

SHIFT

STRATEGIC
BREEDING
策略育种

HEALTHY
CALVES
健康度牛

IDENTIFIED
识别耳牌

FERTILE
SEMEN
繁殖力高冻精

TERMINAL
FOCUS
GENETICS
专注遗传提升

Jeffrey Lutz: Associate Director
SHIFT Beef 杂交项目总监

GENEX™

About me我

- ▶ Grew up on small dairy farm**成长于奶牛场**
- ▶ Bachelors of Science Degree of Animal Science from University of Wisconsin River Falls**威斯康星州大学雷河分校营养学士**
 - ▶ Feedlot management
- ▶ Operate small feedlot with my wife**与妻子共同经营一家小的育肥场**
- ▶ 9 years with GENEX**工作9年**
- ▶ Dairy Account Manager -7 years**乳业经理7年**
- ▶ Associate Director of SHIFT – 1 year**杂交项目总监**



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Agenda 今日议程

- › Background and market analysis 市场背景分析
- › Why dairy farms are adopting beef x dairy 奶牛场为何使用肉牛杂交
- › Implementation of beef semen on dairy farms 肉牛冻精在奶牛场的应用
- › Results of beef semen usage on farm 肉牛冻精使用效果
- › Beef x dairy calves vs Holstein calves 杂交犊牛和荷斯坦犊牛对比
- › Feedlot performance 杂交牛育肥表现

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PERFORMANCE 表现
CALVING EASE 易产性
GROWTH 生长性
FERTILITY 高繁殖力

ICC\$™ 商业奶牛指数
HEALTH 健康
MODERATE FRAMES 中等体型

SHIFT YOUR GENETIC FOCUS.
UTILIZE GENEX BEEF ON DAIRY.
改变奶牛固有选配模式为配肉牛

GENEX™

SHIFT

1. Strategic Breeding 育种策略
2. The Right Genetics 正确的基因
3. Healthy Calves 健康的犊牛
4. Buyer Connections 消费者互动



重要的肉牛性状

Zero in on the Traits that Matter!

SHIFT™



- › 易产性Calving Ease
- › 生长性Growth
 - › 断奶重Weaning Weight (WW)
 - › 周岁重Yearling Weight (YW)
- › 生长和体型平衡性Balance of optimal growth and frame size
- › 胴体品质Carcass performance

GENEX™

选择合适的冻精生产高品质杂交后代

The Right Genetics for High-Quality Crosses

GENEX SHIFT genetics will maximize carcass merit, which means improving the ribeye size and shape with adequate marbling and ultimately creating carcass performance on the rail.

GENEX SHIFT 能够最大化提升胴体品质，也即增加眼肌面积，提升大理石花纹，最终提升胴体表现。



Brad Johnson
Director of Beef Genetics

GENEX[™]

优质的初乳很重要 Quality Colostrum Matters

SCCL初乳产品 colostrum

- › 优质的免疫球蛋白和能量来源Excellent source of colostrum fat & IgG
- › 天然牛初乳Natural bovine colostrum
 - › No blood, whey, egg or other ingredients not naturally found in maternal colostrum
- › 可作为补充剂也可以替代初乳Use as a supplement or replacement
- › 多种选择Multiple options



GENEX™

给您的犊牛一个健康的开始 Get Calves Off to a Healthy Start

- › 记录Write it down, document it
- › 经营您的犊牛而不止销售它们
Your opportunity to 'market'
calves, not just sell them
- › GENEX SHIFT 推荐标准化饲养流程recommended SOPs
available
 - › 与您的兽医共同制订Work
with your herd veterinarian
to customize

SHIFT **GENEX**

Calf Health Protocols & Records

Farm Name: _____ Date: _____
Contact Name: _____ Phone: _____

HEALTH PROTOCOLS

NEWBORNS:

- Calves received 4 quarts of colostrum within 2 hours of birth
 - SCCL colostrum replacer
 - Pasteurized and tested colostrum with SCCL supplementation
 - Pasteurized and tested colostrum from the dam
 - Second feeding of colostrum to all calves
 - Other: _____
- Calves received RumiLife® Pop™ direct-fed microbials for optimal gut-health
- Calves received Push™ calf nutritional paste prior to boarding for energy during transit
- Calves are healthy and drinking normally when they leave the farm.

