We are delighted that the International Pig Veterinary Society Congress 2004, decided to select South Africa as the host country for the 20th IPVS Congress. The Pig Veterinarians of South Africa will ensure that this congress lives up to the best traditions of previous congresses; incorporating an interesting and topical scientific programme, fascinating accompanying persons tours and an excellent social programme, allowing delegates the opportunity to network with their overseas colleagues.

This, the first IPVS congress on the African continent, will undoubtedly be of enormous benefit in generating solutions to the emerging pig veterinary challenges, especially those related to exotic and changing viral diseases, decreased use of antimicrobials and nutritional advances. The congress is important to further pig veterinary science in South Africa, to encourage younger veterinarians to join the pig industry, as a vehicle to generate funds for research and to improve the pig industry in Southern Africa.

South Africa is a magnificent and beautiful country, and offers tourists value for money. Thus, pre and post congress tours will be a major attraction for delegates to come to South Africa. Durban, in KwaZulu Natal, is a vibrant multi-cultural city with magnificent beaches, easily accessible game parks, theme villages and a moderate winter climate making it an ideal tourist destination. We urge our colleagues throughout the world to use this opportunity to get a glimpse of the continent’s rich and fascinating wonders and to enjoy the hospitality of their African friends.

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ANTIMICROBIAL USE IN PIG HERDS WITH AND WITHOUT POSTWEANING MULTISYSTEMIC WASTING SYNDROME

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Introduction
Postweaning multisystemic wasting syndrome (PMWS) was first recognized in North America in 1997 and subsequently reported worldwide. In Denmark, the first cases were identified in 2001. It has been hypothesized that the recent emergence of PMWS in Denmark has been the cause of increasing antimicrobial use (1). A case-control study was carried out in Danish pig herds in 2003-2004 aimed at identifying risk factors associated with PMWS. The data from this study was used to investigate the effect of a positive diagnosis of PMWS on the use of antimicrobials in sows/piglets, weaners and finishers.

Materials and Methods
Study design: A herd was considered PMWS positive in the Danish PMWS case-control study when: 1) lymphoid depletion, giant cells/inclusion bodies and PCV2 virus were found in lymphoid tissues from autopsied pigs and; 2) clinical signs indicative of PMWS and an elevated mortality in weaners (>5%) was observed. Seventy-four herds fulfilling the criteria for PMWS were selected as cases. Each of the cases was matched on veterinary surgeon’s practice with a control herd with no clinical cases. The matched design was carried out in Danish pig herds in 2003-2004 aimed at identifying risk factors associated with PMWS.

Antimicrobial use: Data on the use of antimicrobials (AM) was extracted from the VETSTAT database in each of 4 quarters before and after the diagnosis of PMWS for each of the matched pairs of herds. The AM use within a herd was measured as average daily dose (ADD/n) per sow/piglet, weaning pig or finisher, respectively (2). A logarithmic transformation was used to obtain normal distributed data.

Statistical methods: A multivariate linear mixed model was fitted using the mixed procedure in SAS® 9.1. The dependent variable was log (ADD/n) and explanatory variables were PMWS status (case/control), quarter (relative to diagnosis date, 1-8), case-control pair (proxy for veterinarian and geographic region), diagnosis-quarter (proxy for seasonal effects), and herd size (housing capacity for sows/piglets and weaners, and finishers estimated from number of pigs slaughtered). Case-control pair was included as random variable to adjust for the matched design.

Results
Linear regression showed a significant increasing trend in AM use in all age groups in the control herds.
Sows and suckling pigs: The AM use was significantly higher (p=0.01) in PMWS positive herds compared with control herds in the quarter a year before the herds were diagnosed (quarter 1) and in the quarter immediately before (p=0.04) the diagnosis (quarter 4). The AM use (ADD/n) in PMWS positive herds was elevated by 43% and 35% in quarters 1 and 4.

Weaners: The use of AM was significantly higher in PMWS positive herds compared with control herds in the 2 quarters immediately before the herds were diagnosed (quarters 3 and 4; p<0.01, p<0.001) and in the quarter immediately after the diagnosis (quarter 5; p<0.0001). In quarter 6, AM use was marginally significantly higher (p=0.07). The AM use (ADD/n) in PMWS positive herds was elevated by 68%, 91%, 126% and 41% in quarters 3, 4, 5 and 6 respectively. There was a seasonal variation in use of AM. There was a significantly lower AM use in July – Sept. compared with the Oct. – March quarters (p<0.03; p<0.001). The AM use decreased significantly (p=0.0001) with increasing herd size. An increase by 100 weaners reduced the AM use by 3%.

Finishers: The AM use in PMWS positive herds was insignificantly higher than in control herds, with an almost parallel trend. The effect of herd-pair was significant. The AM use decreased significantly (p=0.02) with increasing herd size. An increase in herd size by 100 finishers reduced the AM use by 2.7%.

Discussion
The results in this study suggest that in sow herds, the occurrence of PMWS related disease treated with AM was significantly higher (35%) in at least the one quarter before diagnosis. In weaners, the AM treatment was increased during two quarters, before to two quarters, after the diagnosis, as seen in 41%-126% increase in AM use. AM treatment of PMWS related disease appears to decrease to the level in herds free from PMWS. This was observed in sows in the first quarter and in weaners in the third quarter, after diagnosis. These findings are supported by a study (3), showing that post-weaning mortality rate peaked on month 9 and returned to the pre-outbreak levels within 16 months after the outbreak. The findings in this study suggest that part of the national increase in AM use in sows (seen in 2003 and 2004) and in weaners (seen in 2004) may be explained by the increase in PMWS occurrence in the pig population. Part of the national increase may be due to a gradual increasing trend in AM use, unrelated to PMWS, as suggested by this study.

References
1. DANMAP 2004. (July 2005), ISSN 1600-2032