## **Biosecurity in Production Animal Medicine**

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Biosecurity refers to the set of procedures and protocols aimed at minimizing the risk and spread of disease. This includes limiting farm access, implementing vaccine programs, performing diagnostic testing, cleaning and disinfecting protocols, and quarantine periods.

**SVetTechPrep** 

Biocontainment is the confinement of pathogenic organisms through isolation to prevent the spread of disease. This may include the strict quarantine of animals, facilities, or personnel.

Using personal protective equipment between farms can help to minimize the spread of disease and protect humans from zoonotic diseases. Changing gloves between patients and wearing shoe coverings can also minimize the spread of disease from farm to farm.

Sodium hypochlorite, commonly known as bleach, and povidone-iodine are disinfectants that work by denaturing proteins. However, it is essential to note that any organic matter must be removed before disinfection. It is safest to use these products alone and avoid mixing them with other soaps or detergents. Bleach and povidone-iodine are relatively sporicidal and effective against most bacteria, viruses, and fungi. Thoroughly rinse surfaces such as chutes and gates to avoid corrosion from the harsh chemicals.

## Bacteria

Gram-negative bacteria contain an extra outer membrane barrier, making them more resistant to disinfectants. Examples:

Escherichia coli mistophilas sonni Leptospirosis	Escherichia coli	Histophilus somni	Leptospirosis
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Bactericidal agents kill bacteria.

Bacteriostatic agents prevent the reproduction of bacteria without killing it.

## Viruses

Non-enveloped viruses lack a lipid bilayer membrane and are more resistant to heat and disinfectants. Examples:

RotavirusPapillomavirusFoot & Mouth Disease
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An enveloped virus is enclosed within a lipid membrane and is more sensitive to heat and disinfection. Examples:

Bovine Viral Diarrhea Virus	Parainfluenza Virus	Coronavirus	
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