WEANED CALVES:

- Vaccinated (details with age at vaccination below)
- Calves are "Feedlot Trained" to eat from bunk
- Days between weaning and shipment no less than _____

DATA & RECORDS:

Records include dam, sire, gestation length, birth date and the following:

<input type="checkbox"/> Calves are tagged with RFID	<input type="checkbox"/> Birth weight
<input type="checkbox"/> Ease of delivery/calving	<input type="checkbox"/> Weaning weight
<input type="checkbox"/> Total protein measurement	<input type="checkbox"/> BVD negative results
<input type="checkbox"/> Health events and dates	<input type="checkbox"/> Vaccines given: _____

Additional information:

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GENEX SHIFT Ear Tags耳牌

1. HERDSMAN® MEDIUM CHARTREUSE



840

988



消费者互动 Buyer Connections

- › 与有共同价值观的消费者互动-从犊牛抓起 Connect with the **right buyers** who **recognize the value** of feeder calves that **perform from the start**
- › 不同区域提供不同选择 GENEX SHIFT program offers local/regional buyer options
- › 形成客户交流平台 We can facilitate connecting you with potential buyers



开始沟通 Starting the Conversation



ABC Dairy



Number of Cows (Milking + Dry)	3500
Number of Breeding Age Heifers	2900

Target Cull Rate (Goal)	35%
Percent Annual Growth (Goal)	0%

	Dairy Conventional		Dairy GenChoice™		Dairy Embryos		Dairy GenChoice 4M		Beef Conventional		Beef Sexed		LNM\$ Levels of Herd		
	Cows	Heifers	Cows	Heifers	Cows	Heifers	Cows	Heifers	Cows	Heifers	Cows	Heifers	1st Quartile	Cows	Heifers
Conception Rate	55%	69%	45%	59%	30%	40%	49%	62%	55%	64%	45%	59%	3rd Quartile	\$261	\$367
LNM\$ (Service Sire)	\$880	\$763	\$738	\$850	\$800	\$800	\$766	\$763					4th Quartile	\$199	\$318
Female Ratio	48%	50%	90%	90%	88%	88%	88%	88%	48%	48%	11%	11%		\$82	\$193

Base Herd Scenario

Heifers	QTL 1	QTL 2	QTL 3	QTL 4	
% Dairy Conventional	46%	50%	50%	43%	43%
% Dairy GenChoice™	50%	50%	50%	50%	50%
% Dairy Embryos	0%	0%	0%	0%	0%
% Dairy GenChoice 4M	0%	0%	0%	0%	0%
% Beef Conventional	4%	0%	0%	7%	7%
% Beef Sexed	0%	0%	0%	0%	0%
Total	100%	100%	100%	100%	100%

Cows	QTL 1	QTL 2	QTL 3	QTL 4
% Dairy Conventional	100%	100%	100%	100%
% Dairy GenChoice™	0%	0%	0%	0%
% Dairy Embryos	0%	0%	0%	0%
% Dairy GenChoice 4M	0%	0%	0%	0%
% Beef Conventional	0%	0%	0%	0%
% Beef Sexed	0%	0%	0%	0%
Total	100%	100%	100%	100%

Comparative Herd Scenario

Heifers	QTL 1	QTL 2	QTL 3	QTL 4	
% Dairy Conventional	22%	26%	26%	19%	19%
% Dairy GenChoice™	74%	74%	74%	74%	74%
% Dairy Embryos	0%	0%	0%	0%	0%
% Dairy GenChoice 4M	0%	0%	0%	0%	0%
% Beef Conventional	4%	0%	0%	7%	7%
% Beef Sexed	0%	0%	0%	0%	0%
Total	100%	100%	100%	100%	100%

Cows	QTL 1	QTL 2	QTL 3	QTL 4	
% Dairy Conventional	0%	0%	0%	0%	0%
% Dairy GenChoice™	7%	25%	0%	0%	0%
% Dairy Embryos	0%	0%	0%	0%	0%
% Dairy GenChoice 4M	0%	0%	0%	0%	0%
% Beef Conventional	57%	0%	80%	80%	80%
% Beef Sexed	36%	75%	20%	20%	20%
Total	100%	100%	100%	100%	100%

Yearly Dairy Heifers Needed to Freshen	1,360
Yearly Dairy Heifers Yielded to Freshen	2,264
LNM\$ of Yielded Heifers	\$562

Yearly Dairy Heifers Needed to Freshen	1,360
Yearly Dairy Heifers Yielded to Freshen	1,665
LNM\$ of Yielded Heifers	\$576

Genetic Advantage Through Intensive Selection

\$14 per replacement

\$19,448 annually

Financials 财务分析

	Dairy Conventional		Dairy GenChoice™		Dairy Embryos		Dairy GenChoice 4M		Beef Conventional		Beef Sexed	
	Cows	Heifers	Cows	Heifers	Cows	Heifers	Cows	Heifers	Cows	Heifers	Cows	Heifers
Unit Price	\$10.00	\$10.00	\$28.00	\$28.00	\$0.00	\$0.00	\$32.00	\$32.00	\$10.00	\$10.00	\$24.00	\$24.00

