



CATTLELAND FEEDYARDS

Innovation in Motion.

Meeting Challenges How you deal with what you got

William Torres
Cattle and Research Manager
Cattleland Feedyards Ltd.

Cattleland Feedyards Ltd.

- History of Cattleland and its Companies
- Our Values and mission statement
- New findings
- Dealing with the past
- Selling the future



CATTLELAND FEEDYARDS

Innovation in Motion.

History of Cattleland Companies

- Cattleland Feedyards, 1970's
- Hiltona Holdings, leased in 2010
- Creekstone Farms, 2004
- Creekstone Trucking, 2004
- Cattleland National Bull Evaluation Centre
- Integrated Beef Research Station, 2009
- Canadian Platinum Beef, 2013

Cattleland Feedyards Ltd. Main Yard



Hiltona Holdings



- 8000 head capacity
- 30 large pens
- EU isolated
- Research isolated

Cattleland's Values

VISION

Cattleland's Integrated Beef Research Station is committed to providing a neutral, exclusive and confidential facility, where all of our customers will benefit from a professional and detailed environment.

MISSION

Cattleland's Integrated Beef Research Station's mission is to deliver the most accurate, dependable and proficient service to the industry, through our research scientists, staff and state of the art facilities.

Bull Test Centre



- The largest of its kind in the world
- Total capacity of 5000 head of sires
- Superior management
- Exposure to commercial cattlemen
- Marketing options

Bull Test Centre

- Arrival: September 9– October 1
- Off test: February (depending on arrival date)
- 112 day tests with an approx. 28 day warm up period.
- Cattle to be penned by breed or composite group
- Net feed efficiency / Grow Safe system \$2.50 per head day

Integrated Beef Research Station

- Cattleland`s Integrated Beef Research Station (IBRS)
- Situated in the heart of Alberta`s cattle country. Our commercial research involves exclusive and confidential trials to validate new pharmaceutical and feed ingredient products and/or protocols that enhance weight gain, have a health benefit or reduce handling and stress. The in-house component is geared toward improving efficiencies of Cattleland`s feedlot, backgrounding and cow-calf operations, as well as adding value for producer clients in the bull test program.
- Toward that end, most of the In-house research at the moment is focused on Residual Feed Intake (RFI), and Genomics.

Research Accomplishments 2008-2012

Year	# of projects	# of cattle	% of population
2008-2009	3	1,232	5
2009-2010	12	17,714	71
2010-2011	10	19860	59
2011-2012	3	23460	70

*2010 added a 2nd feedlot increasing our population by 36%

- Managed thirty eight (38) contract research projects utilizing over 65,000 head of cattle.
- These projects have resulted in over Fifteen (15) publications for various customers.
- 5 corporate research reports reviewed by industry

Residual Feed Intake (RFI)

- RFI, also known as Net Feed Efficiency
- It is defined as the difference between an animal's ACTUAL feed intake and its EXPECTED feed requirements for maintenance and growth.
- Net feed efficiency can be used to select cattle for lower maintenance and feed consumption, without affecting body size and growth rate, or adversely affecting carcass characteristics.



How is RFI measured?

- ❖ RFI is measured as the difference between an animal's actual feed intake and the amount of feed an animal is expected to eat based on its size and growth rate

$$\text{DMI} = \beta_0 + \beta_1(\text{mid-test BW}^{.75}) + \beta_2(\text{ADG}) + \text{residual}$$

- ❖ Calves that eat **less** than expected for their weight and ADG will have **negative** RFI
- ❖ Calves that eat **more** than expected for their weight and ADG will have **positive** RFI

Comparison of steers with divergent RFI



Performance data during an 77-day growing trial:

538 lb	Initial body weight	535 lb
2.11 lb/d	ADG	2.16 lb/d
1502 lb	Expected feed intake	1509 lb
1717 lb	Actual feed intake	1232 lb
+215 lb	Residual feed intake	-277 lb

The more efficient steer (**negative RFI**) gained the same, but ate 485 lbs less feed than the less efficient steer (**positive RFI**)



GrowSafe System at Cattleland



- 8 pens
- 40 nodes total
- 1-2 year advance booking

GrowSafe System - RFI Test



- 100 day test
- 20 day warmup
- 70 days of data
- \$2.50/hd/day
- 20 head minimum

