We did cross-sectional surveys in Kwale District, Kenya to determine the epidemiology of bovine trypanosomosis and livestock owners’ perceptions of the disease. The surveys involved relative importance of trypanosomosis, examination of the current disease constraints, current control practices and drug-use patterns. Informal meetings were held with farmers and cattle census undertaken. Tsetse-fly densities and trypanosomosis prevalences in cattle were determined. A total of 132 farmers were interviewed. Trypanosomosis, anaplasmosis, East Coast fever, foot-and-mouth diseases were reported to be the major constraints to livestock production. Trypanosomosis was the most important compared to other diseases. Chemotherapy was the most widely used method of controlling the disease. Farmer-based tsetse-control technologies were poorly adopted. Respondents were quite knowledgeable on the symptoms, causes and treatment of trypanosomosis. *Glossina austeni, G. brevipalpis* and *G. pallidipes* were found in the area; the latter was the most common (0.2–738 flies/trap). *Trypanosoma congolense* and *T. vivax* were found in cattle with the former more prevalent. Infection prevalences in cattle varied between 0 and 25% (median: 22%).