



Andrew Hunt  
Founder – The Bullvine

# THE FUTURE OF GENETICS



***My wife said if I buy one more  
show animal she would leave me....***

---

***Sure gonna miss her on show day.***



# THE NEWS

## MASTER BREEDER KILLED IN TRIPLE HOMICIDE

Technologies like IVF and Sexed Semen and ownership of genetic rights and females by AI companies have killed the dairy cattle breeding industry. More specifically they have taken things to such a level that the days of the average individual breeder being able to make a little money from selling genetic stock are long dead.

It was first believed that when the exclusive use of genomic information by AI units was going to be lifted (April 2014) that dairy breeders who owned top sires were going to cash in. And while it did happen, it was very short lived. As we predicted here at The Bullvine, these AI units needed to control their costs of sire acquisition and so the majority of them went out and started buying their own females. All except Semex, (Read more: Should A.I. Companies Own Females?, Why Good Business for A.I. Companies Can Mean Bad Business For Dairy Breeders and Semex - The Rise and Fall of a Semen Empire)

Now there are those who believed that, if these had been the only changes, that breeders would have been able to compete, as history had many instances where breeders were able to out perform the geneticists at the AI companies.

The biggest difference this time is that dairy breeders and genetics are not playing on a level playing field.

Technologies like IVF have significantly changed the game. When this whole rat race started, breeders and AI companies alike took advantage of extensive IVF work to accelerate their rate of genetic gain. But more accurately, that allowed them to cover up their mistakes. You see IVF does not make you a better breeder, but rather, gives you more chances to make mistakes. Instead of only being able to select 3 or 4 crosses on a cow a year and get about 10-18 progeny from your top animals, IVF allows companies to make selections every 2 weeks, or up to 26 crosses a year, resulting in hundreds of progeny a year. The challenge with this is that it's a very costly expense and breeders, as a result of low royalty prices on sires and next to no genetic female sales, cannot afford to IVF their top animals as much as AI companies who stand to make significantly more from the sale of



# Genomics



**Hey there brother, the genomic tests  
are back and guess what?**





**IVF**



# Sexed Semen



**SCENE CRIME SCENE**



**NEW RELEASE SIRE**

**SOME BULL X BLOWN BAG  
HAS BEEN GENOMICALLY TESTED FOR THE UGLY GENE**

**Dude**

00H1234 HE IS ONE UGLY DUDE

Check out what breeders are saying:

- He is one ugly bastard
- The quickest way to kill your breeding program
- When used on 2 years olds, 1 in 10 make it out alive
- I no longer have to worry about the milk check, because there isn't one.
- He is not inbred it's linebred

**G-USDB 8-12**

1 dtrs. 20 herds  
PTAM +10000  
PTA%F -2.00  
PTAF +1000  
PTA%P -1.00  
PTAP +1001  
REL. 1%  
PL -10.0  
SCS 9.99  
Calving Ease 10

**USDB/HB 8-12**

20 dtrs. 1 herds  
PTAT -5.00  
UDC -2.30  
REL. 1%

[www.thebullvine.com](http://www.thebullvine.com)





# The Bullvine

May 13<sup>th</sup>, 2013



## WHY GOOD BUSINESS FOR A.I. COMPANIES CAN MEAN BAD BUSINESS FOR DAIRY BREEDERS.

### WHY GOOD BUSINESS FOR A.I. COMPANIES CAN MEAN BAD BUSINESS FOR DAIRY BREEDERS.

By Andrew Hunt

Just about a year ago we drew attention to the fact that, when Dairy Breeders could genomic test their own bulls, it would start to cause the beginning of the end of the seed stock business (Read more: [How Genomics Is Killing The Dairy Cattle Breeding Industry](#)). These predictions were pretty easy to make because these changes were necessary in order for A.I. Companies to thrive in this new genetic environment. With March 2013 now behind us and breeders able to genomic test their own sires, these predictions are coming true. The challenge with these changes is that, while they make great business sense for the artificial insemination companies, they could spell the end of the seed stock business, as we have known it

At the recent Farnear Focus on the Future Sale, Alta Genetics paid \$185,000 for a Massey daughter from Larcrest Case VG-86-2yr with a gTPI of +2505 (Read more: [Farnear Focus on the Future Sale Averages \\$15,471 on 112 lots](#)). While Alta Genetics owning females is not new (Read more: [Should A.I. Companies Own Females?](#)), it does mark the resurgence of their program and certainly a significant investment by Alta Genetics probably indicating that they are looking for new ways to control their sire procurement costs. Of course Alta Genetics is not the only A.I. company that currently owns females. Others, especially some of the smaller companies, have taken to owning top females in order to secure procurement of valuable and unique genetics and to differentiate their genetic offering (Read more: [A Wake-Up Call To All A.I. Companies](#)). There are also those who have taken a very public stance against ownership of females (Read more: [Select Sires vs. Semex – A Contrast in Cooperatives](#)). This too may be a move to watch, as the competition for breeder-bred bulls will decrease with less competition for them from other A.I. companies. Thus Semex and others too may start to see procurement costs subside. Of course the market will decide just how low this price will go, as the other studs will always be watching the cost of production versus the cost of procurement.

