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Short Communication

TRYPANOSOMOSIS IN INTENSIVELY REARED MUTURU CALVES IN NIGERIA

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Four batches of Muturu calves (average age, 40 days) were purchased from neighbouring villages for experimental studies under intensive management at the university farm, Nsukka. Calves are normally weaned at about 9 months of age under extensive village management. The first batch of 15 calves arrived in January 1989 and a month later 2 became recumbent one of which died. Six of the remaining calves were tested for trypanosomosis by examination of blood buffy coat (Murray *et al.*, 1977). Three were positive and all were treated with diminazene aceturate (3.5 mg/kg, i/m). Eighteen days later, 2 calves were unthrifty and febrile (41°C), and re-examination of the 14 surviving calves showed 5 infected including the 3 earlier cases. All calves were subsequently treated with isometamidium chloride (0.5 mg/kg, i/m).

Within 15 to 18 days of arrival of the second batch of 6 calves in July 1989, one calf died, 2 were salvaged and the others obviously ill (weakness and emaciation) responded to isometamidium treatment. No blood samples were examined. In August 1989, one of the calves from the first batch was in poor condition, weak and anaemic. Fifteen calves were then tested, of which 5 were infected with *Trypanosoma vivax* and one with *Trypanosoma congolense*. The mean packed cell volume (PCV) (\pm s.e.) of infected calves (24 ± 1.9) was not significantly different from that of non-infected calves (28.2 ± 1.5) ($P > 0.05$, t test). Of 9 calves procured in September 1989, 2 fell sick 3 weeks later of which one died. Four of the 8 surviving calves including the sick animal were infected with unidentified trypanosomes. The following year, 3 of another group of 7 calves that were received in August 1990 were infected solely by *T. vivax*. Mean PCV of the infected calves (26 ± 3.6) was lower than that of non-infected calves (37.8 ± 3.2), but the difference was not statistically significant ($P > 0.05$).

A survey of 53 healthy Muturu cattle from the same source as the calves revealed 3 of 43 adults infected with trypanosomes (*T. vivax*, *T. congolense*, *T. brucei*), but none of the 10 calves. Also, from a 2 year (1989 to 1991) study of the prevalence of trypanosomosis in the resident university herds of N'Dama (53 animals) and Muturu (11), 5.4% and 0.0% respectively were infected. It is thus possible that the university farm was the source of infection to the calves. The calves were transferred from nearby villages, however, where trypanosomosis was shown to be endemic as well. It is thus probable that their translocation was within the same endemic zone and that the calves were not exposed to any new strains of trypanosomes on the university farm. Muturu cattle are trypanotolerant (Roberts and Gray, 1971; ILRAD, 1990) and their trypanotolerance may have broken down as a result of the stress of their translocation (Stephen, 1986). Possible stress factors were premature weaning and a change to different husbandry and environment.

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