RFI/NFE Costs

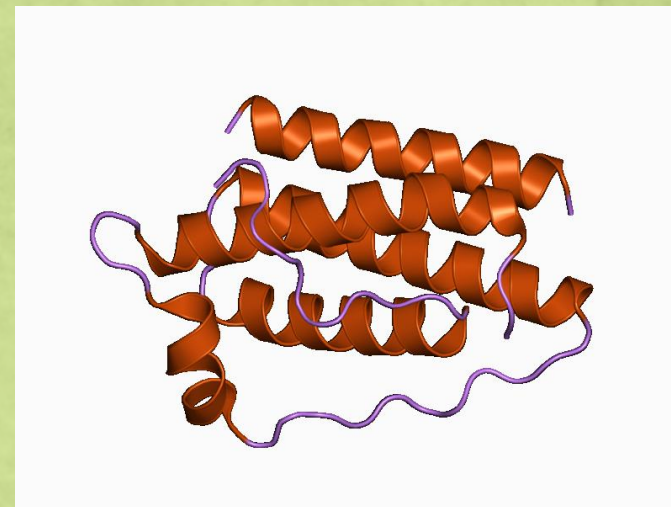
2011 Example of fees based on twenty head

	\$/hd	# head	test days	estimated cost	comments
GS head days	\$2.50	20	100	\$5,000.00	
yardage	\$0.56	20	100	\$1,120.00	
Ultrasound/hd	\$11.00	20		\$220.00	If unavailable then we can calculate RFI unadjusted for backfat
US setup	\$250.00	1		\$250.00	
BSE setup	\$83.00	1		\$83.00	Breeding Soundness Evaluation
BSE/head	\$54.00	20		\$1,080.00	
bedding	\$0.20	20		\$4.00	as needed
feed	\$1.50	20	100	\$3,000.00	
health	\$0.33	20	100	\$660.00	
Weigh Days	\$3.00	20	6	\$360.00	based on two initial, 2 interim and 2 final weigh days
				\$11,777.00	total estimated cost
				588.85	Average per head, based on 20 head minimum.

Regular bull test; \$6777.00 or \$338.85/ head

Genomics/ Leptin

- Leptin is a hormone made by fat tissue that acts on brain to regulate food intake and body weight
- First hypothesized in a mouse colony at Jackson Laboratory in 1950
- Mice homozygous for the ob mutation (ob/ob) ate voraciously and were massively obese



Leptin



- There are 3 Leptin variants:
- CC (lean) animals have less fat and therefore, are less economically favourable
- CT animals are economically intermediate
- TT (fat) animals have more fat and therefore, are more economically favourable

Leptin and the Q-sort system

A single nucleotide polymorphism (SNP), found in the Leptin gene has been shown to have a large impact on several performance and quality traits of economic importance in beef production.

Leptin Traits

- Weaning weight
- Cow milk production
- Accumulation of backfat
- Yield Grade and Quality Grade
- Feed Intake

Leptin and the Q-sort system



- Q-sort is a genomics based sorting system used to sort feedlot cattle to improve efficiency of feeding and help individuals reach their full growth potential.

Q-sort benefits:

- Increase carcass value
- Optimize days on feed
- Improve application of growth enhancing technologies
- Customize to your operation



CATTLELAND FEEDYARDS

Innovation in Motion.

Leptin in the Cow Herd

Figure 1. Effect of Quantum L on beef cow and calf measures

	Quantum L Genotype			P-Value
	CC	CT	TT	
Dam	201	398	211	
<u>Spring</u>				
Back Fat, mm	4.30^a	4.68^b	4.52^{ab}	0.10
Body Weight	1369^a	1334^{ab}	1322^b	0.07
<u>Fall</u>				
Back Fat, mm	6.72	7.06	6.91	0.34
Body Weight	1410	1397	1400	0.75
<u>Calf</u>				
Weaning Wt	603^a	614^a	634^b	0.02
Adj. Weaning	591	589	606	0.19
WPDA, lb/day	2.95	2.95	3.02	0.20



