

## **SYPERTIX<sup>R</sup> IS EFFICACIOUS FOR USE IN TSETSE CONTROL IN KENYA**

Japhet Kiragu<sup>1#</sup>, David Rutere<sup>2</sup> and Johnstone Mwatika<sup>3</sup>

1. Department of Biological Science, Machakos University, PO Box 136-90200 Machakos; 2. Norbrook (K) Ltd, PO Box 134876 – 00908 Nairobi., 3. Kiboko Vector Control and Experimental Station, Ministry of Livestock Development, PO Box 21-90138. Makindu, Kenya.

### Abstract

Over 60% of the Kenyan ASAL is tsetse fly infested and trypanosomiasis causes a considerably constraint to livestock production and productivity. Use of insecticides remain an integral part in the management of the disease vectors. It is necessary to provide to the farmer with a variety of insecticides to choose from. Sypertix<sup>R</sup>, an alpha Cypermethrin, is already registered for use against other vectors. Following a successful laboratory trial in KALRO – Muguga, a trial was carried out in Kiboko, Kenya to determine efficacy of the insecticide under natural conditions of tsetse infestation. Efficacy was determined through bioassays, in which 30 – day old laboratory bred male *Glossina pallidipes* were exposed for 10 minutes, one on either side of the flanks of a treated steer. Three steers were used for each experimental treatment. Performance of Sypertix was compared with that of Dominex<sup>R</sup> and no treatment. Percentage feeding success, knockdown and mortality of the tsetse flies was scored at different times up to four weeks post – exposure. Data analysis comprised comparisons between treatments and trend analysis. Feeding success was less than 10% in the insecticide treated groups and over 80% in the negative control on day zero. It however rose to 80% in week three and four. 90% knockdown occurred in the insecticide treated groups within 5 minutes post treatment, and advanced to 100% mortality within ten minutes on day zero. A cut off mortality of 80% within 24 hours occurred 14 days post treatment for the insecticide treated group. Over 80% of flies survived for up to 48 hours post treatment throughout the experimental times. Results obtained were comparable and not significantly different between the insecticide treated groups ( $p < 0.05$ ), but significantly different ( $p > 0.05$ ) from the non-insecticide treated group. It is recommended to use Sypertix for control of the tsetse flies in Kenya, and sprayed on livestock fortnightly.

**Key words:** Sypertix, tsetse control, bio-efficacy trials, insecticides, bioassays, *Glossina*.  
Corresponding author, Tel +254722812790, email jmkiragu@mksu.ac.ke.