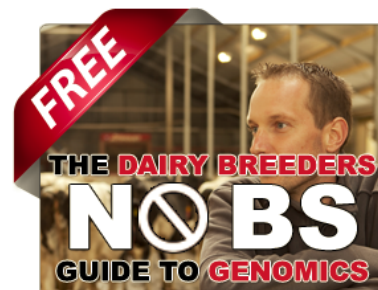
#### About The Author



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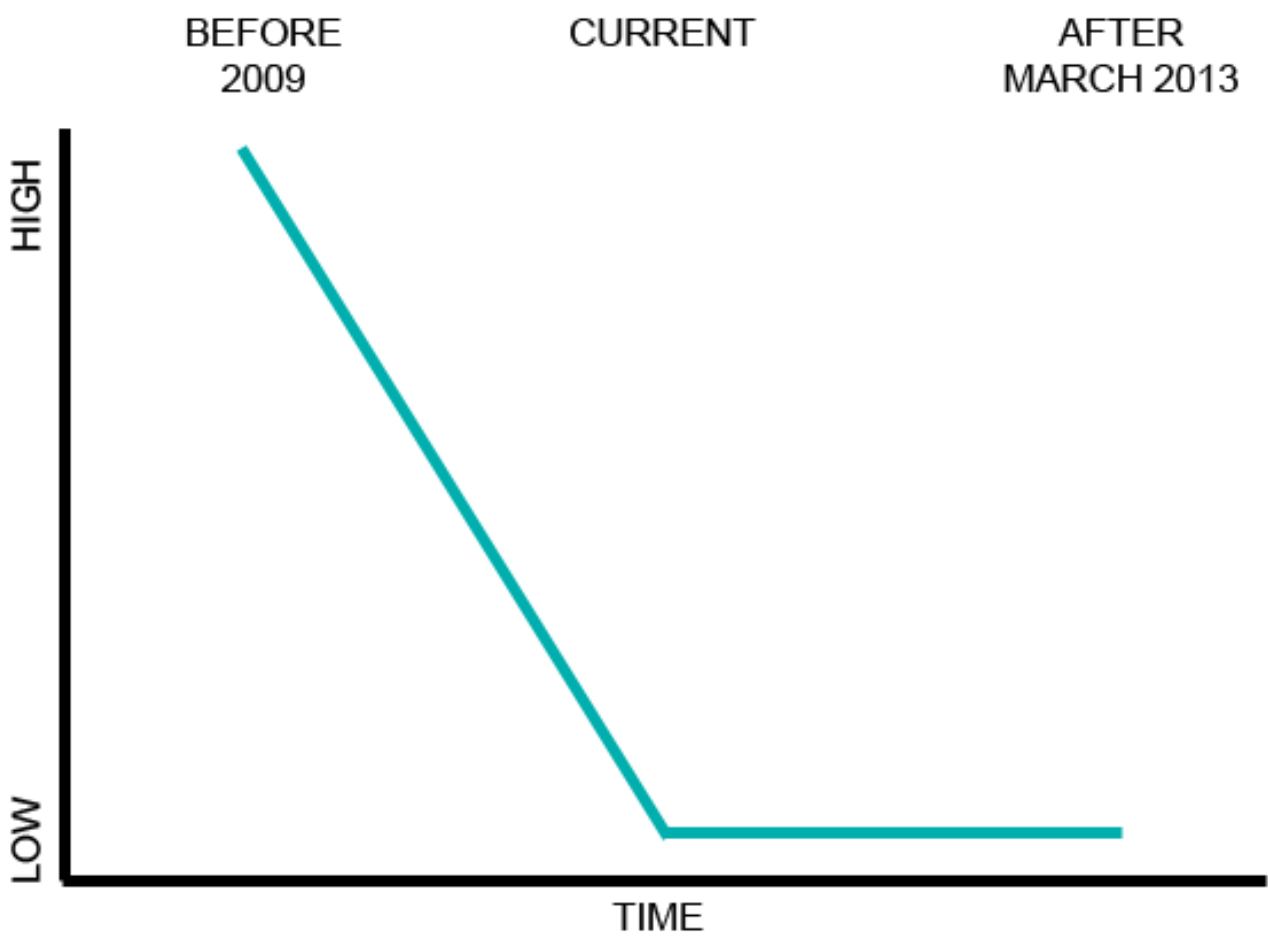
Andrew Hunt (526 Posts)

Having grown up a rural dairy farm in southern Ontario, Andrew learned early in life the value of community and a hard day's work. Leveraging that experience and work ethic, Andrew started his own Animal Genetics marketing company that launched some of the most engaging and innovative campaigns.

