## African maize stalk borer

*Busseola* fusca *Bungua wa mahindi in Swahili*

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| - Crop rotation with crops other than sorghum and pearl millet. Rotating with legumes improves soil nutrients and maize plants’ ability to tolerate stalk borers  
- Plant stress tolerant varieties such as Kito and Kilima ST  
- Plant early in rainy periods Short rains: early to mid-September; Long rains: early to mid-November  
- Intercrop with cowpeas  
- Use push-pull strategy: Plant *Desmodium* in between maize rows to repel stalk borers from the maize. Plant napier grass along the borders of the maize as a trap crop to pull stalk borers away from the maize.  
- Plant wild flowers (e.g. *Tagetes spp.*) to attract natural enemies  
- After harvest, destroy crop residues (e.g. old stalks) in order to kill larvae and pupae in stalks | - Three weeks after planting, begin inspecting maize plants two times per week. Continue inspecting plants until flowering.  
- Observe plants for holes in leaves and dead hearts  
- Consider carrying out early controls when 3 – 10% of young plants in population are damaged  
- In the later stages of the infestation, larvae bore into upper maize stalks and dead-heart symptoms appear. At this stage, control measures are too late because larvae are protected inside the stalks | - Early control of young larvae that have not yet entered stalks: Put one bottle cap of ash dust into leaf-funnel of young plant; Apply Neem seed cake powder 25 – 50g/L water onto young plants every 10 days until flowering; Apply hot pepper solution onto young plants every 10 days until flowering  
- Place egg cards with the parasitic wasp *Cotesia flavipes* in crop | - When using a pesticide, always wear protective clothing and follow the instructions on the product label, such as dosage, timing of application, pre-harvest interval, max number of sprays, restricted re-entry interval, min retreatment interval. Do not empty into drains  
- Always double-check with recent list of registered pesticides in Tanzania (MAFSC through TPRI) | |
| - Products based on *Bacillus thuringiensis* (e.g. Ascopel WP), Bacterial insecticide  
- Deltamethrin based products (e.g. Deltapaz 2.5 EC, Dimepaz 40EC). Pyrethroid with contact and residual activity | - Slightly toxic (WHO Class III); Apply product onto young plants particularly onto or into leaf sheath funnels; Apply as soon as possible after preparation | |
| - Slightly toxic (WHO Class II); Apply products onto young plants particularly onto or into leaf sheath funnels; A contact and stomach poison with 3-4 weeks persistence; High risk to non-target insects such as predators and pollinators; Dangerous to fish and other aquatic organisms. Do not contaminate surface waters or ditches; Do not apply to plants suffering from drought or other physical distress; Do not spray within 6 m of field boundary. | | |

**Tanzania**

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**AUTHOR(S):** Jeremiah Sembosi (Ministry of Agriculture, Food Security and Cooperatives) and Joyce Bakendi (MAFSC)  
**EDITED BY:** Plantwise

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