

III. — PATHOLOGY

**General survey of health problems and performance
in breeding-finishing pig herds in Brittany**

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A study was made to analyse the results obtained after eight years of continuous epidemiological survey of health problems and technical performance in 29 breeding-finishing pig herds in Brittany. This study shows that even though performance have been improved during this period, there is an opposition between two types of behaviour. Above a certain threshold, performance are never depressed, whereas under this threshold, variations in the level of performance are not homogeneous. On the overall, health problems have become more numerous. Disorders occurring during the finishing period have remained steady, but those related to pregnancy or to farrowing have become more frequent. This increase in health problems is not sufficient to affect performance. This sample of herds seemed to be an excellent field of investigation for the development of concepts and of methods to be used in epidemiology.

**Kinetics of lymphocyte subsets in blood and mammary gland of cyclic,
pregnant and milking sows using monoclonal and polyclonal antibodies**

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Using several monoclonal and polyclonal antibodies specific of porcine lymphocytes, we identified phenotypically on sections of mammary gland tissue the different T (helper, cytotoxic and suppressor) and B lymphocytes involved in the establishment of immune responses in the mammary parenchyma of sows at different stages : pregnancy (80 and 105 days of pregnancy), farrowing, lactation (16th day of lactation) and in cyclic sows. Blood was used as control. The following conclusions were drawn :

— all T and B lymphocytes as well as cells reacting with antigens were present at all the above mentioned stages ;

— at 105 days of pregnancy, the helper T lymphocytes/suppressor T lymphocytes ratio was reversed whereas at all the other stages suppressor T lymphocytes were predominant. This ratio remained steady in blood. This suggests a preferential migration of helper T lymphocytes to the udder between 80 and 105 days of pregnancy ;

— T lymphocyte subsets did not undergo morphological changes, during pregnancy and lactation, characteristic of lymphoid cell maturation. So, T lymphocytes could migrate from blood to the mammary tissue after maturation and multiplication ;

— as in the mouse and the rat, Ig A plasmocytes prevailed over Ig M and Ig G plasmocytes at all stages. The number of Ig A+ cells increased regularly from pregnancy to lactation, whereas that of Ig A+ in blood remained constant : Ig A plasmocytes could accumulate in the udder from day 80 of pregnancy. The morphological changes occurring between pregnancy and lactation suggest that these cells arrived in the form of plasmoblasts and multiplied there ;