



ImmuCell Corporation

Investor Presentation
May 2025

(Nasdaq: ICCG)

Forward-Looking Statements

Cautionary Note Regarding Forward-Looking Statements (Safe Harbor Statement):

This presentation contains “forward-looking statements” within the meaning of the Private Securities Litigation Reform Act of 1995, as amended. Forward-looking statements can be identified by the fact that they do not relate strictly to historical or current facts and will often include words such as “expects”, “may”, “anticipates”, “aims”, “intends”, “would”, “could”, “should”, “will”, “plans”, “believes”, “estimates”, “targets”, “projects”, “forecasts”, “seeks” and similar words and expressions. Such statements include, but are not limited to, any forward-looking statements relating to: our plans, goals and strategies for our business; projections of future financial or operational performance; the timing and outcome of pending or anticipated applications for regulatory approvals and pending or anticipated regulatory inspections of our facilities and those of our contract manufacturers; future demand for our products; future adoption of **Re-Tain**® by dairy producers; growth in acceptance of our **First Defense**® product line by dairy and beef producers; the impact of international disputes (including Russia’s invasion of Ukraine and unrest in the Middle East) on the world economy including inflation and the price and availability of grain and oil; the impact of the global supply-chain disruptions on our ability to obtain, in a timely and cost-effective fashion, all the supplies and components we need to produce our products; the impact of inflation and rising interest rates on our operating expenses and financial results; the scope and timing of ongoing and future product development work and commercialization of our products; future costs of product development efforts; future incidence rates of subclinical mastitis and producers’ level of interest in treating subclinical mastitis; the expected efficacy of new products; estimates about the market size for our products; future market share of and revenue generated by current products and products still in development; our ability to increase production output and reduce costs of goods sold per unit; the adequacy of our own manufacturing facilities or those of third parties with which we have contractual relationships to meet demand for our products on a timely basis; the impacts of backlogs on customer relationships; the efficacy of our contamination remediation efforts; whether or not we will experience future contamination events; the anticipated costs of (or time to complete) planned expansions of our manufacturing facilities and the adequacy of our funds available for these projects; the robustness of our manufacturing processes to meet future demand and related technical issues; estimates about our future production capacity, efficiency and yield; the salability of products currently held in inventory pending regulatory approval; future regulatory requirements relating to our products; future expense ratios and margins; the future consequences and effectiveness of our investments in our business; future compliance with, or waivers of, bank debt covenants; anticipated changes in our manufacturing capabilities and efficiencies; our future effectiveness in competing against competitors within both our existing and our anticipated product markets; projections about depreciation expense and its impact on income for book and tax return purposes; and any other statements that are not historical facts. These statements are intended to provide management’s current expectation of future events as of the date of this earnings release, are based on management’s estimates, projections, beliefs and assumptions as of the date hereof; and are not guarantees of future performance. Such statements involve known and unknown risks and uncertainties that may cause the Company’s actual results, financial or operational performance or achievements to be materially different from those expressed or implied by these forward-looking statements, including, but not limited to, those risks and uncertainties relating to: difficulties or delays in development, testing, regulatory approval, production and marketing of our products (including the **First Defense**® product line and **Re-Tain**®), competition within our anticipated product markets, customer acceptance of our new and existing products, product performance, alignment between our manufacturing resources and product demand (including the consequences of backlogs), uncertainty associated with the timing and volume of customer orders as we come out of a prolonged backlog, adverse impacts of supply chain disruptions on our operations and customer and supplier relationships, commercial and operational risks relating to our current and planned expansion of production capacity, and other risks and uncertainties detailed from time to time in filings we make with the Securities and Exchange Commission (SEC), including our Quarterly Reports on Form 10-Q, our Annual Reports on Form 10-K and our Current Reports on Form 8-K. Such statements involve risks and uncertainties and are based on our current expectations, but actual results may differ materially due to various factors. In addition, there can be no assurance that future risks, uncertainties or developments affecting us will be those that we anticipate. We undertake no obligation to update any forward-looking statement, whether written or oral, that may be made from time to time, whether as a result of new information, future developments or otherwise.

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⁽¹⁾Detailed financial reports, summary press releases and conference calls open to interested investors are provided quarterly.

A photograph of a black and white cow standing over a newborn calf in a straw-filled stall. The cow's head is visible in the upper right, looking down at the calf. The calf is lying down in the straw, with its head turned towards the right. The background is a concrete wall.

Section #1: Company Overview and Strategic Opportunity

Company Overview

ImmuCell Corporation (Nasdaq: ICCC) is an animal health company focused on:

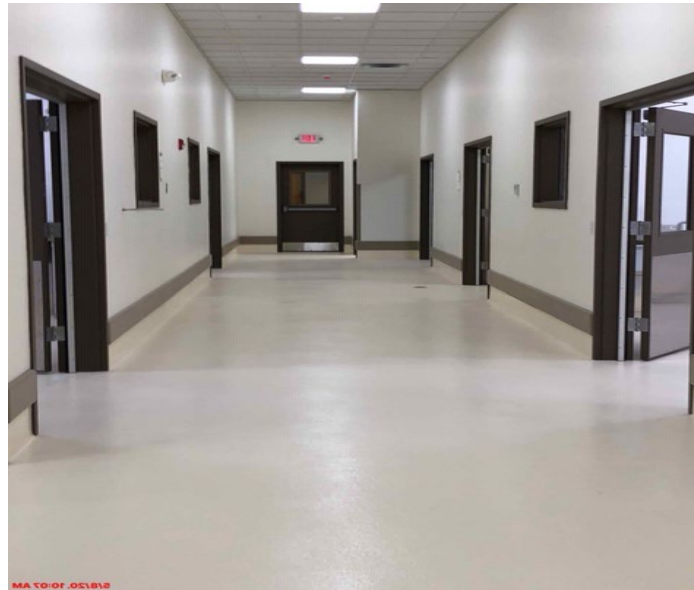
- **Capitalizing** on the significant growth in sales of the **First Defense®** product line (for dairy and beef calves) and **revolutionizing** the subclinical mastitis treatment paradigm with **Re-Tain®**, our novel purified Nisin product (for dairy cows)
- **Delivering Immediate Immunity™** to newborn dairy and beef calves to improve herd productivity, while avoiding unnecessary dam vaccine injections, via the Company's leading-edge **First Defense®** product line
- **Addressing the \$2 BILLION** of annual economic harm to the dairy industry due to mastitis infections WITHOUT traditional antibiotics used in human medicine – thereby **reducing** the amount of antibiotics in the human food chain, with **Re-Tain®** (subject to FDA approval)



Expansion of First Defense[®] production capacity



For a video tour of this new production space, see: YouTube <https://youtu.be/bR4Dp8raAEc>



What Role Does ImmuCell Play?

- **Focus on solving the two most frustrating problems for dairy systems** – scours and mastitis – in a way that reduces dependence on antibiotics
- Improve the food chain with **less antibiotics**⁽¹⁾
- Cows are more productive if we **reduce the use of certain non-essential vaccines**
- **The demand for animal protein**, that must be produced efficiently while ensuring food quality and safety, increases as the human population grows⁽²⁾
- Developing new **international dairy and beef market** opportunities and exploring small ruminant (goats and sheep)

(1) See Slide #46 for some relevant regulatory initiatives.

(2) The United Nations predicts that we will need to double food production to feed 10 billion people in the year 2050.



Coming Soon: Re-Tain[®]

Disruptions/Catalysts

Product	Disruptions	Catalysts
First Defense®	The First Defense® product line <u>disrupts the scours prevention market</u> by providing an effective alternative to vaccines that are given to the mother cow	The first level of our expanded production capacity came on-line during 4Q 2021 to help us fill the large backlog of orders. More capacity came on-line as of July 1, 2023. Still more capacity came on-line during 2024. We now operate with an estimated annual capacity of \$30M with options to expand.
Re-Tain®	Re-Tain® <u>disrupts the mastitis market</u> by providing the only treatment without FDA-required milk discard or pre-slaughter withdrawal label restrictions as an alternative to traditional antibiotics	During May of 2024, the FDA issued a Technical Section Incomplete Letter in response to our third submission of the CMC Technical Section. We submitted our Non-Administrative NADA, which included our fourth submission of the CMC Technical Section, together with All Other Information and Product Labeling during early January of 2025.