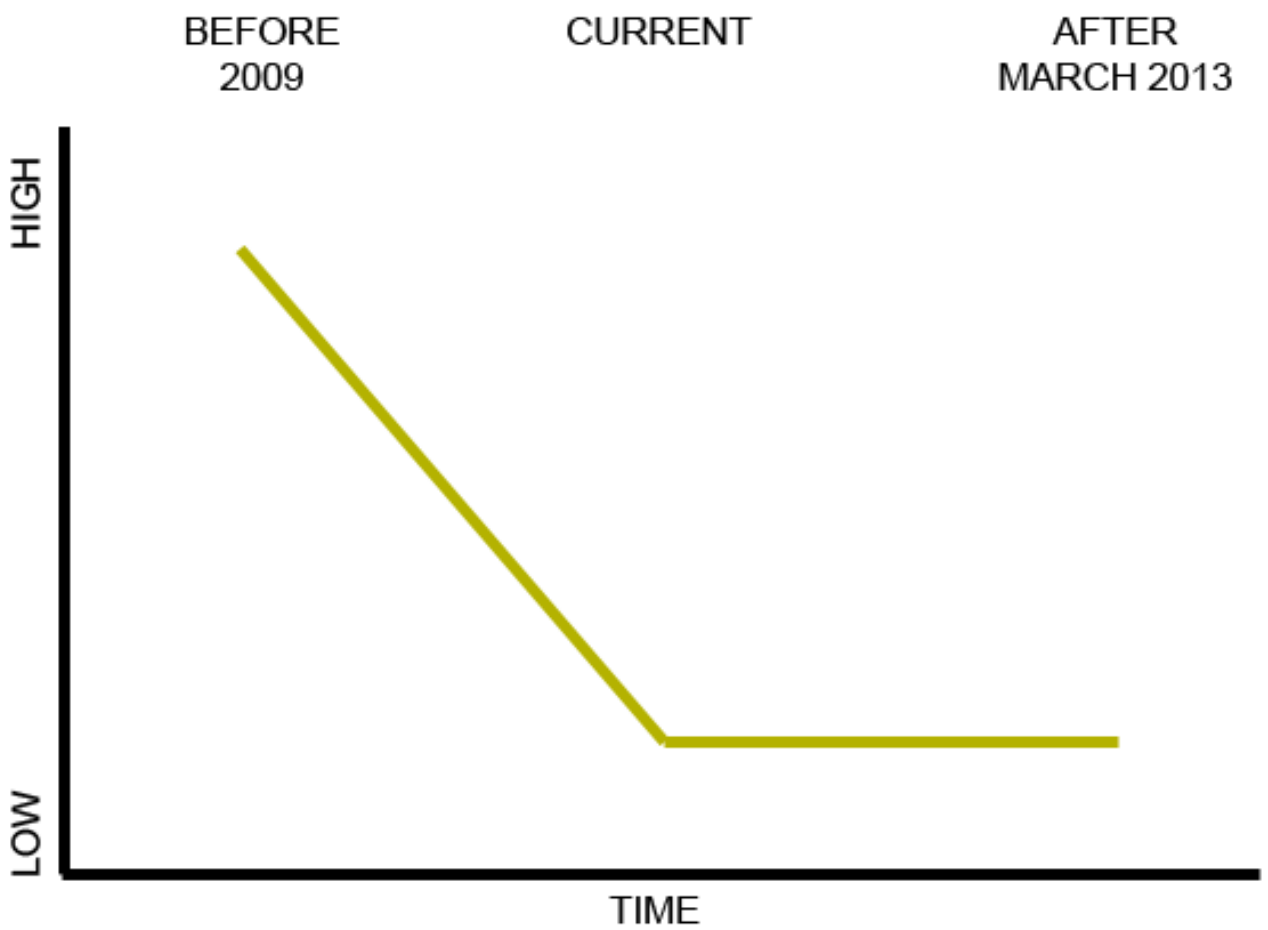




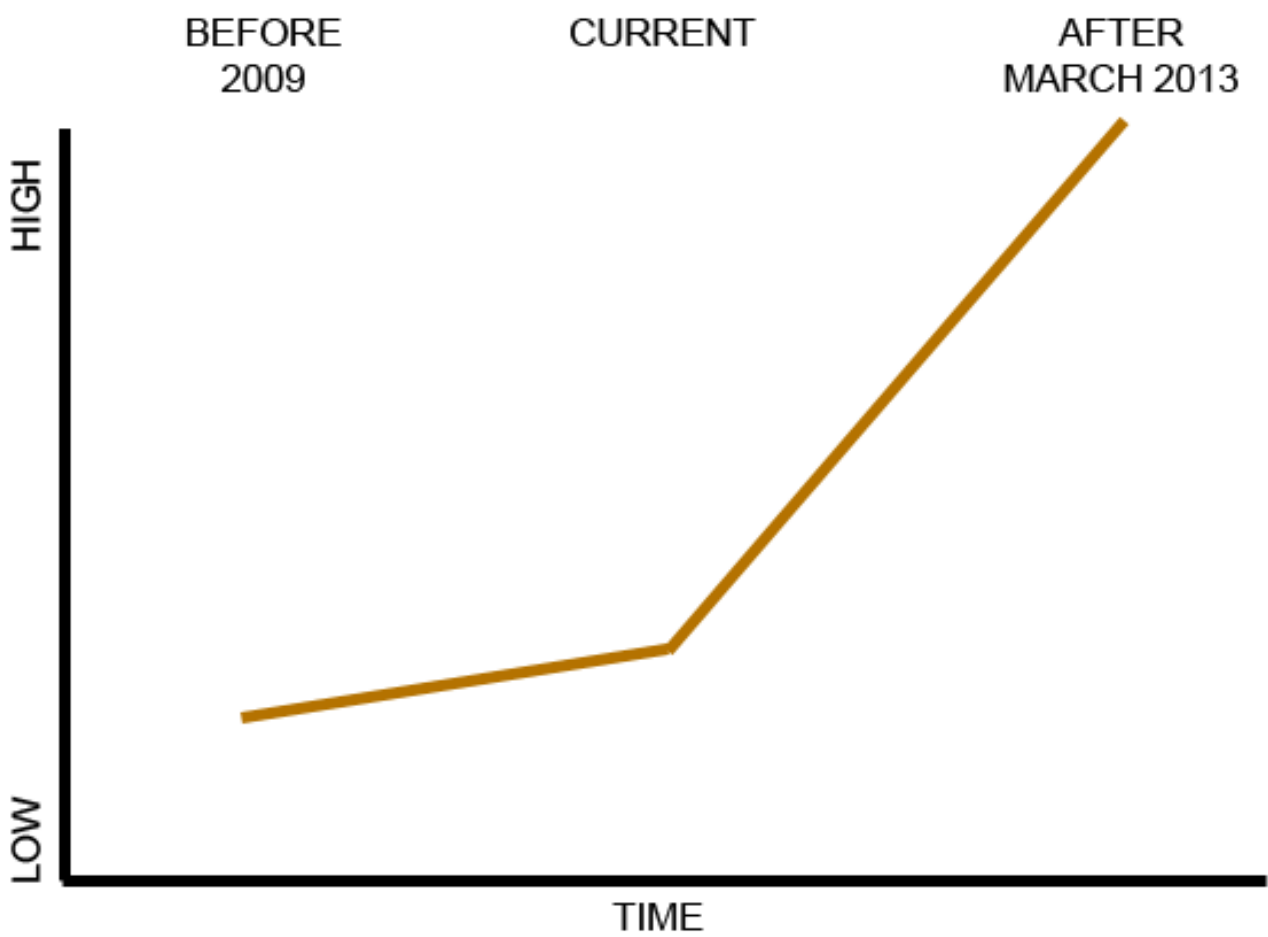
# Genomics



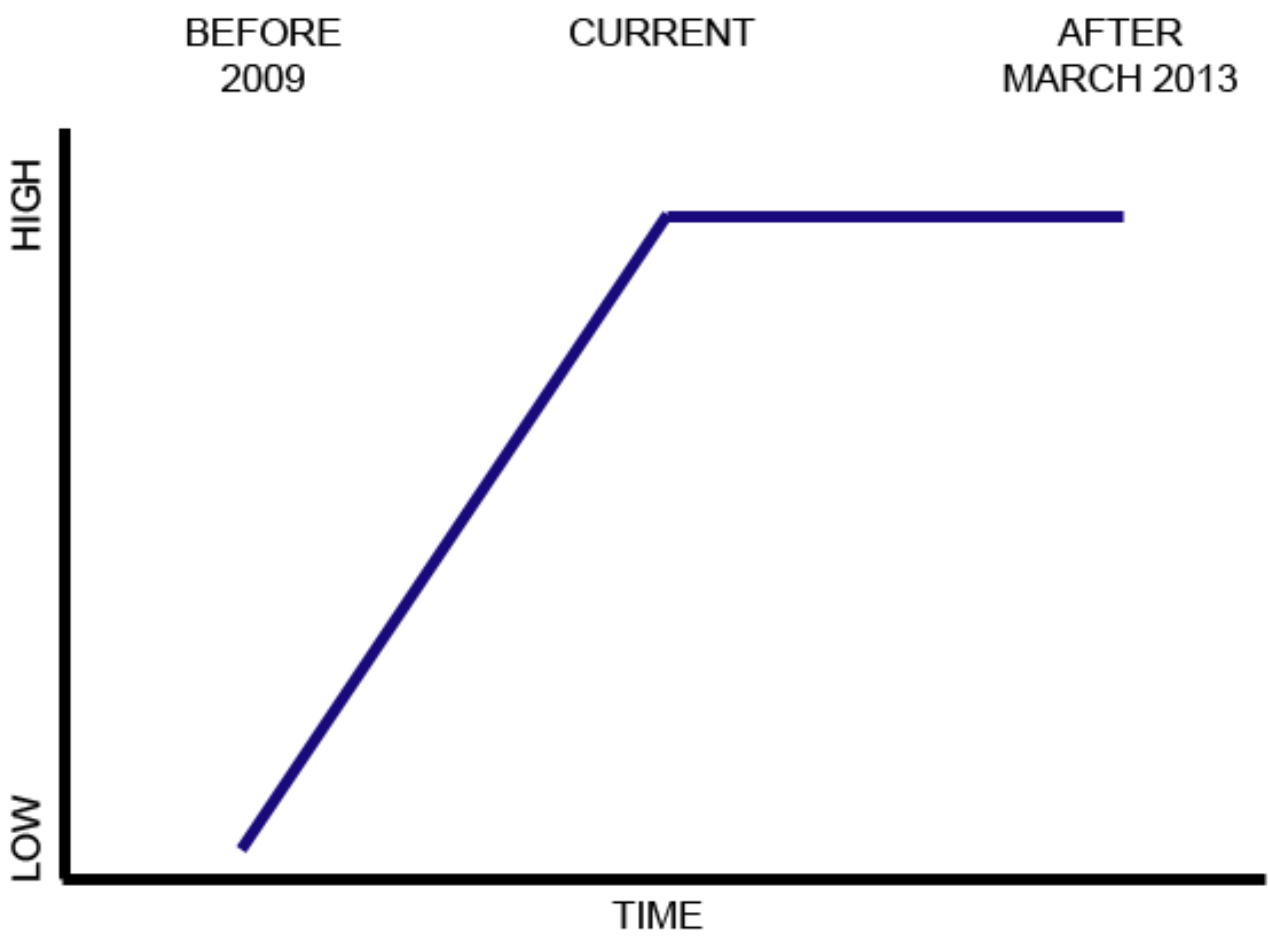
<b>LEGEND</b>	 Revenue	 Sire Procurement Costs
	 Profits	 Sire Sampling Costs
	 Semen Price	 Number of Sires Sampled



