

### Parvovirus and reproductive disorders in the pig. Clinical and serological study — Practical consequences

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A serological survey made in France reveals a rather large diffusion of the Parvovirus among pig herds. 45.2 per cent of the analysed sera show a level of antibodies equal or superior to 1/320e. Two routes of infection of the breeding animals are considered: the venereal route certainly plays an important part in the dissemination of the virus. After settlement of an immunity subsequently to a contamination of a herd, an infection can be started again with newly introduced breeding animals, the serum of which is devoid of Parvovirus antibodies. These clinical observations have been experimented on an S.P.F.pig in contact with *in utero* infected pigs exhibiting a progressively decreasing antibody level.

### A survey of the microflora specific of respiratory diseases in « minimal disease » and conventional pig herds

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A survey of the microflora (mycoplasma and bacteria) associated to respiratory diseases in 11 conventional and 23 " Minimal Disease " pig herds is presented. *Mycoplasma suis pneumoniae* is frequently isolated from SPF herds showing respiratory diseases; *Mycoplasma hyorhinis* is currently found in the lungs of pigs from conventional herds. The isolation of respiratory specific bacteria is more frequent in conventional herds. These results are interpreted.

### *Pasteurella multocida* pathogenesis in young swine. Attempts to obtain an acute bacterial swine pneumonia model

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Our objective was to develop in our laboratory a mode of acute bacterial swine pneumonia. The pathogenesis of 7 strains of *Pasteurella multocida* type A, was checked in mice intra-peritoneally, intra-nasally or after nebulization.

An *intra venous injection* or I.V. + *intra tracheal injection* in swine might kill the animal when the amount of microorganisms is large. The disease is septicemic without any pulmonary localization.

To "fix" *Pasteurella* inside the lungs they should be damaged previously. *P. multocida* is well known as an "opportunistic" invading the breached tissues. Therefore, we choosed the administration of embryonated *Ascaris suum* eggs 7 to 8 days before the trial.

*Ascaris* + *Pasteurella* given by nebulization: (particle size 1 to 3  $\mu$ ) the characteristics of the disease were: severe respiratory symptoms with high hyperthermia, -- polyarthritis (the septicemic facet of *Pasteurella*), -- a loss in weight and an acute broncho pneumonia with an average death time of 15 days.

*Ascaris* + *Pasteurella* given by *intra tracheal* (and I.V.) route: the same disease was obtained, but without polyarthritis. The acute broncho pneumonia was severe and death occurred 4 to 8 days after and was dose-related.

Emphasis must be laid on the difficulty of reproducing in the laboratory a disease so commonly found in the field, as the purpose was to obtain a regular course and not a too early mortality.

### The extent of Transmissible Gastro Enteritis among pigs in France

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The extent of transmissible gastro enteritis in France is demonstrated in this paper. A study was made during one year and concerned 119 piglets and 308 sera of piglets and sows from 82 herds and 23 departments. The disease had classical (95 % of positive subjects) or subacute (66 % of positive subjects) form. The serological survey concerning 31 herds and 200 sera of sows showed 77 per cent of positive subjects in the suspicious herds and 46 per cent in the apparently healthy herds.

### Effect of the watering method on the health of pigs

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According to two surveys made on a total of 417 pigs from 268 farms, the authors show the importance of renal disorders in this species and the necessity of a suitable watering system adapted to the age of the animals. 47 per cent of the automatic water bowls were defective in farrowing-houses and 65 per cent in post weaning houses. These incorrect waterings led to high urea levels in the animals favouring for instance the occurrence of various digestive disorders in the herds. The best watering system seems to be a flexible paddle and a rather flat bowl.