Three Most Critical Action Items

1

Significantly
grow sales of the
First Defense[®]
product line

2

Achieve FDA
approval of **Re-Tain**[®]

3

Prove market
acceptance of **Re-
Tain**[®] with current
\$10 million worth of
annual production
capacity

Got Milk? Undeniably Dairy



Coconut Juice

Almond Juice

Hemp Juice

Oat Juice

Soy Juice

Milk

Protein Content:⁽¹⁾

0 grams

1 gram

3 grams

4 grams

6 or 7 grams

8 grams

Carbohydrate Content:⁽¹⁾

10 grams⁽²⁾

16 grams⁽²⁾

24 grams⁽²⁾

24-25 grams

10 grams⁽²⁾

12-13 grams⁽³⁾

Cost Per Cup:⁽⁴⁾

\$0.50

\$0.50-\$0.63

\$1.00

\$0.63

\$0.13-\$0.38

\$0.19

(1) Grams per one cup serving as reported by POPSUGAR Fitness, a global media and technology company.

(2) The unsweetened versions of these juices have 0-4 grams.

(3) Ultra-filtered milk contains 13 grams of protein and only 6 grams of carbohydrates.

(4) These costs are very rough estimates based on online data. All prices fluctuate.

Enjoy some milk and cookies; Support the dairy industry



4

Eat more pizza; Support the dairy industry



Our Product Lines



First Defense®

Dual-Force®

Our First Defense® product line with *E. coli* and coronavirus claims

- **U.S. market opportunity:** About \$31.1 million in annual sales of calf-level products to prevent scours (diarrhea) in newborn dairy and beef calves
- **USDA approved** in bolus format since 1991
- **USDA approved** in gel tube format since 2018

Tri-Shield®

Our First Defense® product line with *E. coli*, coronavirus **AND** rotavirus claims

- **Beyond Vaccination®:** With this unique breadth of claims, we compete more effectively at the calf-level and also compete against vaccines given to cows to improve the quality of the colostrum that they produce for newborns
- **U.S. market opportunity:** We estimate that annual sales of calf-level products and dam-level vaccine products used to prevent scours (diarrhea) is about \$81.8 million
- **USDA approved** since 2017

Completed an investment to increase our production capacity (annual sales value) for the **First Defense®** product line to over \$30 million.

Re-Tain®

(Subject to FDA review and approval)







Our purified Nisin treatment for subclinical mastitis in lactating cows without FDA-required milk discard or pre-slaughter withdrawal label restrictions

- **Market opportunity:** Mastitis is estimated to cause approximately \$2 billion in economic loss to the dairy industry each year⁽¹⁾
- **Construction of \$21 million pharmaceutical production facility** is complete
- First-phased submission of DS manufacturing Technical Section has been reviewed by the FDA (Incomplete)
- Second-phased submission of DS and DP manufacturing Technical Section has been reviewed by the FDA (Incomplete)
- Second submission of DS and DP manufacturing Technical Section has been reviewed by the FDA (Incomplete)
- We made a third submission of the DS and DP CMC (manufacturing) Technical Section during November of 2023
- In May of 2024, the FDA issued a Technical Section Incomplete Letter
- **Target for FDA approval and market launch:**
- We made our fourth submission of our CMC Technical Section during early January of 2025.

Investing approximately \$4 million to replace a CMO and bring formulation and aseptic filling services in-house. This investment has been paused for the time being. Approval of the new process could be achieved about two years after this investment is re-started.

(1) 2016 Cornell IGEN study.

What do Producers do to Prevent Scours?

	1	2	3
Action:	Nothing	Treat the calf	Vaccinate the mother cow
Estimated Product Sales:	\$0 ⁽¹⁾	~\$31.1 million ⁽²⁾	~\$50.7 million ⁽²⁾
Product Options:	N/A	First Defense [®] by ImmuCell Calf-Guard by Zoetis BOVILIS Coronavirus by Merck   	ScourGuard by Zoetis Guardian by Merck Scour Bos by Elanco   

⁽¹⁾ This figure does not include the cost of scours treatment products and associated labor.

⁽²⁾ Annual purchases for the U.S. market.

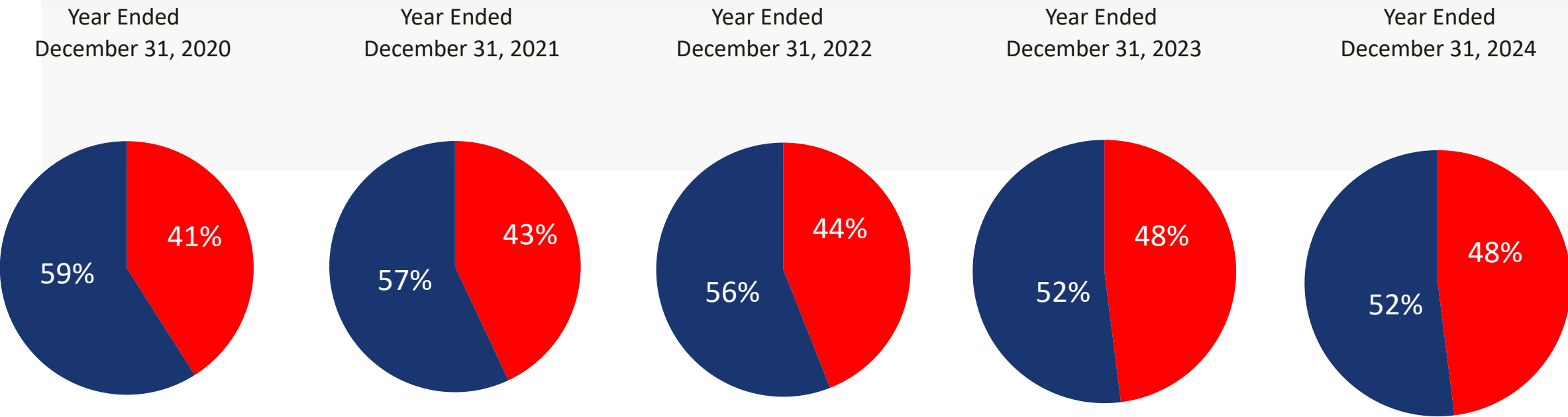
Calf-Level Competitive Product Comparison

Product	Mode-of Action	USDA Claims		
		<i>E. coli</i>	Corona	Rota
The First Defense ® product line (ImmuCell)	Two-part: delivers bovine antibodies to the gut that <u>are</u> absorbed into the bloodstream	✓	✓	✓
Calf-Guard® (Zoetis)	Forces calf to mount an immune response to a modified-live virus oral vaccine to develop protective antibodies, delayed response, inactivated by feeding of colostrum		✓	✓
BOVILIS® Coronavirus (Merck)	Forces calf to mount an immune response to a modified-live virus intranasal vaccine to develop protective antibodies, delayed response		✓	

Calf-Level U.S. Market Share (in volume)

Long-term growth is expected due to the expansion of our sales & marketing team and the addition of a rotavirus claim to the **First Defense®** product line

Join the revolution **BEYOND VACCINATION®**



Market Estimates Provided by Axxiom Consulting and Animalytix LLC

Waste Less, Get More

DAM-LEVEL SCOUR VACCINE



APPROX. 56% OF FUNDS SPENT GO TO

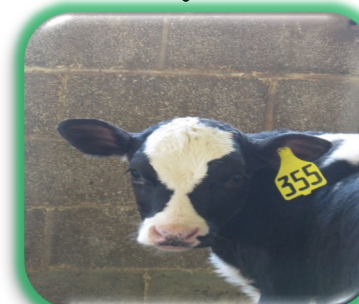
- BULL CALVES
- DOA/ABORTS
- LIMITED VACCINE RESPONSE