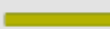


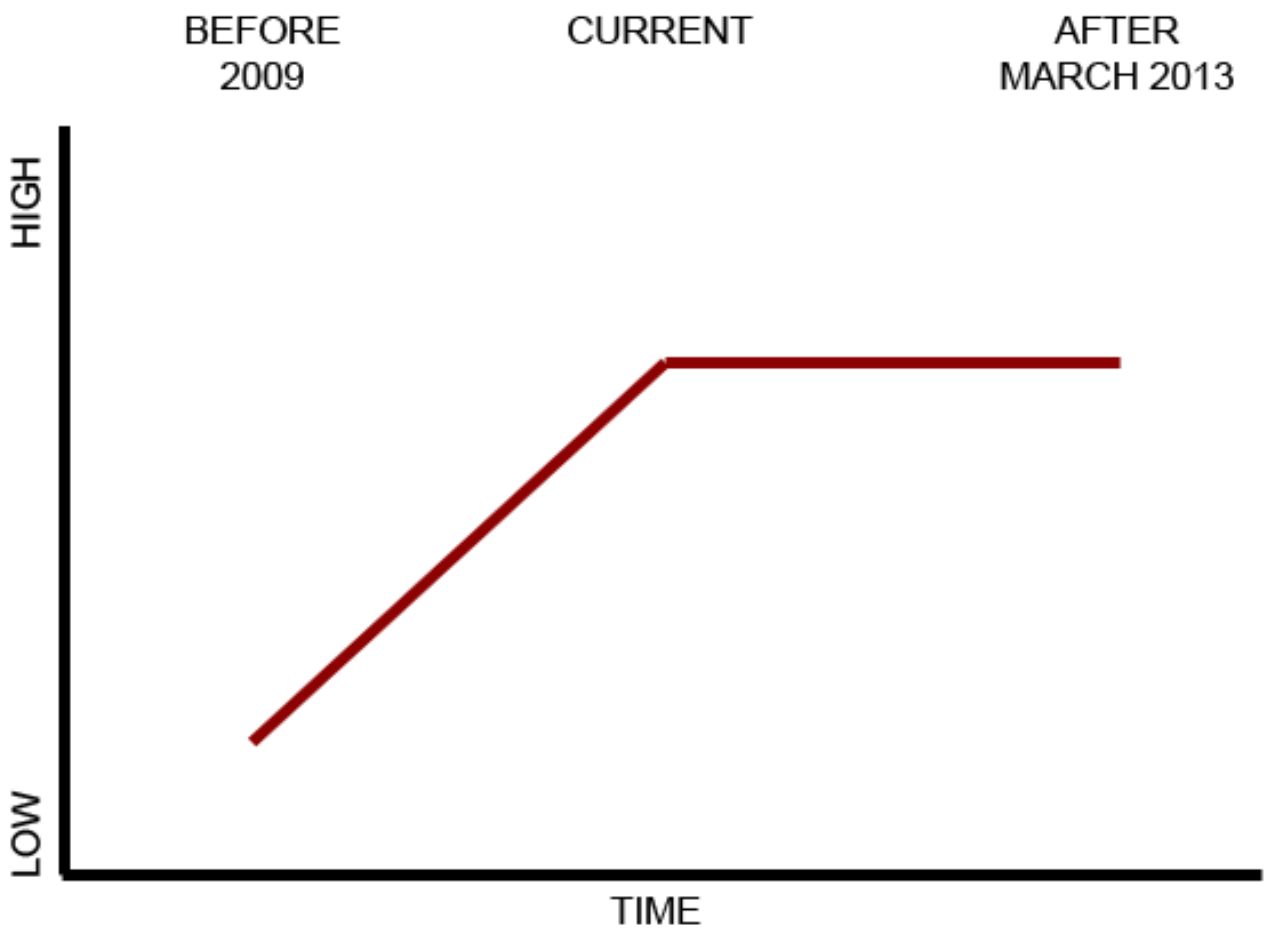
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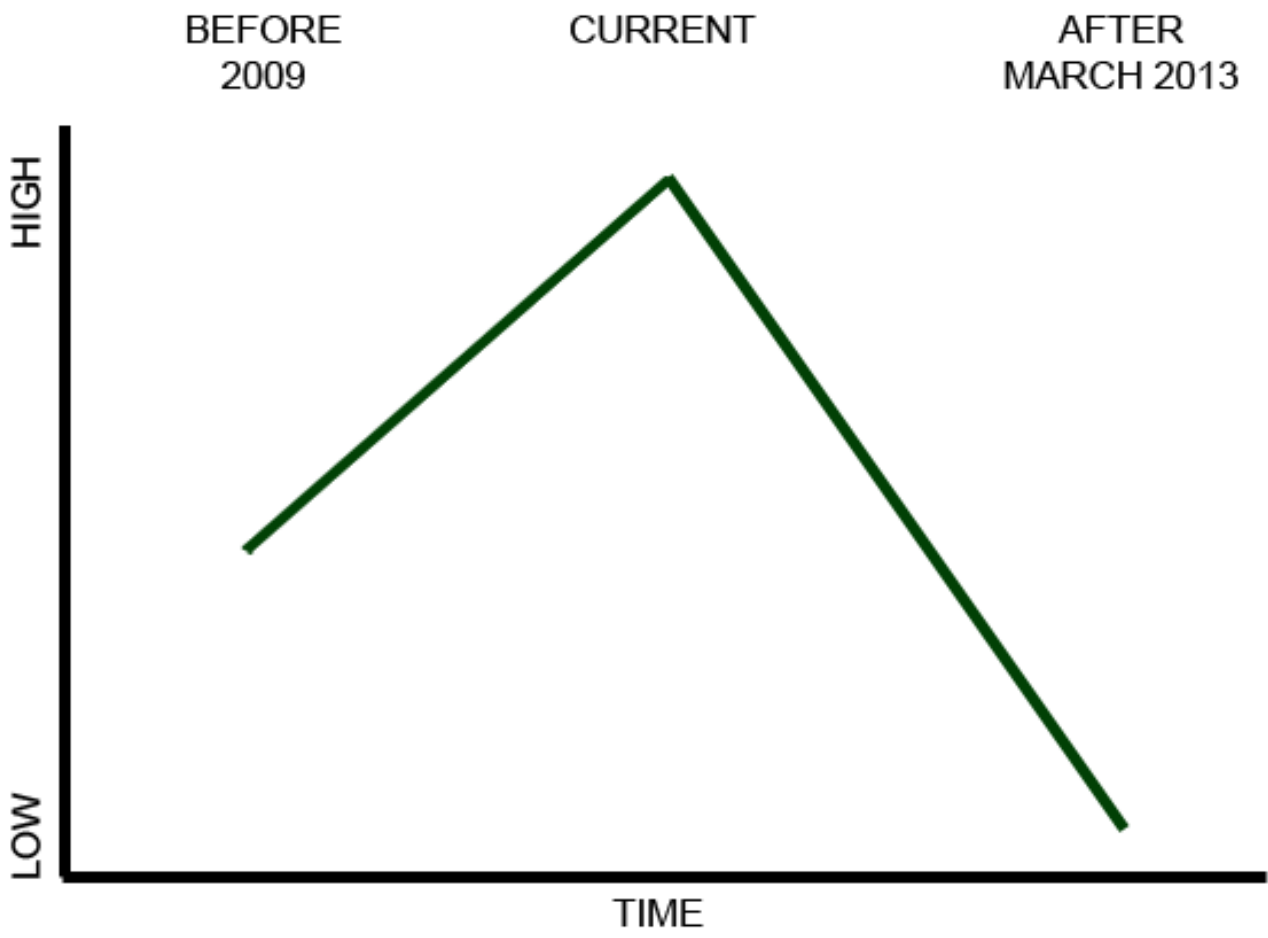


