



HEALTH

Appendix 1: Choosing a disinfectant

When choosing a disinfectant, the trick is to understand the needs of the farm in question and the properties of the disinfectants available, then find the optimum solution for the individual farm's situation.

In order to work out which disinfectant provides the optimum solution, there are a few questions which need to be answered:

- Which type of disease organism needs to be controlled?
ie bacteria, viruses (enveloped or non-enveloped), fungi
- What needs to be disinfected?
ie buildings, equipment, water, transport, personnel
- How can the effectiveness of footbaths be improved?
ie coping with extremes in temperature, high organic matter, etc.

No single disinfectant is suitable for every use.

There is, however, one thing that all disinfectants have in common – they won't work if they don't come into contact with the germs. In other words, success in disinfection is dependent upon thorough cleaning. Time spent cleaning surfaces before applying disinfectant is never wasted.

The overriding rule is to clean first and then disinfect.

The table below can be used as a guide to the correct choice of disinfectants. However, this is a generalised overview only and it is recommended that the suppliers' instructions are referred to.

Suitability of disinfectant products for various uses

	Animal housing	Equipment	Vehicles	Foot dips	Parasites	Food preparation	Water	Personnel
Glutaraldehydes + Formaldehyde	✓	✓	✓	✓				
Glutaraldehyde	✓	✓	✓	✓				
Glutaraldehyde + Quat. ammonium salts	✓	✓	✓	✓				
Oxidising disinfectants	✓			✓			✓	
Chlorocresol	✓	✓	✓	✓	✓			
Quaternary ammonium salts	✓	✓	✓	✓		✓	✓	✓
Organic acids This group includes peroxygen-type products							✓	

Reference

Jim Bigmore, Hysolv Ltd.

Dilution rates

Dilution rates of specific disinfectants on a range of pig disease organisms applied at 10°C ambient conditions

Active compound	Recommended dilution range	Dilution rates for target organisms. See reference list below											
		APP	BB	BH	EC1	EC2	HP	PM	SD	SH	SS	ST	YE
Iodine (acidic based)	1:125–1:600	1/1000	1/400	1/800	not effective	1/400	1/1000	1/1000	not effective	1/800	1/1000	not effective	not effective
Glutaraldehyde plus quaternary ammonium	1:50–1:190 (SVD 1:250)	1/200	1/200	1/800	not effective	1/800	1/1000	1/1000	not effective	1/200	1/800	not effective	1/200 @ 20°C
Peracetic acid plus hydrogen peroxide	1:100–1:200	1/1000	1/200	1/1000	not effective	1/1000	1/100	1/100	not effective	1/100	1/200	1/100	not effective
Iodine	1:200	1/100 @ 20°C	1/400	1/200	not effective	1/400	1/100 @ 20°C	1/100 @ 20°C	not effective	1/100	1/200	not effective	not effective
Quaternary ammonium plus hydrogen peroxide	1:100–1:200	1/10000	1/1000	1/800	1/200	1/800	1/400	1/100	1/100	1/100	1/1000	1/1000*	1/100 @ 20°C
Quaternary ammonium	1:50–1:100	not effective	1/200	1/800	not effective	1/800	1/800	1/100	not effective	1/100	1/800	not effective	not effective
Peroxygen	1:100–1:200	1/800	1/100	1/200	not effective	1/100	1/5000	1/100	not effective	not effective	1/200	not effective	not effective

Above dilution rates only valid after prewash to remove organic matter

Not effective = not effective at 1/100 dilution

* only for some serotypes

Code	Organism	Disease
APP	<i>Actinobacillus pleuropneumoniae</i>	Pleuropneumonia
BB	<i>Bordetella bronchiseptica</i>	Rhinitis/respiratory disease
BH	<i>Brachyspira hyodysenteriae</i>	Swine dysentery
EC1	<i>E.coli</i>	Reference strain
EC2	<i>E. coli</i> (Abbotstown) P5297/06	
HP	<i>Haemophilus parasuis</i>	Glasser's disease

Code	Organism	Disease
PM	<i>Pasteurella multocida</i>	Pneumonia
SD	<i>Salmonella derby</i>	Diarrhoea
SH	<i>Staphylococcus hyicus</i>	Greasy pig disease
SS	<i>Streptococcus suis</i> serotype I/II	Porcine meningitis
ST	<i>Salmonella enterica Typhimurium</i>	Diarrhoea
YE	<i>Yersinia enterocolitica</i>	Diarrhoea

Reference

Dr Jill Thomson, Scottish Agricultural College

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