44% OF SPEND
HITS TARGET



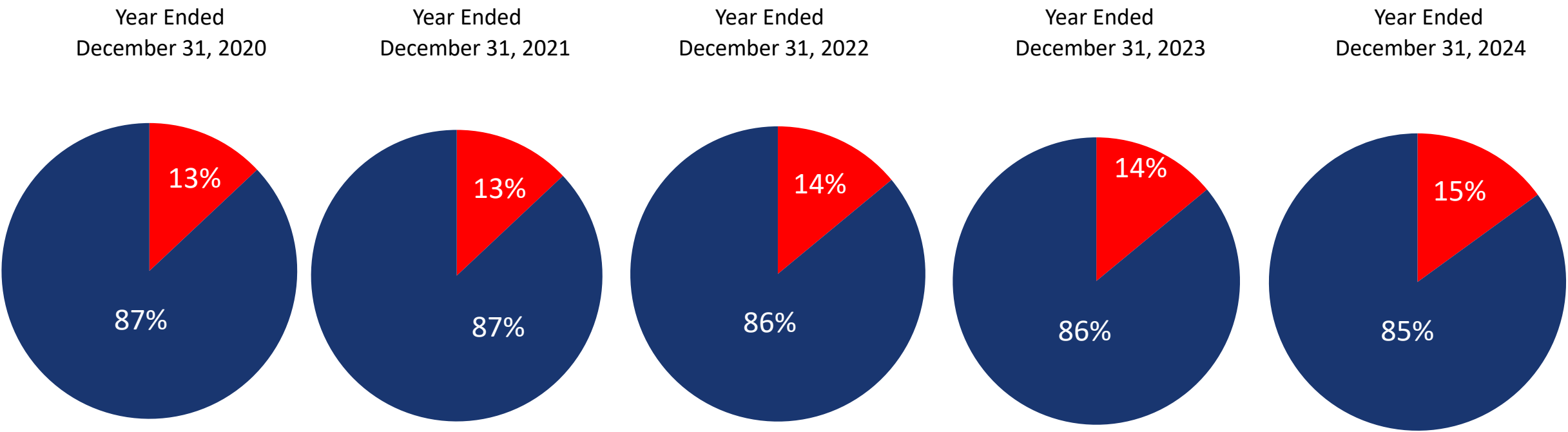
100% OF FUNDS SPENT GO TO
LIVEBORN
VALUED
CALVES



Calf-Level and Dam-Level U.S. Market Share (in volume)⁽¹⁾

Huge market opportunity as we go **Beyond Vaccination**[®] and compete more effectively against vaccines that are given to mother cows

Join the revolution **BEYOND VACCINATION**[®]



⁽¹⁾These unit volume figures account for the approximate number of calves and cows treated, even though two doses of the dam-level scour vaccines are required for first-calf heifers.

Strategy to Increase Sales

- **We now support our distributors** with four regional sales managers, one commercial leader of stakeholder engagement and one director of marketing, reporting to our vice president of sales and marketing.
- **Sales force** communicating the value-proposition of the **First Defense®** product line directly to end-users while multiplying their efforts through distribution partners.
- **Growth is being generated** in multiple market segments: beef, calf ranch, dairy, vet clinics and fleet stores.
- We are initiating a process to achieve regulatory approvals for **First Defense®** in selected international territories.



Be a Calf Hero. Go **BEYOND** VACCINATION[®]



Our Product Lines



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(1) 2016 Cornell IGEN study.

Mastitis: Leading Cause of Economic Harm to the Dairy Industry

\$2 Billion⁽¹⁾

- **Mastitis** is a potentially fatal mammary gland infection
 - \$2 billion per year in the U.S. alone
 - The single largest economic harm to the dairy industry⁽²⁾
- **Traditional antibiotic treatments** are available on the market, but milk from treated cows must be discarded
- **Re-Tain®**, our Nisin-based treatment for subclinical mastitis, **is unique because it does not have FDA-required milk discard or pre-slaughter withdrawal label restrictions** because our bacteriocin is not a traditional antibiotic and is not used in human medicine

⁽¹⁾ 2016 Cornell IGEM study

⁽²⁾ 2015 Science Daily News Release



Re-Tain[®]: Novel Alternative to Traditional Antibiotics

Novel Alternative

- **“Game changer”**: could make treatment of subclinical mastitis (infected, but still producing saleable milk) economically feasible
- The FDA has warned that the overuse of antibiotics that are considered critically important in human medicine may pose a **“high public health risk”**
- The concern is that widespread use of these drugs could encourage the growth of antibiotic-resistant bacteria (**“superbugs”**)
- Nisin is not used in human medicine
- **Bacteriocin Mode-of-Action**: Kills cell by drilling a hole in the colonizing bacterium’s cell wall
- **Antibiotic Mode-of-Action**: Inhibits growth of bacteria by preventing cells from dividing/multiplying

Value Proposition

- **No FDA-required milk discard** or pre-slaughter withdrawal label restrictions (in the U.S.)
- **Higher quality of milk** by having lower somatic cell counts resulting in:
 - Increased milk premiums to the producer
 - Longer shelf life for fluid milk
 - Better taste for cheese
- **Higher milk production** outputs⁽¹⁾
- **Improved reproduction** efficiencies
- **Reduction of clinical flare-ups** from subclinical disease
- **Reduction in pathogen load** on the farm
- **Healthier cows**; reduction in culling

⁽¹⁾Advanced Animal Diagnostics estimates that subclinical mastitis is responsible for more than 1,500 pounds (\$255.30 @ \$17.02 per hundredweight) of lost milk production per infected cow.

Why Treat Subclinical Mastitis?

- A cow infected with subclinical mastitis is “stuck between a rock and a hard place” because the dairy farmer **KNOWS** she is sick but cannot **JUSTIFY** the cost of “dumped” milk required to treat her.
- Subclinical mastitis is a chronic infection that should not be ignored.
- USDA estimates that 21% of all dairy cows are treated with a mastitis drug.
- USDA estimates that 51% of all dairy cows are treated with third generation cephalosporins (traditional antibiotics).

Stage of Mastitis	Incidence Rate ⁽¹⁾	Annual Cost of Treatment Drugs
Clinical	20-25% per year	\$40 million ⁽²⁾
Subclinical	20-25% at any given time	???(³)

⁽¹⁾See Slide #47 for applicable sources. Subclinical mastitis is more prevalent than clinical mastitis.

⁽²⁾In lactating cows (excluding dry cow treatments of similar size)

⁽³⁾ImmuCell aims to revolutionize mastitis treatment practices by enlarging the market for the treatment of subclinical infections. With no FDA-required milk discard or pre-slaughter withdrawal label restrictions, our product candidate could make this economically feasible.



Review of Competitive Product Claims

Brand (Manufacturer)	Active Ingredient	Effective Against						Label Claims	
		<i>Strep. agal.</i>	<i>Staph. aureus</i>	<i>Strep. dysgal.</i>	<i>Strep. uberis</i>	CNS	<i>E. coli</i>	<u>Subclinical</u>	<u>Clinical</u>
Re-Tain® (ImmuCell)	Nisin A							✓	(1)
Spectramast LC (Zoetis)	Ceftiofur						Clinical Only	✓	✓
Pirsue (Zoetis)	Pirlimycin							✓	✓
PolyMast (Boehringer Ingelheim)	Hetacillin								✓
Amoxi-Mast (Merck)	Amoxicillin							✓	
Today (Boehringer Ingelheim)	Cephapirin								✓
Masti-Clear (WG Critical Care)	Penicillin								✓

TRADITIONAL ANTIBIOTICS

(1) We may seek this claim sometime after first FDA approval.

Cost of “Dumped” Milk

Range in costs per cow associated with milk discard for traditional antibiotics with subclinical mastitis disease claims

Brand Name	Company	Treatment Days ⁽¹⁾	Discard Days ⁽¹⁾	Total Dump Days	Average Cost of Dumped Milk ⁽²⁾	Cost per Treatment ⁽³⁾
Re-Tain® (Nisin A)	ImmuCell	0	0	0	\$0	\$45.00
Spectramast-LC (Ceftiofur)	Zoetis	2-8	3	5-11	\$66-\$145	\$11.44-\$45.76
Amoxi-Mast (Amoxicillin)	Merck	1.5	2.5	4	\$53	\$11.25
PolyMast (Hetacillin Potassium)	Boehringer Ingelheim	3	3	6	\$79	\$5.41-\$16.23

⁽¹⁾ Treatment and discard claims from product labels

⁽²⁾ Averages are based on 70 lbs/day (low producing cows at 60 lbs/day and high producing cows at 80 lbs/day) and the USDA Class III milk price average of \$18.89 for the year ended December 31, 2024. The range of these “dumped” milk costs varies from \$45-\$166 per cow. These “dumped” milk costs aggregate approximately \$300M per year.

