

SWINE HEALTH AND HUSBANDRY IN ENDEMIC ZONES OF
 TRYPANOSOMIASIS IN NIGERIA

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The University piggery 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. (ILEMOBADE & 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. brucei was noted. The former slowly disappeared by auto-sterilisation while T. brucei continued in subdued forms, with a definite drop in the PCV of blood (Baldry 1963; Killick-Kendrick 1963). A survey revealed more of biting flies than Tsetse flies around the farm. Antrycide chloride was found effective compared to the treatment by berenil which provided a temporary cure with subsequent relapses. Chemical prophylaxis by Antrycide-Suramin Complex at 3-6 months of 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 feeding was sub-standard and when the PCV was low. When left untreated urticaria developed into diamond lesions which responded well to penicillin therapy but it reappeared. Hence the whole flock was slaughtered, the building 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 (diarrhea) 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 "MFC 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 first neonatal week and the next highest mortality was among the weaners and

subsequent mortality was confined to weanling 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 were 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 piggery in endemic zones of trypanosomiasis in the tropics is as follows:-

- (1) The strategy for control of trypanosomiasis in piggery should be based on:-
 - (a) either raising trypanosome free pigs (Stephen 1966), 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. (Desowitz 1959).
 - (2) A standard schedule for Chemical prophylaxis (Antrycide-Suramin complex at 40 mg/kg at 3-6 months interval) and annual curative therapy with Antrycide 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 herd health hazard.

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