Calf Values

In-House Dairy Heifer	\$200	Dairy Bull/Steer	\$50	Beef Heifer	\$190	Beef Bull/Steer	\$190
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Base Herd Scenario

Semen Expenses	Units	Total \$
Conventional Dairy Semen	8248	\$82,482
GenChoice™ Sexed Semen	2301	\$64,417
Dairy Embryos	0	\$0
Dairy GenChoice 4M	0	\$0
Beef Conventional	161	\$1,615
Beef Sexed	0	\$0
Total	10710	\$148,514

Comparative Herd Scenario

Semen Expenses	Units	Total \$
Conventional Dairy Semen	1075	\$10,752
GenChoice™ Sexed Semen	4005	\$112,129
Dairy Embryos	0	\$0
Dairy GenChoice 4M	0	\$0
Beef Conventional	3972	\$39,716
Beef Sexed	2351	\$56,423
Total	11402	\$219,020

Calf Crop	Calves	Value \$
Total Dairy Females Generated	2264	\$452,882
Dairy Male Calves	1840	\$92,002
Beef Female Calves	40	\$7,685
Beef Male Calves	43	\$8,148
Total	4,188	\$560,718

Calf Crop	Calves	Value \$
Total Dairy Females Generated	1665	\$333,057
Dairy Male Calves	476	\$23,817
Beef Female Calves	783	\$148,742
Beef Male Calves	1372	\$260,713
Total	4,297	\$766,329

Cost to Raise 1 Heifer - Birth to Freshening

\$2,013.76

Heifer Rearing Expense Savings

\$1,206,497

Semen Expense Difference

(\$70,506)

Embryo Expense Difference

\$0

Calf Value Difference

\$205,611

Genetic Advantage

\$19,448

Additional Milk Income from Heifers Having Heifers

\$12,717

Total Economic Impact

\$167,271

Dairy Farm
Example
奶牛场案例



将其加入育种方案

Putting the Strategy in Strategic Breeding

Calf  MathSM



GENEXTM 

牧场计划 On Farm Strategy

ID	SEMP	ELNM
4357	SEXED	604
4362	SEXED	604
4373	SEXED	604
4407	SEXED	604
4413	SEXED	604
2141	BEEF	600
2143	BEEF	600
2148	BEEF	600

Using Sort Gate to find highest genetic animals to breed with sexed semen and beef
优选，核心群配性控

ID	SEMP	TBRD
2943	BEEF	4
2945	BEEF	2
3129	BEEF	2
3209	BEEF	8
3227	SEXED	1
3240	BEEF	5
3249	BEEF	2
3256	SEXED	1

Using the number of times bred to breed with sexed semen and beef
分析配次，选择性控和肉牛冻精

ID	SEMP	LACT
3248	BEEF	2
3249	SEXED	1
3251	BEEF	2
3252	BEEF	2
3254	BEEF	2
3255	BEEF	2
3256	SEXED	1
3257	SEXED	1

Using the lactation number to breed with sexed semen and beef
分析胎次

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牧场实际数据 On Farm Numbers

2020

- › 泌乳牛使用性控比例 15% sexed semen on COWS
 - › 受胎率61% cr
- › 其余配肉牛Bottom 85% of cows bred to beef
 - › 受胎率48% cr
- › 整体受胎率49% overall cr
- › 首配受胎率51% 1st service cr

2021

- › 泌乳牛使用性控比例8% sexed semen on cows
 - › 受胎率60% cr
- › 其余配肉牛Bottom 92% of cows bred to beef
 - › 受胎率48% cr
- › 整体受胎率48% overall cr
- › 首配受胎率53% 1st service cr

Pregnant Cows & Heifers:

Month Due	Total Due	last sire bull				Dairy female	Dairy male	Beef	Month Due
		Preg	Conv. preg	Sexed preg	Beef preg				
Jan	364	0	27	160	177	157	30	177	Jan
July	253	11	121	52	69	110	74	69	July
August	312	11	160	79	62	151	118	74	August
September	273	12	133	69	59	130	101	71	September
October	309	10	151	78	70	146	112	84	October
November	338	11	85	112	130	161	74	156	November
December	365	10	12	164	179	174	34	215	December

AVG/MONTH:

