FORTIS

Fortifying Your Herd

NAMA Student Marketing Competition 2023

Purdue University

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INTRODUCTION

In a technologically advanced world, the cattle industry has been unsuccessful in developing an efficient method for detecting and diagnosing Bovine Respiratory Disease (BRD). This multifactorial disease is most commonly caused by five different bacterial strains: *Mannheimia haemolytica, Mycoplasma bovis, Pasteurella multocida, Trueperella pyogenes, and Histophilus somni*.[1] It wreaks havoc on many cattle operations, costing the industry up to **$4 billion per year**.[2] Even the most biosecure operations will come into contact with BRD, and current diagnostic tests take five to seven days to yield results.

Fortis, a revolutionary animal health product, provides the cattle industry with the technological advancement it has been waiting for. Fortis reduces diagnosis time from **5 days to 5 minutes with 98.5% accuracy**. Simply swab the cattle's nose and the nucleic acid detection technology will detect the specific bacterial strain causing BRD. With these results, feedlot managers will be able to quickly separate infected cattle into isolation pens and administer appropriate antibiotics. Fortis is intended to be an integral part of the feedlot's biosecurity plan by being used preventatively upon new cattle arrival, periodically for surveillance testing, and/or when cattle exhibit symptoms, as deemed necessary by feedlot managers or veterinarians.

Intelligo Industries, based in Amarillo, Texas, is a staple for animal producers across the nation as a reputable and established animal health company. Intelligo Industries is introducing Fortis as a means of expanding their product offerings because they recognize a need for rapid BRD testing in the animal health market.

MARKET ANALYSIS

NEED AND BENEFIT TO PRODUCER

Current Mitigation Practices not Effective in the Fight Against BRD

BRD is the leading cause of economic loss for the beef industry in North America. Currently, the most common diagnostic method is through visualizing clinical signs, which may take up to 10 days to become noticeable. If producers do choose to test for BRD, they take and send a blood sample or a nasal swab to a lab, taking several days. Producers can also mass-treat cattle with an antibiotic in the hopes of controlling BRD. However, these preventative measures are less effective on stressed cattle that were just transported.

In summary, today's inefficient diagnosis and treatment process results in the following negative impacts for feedlots.

- Increased morbidity and mortality since early detection cannot be achieved
- Costly veterinary expenses like antibiotics, vaccines, blood testing, and more
- Concerns about antibiotic-resistant strains of bacteria
- Decreased rate of gain in feedlot cattle from sick days (off feed)
- Extra labor expenses

$119 million
in savings

Fortis Filling the Need

With the introduction of Fortis's early detection and diagnostics, the bacterial strain(s) at the root of the illness is identified in minutes, allowing for more precise and effective treatments. This will mitigate losses the cattle industry faces from animal death, increased labor costs, decreased rate of gain, and medication costs associated with BRD and save producers up to **$40 per head**[3] of cattle adding to a total industry savings of **at least $119 million**.[4]

MARKET TRENDS

1. The cattle healthcare market was valued at $3 billion in 2021 and is projected to reach $5.1 billion by 2028, expanding at a CAGR of 7.9% from 2022 to 2028.[5]
2. In 2021, the global veterinary medicine market was estimated at $29.4 billion and is anticipated to expand at a CAGR of 7.3% between 2022 and 2030.[6]
3. BRD contributes to roughly 70–80% of feedlot total morbidity and up to 50% of feedlot mortalities.[7]
4. Beef feedlot margin decreased 45% from 2022 to 2023. [8]

TARGET MARKET

Fortis will target all cattle feedlots within the United States. This product will appeal to all feedlot cattle producers as an early detection and diagnostic method to fortify their herd health by aiding in the control of BRD.

Cook Cattle Company *founded in 2013, located in Southwest Kansas*

- Over 150 employees, including nutritionists and veterinarians on staff
- Roughly 120,000 head of beef cattle year round
- Transports on average 1,000 head of beef cattle daily
- Utilizes isolation practices and administers vaccines to prevent disease spread

Crockett Family and Company *established in 1965, located in Eastern Colorado*

- Family owned and operated feedlot
- Approximately 4,500 head of cattle with 5 additional employees
- Vets are not staffed on site and are called when medical issues arise
- Lost 122 cattle to BRD last year and are looking for a cost effective way to quickly test for specific bacterial strains

OTHER MARKET FACTORS

Economic - Rising transportation costs, veterinary and medical expenses, and beef prices.
Sociocultural - Increased concern for animal welfare.[9]
Technological - High demand for early detection technologies among livestock producers.[10]

MARKET SIZE AND POTENTIAL

Fortis's market potential lies in all cattle feedlots located within the United States, with an estimated **26,093 operations**, amounting to **14,157,300 head of cattle**, per the most recent Cattle on Feed data published by USDA National Agricultural Statistics Service.[11]

COMPETITIVE ANALYSIS

Fortis is special in that it operates in the BRD health market as both a competitor and a complement. The BRD health market is currently divided into three segments: prevention, diagnosis, and treatment.