⁽³⁾ These minimum advertised prices are subject to discount.



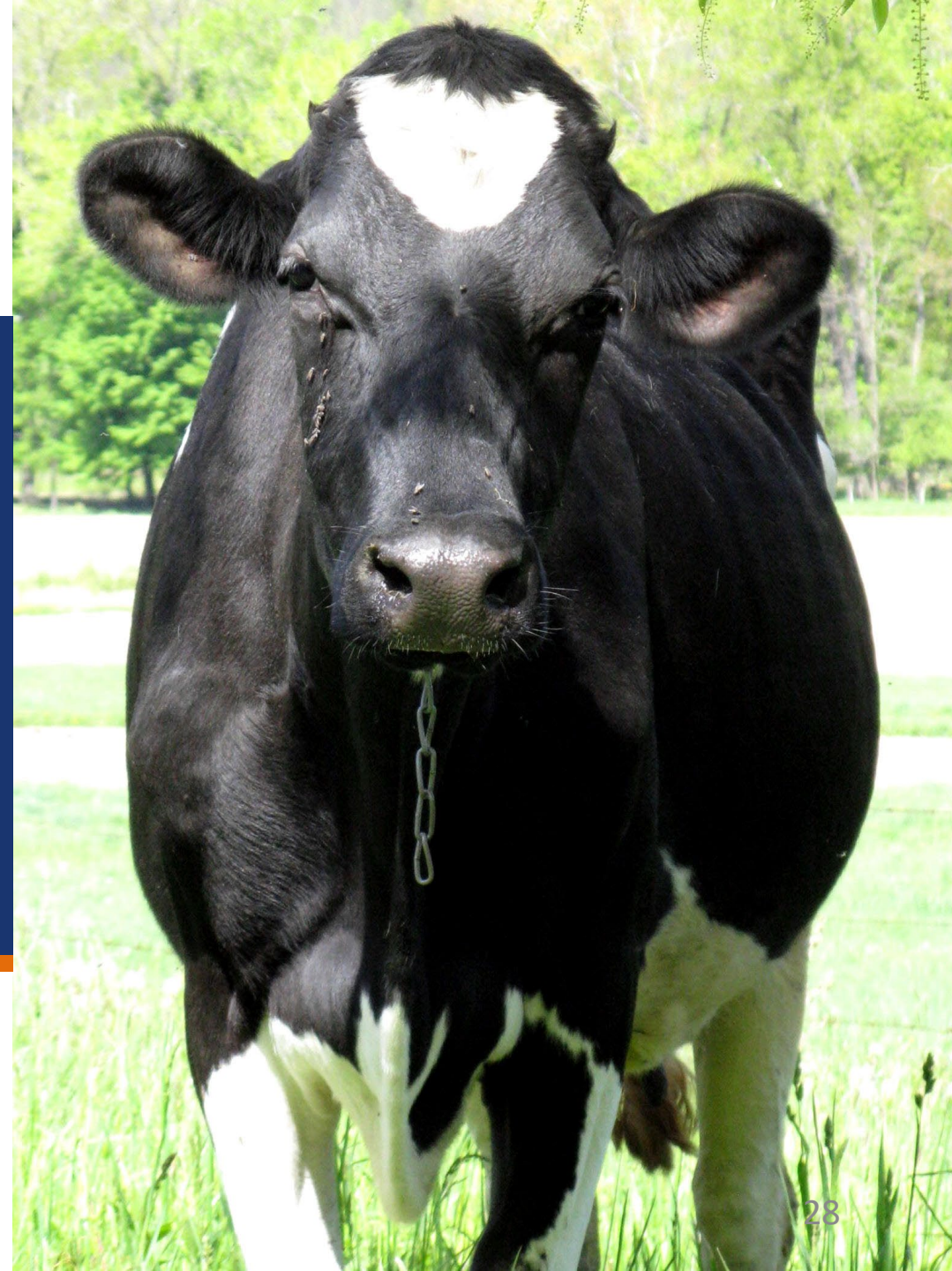
Status of NADA for Re-Tain®

We have completed 4 out of 5 NADA Technical Sections required for FDA approval

Development Item	Date Completed	
1. Environmental Impact Technical Section Complete Letter from the FDA	3Q 2008	✓
2. Target Animal Safety (TAS) Technical Section Complete Letter from the FDA	2Q 2012	✓
3. Effectiveness Technical Section Complete Letter from the FDA	3Q 2012	✓
4. Human Food Safety (HFS) Technical Section Complete Letter from the FDA <ul style="list-style-type: none"> No milk discard or pre-slaughter withdrawal withhold label restrictions Laboratory Method Transfer to detect Nisin in milk 	3Q 2018 2Q 2021	✓ ✓
5. Chemistry, Manufacturing and Controls (CMC) Technical Section <ul style="list-style-type: none"> First-Phased Drug Substance (DS) submission to the FDA Incomplete response from the FDA on First-Phased DS submission Second-Phased DS and Drug Product (DP) submission to the FDA Incomplete response from the FDA on Second-Phased DS and DP submission Second submission of DS and DP Technical Section Incomplete response from the FDA on second DS and DP submission Third submission of DS and DP Technical Section Incomplete response from the FDA on third DS and DP submission 	1Q 2019 3Q 2019 1Q 2021 3Q 2021 1Q 2022 3Q 2022 4Q 2023 2Q 2024	✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓
		Date Anticipated
6. NADA Approval by the FDA after 60-day administrative review (if fourth submission is approved)	2 months after Technical Section approval ⁽¹⁾	

⁽¹⁾ See current SEC filings for detailed description of events that must occur to achieve this milestone in accordance with this projected timing and some of the risks that could prevent this from happening as projected.

Section #2: Testimonials



Customer Testimonials

“ **First Defense®** is like an insurance policy that pays for itself in spades. Say you cut your death loss from, conservatively, 8 to 2 percent. If you have 300 calves a month, that's 18 more calves a month or 216 calves a year more that you are able to raise. That fuels the growth of the whole dairy.”

Arie Roeloffs
Southfield Dairy
5,000 cows
Wendell, Idaho

“ About seven years ago, we were having a serious problem with rotavirus and coronavirus; we were losing a lot of calves. Our veterinarian recommended administering **First Defense®** to newborns. It took care of the problem and I couldn't be happier. We've given **First Defense®** to every heifer calf since.”

Jay Van Der Hoek
Van Der Hoek Dairy
1,800 cows
Modesto, California

“ Approximately 10 years ago we had a minor flare-up of scours in our herd. Treating the calves was costly and time-consuming and it set the calves back in terms of performance. The following year we administered **First Defense®** to every newborn. Scours became basically non-existent. Now each calf receives **First Defense®** within their first few hours of life.”

Brad Bader
Carrousel Farms
700 head beef operation
Monroe, Wisconsin

“ We began using **First Defense®** during the 2013 calving season when we were treating what seemed like half of our calves for scours. Since using **First Defense®**, we have treated only four calves for scours out of our 600 head herd. **First Defense®** really works!”

Brian Marshall
Marshall & Fenner Farms
600 head cow/calf beef operation
Malta Bend, Missouri

Customer Testimonials



Tri-Shield® is the most reliable way for us to prevent calf scours and it is the only thing we need to use.”

Kazmeiro (Kazzie) Nero
Oakwood Dairy
Auburn, NY



Diagnostics have shown rotavirus has been the cause of calf deaths in many herds, even well managed dairies that are very clean. **Tri-Shield®** is our new tool of choice to prevent rotavirus scours.”

Mark Hardesty, DVM
Maria Stein Animal Clinic
Maria Stein, OH



Over the years we layered in 3 different products, trying to prevent scours, but with **Tri-Shield®** we eliminated all of those, and calf health is better than ever, not often can we cut costs in half and improve, but **Tri-Shield®** has done that for us.”

Connie Soemann
McCollum Farms
Godport, NY



We have been using **Tri-Shield®** for 2 years now and have noticed a tremendous reduction in scours. It's so easy to administer and performs every time.”

Sasha Rittenhouse
R Enterprises
New Carlisle, OH



Our day-one protocols are consistent and calf management top notch, but we were still able to see a significant reduction in treatment costs within those first two-weeks of life.”