Dairy female	Dairy male	Beef Total
162	82	140

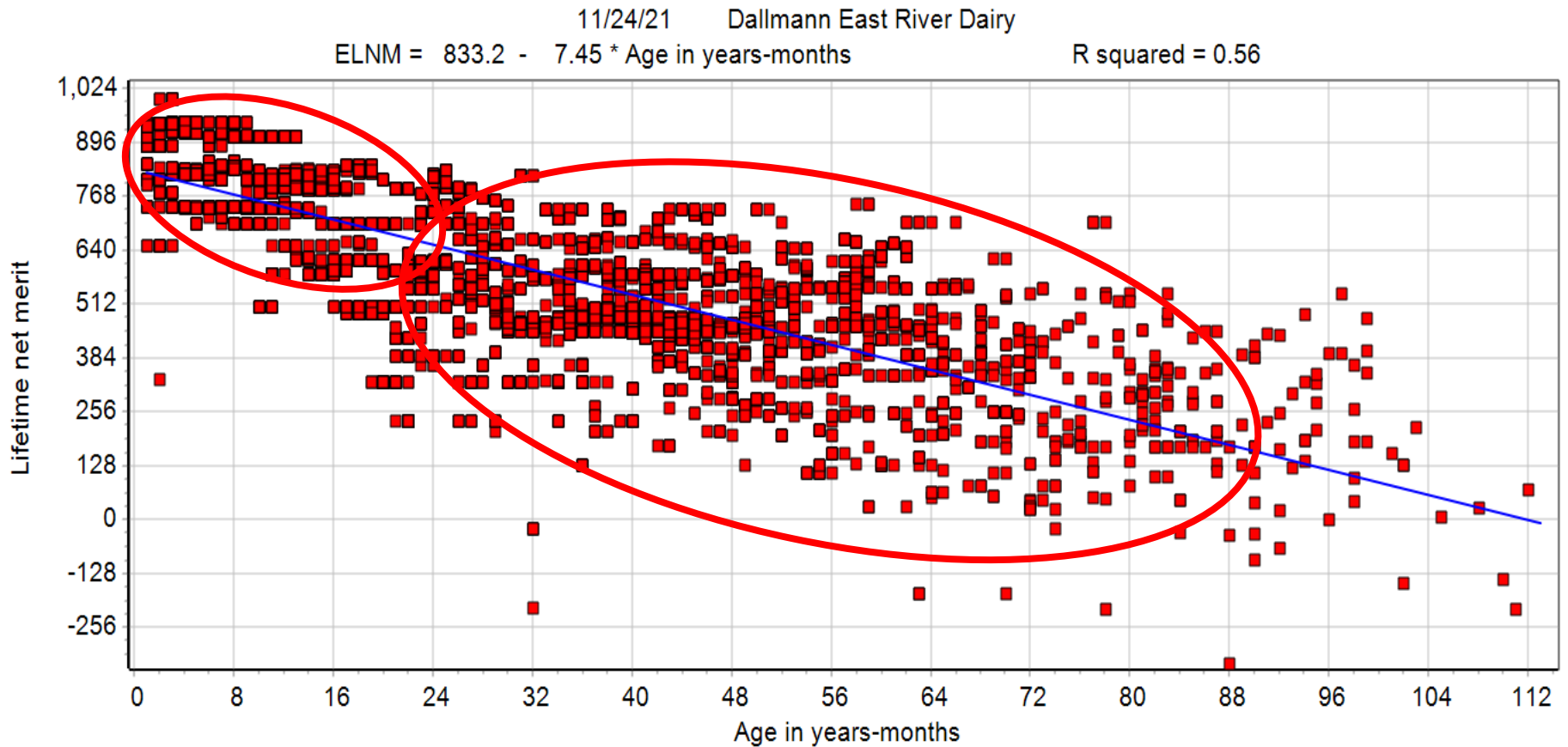
Pregnant Cows & Heifers:

Month Due	Total Due	Conv. preg	Sexed preg	Beef preg	Dairy female	Dairy male	Beef
Jan	349	17	146	186	120	23	186
Feb	273	11	81	181	78	14	181
Mar	281	19	114	148	112	21	148
Apr	282	9	120	153	112	17	153
May	236	9	86	141	95	13	141
June	356	17	108	231	105	20	231
July	257	15	73	169	85	15	169
December	348	10	122	216	115	17	216

AVG/MONTH:

Dairy female	Dairy male	Beef Total
103	18	178

育种目标 Genetic Goal



Calf Raising 犊牛养殖

- › In the US a large majority of the BxD calves are sold shortly after birth **在美国大多数杂交犊牛在出生后就被售出**
- › Birth to 350 lbs at calf ranch **从出生后至350磅（159公斤）在犊牛场养殖**
- › After 350 lbs. move to a feed yard **长至350磅后转到育肥场**

