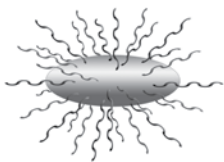


# Guardian®

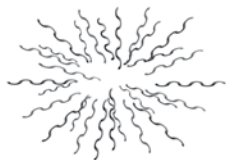
## Protect Your Baby Calves with the Technology of the Most Advanced Scours Vaccine

### 1980 Technology – Whole-Cell *E. coli* Vaccine



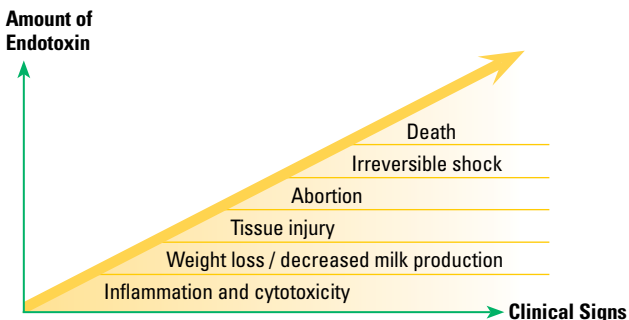
- Harmful and potentially fatal endotoxins exist in *E. coli* cells.
- Despite purification, endotoxins still exist in whole-cell *E. coli* vaccines, such as ScourGuard® 4(K)C and Scour Bos® 9.

### 2004 Technology – Sub-Unit *E. coli* Vaccine



- Guardian's sub-unit technology yields a vaccine containing a concentrated purified K99 antigen, the critical protein in K99 *E. coli* immunity.
- This process reduces the risk of *E. coli* endotoxin-associated effects, such as abortion.

### The Risks from *E. coli* Endotoxin<sup>1</sup>



- The effects of *E. coli* endotoxin can range from inflammation to irreversible shock and death.
- One of the greatest economic risks from a whole-cell *E. coli* vaccine in pregnant cattle is abortion.

## Scours Protection is Safe, Effective, and Easy with GUARDIAN

### Eliminating Bacterial Cells Reduces Likelihood of Reactions

	<b>Guardian®</b>	ScourGuard® 4(K)C	Scour Bos® 9
<b><i>E. coli</i> K99</b>	1 strain, subunit	1 strain, whole cell	4 strains, whole cell
<b>Coronavirus</b>	Type 1, Type 3	Type 1	Type 1
<b>Rotavirus</b>	Serotype G6 Serotype G10	Serotype G6 Serotype G10	Serotype G6 Serotype G8 Serotype G10
<b><i>Cl. perfringens</i></b>	Types B, C, D	Type C	Type C

- **Guardian** contains one strain of sub-unit *E. coli*, while the others contain up to four strains of whole *E. coli* cells.
- Only **Guardian** contains Type 3 bovine coronavirus. Diagnostic laboratories in eight states showed that greater than 80% of isolates were Type 3.<sup>2</sup>
- **Guardian** provides thorough rotavirus protection, relevant to today's viral challenges rather than those of a quarter century ago.
- **Guardian** protects against three types of *Clostridium perfringens* (purple gut), compared to one-type protection by the others.

### Compare the GUARDIAN Vaccination Regimen to Other Products

<b>Guardian®</b>	ScourGuard® 4(K)C	Scour Bos® 9
12 weeks precalving 6-9 weeks precalving	6-9 weeks precalving 3-6 weeks precalving Third dose may be required	8-16 weeks precalving 4 weeks precalving Second dose is Scour Bos 4



► The Most Complete Scours Protection ◀



**Intervet**  
Schering-Plough Animal Health

<sup>1</sup> Adapted from Tizard, IR. Lymphokines and Cytokines. In *Veterinary Immunology: An Introduction*, 4th Ed. WB Saunders Company, 1992.

<sup>2</sup> Kapil, S, KL Richardson, TR Maag, SM Goyal (1999). Characterization of Bovine Coronavirus Isolates From Eight Different States in the USA. *Vet Micro*, 67: 221-230.