

INCIDENCE OF PMWS IN WEANERS IN HEALTHY HERDS BEFORE AND AFTER PMWS WAS DIAGNOSED IN THE REGION

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Introduction

PMWS is a global disease associated to PCV2 (1). It was first diagnosed in Sweden in December 2003 (2). The disease spread northwards in the country and the first cases in Mälardalen occurred in summer 2006 (3). Before that, 15 apparently healthy herds in that region had been screened for presence of PMWS. This study compares the results obtained at that time with a renewed control of these herds.

Materials and methods

In February to April in 2006, pig herds in the PMWS non-affected region north of Stockholm were inventoried. In total, 9 piglet producing or integrated herds with more than 160 sows and 6 satellites belonging to two different sow pools were scrutinised. Necropsies were performed on 4 runt pigs aged 9-14 weeks from each of these 15 healthy herds.

In December 2007, over a year since PMWS first had been diagnosed in the region, three runts from each of these 15 herds were scrutinised again for presence of PMWS in individual runts.

Results

The criteria for PMWS were fulfilled in 5 individual pigs emanating from two herds during 2006. One month later, one of these herds ("herd A") was suspected of having PMWS at herd level and was declared PMWS positive with a merged incidence of runts, culled and dead piglets of 4.5% post weaning. "Herd A" was declared free in October 2006. Another two herds were diagnosed for PMWS at herd level in December 2006, and declared free in spring 2007. The other 12 herds remained healthy.

In 2007, PMWS was seen in 9 herds, including the three herds previously deemed for PMWS - totally 19 out of 27 pigs were diagnosed having PMWS. The disease was not recorded in any pig in 6 herds (n = 18 pig; Tab 1).

"Herd A" had a post weaning mortality of 2% in December 2007. However, the incidence of runts was 12% and the herd was again diagnosed as a PMWS herd. No signs of PMWS were seen in pigs from the other herd with PMWS-positive weaners during the spring 2006, despite a high frequency of runts caused by a severe outbreak of *Lawsonia* during the sampling in 2007.

The PMWS negative herds in 2006 were divided into two categories, those that have remained without signs of PMWS and herds in which occasional PMWS pigs had been recorded. The productivity between these categories was compared (Tab 2).

Table 1. Evidence of PMWS in individual pigs post mortem in 15 herds initially not suspected for PMWS at herd level

Category	Herds	2006	2007
A	1	PMWS+	PMWS+
B	1	PMWS+	no
C	8	no	PMWS+
D	5	no	no

Table 2. Productivity in category C and D herds (See Tab 1)

	Category C		Category D	
Herds	8		5	
Sows	261 ± 111		259 ± 65	
Year	2006	2007	2006	2007
Live born	12.6 ± 0.4	12.1 ± 0.8	12.1 ± 0.7	12.0 ± 0.7
Weaned	10.3 ± 0.4	10.1 ± 0.7	9.9 ± 0.5	10.2 ± 0.5
Post Weaning				
Mortality	1.1 ± 0.4	2.1 ± 1.3	1.7 ± 1.9	2.5 ± 1.8
Runts	1.2 ± 1.6	1.6 ± 1.0	4.4 ± 1.9	3.8 ± 2.6
M+R	2.3 ± 1.6	3.6 ± 1.6	6.0 ± 2.2	6.4 ± 4.3

Discussion

It is notable that the productivity was higher in the herds where individual pigs with PMWS were present than in herds without signs of PMWS. Could a high performance induce some kind of stress that facilitates development of PMWS?

It is remarkable that healthy herds with individual PMWS-pigs increased as PMWS reached the region. These results agree with retrospective studies in Sweden indicating a delay in diagnose of PMWS at herd level (2, 3). It appears that individual pigs with PMWS can be present on farms for a considerable period of time before the criteria for PMWS at herd level are fulfilled. Taking trade and transfer of animals into account, this may have contributed to the spread of PMWS through the country. Indeed, PMWS is spreading in Sweden in spite of preventive efforts. Despite that PMWS may be provoked by PCV2 in combination with a number of known stressors, these observations do not exclude the possibilities that a new microbe or a new type of PCV2 may have been introduced.

References

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