The effects on the fertility of small East African male goats of intravenous infection with Trypanosoma (t) (b) evansi were studied. Six infected bucks developed erratic, low but persistent parasitaemia, the packed cell volume dropped gradually but significantly (p less than 0.001) and they became emanciated. Half of these bucks developed clinical orchitis. Two bucks died of the disease during the experiment. Semen from all the infected bucks deteriorated in quality and quantity and those with clinical orchitis became totally aspermic. Spermatozoal abnormalities and the number of dead spermatozoa rose significantly. Later in the disease, the testicles of the infected bucks atrophied. Histologically, the testicles from the infected animals became devoid of spermatozoa, the testicular blood vessels contained microthrombi and there was infiltration of inflammatory cells. Subsequently, diffuse calcification set in, with calcium deposits obliterating most of the seminiferous vesicles and ducts and also the epididymal ducts.