Matt Kunde
P7 Dairy
Roswell, NM

Oakwood Dairy is a 2,000 head dairy with calves raised in individual stalls within a greenhouse barn. They removed ScourGuard 4KC after seeing results with **Tri-Shield®**.

The Maria Stein Animal Clinic has 9 practicing veterinarians serving 45,000 dairy cows in Western Ohio and Eastern Indiana.

McCollum Farms is a 1,600 head dairy with calves in hutches outside for 9 months, hutches moved inside over winter.

R Enterprises is a beef seedstock operation raising feed efficient, sound, functional cattle that excel in carcass quality.

P7 Dairy is a 4,300 head Holsteins operation milking 3 times a day. P7 is a progressive data driven farm. Calves are fed pasteurized colostrum administered with disposable esophageal tubes and disposable colostrum storage bags at birth. Calves are housed in hutches.

Customer Testimonials



We've had a legacy of rotavirus here. We couldn't live without **Tri-Shield®**. It's good for our calves and our employees. We have used it since it came out and won't ever stop."

Charley Hansen

4C Corporation
Duchesne, UT

4C Corporation is a 3,000 head Jersey/Holstein dairy in the high desert area of Utah.



Tri-Shield® is much easier to apply than a dam-level scour vaccine or Calf-Guard®. A one-step process with no waste on DOA's or cows that don't give colostrum."

Brent Wickstrom

Wickstrom Jersey Farm
Hilmar, CA

Wickstrom Jersey Farm is a 2,000 head farm whose heifers feed into an off-site calf ranch owned by the dairies.



We had lots of issues with our calves before **Tri-Shield®**. Lab results confirmed we were dealing with all three pathogens (E. Coli, coronavirus, and rotavirus). Since we started **Tri-Shield®** the calves have been doing much better, I haven't lost a calf to scours in the past 9 months."

Alyssa Fischer

Darian Acres
Rio, WI

Darian Acres is a dairy with 30-50 calves per month. Calves receive colostrum and then milk replacer, fed by bottle for two weeks, then by pail. Calves are on milk until 8 weeks old when they are weaned. They are housed in hutches.



Our pasteurized colostrum program is highly monitored. We routinely track bacterial count and solids. Our blood total proteins average 6.7 mg/ml. But **Tri-Shield®** has an added effect over a quality colostrum program. Fewer calves shedding pathogens at the calf ranch protects not only our calves but all calves at the ranch."

Chris Terra

Red Top Jersey
Chowchilla, CA

Red Top Jersey is a 4,000 head farm whose heifers feed into an off-site calf ranch owned by the dairies. They have tried other scour prevention programs like ScourGuard® and Calf-Guard® in the past but have moved to only **Tri-Shield®**.



Tri-Shield® is a highly effective and easy to deliver, without colostrum interference. I have received lots of positive feedback from my customers using **Tri-Shield®**. I also use **Tri-Shield®** on our personal Angus herd and have had great results."

Vince Collision, DVM

Collision Veterinary Services
Rockwell City, IA

Collision Veterinary Services provides Veterinary and Embryo services.

Customer Testimonials

RESEARCH PROVEN

...simple to administer and produces results

"Prior to adding **First Defense**® to our regimen, our calves would always run into problems with salmonella after having scours seven to ten days after birth. We have been using **First Defense**® at Cal Poly State University's dairy unit and have seen calves getting through the first two weeks of life stage really successfully. We would recommend **First Defense**® to anyone. This product is simple to administer and produces results."

-Rich Silacci, Cal Poly State University, San Luis Obispo, CA

...a huge return

"We have been using **First Defense**® for the last 3-4 years and are really happy with the product. For us it's important, it's a big investment and a huge return. The product is convenient and versatile. Knowing we have protection as soon as the calf hits the ground is satisfying and comforting. This product gives assurance."

-Dan Kullot, DVM, Syracuse Dairy, Syracuse, KS

...we went from 40% scour down to 15%

"The first two weeks of life are very important because that affects her milk production for the rest of her life. And we've made a change in the last 30 days and we went from 40% scour incidences down to about 15% scour incidences. But then I've also used **First Defense**® on other dairies and it worked phenomenal for me too."

-Danny Cundiff, G2 Producers, Dumas, TX

...give to the calf as soon as it's born

"The thing that I like about **First Defense**® is that you give to the calf as soon as it's born. There are some products on the market today that you have to give to the calf at birth and the recommendation is to wait 30 minutes or longer before you can feed colostrum. It's so hard to tell a dairyman or a calf raiser to delay feeding colostrum when that's the most important thing to give the calf."

-Steve Hayes, DVM, Day 1 Technology, Winona, MN

...we noticed a big difference in milk and grain intake

"You can just compare calves that you have on **First Defense**® compared to calves that aren't. There's definitely a big difference. Maybe not day one, but as they're in their first three weeks when they're in the calf hutches and they're on milk. Once they start grain, we noticed a big difference on their milk and grain intakes, as well as just being healthier all around."

-Zach Damrow, Deagull Bay Dairy, American Falls, ID

...dropped our scours rate by about 75%

"We did a trial and found that **First Defense**® as well as a different colostrum pasteurizer dropped our scours rate by about 75%."

-Katie Grinstead, Vir-Clar Farms, Fond du Lac, WI



Section #3: Financial Review

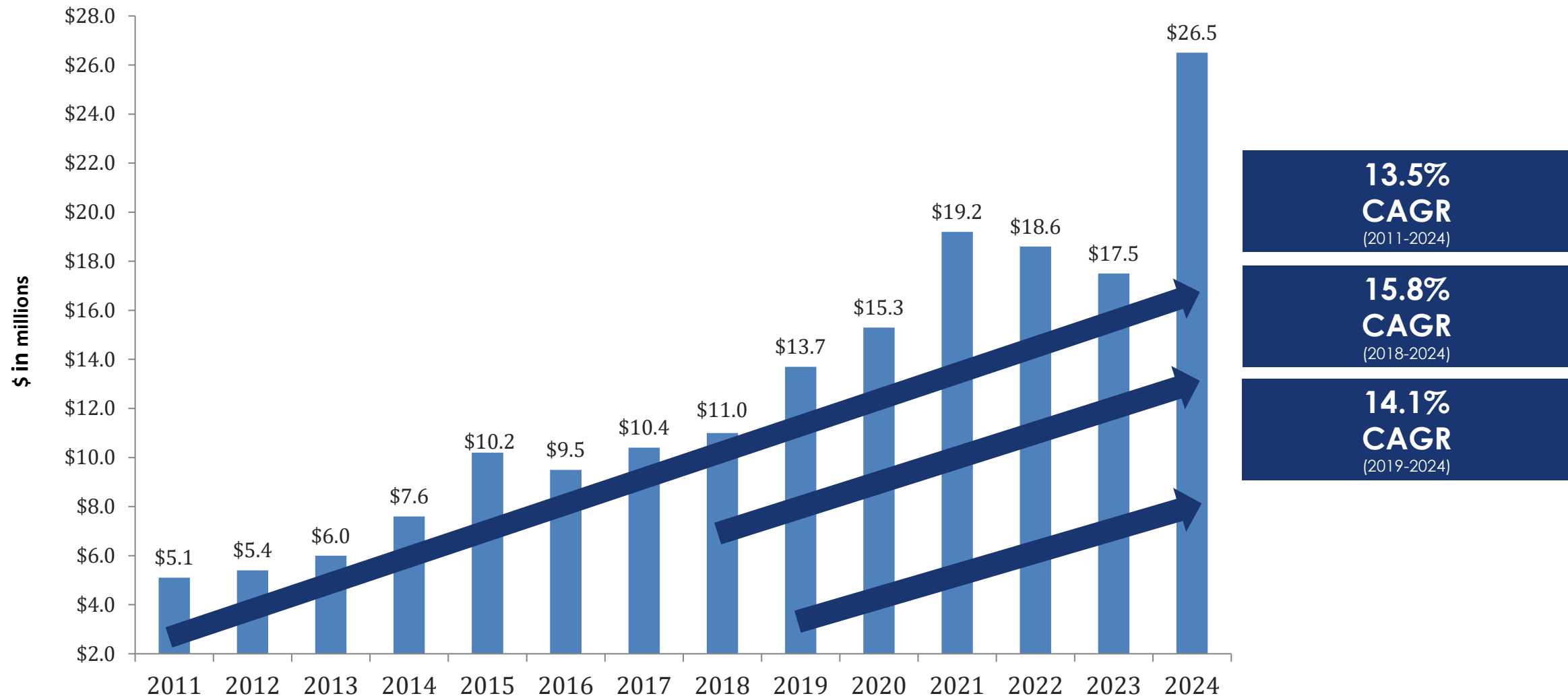
Balance Sheet & Capitalization

(In millions except for percentages and per share amounts)

