Maize Stalk borer (*Busseola fusca*) the perennial pest in maize and Sorghum (By C. Zishiri Maize and Small Grains Specialist)

1.0 Introduction
Maize stalk borer, scientific name, (*Busseola fusca*) is one of the destructive insect pest of maize, sorghum as well as millets limiting farmers to potentially achieve expected yield. It belongs to order Lepidoptera. The pest affects both irrigated and dry land maize crops.

2.0 Life cycle of Maize Stalk borer
It is important for the farmer to know the life cycle of maize stalk bore in order to make proper decision on preventative and control methods and measures. Maize stalk borer has four (4) stages in its life cycle. These are eggs, larvae, pupa and adults (moths). The female lays eggs 3-4 nights in batches of 10-130 eggs. Take note of the number of eggs laid, they determine number of potential pests that will damage the crop. The eggs are laid under the leaf sheath. After 7-10 days eggs hatch into larvae. This is called first generation larvae. These are small worms that migrate to into the plant funnels. Remember the plant funnels hiding positions which cannot be seen clearly and also chemical penetration must be effective in order to kill the pest. The larval stage can be 3-6 weeks. This explains long period of damaging the crop. In a single season, the pest can complete two non diapaus ing generation generations and a third diapausing
generation that overwinters in soil or plant debris. The second generation larva causes damage to maize grain.

3.0 Damage caused by Maize Stalk borer
The first generation larvae of maize stalk borer affects all plant parts except the roots. This early instar larvae cause leaf scarification and short holes. Damaged plants show a ragged appearance. Characteristic feeding marks horizontal rows of holes on the leaves emerging from the funnel of the plant and frass (droppings) are the first signs of infestation. Attack by the larvae on young plants may permanently stunt the crop and prevent them bearing a cob. The tunneling activities of the more mature caterpillars in the main stem weaken the plants which may then lodge. As they migrate inside the funnel of maize, they attack the growing points which are the potential reproductive organs of the crop. The second generation larva feed on developing maize cobs from the tips affecting grain development. This type of damage is a pre-disposing factor for fungal disease infection for the cobs, resulting in loss of grain yield and quality. Grain yield losses have been estimated at between 10 and 43%.

*Figure 1: Leaf and funnel damage caused by First Generation Larvae*
Figure 2: Stunted growth and lodging caused by maize stalk borer

Figure 3: Stem and cob damaged by Maize stalk borer
4.0 Chemical Control of Maize Stalk borer

Apply Dipterex 2.5 % granules or cambat granules or use Carbarly 85%. Ensure that the chemical is applied directly inside the funnel in order to kill the first generation larva. Apply the chemical at 4-6 weeks after emergence of the crop. Do not wait for the damage to occur, use chemical as preventive measure.

5.0 Cultural Methods of Controlling Maize Stalk borer

- Crop rotation
- Manipulating of planting dates
- Removals of alternative hosts and volunteer plants
- Intercropping
- Deep burying of crop residues