pattern of dots on its back, but its head is usually paler, and although they can also show an inverted Y, this is usually a similar colour to the rest of the head. Unlike the fall armyworm they feel rough to the touch due to tiny spines.

Larvae:

The colour of young FAW larvae are usually light green and/or brown in colour, but they might also present a yellowish colour. As larvae mature they become darker in colour with variations of green to brown with the head presenting in orange, brown or black. Mature larvae usually have the following key characteristics (Figure 1):

- Y mark on the head region
- Four large spots in a near square arrangement on the second last segment
- Each of the body segments has four spots formed in a trapeze pattern



Fall armyworm characteristic marks. © Visser ARC/VOP Rooiplant

Figure 1: FAW identification marks

Caterpillars are usually found in whorls of young maize plants. On mature plants they may infest the ears feeding on the softer tissue. Moths hide in debris, whorls and other secured areas. Moths prefer dark places during daylight.

Pupae:

FAW pupae are usually found in soil or on the plant and usually presents in a brown/reddish colour.



Figure 2: FAW Pupae (D. Visser ARC)

Moths:

Moths are brown or gray with irregular markings (Figure 3)

Leaf damage:

Leaf damage is usually characterized by ragged feeding, and moist sawdust-like frass near the funnel and upper leaves. Early feeding can appear to be similar to other stem borers.



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Figure 3: Adult male moth (© Matt Bertone)



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STATUS THROUGHOUT SA

The fall armyworm has been reported in most provinces throughout South Africa. Limpopo (widely distributed), Northwest (significant pockets), Gauteng (east and west), Free State (significant pockets), Mpumalanga (widely distributed), Northern Cape (localized), Eastern Cape and KwaZulu-Natal. Confirmed reports are relatively wide spread in the Western Cape, no infestations have been reported and moth numbers are low and sporadic.



ACTION BY DAFF



DAFF established a governing body and is in constant contact with industry experts. Through this body DAFF is constantly monitoring the status of the FAW throughout South Africa and is in process of registering a pesticide to manage the pest. Various process chemicals have already been registered to combat the FAW.

POTENTIAL IMPACT ON AGRICULTURE

The FAW is a polyphagous pest known to feed on multiple plants, it however prefers grain crops such as maize and corn.

Useful links:

1. Fall Armyworm in Africa: A Guide for integrated pest management.

https://www.usaid.gov/sites/default/files/documents/1867/-Fall-Armyworm-IPM-Guide-for-Africa-Jan_30-2018.pdf

2. ARC Fact Sheet

<https://www.nda.agric.za/doaDev/sideMenu/Food%20Import%20&%20Export%20Standard/docs/Fall%20armyworm%20Fact%20Sheet%20FAW.pdf>

3. Guideline for registered agrochemicals

<https://www.nda.agric.za/doaDev/sideMenu/Food%20Import%20&%20Export%20Standard/docs/Guideline%20for%20registered%20agrochemicals%20to%20control%20Fall%20armyworm%20in%20South%20Africa.pdf>

4. Croplife Managing FAW

http://www.croplife.co.za/images/CLSA_FAW_position_statement_V8_5_April_2017.pdf

Agri SA is in constant contact with DAFF in monitoring the status of the pest and urge all farmers to take note of the potential problem and report infestations to ensure a swift response from the sector (see contact below).

Cropwatch Africa can be contacted for Surveillance work, training and identification throughout South Africa.

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