

**Sanitary state of pig herds from Brittany.**  
**1. Lesions of the respiratory tract in fattening pigs**

F. MADEC <sup>(1)</sup>, P. ROBINEAU <sup>(2)</sup>, A. QUERREC <sup>(2)</sup>, J.F. PANSART <sup>(1)</sup>

(1) *Station de Pathologie Porcine, B.P. 9, 22440 Ploufragan*  
(2) *Direction des Services Vétérinaires des Côtes-du-Nord, 8, Place du 71<sup>e</sup>-R.I.,  
22021 Saint-Brieuc*

Examination of the respiratory tract of slaughter pigs was performed in six slaughter-houses of Brittany (France) during April 1987. A total of 249 batches of pigs representative of the slaughter population of this region was selected. In each batch, 25 lungs were randomly selected and 10 snouts. The latter were sawn for analysis. Pneumonia lesions were recorded lobe by lobe according to the extent of consolidation from 0 (no lesion) to 4 (all the lobe consolidated). Rhinitis was allotted a score of 0 to 4 according to the degree of atrophy of the 4 turbinates and from 0 to 2 according to the dystrophy of the septum.

A prevalence of 48.1 p. 100 was obtained for pneumonia (n = 6014 pigs examined). Pleuritis was noted in 14 p. 100 of the pigs and atrophic rhinitis in 44 p. 100 of them. Some associations were found and discussed. Thus, a higher incidence of pneumonia was recorded in the batches of pigs the most affected by rhinitis. Pigs coming from areas with a high density were also more concerned as well as those coming from breeding-finishing herds.

**Antigenic characterization of porcine respiratory coronavirus  
using monoclonal antibodies directed against TGEV**

H. LAUDE, Jacqueline GELFI, D. RASSCHAERT, B. DELMAS

*Institut National de la Recherche Agronomique. Station de Recherches de Virologie  
et d'Immunologie, route de Thiverval, 78850 Thiverval-Grignon*

PRCV, a recently identified porcine respiratory coronavirus, has become widespread in European pig producing countries. The infection results in the induction of antibodies neutralizing the enteric coronavirus TGEV (Transmissible Gastroenteritis Coronavirus). The antigenic relationship between PRCV and TGEV was investigated in an indirect immunofluorescence assay using a panel of monoclonal antibodies raised against the Purdue strain of TGEV. The three isolates of PRCV exhibited an identical antigenic spectrum. Several differences with TGEV strains were noted, the most relevant of which affects the major antigenic site D of the spike glycoprotein E2. Several hypotheses about the possible derivative source of this virus are discussed.

**Effect of health problems on the growth of pigs between weaning and slaughter**

P. LE FOLL, N. AMARA, B. GIRAL, T. SOLIGNAC

*Institut Technique du Porc, 34, boulevard de la Gare, 31500 Toulouse*

An epidemiological survey of breeding-finishing pig herds was conducted in 1986 in the Midi-Pyrenees region. The survey concerned 550 animals studied individually from birth to slaughter and belonging to 46 herds. The purpose was to determine the influence of health problems on growth performance.

About ten variables pertaining to digestive diseases in the piglet and respiratory disorders in the fattening pig were found to have an effect on growth and constitute sanitary indexes. Individual and sanitary growth parameters were characterized by a withinherd component of their total high variance (often ranging between 55 and 65 p. 100 of the total variance).

Pneumonia lesions observed at the abattoir led to increases in age at 100 kg ranging between 4 and 13 p. 100 according to their extent, and to decreases in DMG in late fattening (110 to 185 days) ranging between 7 and 19 p. 100. Pneumonia accounted for more than 6 p. 100 of the total variance of age at 100 kg. Respiratory symptoms (coughing and sneezing) also represented important indexes which have to be taken into account to determine the economic consequences of health problems.

### **Experimental pathogenicity of *Pasteurella multocida* and effect of the exotoxin in the piglet**

Marylène KOBISCH

*Station de Pathologie Porcine, B.P. 9, 22440 Ploufragan*

A total of 28 S.P.F. piglets were intranasally and intratracheally infected with *P. multocida* (type A or D) or were administered by the intramuscular or intraperitoneal route the crude dermonecrotic exotoxin of these bacteria. Ten S.P.F. piglets received the culture medium in the same conditions.

The experimental infection provoked the death of some piglets and led to severe lesions of the respiratory tract and organs but also of the liver and urinary tract. Results showed that *P. multocida* type A is related to the occurrence of pneumonia, whereas *P. multocida* type D is rather associated with nasal lesions.

### **Streptococcal diseases in the pig**

Josée VAISSAIRE, Micheline LAROCHE

*Laboratoire Central de Recherches Vétérinaires, Service de Bactériologie,  
22, rue Pierre-Curie, 94700 Maisons-Alfort*

The authors give an overview of streptococcal diseases in the pig over the last six years in France. A total of 4152 strains of streptococci were isolated from 877 outbreaks of porcine streptococcal diseases mainly in industrial farms.

The different strains were studied by chemical characterization and serogrouping by the Lancefield or the Fuller method. Clinical observation and symptomatology were usually typical for the affections due to the same serogroup. These affections can also be zoonoses.

Results emphasized the predominance of affections due to *Streptococcus suis* (groups R and S) and to *Str. equisimilis* (group C) : 19 p. 100.

Affections caused by serotypes E, L and G and causing abortions and mortinatalité represented 9 p. 100 of the cases. Rapidly evolving septicaemia were observed in 8 p. 100 of the cases among adults or fattening pigs and were due to *Str. agalactiae*, *dysgalactiae* and *uberis*. Enterococci were responsible for septicaemia (6 p. 100 of the cases). Finally, 10 p. 100 of the affections were due to nongroupable streptococci (*Str. mitis*, *sanguis*). These affections may cause important economic losses. Their treatment is difficult and their prevention remains essential.