Balance Sheet (as of 03/31/2025)	
Cash and cash equivalents	\$4.6
Net working capital	\$12.1
Total assets	\$45.6
Debt outstanding (excluding line of credit)	\$10.2
Total liabilities	\$16.6
Stockholders' equity	\$29.0
Debt/equity (excluding line of credit)	35%

Capitalization Table (as of 05/06/2025)	
Stock price (per share)	\$5.07
Shares outstanding	9.04
Options	0.747
Warrants	0
Preferred stock	0
Convertible securities	0
Average volume (20-day)	0.022
Market cap	\$45.8

Total Product Sales



Income Statement

(\$ in millions, except percentages and per share amounts)	During the Three-Month Periods Ended March 31,	
	2025	2024
Product Sales	\$8.1	\$7.3
Gross Margin	\$3.4	\$2.3
Gross Margin %	42%	32%
Net Operating Income (Loss)	\$1.1	(\$0.3)
Net Income (Loss)	\$1.4	(\$0.4)
Net Income (Loss) Per Share	\$0.16	(\$0.06)

Non-GAAP Financial Measures

Generally, a non-GAAP financial measure is a numerical measure of a company's performance, financial position or cash flow that either excludes or includes amounts that are not normally included in or excluded from the most directly comparable measure calculated and presented in accordance with GAAP. The non-GAAP measures included in this slide deck should be considered in addition to, and not as a substitute for or superior to, the comparable measure prepared in accordance with GAAP. We believe that considering the non-GAAP measure of Earnings Before Interest, Taxes, Depreciation and Amortization (EBITDA) assists management and investors by looking at our performance across reporting periods on a consistent basis excluding certain charges from our reported net income (loss). Adjusted EBITDA is calculated and reconciled to the most comparable GAAP financial measure in the following table:

(In thousands)	During the Three-Month Periods Ended March 31,	
	2025	2024
Net income (loss)	\$1,447	(\$438)
Income tax expense	2	1
Interest expense (excluding debt issuance and debt discount costs)	117	136
Depreciation	671	663
Amortization (including debt issuance and debt discount costs)	16	15
Stock-based compensation expense	52	81
Adjusted EBITDA	\$2,305	\$458

Cash payments to satisfy debt repayment obligations and to make capital expenditure investments are other uses of cash that are not included in the calculation of EBITDA, which management also considers when assessing its cash flows.

Capital Expenditures

During 2019, we initiated several additional capital expenditure investments in **First Defense®** and **Re-Tain®** as detailed in the following table (in thousands):

Paid During the	First Defense®	Re-Tain®	Other	Total
Year Ended December 31, 2019	\$279	\$538	\$574	\$1,391
Year Ended December 31, 2020	2,938	581	554	4,073
Year Ended December 31, 2021	1,633	976	-	2,609
Year Ended December 31, 2022	3,498	430	47	3,975
Year Ended December 31, 2023	1,097	796	-	1,893
Year Ended December 31, 2024	410	54	2	466
Three-Month Period Ended March 31, 2025	322	7	-	329
Total Paid through March 31, 2025	10,177	3,382	1,177	14,736
Estimate to Complete ⁽¹⁾	4,000	2,000	-	6,000
Total Project Cost	\$14,177	\$5,382	\$1,177	\$20,736

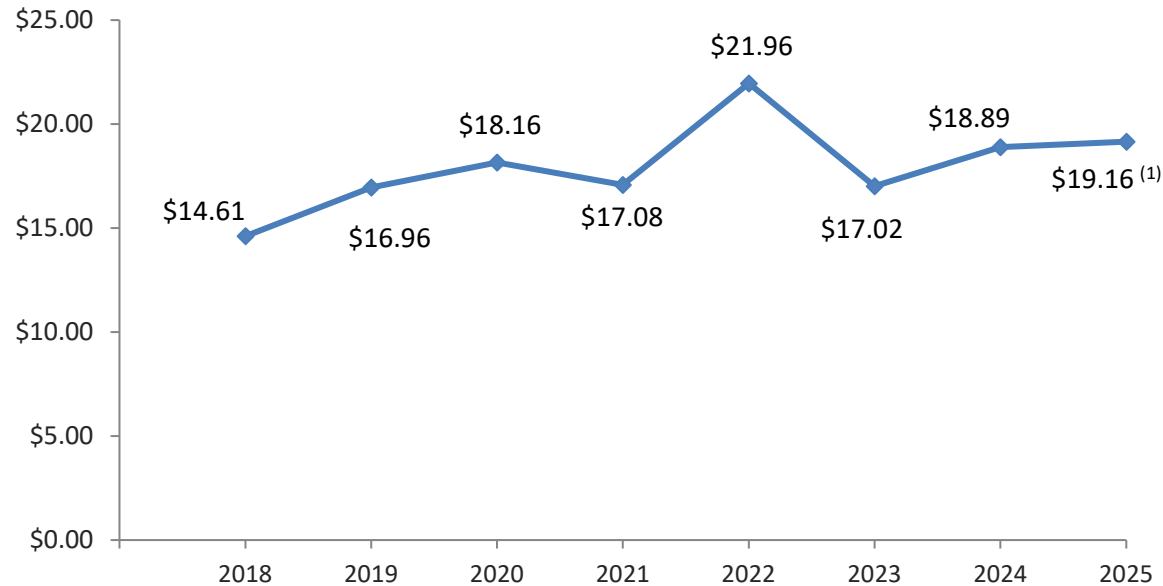
⁽¹⁾ The investments of approximately \$3 million of these funds to increase **First Defense®** production capacity from approximately \$30 million to approximately \$40 million per year and approximately \$2 million to build an in-house aseptic filling facility for **Re-Tain®** have been deferred for the time being, due to cash constraints caused by production slowdowns implemented during 2023 to remediate certain contamination events. These estimated costs to complete are based on historic quotations and have not been updated or adjusted to account for inflation, project scope change and other factors.

Economics of Dairy Industry

- The milk price for the first four months of 2025 was 1% higher than the 2024 average.
- The Milk-to-Feed Ratio for the first three months of 2025 was 7% higher than the 2024 average.

Average Class III Milk Price

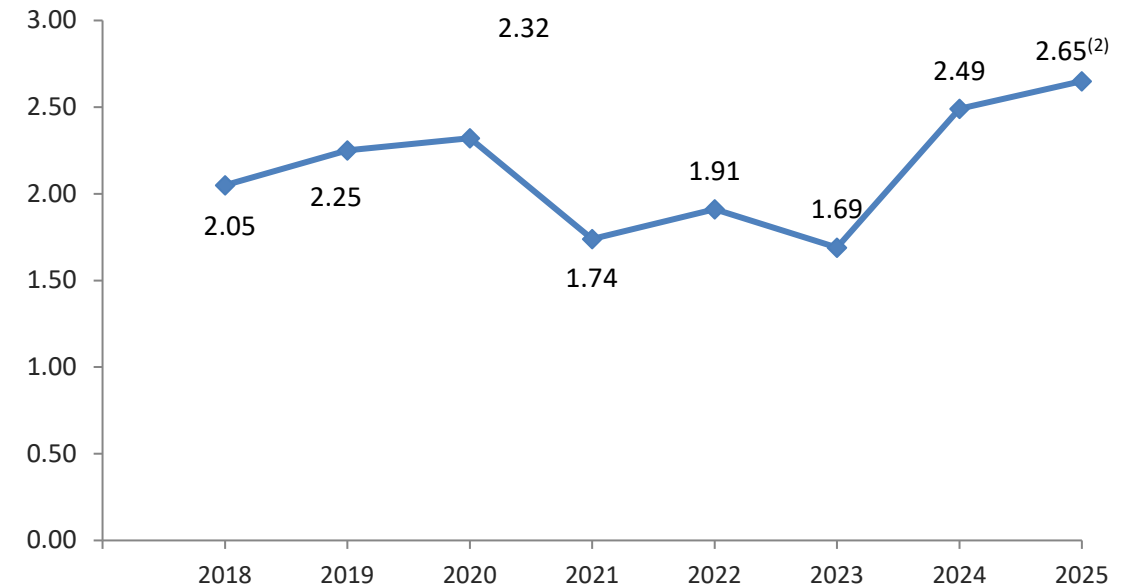
(for the years ended December 31st)



Source: US Department of Agriculture (USDA)

Average Milk-to-Feed Price Ratio

(for the years ended December 31st)



(1) Four-month period ended April 30, 2025.