Beef on Dairy Calves vs Holstein Calves

杂交犊牛和荷斯坦犊牛对比

- › Increase performance of BxD calves over Holstein calves 杂交牛表现提升（相同饲喂模式下）
 - › Holstein calves ~1.8 lb. average daily gain 荷斯坦犊牛平均日增重1.8磅（0.8公斤）
 - › BxD calves ~2.0 lb. average daily gain 杂交犊牛平均日增重2磅（0.9公斤）
- › Hybrid vigor “混合动力”
 - › Stronger healthy calves 更强壮的健康犊牛

BxD
Calves
杂交犊牛



GENEX[™]

育肥场阉割公牛对比小母牛

Feedlot Performance Steers vs Heifers

Q1 2021				
	All Weights Steers	All Weights Heifers	Steers vs Heifers	Economic Difference
Head	396,123	320,481		
In Wt	766	721	45	
Out Wt	1415	1285	130	\$153.40
DOF	202	192	10	
COG/cwt	\$94.55	\$101.91	-\$7.36	\$41.51
ADG	3.11	2.83	0.28	
Feed:Gain	6.9	7.17	-0.27	
Dressing %	64.50%	64.20%	0.30%	

雄性性控肉牛冻精

Sexed Male Beef

Calf  Math™

ABC Dairy

GENEX™ 

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	Conception Rate	55%	69%	45%	59%	30%	40%	49%	62%	55%	64%	45%	59%	1st Quartile	\$341
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Female Ratio	48%	50%	90%	90%	88%	88%	88%	88%	48%	48%	11%	11%	3rd Quartile	\$199	\$318
													4th Quartile	\$82	\$193

GENEX™ 

Meat Quality 出肉品质

- › Greater percentage of BxD cattle will grade choice or better when compared to straight beef cattle 杂交牛相比纯肉牛有更大比例的高品质牛肉
 - › 80% Choice or better 特选或更高
 - › 20% Prime 极佳
- › Straight beef cattle will average about 7% prime 纯种肉牛出肉平均只有7%为极佳品质

**ABUNDANT
MARBLING**



Prime

**MODERATE
MARBLING**



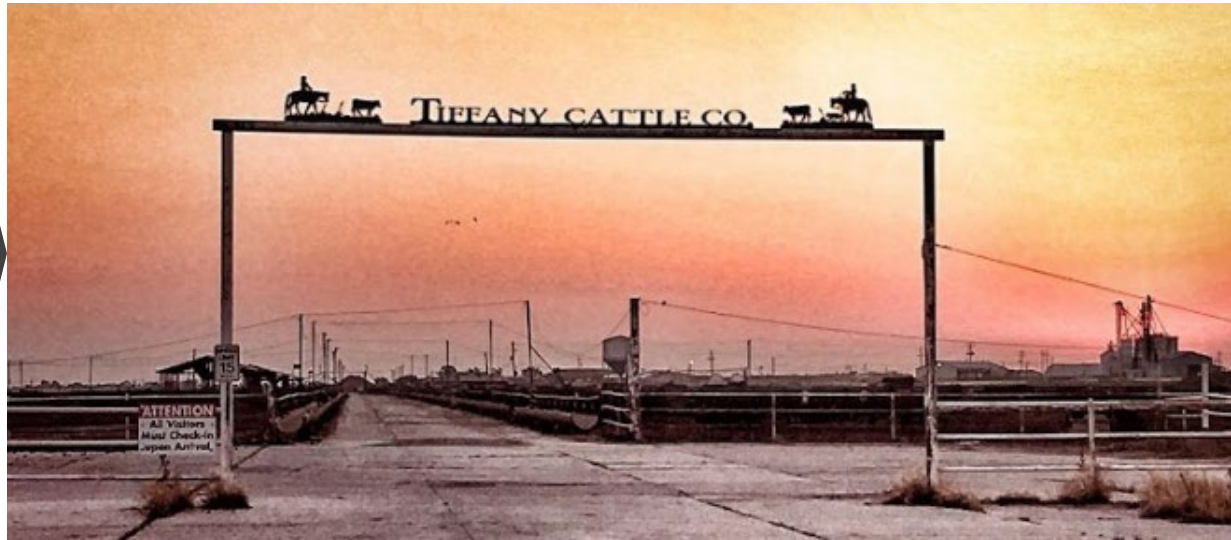
Choice

**SLIGHT
MARBLING**



Select

Beef x Dairy
in the
Feedlot
杂交牛育肥
表现





Q&A! 问题

Thank You!
谢谢！

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