

## ABSTRACT

The noctuid stem borer *Busseola fusca* is an important pest of maize and sorghum in Sub-Saharan Africa. The presence of this species occurred mostly on cultivated than on wild habitats. *Busseola fusca* is oligophagous having a narrow range of a wild grass species. This might be due, in part, to differences in silicon (Si) content in plant tissues between cultivated and wild grasses. In the present study, we have tested this hypothesis by studying the survival and the relative growth rate (RGR) expressed as daily weight gains of *B. fusca* larvae on maize and six wild host plants, mostly present in the natural habitat where *B. fusca* occurred, and correlated with their Si contents. Survival and RGR of *B. fusca* larvae were considerably higher on maize and wild sorghum than on the other grass species, and they were negatively related to plant Si content. This was corroborated with results on RGR from artificial diets amended with increasing levels of Si. In addition, if Si was added to maize growing substrate *B. fusca* larval growth was significantly reduced confirming the involvement of Si in *B. fusca* larvae – Poaceae interactions. The results provide insight into the possible mechanisms of oligophagy of *B. fusca* and provide a correlative support for a physical role of plant endogenous Si in impeding feeding of *B. fusca* larvae.