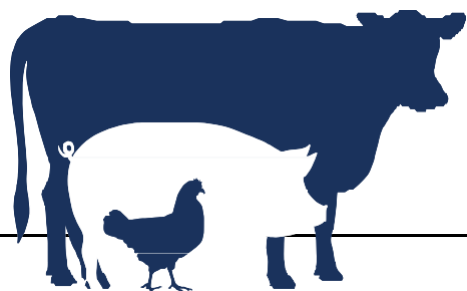




FARM PHAGE NEWSLETTER



USING BACTERIOPHAGES TO PROTECT SWINE

WHAT ARE BACTERIOPHAGES?

Organisms that attack harmful bacterial cells.

They are:

- Cost effective
- Harmless to animals
- Better for the environment
- Highly effective
- Reduce the need for antibiotics

“ANTIBIOTICS ARE VALUABLE BUT BACTERIOPHAGES ARE A BREAKTHROUGH”

Antibiotics reduce human and animal disease and suffering, but their continued overuse has led to the emergence of antimicrobial resistant bacteria.

Nature has provided a solution to the problem – bacteriophages.

Cytophage is working on improving bacteriophages to better target bacterial diseases that impact the Manitoba Agricultural Sector.

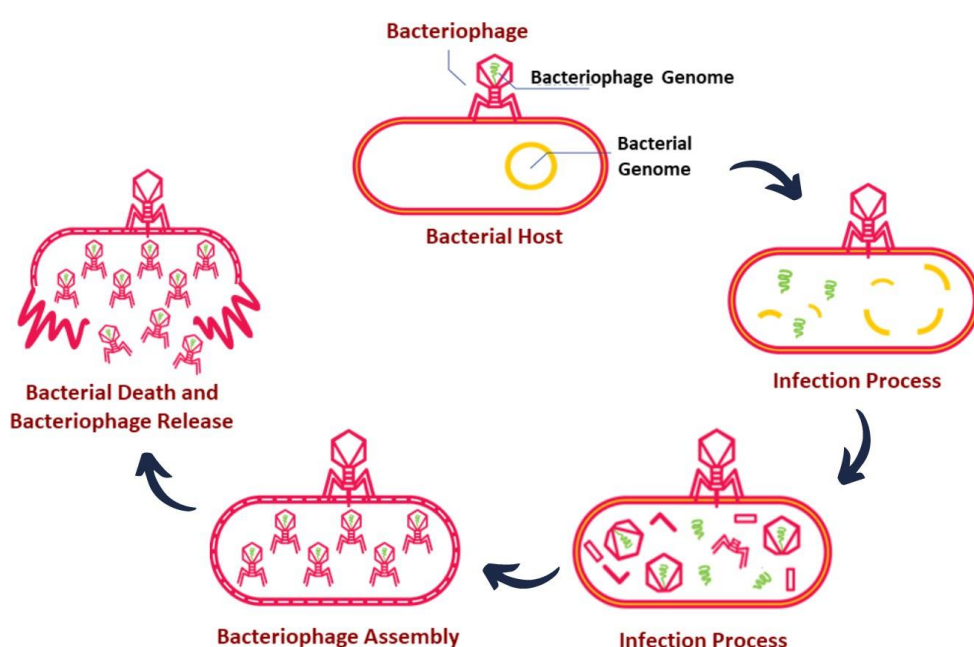
What is ETEC?

- Enterotoxigenic *Escherichia coli* (ETEC) is a bacterial infection that causes postweaning diarrhea in pigs.
- Diarrhea caused by ETEC is responsible for major financial losses to pork producers due to the cost of medication, weight loss, and death.

How can bacteriophages help protect your animals from ETEC?

- Cytophage has developed a bacteriophage that targets disease-causing *E.coli* isolated from a sick pig on a farm in Manitoba.
- With funding from the Manitoban and Canadian governments through the Canadian Agriculture Partnership program, Cytophage will be testing this bacteriophage in large animal trials in January.
 - The animal trial will test the ability of this bacteriophage to treat high levels of ETEC infection in swine.
- Bacteriophages can be used preventatively or to treat infections.
- This will help Canadian swine producers reduce the use of antibiotics while keeping their animals healthy.
- Using bacteriophages is a cost-effective way to meet the need for antibiotic-free pork.

HOW BACTERIOPHAGES WORK



CYTOPHAGE

Manitoba company innovating to improve animal health