

Pathogen Elimination from farms

Pathogens can become so destructive to the farm that the welfare of the pigs and the farm's profitability become unviable. It will then be necessary to completely remove the pathogen. For some pathogens this is almost impossible – *Bordetella bronchiseptica* or *Lawsonia intracellularis* would be examples. These pathogens exist in other common animals and therefore, when eliminated the farm rapidly becomes reinfected.

However, some of the most serious pathogens to pigs can be eliminated from farms, Classical Swine Fever (Hog Cholera), Foot and Mouth Disease and Aujeszky's (Pseudorabies) would be examples. This section discusses some techniques which may be used to eliminate various pathogens. The key to pathogen elimination is a thorough understanding of the epidemiology, physical characteristics and diagnostic capabilities of the specific pathogen. In addition, a pathogen is not necessarily eliminated for a farm just because you cannot detect it in the laboratory.

Also note, you cannot eliminate 'disease' –only specific pathogens. Which is why a term like 'high health' is meaningless.

Elimination Method	TGE/ PED	Swine Influenza virus	Sarcoptes scabiei - Mange	PRRSv	PMWS (cause)	Pasteurella multocida(toxigenic)	Mycoplasma hyopneumoniae	Leptospira pomona	Foot and Mouth Disease	Classical and African Swine Fever	Brucellosis	Brachyspira hyodysenteriae	Aujeszky's Disease (Pseudorabies)	Actinobacillus pleuropneumoniae
Depopulation and repopulation														
Hysterectomy and move piglets to a new farm														
Direct pathogen exposure														
Vaccination														
Segregated early weaning														
Test and remove														
Herd closure														
Medication programmes														

The method which is applicable is blocked. Where the method may work occasionally is hatched. Note that the *Leptospira* and *Pasteurella* are specific species/strains. Elimination of all *Leptospira* and *Pasteurella* types is not practical.



Elimination requires a detailed knowledge of the pathogen's life cycle, method of spread and susceptibility to treatments.

Biosecurity and trust are the key components to any elimination programme.

Note, there may even be pathogens you do not want to eliminate, *Haemophilus parasuis* and the virus of Congenital tremor II are examples which may be eliminated during the elimination of other pathogens and result in serious problems trying to integrate normal replacement stock after the clean up.