

THE PROCESS BEHIND RELIABLE PROTECTION

Creating the First Defense product line takes about five months. Every step is highly controlled, resulting in a USDA-verified veterinary biologic that is truly one of a kind.

Our production process starts with hyperimmunization — proprietary, high-antigen vaccines formulated and manufactured in house to elicit a strong immune response not achievable with commercial products alone.

We administer these high-antigen vaccines in a carefully timed four-shot series to cows on Grade A dairies, under strict oversight from the USDA Center for Veterinary Biologics. Our process is dialed in to deliver consistent concentrated antibody levels:

- Only second-lactation (or greater) cows are enrolled.
- Cows that calve outside their expected window are removed, ensuring we only collect colostrum at peak antibody levels.
- Antigens are decoupled to prevent immune interference and maximize response to our target strains.

Colostrum from qualifying cows is collected, immediately frozen, and shipped to our facility, where it undergoes purification and concentration to produce a powder rich in targeted antibodies and bioactive proteins.

Antibodies and bioactive proteins are concentrated through the hyperimmunization process. These are uniquely powerful proteins that fight infection by neutralizing both bacterial and viral pathogens.

We formulate each batch to contain effective levels of antibodies for *E. coli*, coronavirus and rotavirus, the top three causes of newborn calf scours. Every product must meet potency thresholds confirmed in third-party, USDA-approved effectiveness trials.

Dairy and beef producers manage countless uncertainties — but scour protection shouldn't be one of them. We remove the uncertainty of vaccine variability by protecting every calf with a consistent dose of immediate immunity.

Scour vaccines used to be the only option. But a single dose of targeted bovine antibodies changes everything. Stronger calves, less stress for calf raisers.


LEARN MORE

Contact your First Defense Sales & Marketing representative by scanning the QR code.



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FIRST DEFENSE[®] PRODUCT LINEUP



Rotavirus



Coronavirus



K99+ *E. coli*



**THE BEST VACCINE FOR SCOURS,
ISN'T A VACCINE.**

ONE-OF-A-KIND SCOUR PROTECTION



TRI-SHIELD® SINGLE-DOSE GEL TUBE

Designed for operations wanting the broadest protection. Tri-Shield targets all three of the most common scour-causing pathogens: *E. coli*, coronavirus and rotavirus.

- 1 gel tube per calf given orally at birth
- Contains a non-digestible blue dye protocol marker
- Approved by the USDA Veterinary Center for Biologics, CFIA and OMRI
- 12 tubes per box



DUAL-FORCE® FIRST DEFENSE® SINGLE-DOSE GEL TUBE AND CAPSULE

Designed for operations with scours hitting in the first few days of birth, often caused by *E. coli*, and operations with nagging respiratory issues that are routinely linked to bouts of pre-weaning coronavirus scours. Choose the administration option best for your calf team: single-dose gel tube or capsule.

- 1 gel tube or capsule per calf given orally at birth
- The gel tube contains a non-digestible blue dye protocol marker
- Approved by the USDA Veterinary Center for Biologics, CFIA and OMRI
- 12 tubes per box and 5 or 30 capsule box sizes
- Free balling gun. Call 800-466-8235 to request yours



FIRST DEFENSE TECHNOLOGY® 90-DOSE BULK POWDER

Designed for operations that want the same protection as Dual-Force, but in a bulk powder that's easy to mix into colostrum, milk, water, or electrolytes for large groups. Feed 30 grams per calf within 24 hours of birth or during stressful periods such as before shipping or at receiving. Repeat as needed for added support.

- 1 level scoop added to colostrum, milk, water or an electrolyte solution at birth
- New, easier-mixing formula
- Highest level of colostratal fat

NO NEEDLES. NO SCOURS. NO DOUBT.