

Post weaning multi-systemic wasting syndrome (PMWS) in British pig herds – prevalence and impact of some postulated risk factors

A.J.C. Cook^{1*}, C Gaudie², A.M. Miller¹, R. Gopal¹, C. Byrne¹ Y. Spencer¹ and S. Done². ¹Veterinary Laboratories Agency – Weybridge, Addlestone, Surrey, KT15 3NB, United Kingdom. ²VLA Thirsk, West House, Station Road, Thirsk YO7 1PZ UK.

Post weaning multi-systemic wasting syndrome (PMWS) has emerged as a devastating disease of pigs in the UK, which probably caused the death of up to ¼ million finisher pigs in 2002. The first UK report was in 1998 and there have been hundreds of affected farms in subsequent years. Affected pigs suffer from respiratory distress, diarrhoea and wasting. They do not respond to treatment and many must be humanely killed on welfare grounds. Post-weaning mortality before PMWS was typically 4%; during an outbreak, post weaning mortality peaks at 20% after 6 months and stabilises at around 10% some 9 months after the onset of the disease. PMWS presents a diagnostic challenge to veterinary surgeons as the clinical signs of wasting with high morbidity and mortality may be seen in chronic classical swine fever (hog cholera). The remorseless and harrowing nature of the disease causes considerable distress to farm staff, in addition to the heavy financial cost of the disease. The widespread distribution of PMWS has been estimated via telephone surveys of specialist pig practices but no formal survey to estimate prevalence in UK has been conducted. The aetiology of PMWS remains elusive, although disease has been linked to infection with Porcine Circovirus 2 (PCV2). However, it is believed that some other factor or factors are also necessary for disease to be expressed. No universally applicable means of treatment or prevention of PMWS has yet been identified.

A cross-sectional study was designed to estimate the prevalence of farms that were affected by PMWS and to measure the impact of five postulated factors upon the occurrence of the disease. These factors were the strict adoption of all in/all out management, age at weaning, frequency of mixing pigs, stocking density and vaccine use. A random sample of 400 commercial pig farms in UK was selected from existing databases in November 2002. Farm owners were invited to participate in the study between December 2002 and May 2003. Those that agreed completed questionnaires concerning pig health and management. Their own veterinarian visited the farm and selected four pigs for a standardised post mortem. Tissues from these pigs will be subject to histopathological examination and immunocytochemistry for PCV2 virus.

This preliminary report will present an estimate of the reported prevalence of PMWS and an initial estimate of the impact of each postulated risk factor upon the presence or absence of the disease.

This study was funded by Defra. We would like to thank all of the staff and farmers who worked with us.