^{a,b} = Means in same row with different superscripts differ ($P < 0.05$), P-values ranging from 0.06 – 0.15 are considered a statistical trend. Quantum Genetics (Data on file)

Leptin costs and Cattleland GBA

600lb CALF	<u>Normal Marketing</u> \$110.00/cwt	<u>CFL Alliance</u> \$108.00/cwt
Shrink	8% = 48lbs <u>552 lb payweight</u>	4% = 24lbs <u>576 lb payweight</u>
Gross	\$607.20	\$622.08
Bull Cost	\$35	0
Auction Mart Commission	\$17	0
Genotyping	0	\$15
NET	\$555.20	\$607.08
Difference	<u>\$51.86 = 9.4%</u>	

Erasing the past

- Historically, breed and herd improvement has been achieved through visual inspection and choosing animals based on phenotype
- There has not been vertical integration
- Every man for himself
- it has been a guessing game



Selling the Future



- Today's beef uses 30% less land, 14% less water, and 9% less fossil fuel than beef 30 years ago
- Antibiotics = Liquid Health
- Producers want change, but they don't believe it
- Vertical COORDINATION

Selling the Future



- We have more technology that's harmful, when we're not part of it.
 - Better testing for Maximum Residue Limits(MRL's)
 - Blogs
 - Social media

Selling the Future



- We have more technology that's harmful, when we're not part of it.
 - Better testing for Maximum Residue Limits(MRL's)
 - Blogs
 - Social media

- Questions are more powerful than data
 - *Could Ractopamine, added to the food supply in 1997 with little public awareness¹, be contributing to skyrocketing rates of obesity and hyperactivity in children?*

Selling the Future



www.salon.com/2013/09/24/9_reasons_to_fear_your_steak_dinner_partner/

SALON NEWS POLITICS ENTERTAINMENT LIFE TECH BUSINESS SUSTAINABILITY 240K 315K Sign in

TUESDAY, SEP 24, 2013 07:00 AM MDT

9 reasons to fear your steak dinner


Our favorite meats are loaded with contaminants, all so the food industry can improve its profit margins

BY MARTHA ROSENBERG

Recommend 432 Send 141 53 Share 4 +1 8

more

TOPICS: ALTERNET, MEAT, BEEF, MEAT CONTAMINATES, MERCURY, BUSINESS NEWS, LIFE NEWS




images (2).jpg Show all downloads...

Desktop 8:23 PM 10/20/2013

award-winning news magazine and online community that creates original journalism and amplifies the best of hundreds of other independent media sources.

ADVERTISEMENT



You can make a difference Sponsor a girl Plan Canada.ca

Canadian Platinum Beef



The screenshot shows a web browser window with two tabs. The active tab is titled 'Canadian Platinum B' and the address bar shows 'www.canadianplatinumbeef.com'. The website has a dark red header with the text 'CANADIAN PLATINUM BEEF' on the left and a navigation menu with 'Home', 'About', 'Team', and 'Contact' on the right. The main content area features a large image of a brown and white cow in a field. Overlaid on the right side of the image is the text: 'The First Company to offer Halal Slaughtered Ractopamine-free Beef & Natural Beef Products'. In the bottom right corner of the image, there is a circular logo with a map of Canada and the text 'Canadian PLATINUM BEEF'. The browser's taskbar at the bottom shows the Windows logo, several application icons (including Chrome, PowerPoint, and Word), and the system tray with the date '1/23/2014' and time '9:55 AM'.

Selling the Future



- Genomics is our past and our future



Credits

- Karen Gregory, Cattleland Feedyards Ltd.
- Gordon Carstens, PhD. Texas A&M University
- John Basarab, PhD. Lacombe Research Station, UofA, etc.
- GrowSafe Systems, Airdrie Alberta
 - www.growsafe.com
- Jim Palmer, Quantum Genetix
 - www.quantumgenetix.com
- Jude Capper, PhD. Montana State University
 - www.bovidiva.com
- Greg Appleyard, Agra Risk Solutions Strathmore Ab.
- Dickie, M.M. and P.W. Lane, Mouse News Lett.; Plus letter to Roy Robinson 7/7/70. Mouse News Lett., 1957. 17: p. 52



CATTLELAND FEEDYARDS

Innovation in Motion.

Questions?