PREVENTATIVES

Vaccines (Bovilis Nasalgen 3-PMH):
Intranasal vaccine, but only protects against two of the bacterial BRD strains.
Cost: $4.82/dose

DIAGONOSTIC METHODS

FORTIS
A simple rapid test that detects and diagnoses the five most common bacterial BRD strains in less than 5 minutes.
Cost: $5.10-$5.42/test

Visual Assessment[12]:
Most common method of diagnosis, but it does not allow for early detection and has low accuracy.
Cost: Free or variable on hourly vet charges

Non-Rapid Nasal Swab PCR Test[12]:
An accurate, lab-processed detection method, but results take several days to process, it is expensive, and it can only test for one strain.
Cost: $37/test[13]

Serology Blood Test[14]:
Extremely accurate blood detection method, but is more invasive, can only test for one strain, and results take several days to process.
Cost: $9.25/test[13]

TREATMENTS

Macrolides (ie. Draxxin/Tilmicosin)[15]:
Most effective against *Mycoplasma bovis* strain
Cost: $37/dose[16]

Florfenicol (ie. Nuflor)[17]:
Most effective against *Mannheimia haemolytica, Pasteurella multocida, and Histophilus somni* strains
Cost: $49.76/dose[18]

Penicillin (ie. Amoxicillin)[19]:
Most effective against *Trueperella pyogenes* strain
Cost: $6/dose[20]

SWOT ANALYSIS

S
- Identifies the five most common bacterial strains associated with BRD
- User-friendly and delivers test results in under 5 minutes
- Minimizes profit loss due to BRD for feedlot producers
- Decreases herd infection rates due to early detection and diagnosis

W
- More difficult to sell early-detection measures
- First to the market
- Limited brand awareness

O
- Product line diversification: add tests for new diseases and species
- Reduces use of antibiotics and resistance in feedlots
- Use in conjunction with other BRD detection and prevention technologies

T
- Increased prevalence of viral BRD strains
- Confined cattle feeding method outlawed
- Investment hesitation

BUSINESS PROPOSITION

PRODUCT DESCRIPTION

Intelligo Industries offers Fortis: the first rapid nasal swab for the detection and diagnosis of BRD with 98.5% accuracy. Fortis is available to feedlots at the cost of **$271.41 per pack of 50 tests** and **$1,277.01 per pack of 250 tests** with a shelf-life of up to two years. To use Fortis, producers simply swab the nose once and transfer the collected sample onto the five reactive papers that each detect one of the five most common bacterial strains of BRD. The nucleic acid detection technology identifies the strain of bacteria causing BRD within five minutes, ultimately saving time, money, and lives.

METHODS OF USE

- Preventative
- Surveillance
- Sypmtomatic

KEY PLANNING ASSUMPTIONS

1. Fortis BRD testing passes all USDA and APHIS testing and regulations that are required.
2. Established distribution network through our distributors, Animal Health International (AHI) and MWI Animal Health.
3. Through its parent company, Intelligo Industries, Fortis has developed strong veterinary relationships.

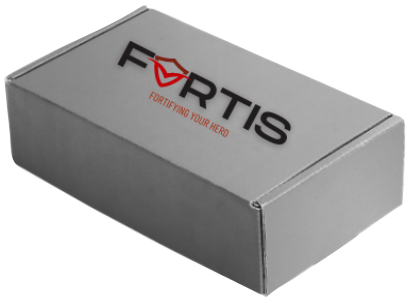
STRATEGY STATEMENT

The primary strategy of Fortis is to reduce the losses incurred from BRD by providing feedlots with an efficient way to test for specific bacterial strains. Fortis enters the market with a unique opportunity to fundamentally alter how BRD is detected, diagnosed, and managed within feedlots of all sizes. It supplements current herd health management practices such as vaccination and treatment.

OBJECTIVES AND GOALS

Goal:

Fortis's goal is to be a reliable, well-known, and accurate solution providing feedlots with a product that will reduce losses incurred from BRD.



Objectives:

1. Increase Fortis's net profit margin to 13.41% by the end of year 3.
2. Capture 2.88%, 7.00%, and 10.28% of the market share across years 1, 2, and 3, respectively.
3. Achieve 50%, 75%, and 90% of brand recognition across years 1, 2, and 3.
4. Maintain Fortis's test accuracy of 98.5%.

PRIMARY RESEARCH

- 100% of Animal Health Sales Representatives, Producers, and Veterinarians indicated a market need or value for this product.
- More than 90% of feedlot operators surveyed have dealt with BRD in their operation.

