

## **SURVEY OF BRUCELLOSIS INVOLVING BRUCELLA SUIS BIOTYPE 2 IN WILD BOARS, ARC-EN-BAROIS FOREST, FRANCE**

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In France, since 90's free ranging wild boars had been identified as a reservoir of *B. suis* 2 and a threat for outdoors piggeries. A national survey has been implemented in order to study the extend of the disease in the French wild boars populations. Parallel to this national survey we have studied more particularly transmission mechanism of porcine brucellosis in wild boars inhabiting Arc-en-Barois forest. There, on a 11 000 ha forest, 500 to 1000 wild boars are shot every year. On 3000 ha capture recapture are performed by the National Game and Wildlife Office for biological studies, that allowed a dynamic serologic survey of marked individuals.

Serological and bactériological status of shot wild boars (N~295) was studied in relation to age, gender, reproduction success and corpus lutea observations. Overall seroprevalence is around 20% while bacterioprevalence does not raise 3%. Very few lesions and clinical signs were recorded. Youngs are significantly less seropositive than older animals ( $p < 0.05$ ), male are more seropositive than female when subadults or adults, but this former tendency is not significant ( $p > 0.05$ ). We also notice that teats are seldom developped in seropositive subadult female (12 to 24 months old), what reveal that such individuals seldom reproduce. Nevertheless seropositive animals are recorded in the whole area, and we cannot see any difference in seroprevalence before and after mate. In capture animals antibodies can disappear between 4 and 8 months old, and around farrowing period in adult females. No clinical signs were observed on these animals except some orchitis in males. Impact on reproduction success is still unclear.

Our conclusions are that, contrary to chamois brucellosis, porcine brucellosis is widely spread over this wild boar population. This situation could not be maintained by domestic pigs that does not range on this area. Moreover hare populations are very low and could not explain the extend of brucellosis in wild boar. Thus, contrary to chamois, we have to admit intra-wild boars transmissions. In this enzootic situation sexually mature animals seem more susceptible to infection, even we cannot exclude a transient disappearing of antibodies until sexual maturity in young animals infected as piglets. Paradoxically mate does not seem to play a determinant role in transmission. Regarding brucellosis impact on population dynamics, we cannot see any impact of infection on individual survival. And even if subadults reproduction success seems lessened by brucellosis, we cannot detect a true impact of the disease on wild boar dynamics.

**Zusammenfassung(??)**

**Résumé**

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**Key words:**

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