



## **Caterpillars on Grass Family Crops (maize, sugarcane, sorghum)**

### **Awareness for better management**

Ministry of Agriculture, Mechanization and Irrigation Development  
Department of Research and Specialist Services  
Harare Agricultural Research Centre  
Fifth Street Extension  
P. O. Box CY 594, Causeway, Harare  
[www.drss.gov.zw](http://www.drss.gov.zw)

**1 December 2016**

- The Department has requested for slots on Radio and ZBC-TV for the Government Entomologist to create awareness on pests of economic importance and **their management**.
- The awareness information will also be translated into Shona and Ndebele. The Government Entomologist will co-present/ share presentations with AGRITEX to allow for adequate translation into extension messages.
- Of particular interest are the various caterpillars of the Lepidoptera group that have surfaced on cereal crops, particularly maize. The information will also be availed to the Herald and the Sunday Mail for publication.
- The awareness targets farmers, agricultural extension staff, academia, private companies and the general public in Zimbabwe.
- Some of the pests, with pictorial illustrations to show the differences, are listed below.

## 1. Fall Armyworm



**Figure 1:** Fall Armyworm larva (a) on a maize plant (left) and showing the hairy back, brown and black stripes and black spots (right, under viewing glass)



**Figure 2:** Maize planting showing Fall Armyworm damage

**Common name:** Fall Armyworm (*Spodoptera Frugiperda*)

**Group:** Insect, moth (*Lepidoptera: Noctuidae*)

**Type:** Chewing pest (Larvae/ caterpillar)

**Some host plants:** Maize, sugarcane, sorghum and other cereals

- Fall Armyworm is a new armyworm pest in Zimbabwe.
- The Alien invasive moth is native to tropical and sub-tropical regions of the Americas.
- The pest was first reported on the African continent in several West African countries.
- The pest can wreak havoc on crops, if left to multiply.
- Caterpillars of Fall Armyworm seem to be much more damaging to crops such as maize than most other African *Spodoptera* species.

### **Dispersal Capacity**

- Fall Armyworm has a remarkable dispersal capacity of over 2 000km per annum.
- Now present in West Africa, but is likely to spread and colonize most of tropical Africa in a short space of time because of its high dispersal capacity.

### **Management**

- It is important to choose and use selected insecticides. Indiscriminate non-selective use of pesticides will lead to resistance in the pest populations.
- Therefore, alternated application of insecticides such as pyrethroids, carbamates and organophosphates are recommended as an immediate measure.
- For example, control of Fall Armyworm with **Carbaryl 85% WP** at high dosage rates of **300-400g/15 L of water at full cover spray** would effectively control the pest. Test apply the Carbaryl and if it does not work effectively, the other option is to use **Lambda** at **150 ml/200 L of water** or 15ml/15 L of water (knapsack sprayer) *full cover spray*.

## 2. Spotted stem borer (*Chilo partellus*) and maize stem borer



**Figure 3:** Spotted stem borer, cream in colour with brown spots on its body and a reddish head.



**Figure 4:** Maize stem borer



**Figure 5:** Damage caused by spotted stem borer (*Chilo partellus*).

**Common name:** Spotted Stem Borer (*Chilo partellus*)

**Group:** Insect, moth (*Lepidoptera: Noctuidae*)

**Type:** Chewing pest (Larvae/ caterpillar)

**Some host plants:** Maize, sorghum and other cereals

Application of **granular insecticides** such as Combat or Dipterex in the maize plant funnel will usually control the ordinary maize stem borer.

### 3. African Armyworm (*Spodoptera exempta*)



**Figure 6:** African Armyworm larva with black and brown stripe and a black head



**Figure 7:** African Armyworm pupae



**Figure 8:** Armyworm larvae feeding on maize plants

**Common name:** African Armyworm (*Spodoptera exempta*)

**Group:** Insect, moth (*Lepidoptera: Noctuidae*)

**Type:** Chewing pest (Larvae/ caterpillar)

**Some host plants:** Maize, sorghum, other cereals and grasses

- African armyworm is a well-known pest of maize, other cereals and rangeland grasses in Zimbabwe and the rest of Sub-Saharan Africa. It shares the same genus with the Fall Armyworm.

- African Armyworm is effectively controlled using **Carbaryl 85% WP** at normal rates as a **full cover spray**.

**Key Contacts:**

**Plant Protection Research Institute (PPRI)** telephone number **(04) 700339**, or contact the following:

1. The Head, PPRI, Mr S. Nyamutukwa: 0772 868 804 (Entomologist)
2. Deputy Director, RSD, Dr G.P. Chikwenhere: 0712 415 348 (Entomologist)
3. Director, Research Services Division (RSD), Dr C. Mguni: 0712 611 772