

A study on the interactions between *Striga hermonthica* (Del.) Benth, and stemborer [*Chilo partellus* (Swinhoe) (Lepidoptera: pyralidae)] on maize plant (*Zea mays* L.) hybrid (511) was carried out at ICIPE Mbita Point Research and Training Centre (MPRTC) situated on the shores of Lake Victoria in Western Kenya. Maize is the staple food in this area and is grown by small-scale farmers. *C. partellus*, is one of the serious pests of the maize plant whereas *S. hermonthica* is a parasitic weed. Both the borer and the weed are among the major factors limiting maize production and infest a large area of Western Kenya within the Lake Victoria basin. This study was to investigate the interactions between striga and borer on maize plant. Studies on *C. partellus* infestation levels in the *S. hermonthica* infested / uninfested maize fields was carried out within MPRTC during both long and short rain seasons of the year 2000. Results showed that there was a positive correlation between borer leaf damage and striga plants, and also there was a negative correlation between striga weeds and maize plant height as well as yield. Investigations on various infestation density levels of *S. hermonthica* and *C. partellus* on maize plants were carried out in the laboratory and screen house. These involved the effect of the striga infested maize plants on oviposition, biology and behaviour of *C. partellus*. Results indicated that the mean number of eggs laid by the moths was higher on the high striga infested maize plants than on the low and medium striga infested, and the control. Effect of the striga infested maize plants on larval arrest, settling, feeding, food assimilation, growth and development were also studied. There was no significant difference on the mean number of *C. partellus* larvae arrested on maize plants in 3 and 5 days after infestation; neither on those settled on maize leaf cuts in 4, 8 and 24 hours after infestation. Results from these studies also showed that larvae consumed less leaf cuts and stem segments from the striga infested maize plants than they did on those from the control maize plants. The least larval food assimilation also occurred on the high striga infested maize plants. The shortest larval development period was recorded on the control (uninfested) maize plants. Percentage pupation was also significantly higher on the uninfested maize plants compared to the medium and high striga infested maize plants. In order to achieve sound knowledge on maize and striga interactions further studies on the influence on maize growth should be carried out. There is also need to carry out further studies on oviposition preference of *C. partellus* moths on striga infested maize plants.