PMWS a novel infectious disease

evidence from British pig herds

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Introduction

- Post-weaning multisystemic wasting syndrome (PMWS) 1st reported in England in 1999
- Affects pigs aged 6 – 14 wks old
- Clinical characteristics - classically growth retardation, unthriftness, skin pallor, diarrhoea, dyspnoea & enlarged inguinal lymph nodes
- Morbidity range 1 – 60%
- Mortality 70 – 80%
- Some hypothesis PCV2 is the causal agent, with an unknown infectious or non-infectious co-factor

Objectives

- Establish main risks for GB herd breakdown
- Establish prevalence & spread within British pig industry

Materials & Methods

Farm selection

- Retrospective cohort study for 2000 to 2003
- 116 English, Welsh & Scottish pig farms visited between August '03 – August '04
- Breeder-finisher farms > 100 breeding sows from ABP or QMS

Analyses

- Survival Analysis (Egret)
  - Pre-FMD, FMD & Post-FMD
- Pearson's Correlation Coefficient
- Spatial distribution (Matlab)

Results

Survival analyses

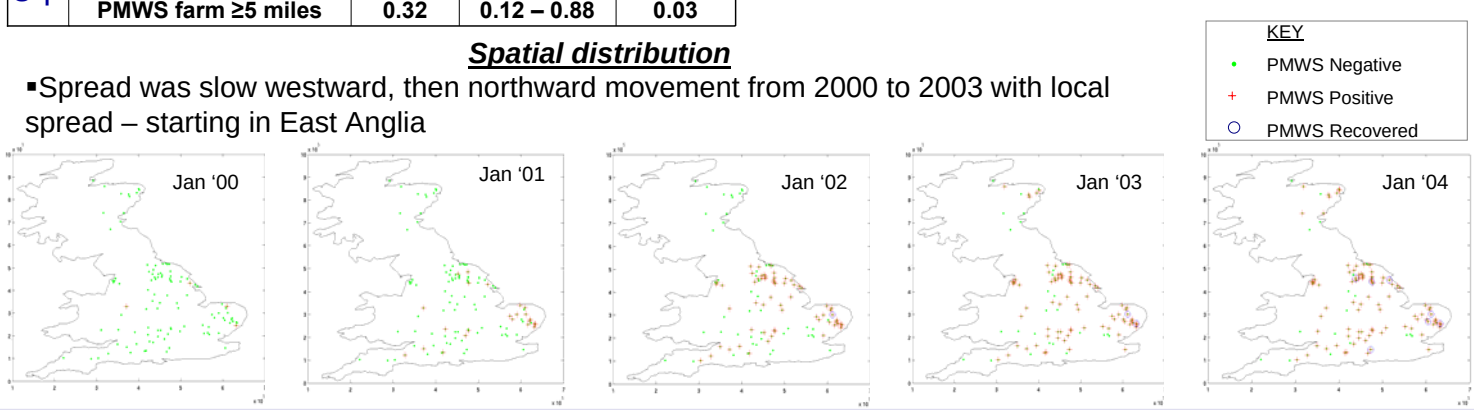
	Risk factor	HR	95% CI	P-value
Pre-FMD	≥ 600 sows	3.30	1.47 – 7.45	<0.01
	Purchase gilts	3.31	1.25 – 8.81	0.02
FMD	≥ 3 days pig free	0.14	0.03 – 0.61	0.01
	Nearest farm	2.96	1.31 – 6.67	0.01
Post-FMD	≥ 600 sows	2.61	0.89 – 7.66	0.08
	≥ 3 days pig free	0.40	0.16 – 0.99	0.05
	PMWS farm ≥5 miles	0.32	0.12 – 0.88	0.03

Correlations

- Presence of PRRSV, PPV, *E. coli*, Salmonella associated with herd size, farm density
- Use of PRRSV, PPV, Erysipelas vaccines associated with herd size

Spatial distribution

- Spread was slow westward, then northward movement from 2000 to 2003 with local spread – starting in East Anglia



Conclusions

- PMWS behaving as a novel infectious epidemic because of its properties & geographical spread
- Properties include: introduced by breeding stock, robust (spread by humans & local farm to farm dissemination), low transmissibility & long infectious period

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