To improve and support the planned marketing of Fortis, Intelligo Industries performed primary research to get a range of viewpoints and input on the product. During one-on-one interviews, Intelligo Industries reached out to producers of feedlots, veterinarians, and animal health sales representatives. The interviews revealed that a majority of industry professionals are interested in Fortis's capacity to reduce the losses producers incur from BRD. These industry professionals recommend Fortis for feedlot management.

ACTION PLAN

POSITIONING STATEMENT

Through a nasal swab rapid test that allows producers to quickly detect BRD, Fortis provides farmers with an efficient, cost-effective, and convenient alternative approach to current biosecurity measures. Fortis's objective is to fortify feedlots by rapidly identifying the five bacterial strains that cause BRD, hence allowing for more effective antibiotic treatment and reduced transmission.

PLACE

Fortis will be available for purchase across the United States. To maximize potential sales, Fortis will initially direct marketing efforts towards the five states where 72% of feedlots are located: Texas, Colorado, Iowa, Kansas, and Nebraska.[21]

Fortis will use Intelligo Industries' existing partnerships with AHI and MWI Animal Health as its sole distributors. To order Fortis, feedlot owners will consult their on-site veterinarian or local veterinary supply store. Veterinarians can then order directly from these distribution centers on behalf of their feedlot clients. Fortis can be implemented in the herd as early as the next day by utilizing these distribution centers, which are heavily concentrated within our targeted states.

PRICE

Fortis will be sold through the distributors AHI and MWI Animal Health. The distributor will pay $188.48 for a 50-pack and $886.81 for a 250-pack. This will result in a **41% gross margin** for Fortis. The end price feedlots and cattle producers pay is $271.41 for a 50-pack and a discounted bulk price of $1,277.01 for a 250-pack, saving producers $0.32 per test.

PROMOTION

HOOVES ON THE GROUND

Sales Representatives

Intelligo Industries has an established sales force that will employ five sales representatives along with one product manager in the five targeted states who will educate and promote the Fortis brand to veterinarians, feedlot operations, and at high-profile conventions. These sales representatives will actively travel to feedlot operations and veterinarian clinics to sell the convenience and functionality that Fortis provides, further demonstrating recommended use.

Veterinarian Ambassadors

Veterinarians are critical for Fortis's exposure because they provide credibility and real-world experiences. Veterinarian ambassadors will be hired to speak at conventions, give demonstrations, and provide testimonials on Fortis's behalf.

Convention & Expositions

In tandem with Intelligo Industries, Fortis will sponsor space for a promotional booth at annual national industry conferences such as the National Cattlemen's Beef Association (NCBA) Convention and the American Association of Bovine Practitioners (AABP) Convention to increase brand recognition and product awareness. At both conferences, Fortis will sponsor a panel in which veterinarian ambassadors and producers will discuss their experiences with the product. Likewise, demonstrations will be given to educate veterinarians and producers on the use and benefits of Fortis. To expand the Fortis brand, Intelligo Industry Sales Representatives and Veterinarian Ambassadors will pass out physical collateral such as hats, pens, koozies, and more.

DIGITAL MOOOVES

Search Engine Optimization & Pay Per Click

Fortis will invest in keyword phrases such as "Bovine Respiratory Disease," "cattle productivity," "BRD," and "cattle disease management." By purchasing smart keywords, Fortis will immediately enhance traffic on its website through increased click counts and page views.

Social Media

Fortis will employ the Intelligo Industries YouTube, Facebook, Twitter, and LinkedIn profiles to communicate product information, promotional offers, and sales team advice to increase awareness of the new product.

Earned Media

Fortis will use press releases, media pitches, and event alerts to capture earned media exposure in the cattle industry's widely trafficked print media, digital media, podcasts, and radio shows.

Email Marketing

Intelligo Industries will invest in email marketing to contact current and prospective customers. The communication will contain producer testimonials, biosecurity precautions, and discounts for customers.

Website

Intelligo Industries has an established website with a tab for the Fortis brand that contains product information and customer reviews. Contact information for trusted veterinarians and sales representatives can be easily found here as well.

COW PRINT

Fortis will strategically position print advertisements in publications such as Feedlot Magazine, Progressive Cattle, and American Cattlemen. By publicizing the product's description, packaging, customer reviews, and ordering details, brand recognition will increase among new and existing customers.

Giving back the Mooola

Intelligo Industries will support the next generation of veterinarians by establishing a $1,500 Fortis Veterinary Scholarship which will be awarded to one current and incoming veterinary student. Additionally, Intelligo Industries will donate Fortis test samples to five large Animal Veterinary Institutions for diagnostic and research purposes.

