Epidémiol. santé anim., 1997, 31-32

# PREVALENCE OF ANTIBODIES TO CAPRINE ARTHRITIS-ENCEPHALITIS VIRUS IN BREEDING GOATS IN POLAND

Kaba J.[1], Ganter M.[2], Bickhardt K.[3], Prandota J. [1]

*Le travail avait pour but l'étude de la présence des anticorps contre le virus d'arthrite-encéphalite caprine dans les élevages en Pologne. Les sérums de 1074 chèvres de 76 troupeaux qui faisaient partie de 5035 chèvres en 349 troupeaux avaient été testés utilisant les méthodes d'ELISA et AGID. 161 (14.99%) animaux et 20 troupeaux (26.32%) étaient positifs. Le taux d'anticorps variait de 4.18% à 80 %. Tous les troupeaux provenant de: Belgique, Rép. Tchèque, France, Allemagne et des Pays Bas étaient positifs. Par contre, un troupeau d'Ukraine était négatif. Le niveau d'anticorps le moins élevé (16.46%) était chez les chevreaux (1 an) et le plus élevé (55.74%) chez les chèvres âgées de 4 ans.*

## INTRODUCTION

In recent times many new goat farms varying in size from a few animals to several hundred have been established in Poland. The number of indigenous goats was very limited and therefore it was necessary to import breeding animals from abroad. It seems to be important to evaluate the prevalence of major goats diseases in this new epizootiological situation in Poland.

## MATERIALS AND METHODS

An one-stage cluster sampling scheme was used for the investigation. The necessary data and a list of herds were provided by the Polish Association of Sheep and Goats Breeders. In July, 1996 there were registered 5035 mature breeding goats in 349 herds. The sample size (g=80) was calculated as described by Thrusfield (1995) and adjusted due to small population of clusters ($g_{adj}$=65). Because of expected technical problems it was decided to choose randomly 80 herds from the provided list. From this number 76 herds (21,78% of all breeding herds) originated from 42 districts (85,71% of all districts in Poland) and containing 1074 animals (21,33% of all breeding goats) participated in the survey. The blood samples were collected during the summer of 1996. The questionnaire with basic epidemiological information about particular farms accompanied the samples.
The serial testing method was chosen for laboratory investigations of samples. The samples that tested positive on commercial ELISA (Chekit-CAEV/MVV, Dr. Bommeli AG, Bern, Switzerland) were retested with commercial AGID test (Capriclear, Central Veterinary Laboratory, Weybridge, UK). Only the samples which were positive in both tests and the herds with at least one seropositive animal were considered as positive.

## RESULTS

Twenty herds (26.32%) and 161 animals (14.99%) were positive. The in-herds prevalence varied from 4.17% to 80.00%. All herds with a history of importing goats from Belgium, the Czech Republic, France, Germany and Holland were positive, while one herd importing goats only from the Ukraine was negative. The seroprevalence was lowest (16,46%) in young goats (1 year old) and highest (55,74%) in the group of 4 year old animals.

## DISCUSSION

The study was conducted on a large number of animals chosen in a random fashion and the results can be considered as representative for population of breeding goats in Poland. Similar surveys done in other countries do not possess such a characteristic but obtained results are similar. Countries with relatively small goat milk industries have a low seroprevalence in their indigenous animals and most positive reactants are associated with imports from high prevalence states (Adams et al., 1984; Grant et al., 1988). The results of this study can lead to the conclusion that many of goats imported to Poland during last few years were seropositive and served as a source of infection for their respective herds. The increase in seroprevalence with age is in agreement with the results of other researchers (Cutlip et al., 1992; Greenwood et al., 1995).

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[1] Department of Epizootiology, Faculty of Veterinary Medicine, Warsaw Agricultural University, Grochowska 272, 03-847 Warszawa, Poland
[2] Department for Epidemiology, Veterinary School of Hannover, Hannover, Germany
[3] Clinic for Pigs, Small Ruminants, Forensic Medicine and Ambulance Service, Veterinary School of Hannover, Hannover, Germany