(2) Three-month period ended March 31, 2025.

Section #4: Other Information



First Defense® Product Line

- The First Defense® product line is the only USDA-licensed, orally delivered scours preventative with claims against *E. coli*, coronavirus and rotavirus.
- Colostrum (first milk) consumption immediately after birth provides critically important antibodies before the immune system matures to produce its own antibodies. Our hyperimmunization program and the use of bovine colostrum makes our product unique.
- Three primary formats:
 - 1)The original (approved in 1991) Dual-Force First Defense® in a bolus
 - 2)The new (approved in 2017) Tri-Shield First Defense® in a gel tube
 - 3)The newest (approved in 2018) Dual-Force First Defense® in a gel tube
- The First Defense® product line provides Immediate Immunity™ to newborn calves.
- Verified antibodies are more progressive and protective than a variable vaccine response.



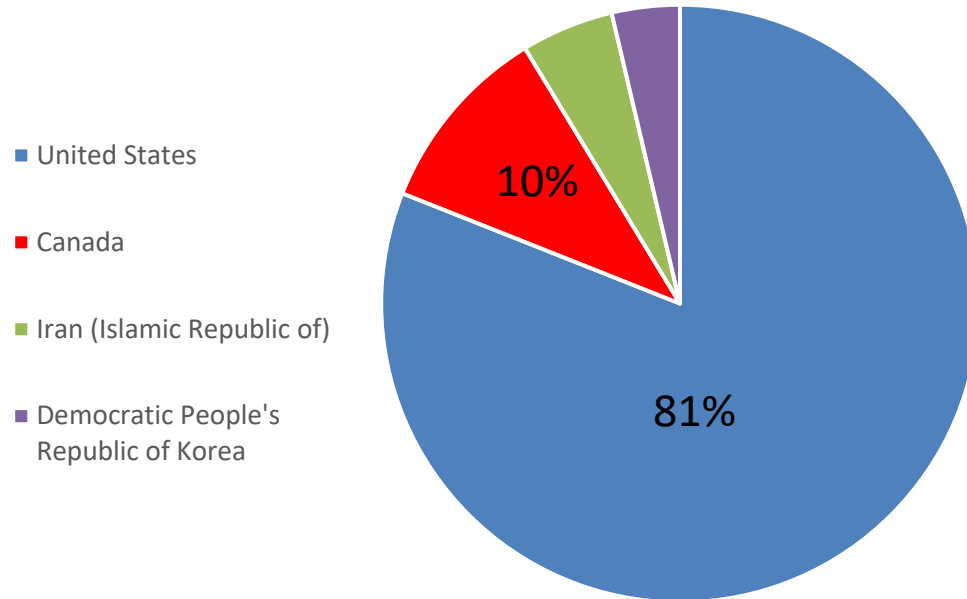
First Defense® Product Line (continued)

- **More than 37 million doses sold** in aggregate (as of April 2025)
- **With the addition of rotavirus claim**, we provide a unique breadth of protection against three leading pathogens
- **Improved competitive position** against calf-level products
- **Now able to compete more effectively** against dam-level scours vaccine products
- **Producers can save needles and labor** for vaccines that are more critical to cow health
- **Invest in viable calves** only
- Completed an investment to increase our estimated **production capacity** (annual sales value) for the **First Defense®** product line to over \$30 million per year



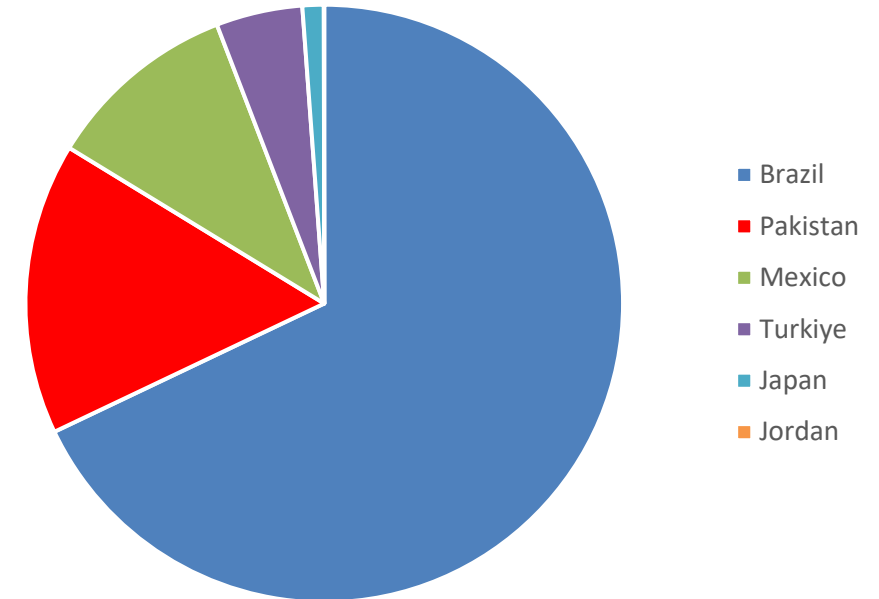
Cattle Market Overview

Cattle inventory in markets currently served



Total number of dairy and beef cattle: 109,659,000

Cattle inventory in new markets being researched



Total number of dairy and beef cattle: 351,240,000

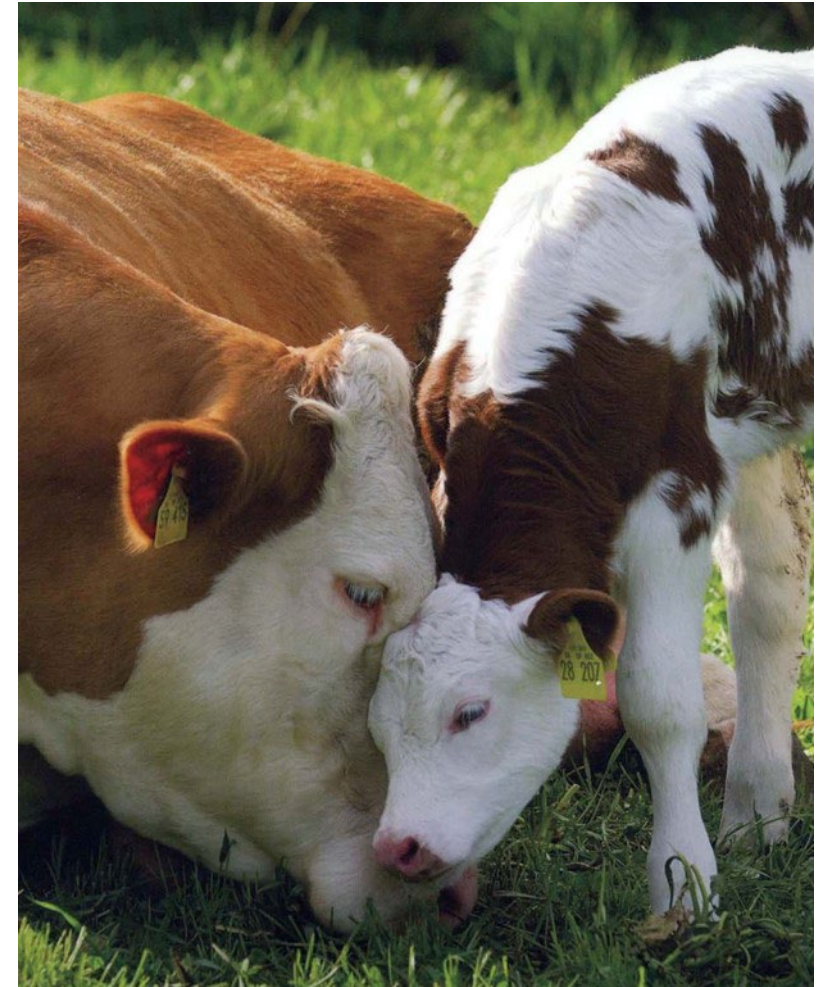
What is Scours?

