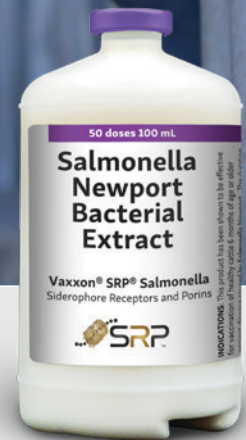


vaxxino[®]

Vaxxon[®] SRP[®] Salmonella

PROVEN TO INCREASE MILK PRODUCTION
BY PREVENTING *SALMONELLA*



SALMONELLA CONTROL STARTS WITH PREVENTION.

IN A UNIVERSITY STUDY COWS VACCINATED WITH TWO DOSES OF VAXXON[®] SRP[®] SALMONELLA PRODUCED AN INCREASE OF 2.5 LBS. OF MILK PER DAY, PER COW.

SRP[®] technology helps control infection and fecal shedding of *Salmonella* Newport, resulting in reduced disease incidence¹ and improved herd performance.² Vaccination along with proper sanitation and bio-security are a three-prong approach to effective management of *Salmonellosis* in dairy herds.

KEY FEATURES & BENEFITS:

- Reduces symptoms of *Salmonellosis* caused by *Salmonella* Newport¹
- Decreases the number of animals shedding *Salmonella* in their feces¹
- Reduces the amount of *Salmonella* Newport shed in feces¹
- Increases milk production by 2.5 pounds/cow/day even in herds with no clinical signs²



99%

FEWER *SALMONELLA*
ORGANISMS IN FECES¹

97%

DECREASE IN MODERATE
TO SEVERE DIARRHEA¹



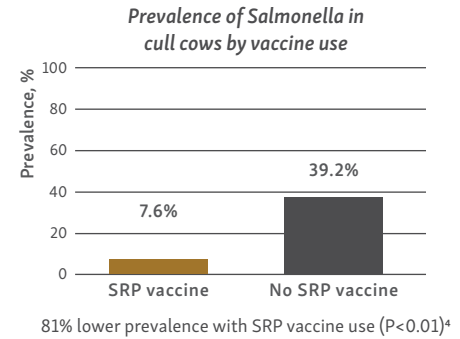
2.5 LB INCREASE
IN MILK PRODUCTION²

WHY IS SALMONELLA PREVENTION IMPORTANT?

Salmonella is a bacteria that causes disease in nearly all mammals. The most common symptoms of *Salmonellosis* in dairy cattle are diarrhea, fever, abortion, and death. *Salmonella* infections may also be subclinical where they decrease milk production and feed efficiency and increase cull rates. *Salmonella* can be transmitted to humans. An estimated 1.35 million illnesses and 420 deaths occur each year in the United States due to *Salmonella* infections.³

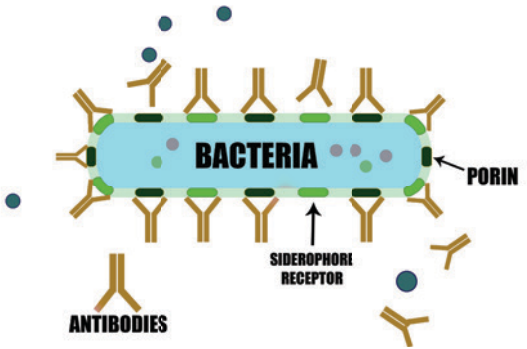
THE SRP DIFFERENCE:

A study performed in large Texas dairies demonstrated that the prevalence of *Salmonella* in cull cows was significantly lower in herds vaccinated with Vaxxon SRP *Salmonella*.⁴ Whole-herd vaccination helps control *Salmonella* Newport infections by decreasing the number of animals that shed *Salmonella* in their feces.¹ Of those that do still shed, the number of *Salmonella* organisms is reduced by 99%.¹



SRP® VACCINE TECHNOLOGY:

Bacteria require iron to survive. Since most iron in a host is tied up, bacteria produce and release small proteins called siderophores, which scavenge iron from the local environment. These siderophores bring iron back into the bacteria through protein pores specialized for iron acquisition. These pores are referred to as siderophore receptors. Siderophore receptors belong to a family of proteins called porins. Vaccines made from siderophore receptor and porin (SRP) proteins generate antibodies that block the uptake of iron into the bacterial cell. Without iron, the bacteria dies.



FEATURES	BENEFITS
SRP proteins are “conserved” ⁵	Cross-reactive antibodies for many gram-negative bacteria ⁵
Antibodies attack a critical bacterial function	Controls infection and colonization, not just endotoxemia
SQ administration	BQA compliant

REFERENCES:

¹Vaxxinoa Study 0606 ²Hermesch, D. R., D. U. Thompson, G. H. Loneragan, D. R. Renter, and B. J. White. 2008. Effects of a commercially available vaccine against *Salmonella enterica* serotype Newport on milk production, somatic cell count, and shedding of *Salmonella* organisms in female dairy cattle with no clinical signs of salmonellosis. *AJVR*. 69:1229-1234. ³Centers for Disease Control and Prevention. <https://www.cdc.gov/salmonella/index.html> Accessed August 3, 2021. ⁴Loneragan, G. H., L. R. Matthews, A. Daniels, T. S. Edrington, D. Nisbet, T. M. Platt, R. M. McCarthy, M. Nemecek, C. Narvaez, T. Jackson, and M. M. Brashears. 2008. *Salmonella* in cull dairy cattle of the Texas high plains. 89th Annual Meeting of the Conference of Research Workers in Animal Diseases. Chicago, IL. ⁵Lin, J., J. S. Hogan, and K. L. Smith. 1999. Antigenic homology of the inducible ferric citrate receptor (FecA) of coliform bacteria isolated from herds with naturally occurring bovine intramammary infections. *Clin Diagn Lab Immunol*. 6:966-969.

