

PMWS IN SWEDEN - THE FIRST TWO YEARS WITH THE DISEASE

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In Sweden there are 2.500 sows herds. The country is free from many contagious diseases including PRRS. The index case of PMWS was diagnosed in a progeny test station in December 2003 (1). During 2004, PMWS was diagnosed in another 15 herds, including one Landrace nucleus herd that had delivered piglets to the progeny test station (1). Since then, PMWS has continued to spread through the country.

Material and methods

National health monitoring and diagnose of PMWS. The Swedish Animal Health Service visits every pig herd in Sweden at least once annually. Herd categories of strategic interest, such as nucleus and multiplying herds are visited 4-6 times, and visits are also intensified upon suspicion of contagious diseases, such as PMWS.

PMWS in individual pigs is diagnosed by necropsy and demands increased size of inguinal and mesenteric lymph nodes with atrophy of the lymphatic tissue. Multinuclear giant cells and increased amounts of PCV2 should be present in affected organs. Whenever a pig is given the diagnose PMWS the herd of origin is registered as suspected for PMWS, regardless of the initial reason for doing the necropsy.

To be deemed for PMWS on herd level, the incidence of wasting/dying pigs post weaning should be increased with 1.66 standard deviations according to history of the herd, or exceeding the national mean level by 50% (In Sweden $1.5 \times 2.5\% = 3.8\%$). Deemed herds are put under restrictions and have to inform potential buyers of the status of the herd.

Measures to control PMWS have included general disease preventing methods including preventing other diseases and improving management and hygiene systems. These efforts stipulate strict age segregation and adaptation of the potential rearing time to the requirements of the slowest growing pigs.

To be declared free from PMWS, deemed herds either have to document a normal production during the post weaning period for at least four months or repopulate.

Results

The national health monitoring system has revealed individual PMWS-positive pigs at necropsy in totally 111 herds, making all these herds suspected for PMWS.

Totally 40 of these herds have been deemed for PMWS at herd level (Tab 1). At the time for being deemed for PMWS the mean incidence of wasting/dying pigs in these herds was $7.7 + 2.9\%$. Later, 11 of these 40 herds have been declared free from PMWS with post weaning losses of $2.1 \pm 1.6\%$.

Another 44 herds of the suspected herds have been declared free from PMWS at herd level following combatting other diseases, mainly *Lawsonia intracellularis*, *Brachyspira pilosicoli* or *Actinobacillus*

pleuropneumoninae, and management improvements (Tab 1). When first suspected for PMWS, these herds had post weaning losses of $4.8 \pm 3.8\%$ which had decreased significantly ($p < 0.001$, t-test) to $2.0 \pm 1.7\%$ when the suspicion for PMWS was withdrawn.

The odds ratio for suspected herds to be deemed was 48% (40 out of 84 herds deemed; Table 1). A number of herds are constantly under observation to PMWS diagnose in individual pigs ($n = 27$ by Dec 2005). Some of these, but not all, are likely to be deemed for PMWS at herd level.

Table 1 PMWS on herd level in Sweden up to 2005

Year	Herds deemed for PMWS	Deemed, later declared free	Suspected, but declared free
2003	1	-	-
2004	15	3	15
2005	24	8	29
Total	40	11	44

Discussion

PMWS is spreading relatively slow through Sweden, and the losses of the disease are only around 50% of what has been reported from elsewhere (2), possibly linked to the freedom from PRRS. Still the economical losses may be significant in affected herds. An increased post weaning mortality from 2.5 % to 7.7 % corresponds to a loss corresponding to 29 € per litter, and an increased age at 25 kg bw with one week will increase the rearing costs with 22 € per litter. In total this corresponds to 112.2 € per sow and year.

Even though PMWS still is spreading, we want to highlight that 11 herds deemed for PMWS later have been declared free, and that 44 suspected herds never were deemed for PMWS. Despite that PMWS is a mysterious disease that probably will be with us for long, we believe that this shows that the disease is possible to combat. By preventing other diseases and by trimming management and hygiene systems, we believe that the damage of PMWS with time can be limited.

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References

1. Wallgren et al., (2004), VetQ. 26:170-187
2. Gresham et al., (2003). Vet Rec. 153: 400-413.

