The university pigsty at Nsukka is right in the endemic zone of Trypanosomiasis in Africa. The capability of Trypanosomes to undergo antigenic variation of its surface coat against the immune responses of the patient and the Chemotherapy (Bruce et al 1913) renders the control measures either inadequate or difficult to implement. Thus every other disease of pig in the farm is rendered complex by the existence of sub-clinical trypanosomiasis. Thus an analysis of the clinical documentation and the farm records (1974-80) were undertaken to assess the role of sub-clinical trypanosomiasis and animal husbandry practices as a predisposing factor for other pig diseases in the farm. (ILOMODERE & BALOGUN 1981).

Swine trypanosomiasis was observed either as sub-clinical or chronic disease except for one serious outbreak during 1977/78. A mixed infection of T. congolense & T. brucel was noted. The former slowly disappeared by auto-sterilisation while T. brucel continued in sub-clinical forms, with a definite drop in the PCV of blood (Baldray 1963; Killick-Kendrick 1963). A survey revealed more of biting flies than Tsetse flies around the farm. Antracyclin chloride was found effective compared to the treatment by benenil which provided a temporary cure with subsequent relapsing. Chemotherapy prophylaxis by Antracyclin-Suranil Complex at 3-6 months interval was useful.

Swine Erysipelas (Diamond disease) appeared in a sub-acute/chronic form in the native and cross-bred weaners in wet and cold season particularly when the feed was sub-standard and when the PCV was low. When left untreated the disease developed into chronic lesions which responded well to penicillin therapy but it reappeared. Hence the whole flock was slaughtered, the buildings and surroundings sterilised and kept empty for about two years. A fresh foundation stock with no history of diamond disease was introduced. Since then the flock was free. (SHUMAN, R. D. 1970).

Pig scour (diarrhoea) was common among weaners. E. coli was generally isolated. It was controlled by antibiotherapy and strict sanitary measures. Trypanosomiasis did not appear to be a complementary factor. Locomotor ataxia was observed in large white sows with large litter, particularly during late pregnancy and early period of suckling. The low PCV in such animals, suggested the involvement of sub-clinical trypanosomiasis as an additional stress factor. Clinically it was diagnosed as locomotor ataxia due to magnesium deficiency, (probably caused by excessive excretion of "Mg" due to stress). It responded well for treatment with "MPC solution" (M & B). Feed supplementation may help.

The Health hazard due to defective hygiene and husbandry was studied by analysing the mortality among the young stock. A highest rate of mortality was observed among piglets up to 6 months of age, viz. highest mortality during the neonatal week and the next highest mortality was among the weaners and subsequent mortality was confined to weaning of the flock. They were directly or indirectly related to defective hygiene and farm management. Sub-clinical trypanosomiasis did not appear to influence the mortality. A comparative study of the viability revealed that the viability of native pigs were least at peri-natal period (due to high rate of still birth, probably due to inbreeding). The viability of exotic pigs was higher than the native but lesser than the cross-bred pigs, and it was ascribed to high genetic resistance of one of the parents to trypanosomiasis. (Morrison & Max Murray 1979).

The recommendation for trouble free pigsy in endemic zones of trypanosomiasis in the tropics is as follows:

(1) The strategy for control of trypanosomiasis in pigsty should be based on:
(a) either raising trypanosome free pigs (Stephen 1968), or, (b) a strategy of co-existence with trypanosomes, with an upper hand on control measures supported by reasonably high degree of health and effective measures for reduced reinfection and periodical test for PCV of suspected pigs in the farm. (Denowitz 1959).
(2) A standard schedule for Chemotherapy prophylaxis (Antracyclin-Suranil complex at 40 mg/kg at 3-6 months interval) and annual curative therapy with Antracyclin Chloride.
(3) A standard schedule for preventive vaccination against endemic microbial diseases.
(4) Establishment of a particular pattern of cross-breeding with an eye on production and disease resistance. (Morrison & Max Murray 1979).
(5) A packages of improved feeding, sanitation and animal husbandry practices to prevent hard health hazard.

References:

(7) STEPHEN, Monograph on Commonwealth Agriculture Bureau-UK/England.
(8) SHUMAN M.D., "Diseases of Swine" 3rd ed. PP.508-562. IONA Univ. Press Ames U.S.A.