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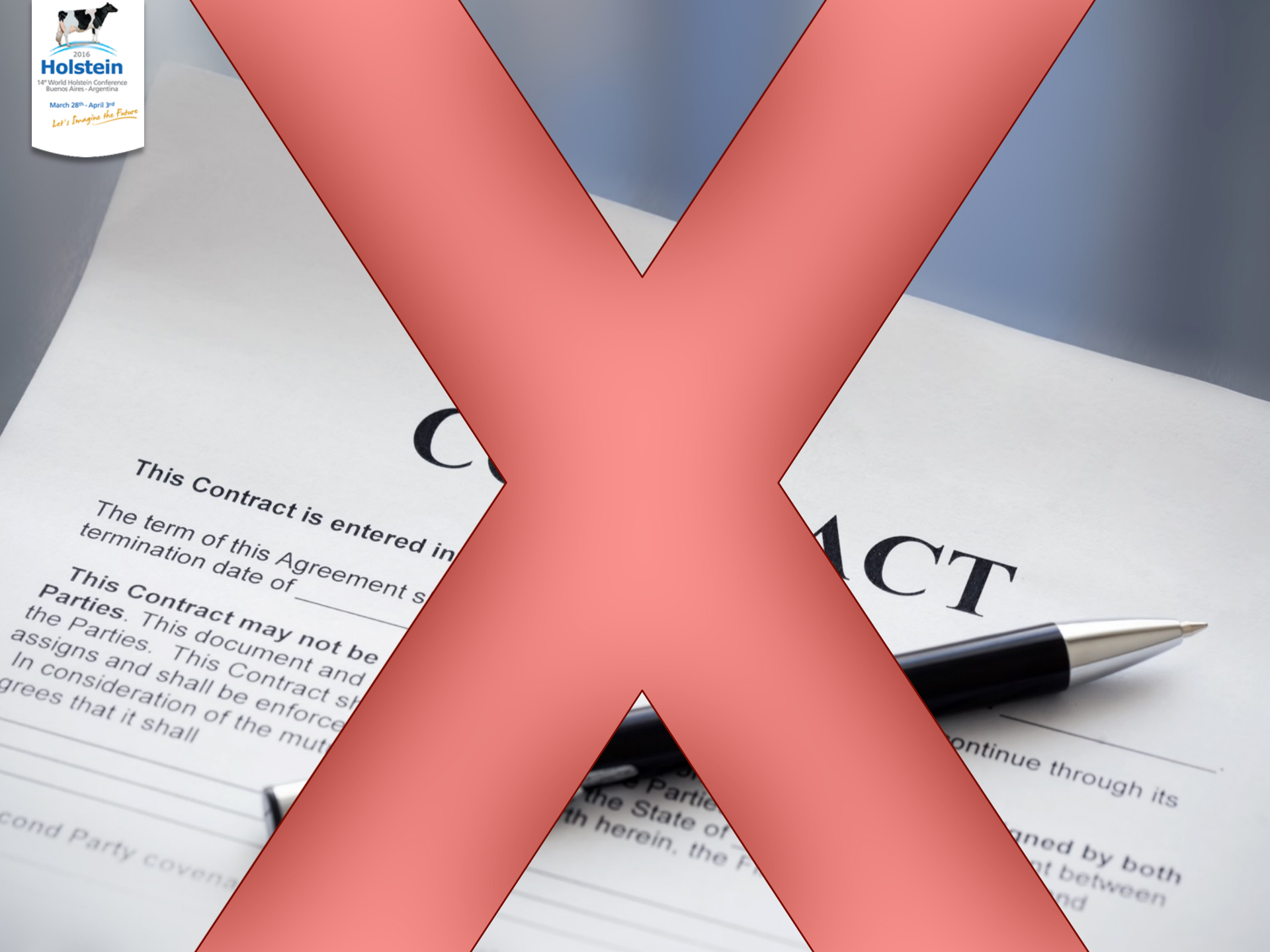




<b>LEGEND</b>	 Revenue	 Sire Procurement Costs
	 Profits	 Sire Sampling Costs
	 Semen Price	 Number of Sires Sampled







CONTRACT

ACT

This Contract is entered in

The term of this Agreement shall be \_\_\_\_\_  
The termination date of \_\_\_\_\_

This Contract may not be assigned or  
transferred by either Party. This Contract and  
the Parties. This Contract shall be enforceable  
and shall be enforceable. In consideration of the mutual  
agrees that it shall

cond Party covenants

Parties  
the State of \_\_\_\_\_  
th herein, the Parties

continue through its

signed by both  
between  
and







**Reactive**

**Proactive**



**IVF**



# Sexed Semen





90%



# DAIRY BREEDERS *VS* GENETIC CORPORATIONS WHO ARE THE TRUE MASTER BREEDERS?



# **FACT VS. FANTASY** A REALISTIC APPROACH TO SIRE SELECTION





**Is This Your Ideal Cow?**

2016  
**Holstein**  
14<sup>th</sup> World Holstein Conference  
Buenos Aires - Argentina  
March 28<sup>th</sup> - April 3<sup>rd</sup>  
*Let's Imagine the Future*



THIS IMAGE IS NOT A REAL COW AND IS FOR DISCUSSION PURPOSES ONLY



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THIS IMAGE IS NOT A REAL COW AND IS FOR DISCUSSION PURPOSES ONLY



**What style of 1st lactation FEMALE do you think will last the longest and produce the most milk over her lifetime?**





THIS IMAGE IS NOT A REAL COW AND IS FOR DISCUSSION PURPOSES ONLY



# CERTIFICATE

The highest recorded world lifetime yield of milk is 216,891 kg (478,163 lb) as verified from the production certificate dated 27 February 2012. Smurf is a Holstein cow owned by La Ferme Gillette Inc. Dairy Farm (Canada) in Embrun, Ontario, Canada.

