The first vaccine designed to help protect the beef industry from *E. coli* O157.
The first and only vaccine to reduce *E. coli* O157 at the source.

*Escherichia Coli Bacterial Extract vaccine* with SRP technology is the first and only vaccine conditionally licensed by the USDA to reduce the amount of *E. coli* O157 pathogens in the intestines of cattle. This advanced technology:

- Reduces the amount of the pathogen in cattle before they enter the slaughtering facility
- Decreases the amount of *E. coli* O157 shed in the feedlot, to minimize environmental contamination

**SRP technology: a novel approach to reducing *E. coli* O157 burdens**

Siderophore receptors and porins (SRP) are cell wall proteins that transport iron, an essential nutrient, into the bacterial cell.

Innovative SRP vaccine technology activates the immune system to produce antibodies that target these key bacterial proteins.

Antibodies bind to the siderophore receptors and porins, and help prevent iron from passing through the cell wall.

Bacteria are deprived of iron and die.
Effective at reducing *E. coli* O157 in cattle.

A recent field study was conducted in commercial feedlots to quantify the efficacy of the Escherichia Coli Bacterial Extract vaccine with SRP technology on reducing the burden of *E. coli* O157 in feedlot cattle.\(^3\)

Escherichia Coli Bacterial Extract vaccine with SRP technology reduced the number of cattle testing positive for the bacteria by 85 percent.

Post-harvest interventions within processing plants, such as steam pasteurization and hot water washes, are designed to help prevent *E. coli* O157 from reaching the consumer.

When the incoming pathogen burden overwhelms the in-plant interventions, the system can potentially fail.

Preharvest intervention adds another barrier, to reduce the pathogen burden before it enters the processor, and decrease environmental contamination at the feedlot.
Administer according to label for comprehensive protection.

- Administer one dose (2 mL) subcutaneously
- Booster in two to four weeks, then at least six weeks after the initial dose
- Do not vaccinate within 60 days of slaughter

Together, we can reduce *E. coli* O157 from the source to the table.

- Controlling *E. coli* O157 is good business for everyone in the beef industry
- With the Escherichia Coli Bacterial Extract vaccine, you can reduce *E. coli* O157 before cattle reach beef processors, while minimizing environmental contamination at the feedlot
- Ensuring beef safety helps safeguard consumer confidence, and that makes for a healthier beef industry
Contamination of beef with *Escherichia coli* (E. coli) O157 continues to raise concern among consumers.

As a result of *E. coli* O157 infection, the Centers for Disease Control and Prevention (CDC) estimates that every year:

- At least 63,153 Americans are infected
- Of those, 2,138 are hospitalized and about 20 die

While *E. coli* O157 doesn't make cattle sick, it can profoundly affect consumer confidence in beef

- From 1991 to 1999, beef recalls resulted in approximately $1.6 billion in lost demand\(^1\)
- Between 1994 and 2004, *E. coli* O157 cost the beef industry an estimated $2.67 billion\(^2\)

Fecal shedding of the pathogen also has been linked to contamination of water sources, unpasteurized milk and produce\(^3\)

*E. coli* O157 contamination has costly implications for all levels of the beef industry.
*This product license is conditional. Efficacy and potency test studies are in progress.

LABEL INDICATIONS: For use in healthy cattle 5 months of age or older to reduce prevalence of the *E. coli* O157 carrier state, and for reduction in the amount of *E. coli* O157 shed in feces to minimize *E. coli* O157 exposure and infection of herdmates.


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