

**INFLUENCE OF MAIZE-LEGUME INTERCROPPING ON STRIGA (*Striga hermonthica* Del. Benth) CONTROL AND MAIZE GRAIN YIELD IN EASTERN UGANDA**

**By**

**NAMUTEBI VIVIAN**

**(Bsc. LUM, MAK)**

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## **ABSTRACT**

Striga is the biggest constraint to maize production to the people of Eastern Uganda. Some of striga control measures include use of agricultural inputs, resistant cultivars and use of trap crops. Most of them have not been adopted by the farmers. The use of trap crops, which includes legumes, has been recommended for resource limited farmers. However there is no information regarding suitable legumes for the control of striga in this region. In order to improve maize yields in the striga infested areas of Eastern Uganda, on-farm experiments were carried out in Tororo and Busia districts for two seasons in 2011 and 2012. Maize was intercropped with soybean, Desmodium and Common beans with sole maize as the control. A randomized block design was used. Laboratory screening of the legumes was also done to assess the trap crop potential of the legumes. The results showed that intercropping significantly reduced the incidences of striga in the farmer's field. Maize Desmodium intercrop reduced the incidences of striga the most at 72% while common bean-maize and soybean-maize intercrop reduced number of emerged striga plants by 37% and 36% respectively. During the screening of the legumes, results showed that soybean and common beans had the highest amount of germination stimulant produced while Desmodium had the least amount. However, due to the perennial nature of the Desmodium and more N released into the soils, efficiency of reducing the striga and yield of maize was highest with the Desmodium-maize intercrop. Farmers were therefore encouraged to incorporate it into their farming system.