GUINNESS WORLD RECORDS

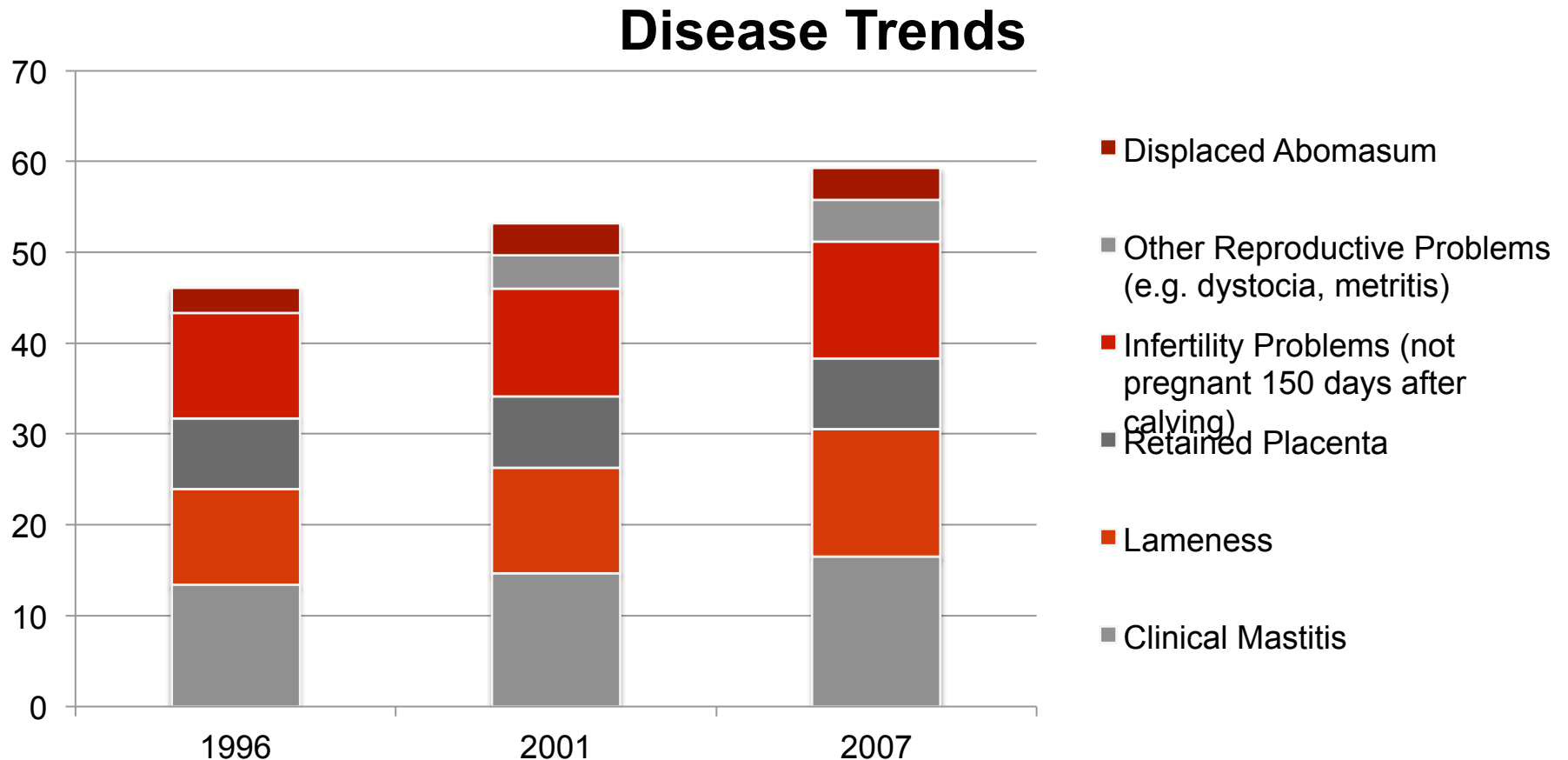


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# GILLETTE B

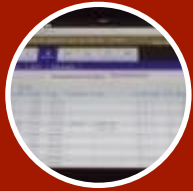


# Dairy cow morbidity trends



USDA. 2008. Dairy 2007, Part II: Changes in the U.S. Dairy Cattle Industry, 1991–2007 USDA-APHIS-VS, CEAH. Fort Collins, CO #N481.0311.

# Creating wellness TRAIT genomic predictions



Data



Genotypes



Pedigrees

Zoetis has the resources to bring these components together





## CDCB OFFICIAL EVALUATION

PARENTAGE

PRODUCTION

REPRODUCTION

HEALTH

TYPE



## WELLNESS TRAITS

MASTITIS

LAMENESS

METRITIS

RETAINED PLACENTA

DISPLACED ABOMASUM

KETOSIS



## GENETIC CONDITIONS

POLLED (NO FEE)

MILK COMPONENTS

INFERTILITY HAPLOTYPES

OTHER GENETIC CONDITIONS\*

\* CVM, Brachyspina and Beta Casein A2 available with add-on fee.



# DWP\$™ ANIMAL RANKING



# Bottom line, Direct selection is best!

- To make the most genetic and phenotypic progress in a trait, use direct selection, not indirect
- Examples:

Goal	Indirect trait	Direct trait	Estimated correlation
Improve reproduction	PL	Daughter Pregnancy Rate (DPR)	0.64
Reduce mastitis cases	SCS	New genomic Mastitis trait	-0.45
Reduce lameness	PL	New genomic Lameness trait	0.28
	FLC	New genomic Lameness trait	0.00
Reduce metritis	PL	New genomic Metritis trait	0.32

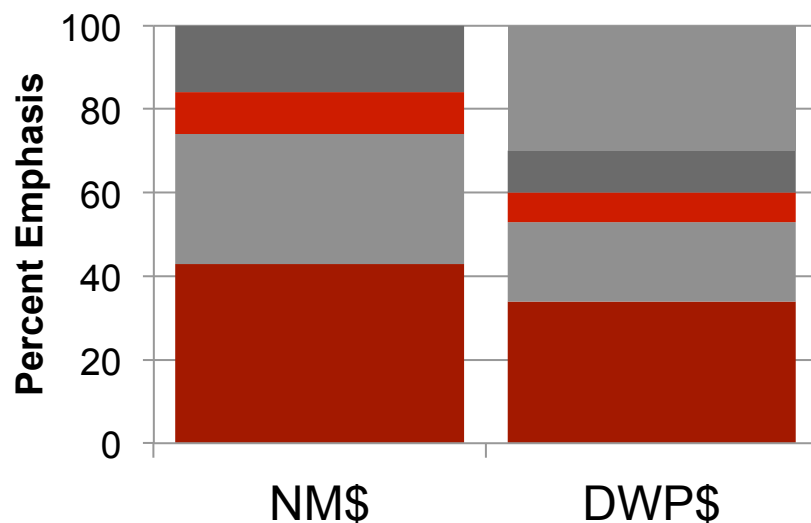
Source: Data on file, Zoetis internal data, August 2015, Zoetis Inc.



# Response to selection

Trait	NM\$	DWP\$	
MILK	246	<b>200</b>	↓
FAT	16	<b>14</b>	↔
PROT	10	<b>9</b>	↔
PL	1.7	<b>1.7</b>	↔
SCS	-0.06	<b>-0.06</b>	↔
BDC	0.01	<b>-0.02</b>	↔
UDC	0.25	<b>0.21</b>	↔
FLC	0.18	<b>0.16</b>	↔
DPR	0.60	<b>0.69</b>	↑
CA	8.32	<b>8.40</b>	↔
HCR	0.56	<b>0.53</b>	↔
CCR	0.89	<b>0.94</b>	↔
MAST	0.86	<b>2.09</b>	↑↑
LAME	1.04	<b>2.02</b>	↑↑
MET	1.64	<b>2.37</b>	↑↑
RP	-0.01	<b>0.41</b>	↑↑
DA	1.72	<b>2.05</b>	↑↑
KET	1.69	<b>2.04</b>	↑↑

