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THREE YEARS AFTER THE INDEX CASE - PMWS IS ENDEMIC IN SWEDEN

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Introduction

Porcine circovirus type 2 (PCV2) has been endemic in Sweden since at least 1993 (3), but PMWS was not diagnosed prior to December 2003 (1). This manuscript outlines the development of PMWS from an exotic to an endemic disease in Sweden over a period of three years, despite intensive efforts aimed to understand and combat the disease.

Materials & Methods

The number and category of herds diagnosed for PMWS until December 2006 have been recorded and compared with the profile of the Swedish pig population.

There are approximately 160,000 sows in Sweden, and around 3.25 million pigs are reared annually to market weight. During 2003, 2,483 production sites housed sows out of which 886 had more than 50 sows, 427 more than 100 sows, 45 more than 500 sows and 22 more than 1,000 sows. Fattening pigs were present at 2,993 sites out of which 721 housed more than 500 pigs. Farrow to finish herds (n = 418) and Specific Pathogen Free herds (SPF-herds, n = 25) are included under both categories above, as well as 100 nucleues/multiplying herds.

Around 20 % of the Swedish pig production takes place in sow pool systems. In 2003, there were 30 sow pools with a total of 32,200 sows and 284 satellite units. This system is normally performed in cycles of 16 weeks typified by transfer of pregnant sows from the central unit to the satellite unit three weeks prior to farrowing, weaning on this unit at 5 weeks of age and return of sows to the central unit before the arrival of a subsequent group of sows eight weeks later. Satellites can also run two or four cycles like this in a parallel system, which allows 84 days for rearing piglets to 25 kg body weight and 7 days for cleaning between batches. However, in recent years some satellite herds have developed intensified systems with shorter cycles with a view to increased production, which have lead to shortened times for rearing and/or hygiene measures.

Results

The accumulated number of PMWS-affected herds have increased via 16 (2004) and 41 (2005) to 123 in December 2006 (Table 1). Of these herds, 30 (25%) had been declared free from PMWS. A number of other herds have had individual pigs that have fulfilled the demands for PMWS at necropsy and 52 of these herds have been declared PMWS-negative on herd basis after treatment for intestinal or respiratory diseases, and/or by correcting shortcomings in management of the herd including feed.

Table 1. PMWS in different herd categories

Category	Deemed	Total	Deemed
Test station	1	-	-
Nucleus/Multipl	5	100	5.0 %
Piglet producer	32	1,965	1.6 %
Integrated herds	37	418	8.9 %
Fattening herds	6	2,475	0.2 %
Sow Pool Satellites	42	284	14.8 %
TOTAL	123	42	14.8 %

All herds with sows were udjusted to size. PMWS was diagnosed in 0.2% of the herds with <50 sows (n = 1,597), in 4.4% of the herds with 50-100 sows (n = 459), in 11.8% of the herds with 101-500 sows (n = 382), in 13.0% of the herds with 501-1,000 sows (n = 23) and in 13.6% in herd with >1,000 sows (n = 22).

In sow pool satellites, PMWS was more often ($p>0.01$, χ^2-test) seen in herds with intensified rearing systems (9 out 20 herds = 45%) than in herds effectuating the 16 week production cycle (31 out of 264 = 9%).

Group medication with antibiotics was effecte if other disease were present, but if PMWS was the sole diagnose.

Discussion

By the end of 2006, individual cases of the PMWS had been observed in around 200 herds out of which 123 had been deemed at herd level. PMWS is now regarded as an endemic disease in Sweden. Interestingly, the syndrome PMWS have more frequently been diagnosed in integrated herds (that deal with the disease itself) than in piglet producing herds. Practically no fattening herds have been diagnosed for PMWS at herd basis despite occasionally established. from deemed piglet producers. This is mainly to be looked upon as a restricted intererst for PMWS in fattening enterprices.

Combating other diseases and improving management routines have helped to combat PMWS, a disease generally diagnosed in larger herds and in herds with intensive production systems (**2**), which might give a clue for the absence of the diseae earlier as herds were smaller and piglets were weaned at a higher age than today.

References

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