SUMMARY

The work presented here was aimed at studying the life cycle *B. bigemina* on its invertebrate host, the tick *B. microplus*. The *B. bigemina* capacity of infection and transovarian transmission on *B. microplus* engorged females was assessed. The females used were fed either on cattle either carrier or clinical ill due *B. bigemina*. Until DAI 18, females were detached direct from hosts, and from DAI 21 on, they were collected after natural fall. All groups were incubated at 27°C and 70% relative humidity. After 5 days of oviposition, a haemolimph examination for *B. bigemina* was made. Further on the biological test showed that engorged females derived from clinical ill cattle are able to transmit *B. bigemina* to their offspring. Such results indicate that when the vertebrate host presents high levels of parasites on blood, tick infection is prone to occur early.

KEY WORDS: *Babesia bigemina, Boophilus microplus,* biology, epidemiology, transovarian transmission.