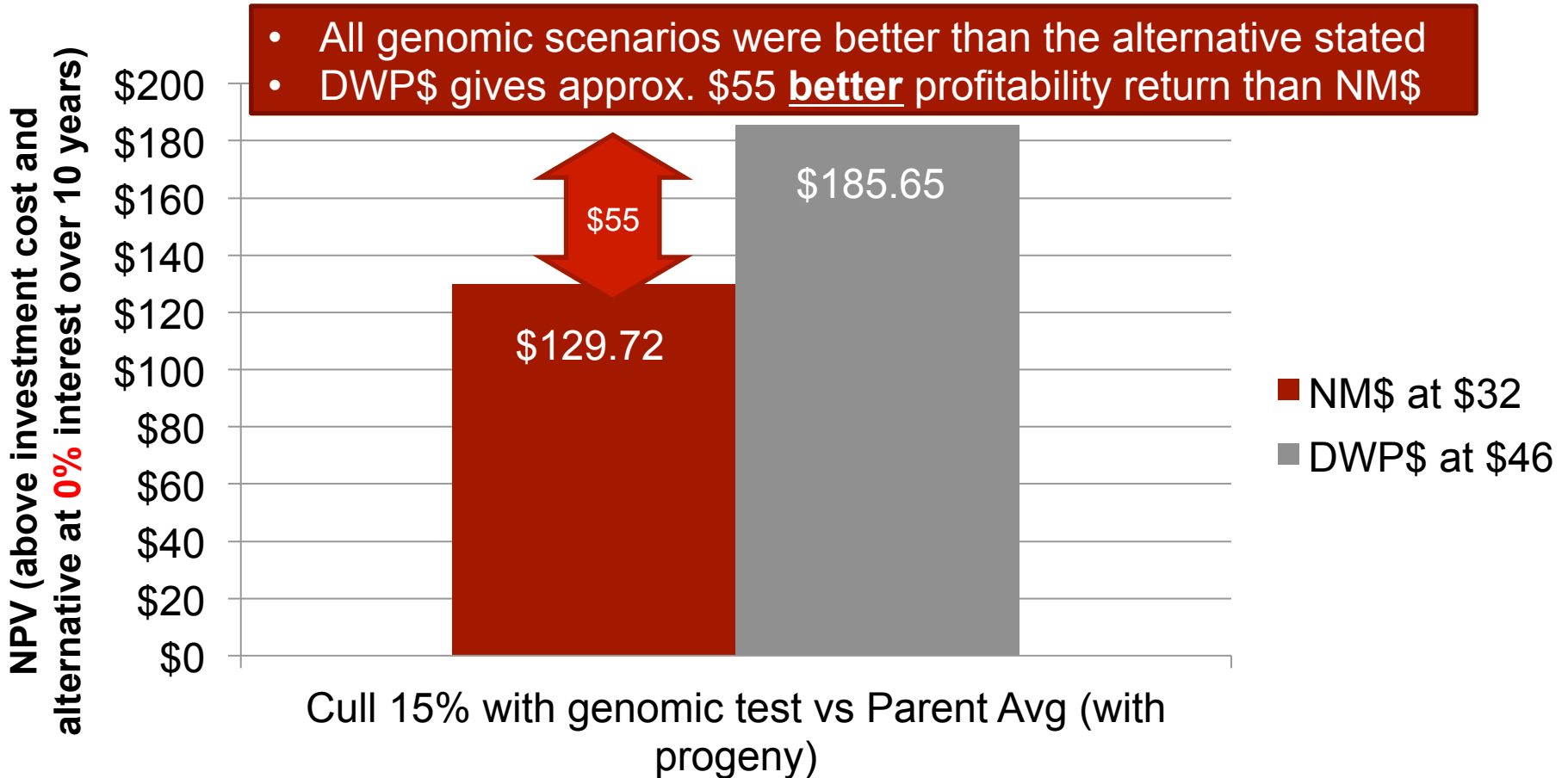
- Production
- Fertility
- Wellness Traits
- Health & Calving
- Type



Source: Data on file, Zoetis internal data, August 2015, Zoetis Inc.



# CLARIFIDE Plus provides a better return!



Data on file, Dec.2015 Data Package, Zoetis Inc.



# NEW INNOVATION IN GENOMIC SELECTION TO REDUCE DISEASE RISKS

WEBINARS TO BE HELD ON MARCH 16TH AND MARCH 23RD

[THEBULLVINE.COM/WEBINARS/](http://THEBULLVINE.COM/WEBINARS/)

2016  
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*Let's Imagine the Future*

**DeLaval**





March 16<sup>th</sup>, 2016

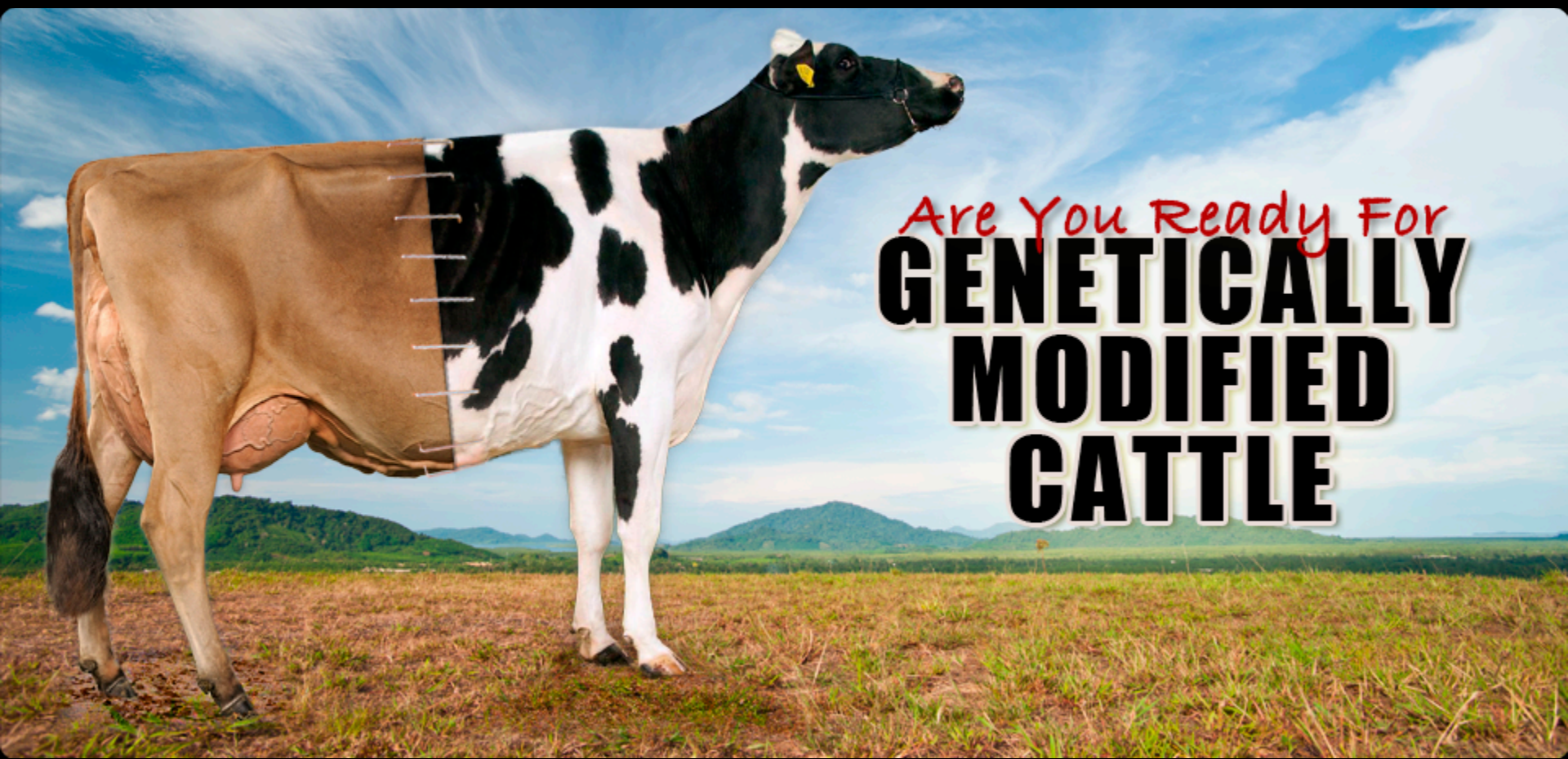
*The Bullvine*

**PRECISION DAIRY TOOLS**  
***EXPLORE THE POTENTIAL***  
**Dr Jeff Bewley #VMSPRO2016**

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*Are You Ready For*  
**GENETICALLY  
MODIFIED  
CATTLE**



# Gene Editing



A **“Supercow”**  
constructed from  
the best  
haplotypes in the  
Holstein  
population would  
have an EBV(NM\$)  
of **\$6745**

Advancing Dairy Cattle Genetics: Genomics and Beyond, Phoenix, AZ  
Feb 19, 2014. Adjusted for Dec. 2014 base change per Paul Van Raden  
5/26/15 personal communication.