- The disease manifests as rampant, **uncontrolled diarrhea** in newborn calves.
- **Scours is the leading calf disease risk.** We estimate the cost to the U.S. dairy and beef industries to be approximately \$741 million.⁽¹⁾
- **Percent of pre-weaned heifer deaths** caused by scours or other digestive problems:
57%⁽²⁾
- **Incidence rate** of scours in live births:
23%⁽³⁾
- **Scours is an economic drain in three ways:**
 1. Calf losses (death)
 2. Treatment costs (antibiotics, rehydration fluids, and increased labor/nursing back to health)
 3. Reduced productivity (less growth and milk production)

(1) See next slide for detailed, estimated calculations.

(2) USDA report, *Dairy 2007 Heifer Calf Health and Management Practices on U.S. Dairy Operations, 2007*.

(3) APHIS/NAHMS 2007 Info Sheet III, *Highlights of Dairy 2007 Part III: Reference of Dairy Cattle Health and Management Practices in the United States, 2007*.



Scours: Cost to the U.S. Dairy & Beef Industries

Scours Related Cost to Dairy Industry

\$119 million – Calf Deaths
\$45 million – Scours Treatments
\$90 million – Reduced Weight Gain
\$75 million – Reduced Milk Production
\$329 million estimated annual cost

Scours Related Cost to Beef Industry

\$76 million – Calf Deaths
\$112 million – Scours Treatments
\$224 million – Reduced Weight Gain
\$412 million estimated annual cost

**ESTIMATED
ANNUAL COST TO DAIRY & BEEF
INDUSTRIES
\$741 million**

Dairy Calf Deaths

Deaths prior to weaning	7.8%
% of above deaths from scours	56.5%
Number of calves	9,000,000
Wet calf value (increases towards \$1,000 with age)	\$300
Cost to dairy industry due to scours deaths	\$118,989,000

Scours Treatments

Live calves treated for scours	25.0%
Number of calves	9,000,000
Treatment costs (labor, antibiotics, fluids)	\$20
Cost to dairy industry due to scours treatment	\$45,000,000

Reduced Weight Gain

Pounds lighter at weaning	20
Price per pound	\$2.00
Calves treated for scours	2,250,000
Cost to dairy industry in reduced weight gain	\$90,000,000

Reduced Milk Production

Pounds less milk produced per lactation	187
Cost in cwt (1 cwt = 100lb) (price @ December 2014)	\$ 17.82
Calves treated for scours	2,250,000
Cost to dairy industry in reduced milk production	\$74,970,000

Beef Calf Deaths

Deaths prior to weaning	6.4%
% of above deaths from scours	14.2%
Number of calves	28,000,000
Wet calf value (increases towards \$1,000 with age)	\$300
Cost to beef industry due to scours deaths	\$76,339,200

Scours Treatments

Live calves treated for scours	20.0%
Number of calves	28,000,000
Treatment costs (labor, antibiotics, fluids)	\$20
Cost to beef industry due to scours treatment	\$112,000,000

Reduced Weight Gain

Pounds lighter at weaning	20
Price per pound	\$2.00
Calves treated for scours	5,600,000
Cost to beef industry in reduced weight gain	\$224,000,000

The data used to compile the estimated cost of calf scours to the dairy and beef industries was derived from our best interpretation of industry reports and understandings with reference to, but not limited to, the following published sources:

- 2007-2008 USDA National Animal Health Monitoring System (NAHMS) Report on Beef Cow-Calf Health and Management,
- USDA Dairy 2007 NAHMS Report on Heifer Calf Health and Management,
- Progressive Dairyman, May 2014, What is scours costing your operation?
- Drovers CattleNetwork, March 2014, Optimizing Calf Health, and
- Economics of Scours, beef worksheet, Pfizer Animal Health.

While ImmuCell believes the figures presented are reasonable for the purpose of this discussion, the actual cost of scours could vary greatly from the estimated figures presented

Relevant Regulatory Initiatives

- 2011: Dutch Veterinary Society restricts the use of beta lactams in cattle
- 2012: FDA further restricts the use of cephalosporins in food animals
- 2017: Veterinary Feed Directive (VFD) restricts the use of medically important antibiotics
- 2018: FDA announced 5-year plan for Antimicrobial Stewardship in Veterinary Settings, eliminating production uses of medically important antimicrobials and bringing all therapeutic uses under the oversight of licensed veterinarians

Key Publications Related to the Subclinical Mastitis Market Opportunity

- New York State Cattle Health Assurance Program, Mastitis Module-Veterinary Resource, “Epidemiology of Mastitis”.
- Santman-Berends, IM. (2012, May), Incidence of subclinical mastitis in Dutch dairy heifers in the first 100 days in lactation and associated risk factors, *J Dairy Science*, 95(5): 2476-2484.
- Roesch, M. (2007, February), Subclinical mastitis in dairy cows in Swiss organic and conventional production systems, *J Dairy Research*, 74(1): 86-92.
- Makovec, JA. (2003, November), Results of milk samples submitted for microbiological examination in Wisconsin from 1994 to 2001, *J Dairy Science*, 86(11): 3466-3472.
- Jayarao, BM, et al, Epidemiology of *Streptococcus uberis* intramammary infections in a dairy herd, *Zentralbl Veterinarmed B.*, September 1999, 46(7): 433-42.
- Pol, M. and Ruegg, P.L. (2007), Relationship between antimicrobial drug usage and antimicrobial susceptibility of gram-positive mastitis pathogens, *J Dairy Science*, 90, 262-273.

Executive Management Team



Michael F. Brigham
*President and Chief Executive Officer,
Director*

- *Joined ICCC in September 1989*
- *Appointed as President and Chief Executive Officer in February 2000*
- *Director since 1999*
- *Audit Manager at Ernst & Young prior to joining ICCC*

ImmuCell



Timothy C. Fiori
Chief Financial Officer

- *Joined ICCC in April 2025*
- *Appointed as Chief Financial Officer in April 2025*
- *Sr. Director Finance, Commerical Operations at IDEXX*

IDEXX



Bobbi Jo Brockmann
*Vice President of Sales and Marketing,
Director*

- *Joined ICCC in January 2010*
- *Promoted to VP of Sales and Marketing in February 2015*
- *Director since 2017*
- *Previously with APC Inc., W&G Marketing Company Inc.*



Board of Directors (outside directors)



Gloria J. Basse
Director

- *Member of the Compensation and Stock Option Committee*
- *Director since 2020*
- *Zoetis, Context Network, independent consultant, Tonisity International*



Bryan K. Gathagan
Director

- *Member of the Audit Committee*
- *Director since June 2023*
- *broad Thinking, LLC, Animalytix LLC*



Steven T. Rosgen
Director

- *Member of the Audit Committee*
- *Director since 2018*
- *Stratagem Research Inc., Street Smart Strategic Planning*



Board of Directors (outside directors) (continued)



David S. Tomsche, D.V.M.
Chair of the Board

- *Appointed to Chair of the Board in February 2013*
- *Director since 2006*
- *Leedstone Inc., J-t Enterprises of Melrose, VetPharm Inc.*



Paul R. Wainman
Director

- *Member of the Audit Committee and Nominating Committee*
- *Director since 2014*
- *Hancock Lumber, Kleinfeld Paper, William Arthur Inc.*



Sales & Marketing Territories



Your Calf Crew®

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Mark Wustenberg, DVM

Commercial Leader of Stakeholder
Engagement

Kathy Becher

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Dale Miller

Sales & Marketing Manager
Northeast US and Canada Region

Becky Vincent

Sales & Marketing Manager
Great Lakes Region

Sarah Eck

Sales and Marketing Manager
Lower Midwestern Region

Jill Sprakel

Sales & Marketing Manager
Midwestern Region

Visit us on Facebook, Instagram and
YouTube at Immediate Immunity™



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