MARKETING EXPENSES

	Year 1	Year 2	Year 3
Digital Media			
Search Engine Optimization (SEO)	$ 25,187.40	$ 44,087.40	$ 71,234.10
Webpage Development & Modernization	$ 745.00	$ 820.00	$ 902.00
GeoTargeting	$ 5,155.00	$ 15,465.00	$ 22,888.20
Email Campaign	$ 3,938.00	$ 4,233.00	$ 4,550.00
Social Media Analytics	$ 4,164.00	$ 4,164.00	$ 4,164.00
Social Media Advertisements	$ 48,037.16	$ 144,111.47	$213,284.98
Print Media			
Magazine Ads	$ 33,000.00	$ 44,880.00	$ 61,036.80
Events and Programs			
Veterinary Ambassadors Program	$ 34,000.00	$ 37,400.00	$ 41,140.00
Convention/Expo's Booth	$ 49,137.46	$ 72,952.39	$103,414.33
University Outreach			
Veterinary Student Scholarships (2 - $1,500)	$ 15,000.00	$ 15,000.00	$ 15,000.00
Veterinary School Test Kit Donations (250 Kit)	$ 6,385.06	$ 6,385.06	$ 6,385.06
Total	$224,749.08	$ 389,498.32	$543,999.47
Percentage of Sales	13.76%	10.14%	9.79%

FINANCIAL EVALUATION

Fortis will aim to capture 2.88% of its target market in year one and expand its reach to 7.00% and 10.28% of its target market in years two and three. In its first year on the market, Fortis will generate a net loss of $201,457.92 after costs of goods sold and **heavy reinvestment** into marketing techniques are accounted for. Fortis has elected to invest large amounts of capital into promotional tactics that will provide Fortis with a firm foundation capable of delivering higher sales, greater market acquisition, and ultimately, higher profits for Intelligo Industries. The heavy reinvestment into these promotional tactics will come to fruition with positive profits in years two and three where Fortis will generate **net profits of $327,700.22** and **$702,588.89** with **net profit margins of 9.14%** and **13.41%**, respectively.

Income Statement	Year One	Year Two	Year Three
Total 50 Unit Kits Sold	4,339	6,304	6,718
Total 250 Unit Kits Sold	766	2,702	4,479
Total Gross Sales	$1,496,739.13	$3,584,308.51	$5,238,189.79
COGS	$ (879,598.53)	$ (2,133,995.07)	$ (3,135,512.17)
Gross Sales	**$617,140.61**	**$1,450,313.45**	**$2,102,677.61**
Product Manager	$ (134,000.00)	$ (142,720.00)	$ (152,057.60)
Sales Personnel Salaries	$ (325,000.00)	$ (338,000.00)	$ (351,520.00)
Other Operating Expenses	$ (134,849.45)	$ (252,394.91)	$ (352,511.66)
Total Marketing Costs	$ (224,749.08)	$ (389,498.32)	$ (543,999.47)
Total Overhead	$ (818,598.53)	$ (1,122,613.23)	$ (1,400,088.73)
Net Profit	$ (201,457.92)	$327,700.22	$702,588.89
Net Profit Margin	-13.46%	9.14%	13.41%

MONITORING AND MEASURING

MEASUREMENT	IF GOAL IS EXCEEDED	IF GOAL IS NOT MET
GOAL: Increase Net Profit Margin		
Analyze financial statements annually. Year 1: (8.90%) Year 2: 11.23% Year 3: 14.94%	Continue to push existing promotional tactics.	Assess the effectiveness of individual marketing campaigns and re-allocate more advertising dollars to effective campaigns.
GOAL: Increase Market Share		
Evaluate share of feedlots using Fortis by comparing sales volume relative to cattle on feed. Year 1: 3.15% Year 2: 7.50% Year 3: 10.90%	Continue to push existing promotional tactics.	Re-invest efforts into increasing transparency of product usage through the outlets of sales representatives, ambassadors, and other promotional avenues.
GOAL: Increase Brand Recognition		
Monitor social media interactions, web page traffic data, and surveys. Year 1: 50% Year 2: 75% Year 3: 90%	Re-allocate and analyze resources to marketing campaigns that generate more consumer activity and expand to reach more consumers.	Re-invest profits into new campaigns aimed at enhancing consumer interaction and marketing awareness.
GOAL: Maintain Test Accuracy		
Ensure Fortis is maintaining a 98.5% test accuracy rate by measuring customer metrics and survey data.	Use collected data to educate potential customers about the benefits of Fortis.	Invest into research and development of the product and education of proper usage of the product.

CONCLUSION

Despite the existing prevention, diagnostic, and treatment methods developed for Bovine Respiratory Disease, feedlots continue to incur substantial economic losses. Being the first rapid nasal swab test to diagnose the five most common bacterial strains of BRD, Fortis is prepared to help save producers at least $119 million. Intelligo Industries is confident that Fortis will **FORTIFY YOUR HERD.**

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