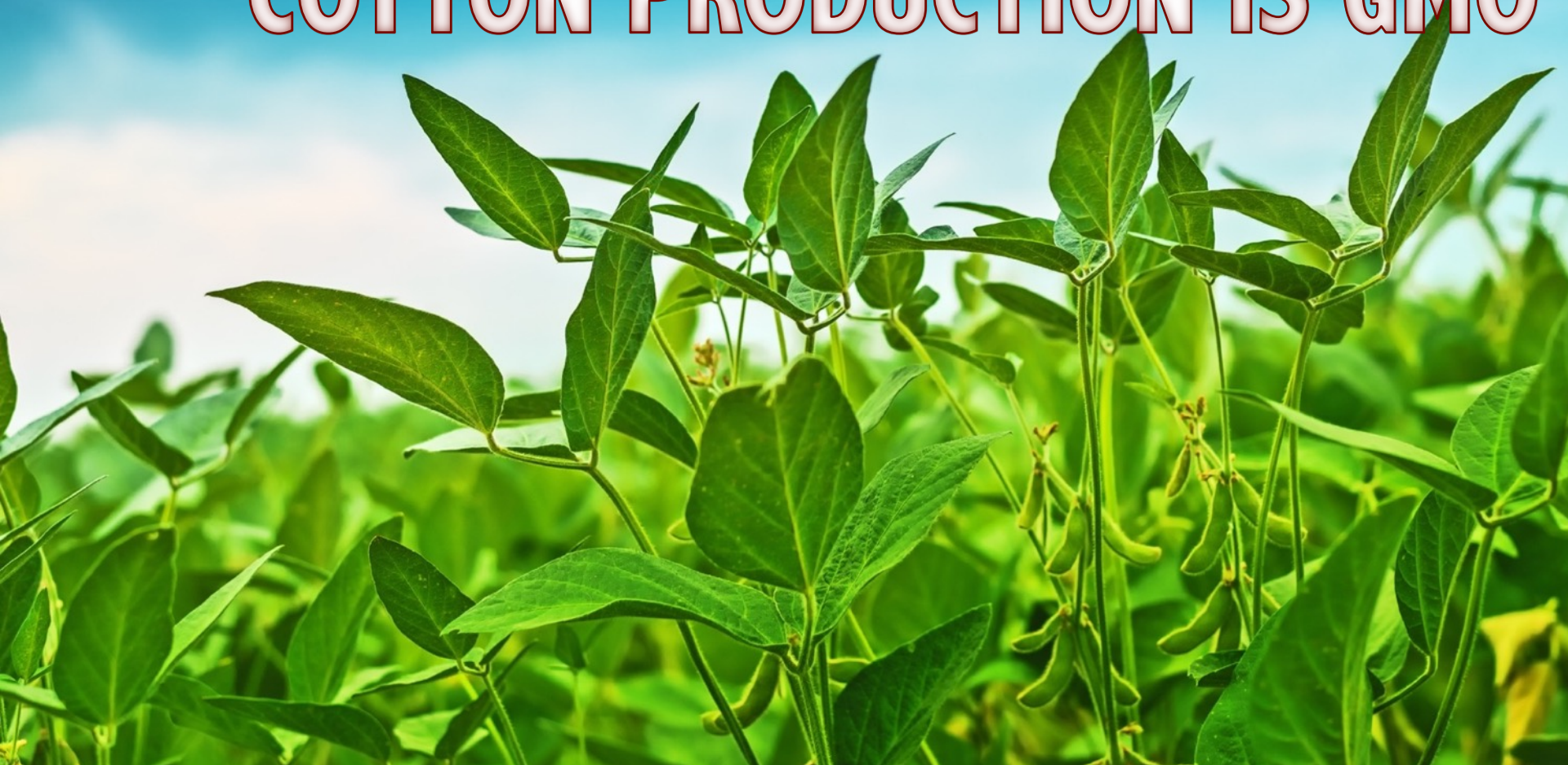


**IN 50 YEARS  
THE WORLD  
POPULATION  
WILL REQUIRE  
100% MORE  
FOOD**





**APPROXIMATELY 80% OF  
THE WORLD'S SOY AND  
COTTON PRODUCTION IS GMO**





# Epigenomics



# Nutrigenomics



2016  
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Buenos Aires - Argentina  
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*Let's Imagine the Future*







## Who We Are

Let's start with what we are not. We're not just an event reporting magazine. We're not a billboard or promoter of whoever will pay us the most money. We are something different, something real. We're what's been missing for real dairy breeders. The Bullvine is an independent, online community for professionals in the dairy breeding industry. Every day, we give insight and host lively debate about the people, products and services that are revolutionizing the dairy breeding industry.



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*Free*







**OVER 33,000 SUBSCRIBERS**

# The Bullvine

NEWS & REVIEWS

Diana Mallett Photography

ISSUE 20160326 MARCH 26, 2016



456815 942621



**FREE**

**GENETICS  
EVALUATIONS**  
*August 2012*

**DOWNLOAD NOW!**

This banner features a collage of national flags including the United Kingdom, Italy, Australia, Canada, and the United States. The text is prominently displayed in the center, with a 'FREE' ribbon in the top left corner and a 'DOWNLOAD NOW!' button at the bottom.



**FREE**

**THE DAIRY BREEDERS**  
**NO BS**  
**GUIDE TO GENOMICS**

**DOWNLOAD NOW!**

The banner shows a man in a grey shirt looking towards the left, with a blurred background of a dairy farm. The text is overlaid on the image, with a 'FREE' ribbon in the top left and a 'DOWNLOAD NOW!' button at the bottom.



**FREE**

**RETURN ON  
INVESTMENT  
CALCULATOR**

**Download Now!**

The banner features a black cow standing on a stack of money, with a calculator in front of it. The calculator's display shows the word 'SUCCESS'. The text is centered over the image, with a 'FREE' ribbon in the top left and a 'Download Now!' button at the bottom.



**FREE**

**THE DAIRY  
BREEDERS  
GUIDE TO  
facebook.**

**DOWNLOAD NOW!**

The banner has a solid blue background. The text is centered, with a 'FREE' ribbon in the top left and a 'DOWNLOAD NOW!' button at the bottom.



**O F T E N  
I M I T A T E D**  
**N E V E R  
D U P L I C A T E D**

The Milk House - The World Wide...

🔒 Closed Group

Joined ▾

➦ Share

✓ Notifications



Discussion

Members

Events

Photos

Files

Search this group



✎ Write Post

📷 Add Photo / Video

☰ Create Poll

➕ Add File



Write something...

ADD MEMBERS *i*

+ Enter name or email address...

MEMBERS

6,155 Members (38 new)



Message · Invite by Email

**FACEBOOK.COM/GROUPS/THEMILKHOUSE/**







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# *-I APOLOGIZE- FOR LETTING YOU MISINTERPRET WHAT I WAS SAYING.*

READING THE BULLVINE CAN HELP YOU THINK CLEARER AND FORM YOUR OWN OPINION. CLINICAL STUDIES SHOW THAT READING THE BULLVINE CAN DECREASE MENTAL FATIGUE AND INCREASE YOUR INTELLIGENCE. IT HAS ALSO PROVEN TO INCREASE FERTILITY AND PROFITABILITY OF YOUR COWS.



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