



International Genetic Solutions

**& Growing
: A Global Beef Industry Movement**

**An unprecedented global unification of beef cattle
organizations to enhance genetic improvement**

Unprecedented Unification:

701x[™]
**AUTONOMOUS
RANCHER[®]**



Unprecedented Unification...



Seeds of IGS...

❖ Exist to serve beef industry



SimGenetics

PROFIT THROUGH SCIENCE

American Simmental Association

1968

Seeds of IGS...

❖ **Exist to serve beef industry**

✓ **Leverage science and technology**



Dr. Ray Woodward





Fast Forward 45 Years...

❖ Exist to serve beef industry

✓ Leverage science and technology
✓ Leverage collaboration/cooperation

We're Better Together!



**World's most accurate and
economical genetic
evaluation of beef cattle**



The success of IGS is the result of working as a team towards a common goal: maximizing the global genetic improvement of beef cattle

TYPICAL AMERICAN!

Most Accurate and Economical...

Unprecedented Human Contribution!



Most Accurate and Economical...

Operation Quantum Leap



 **Theta Solutions**

 **BOLT**


Helical

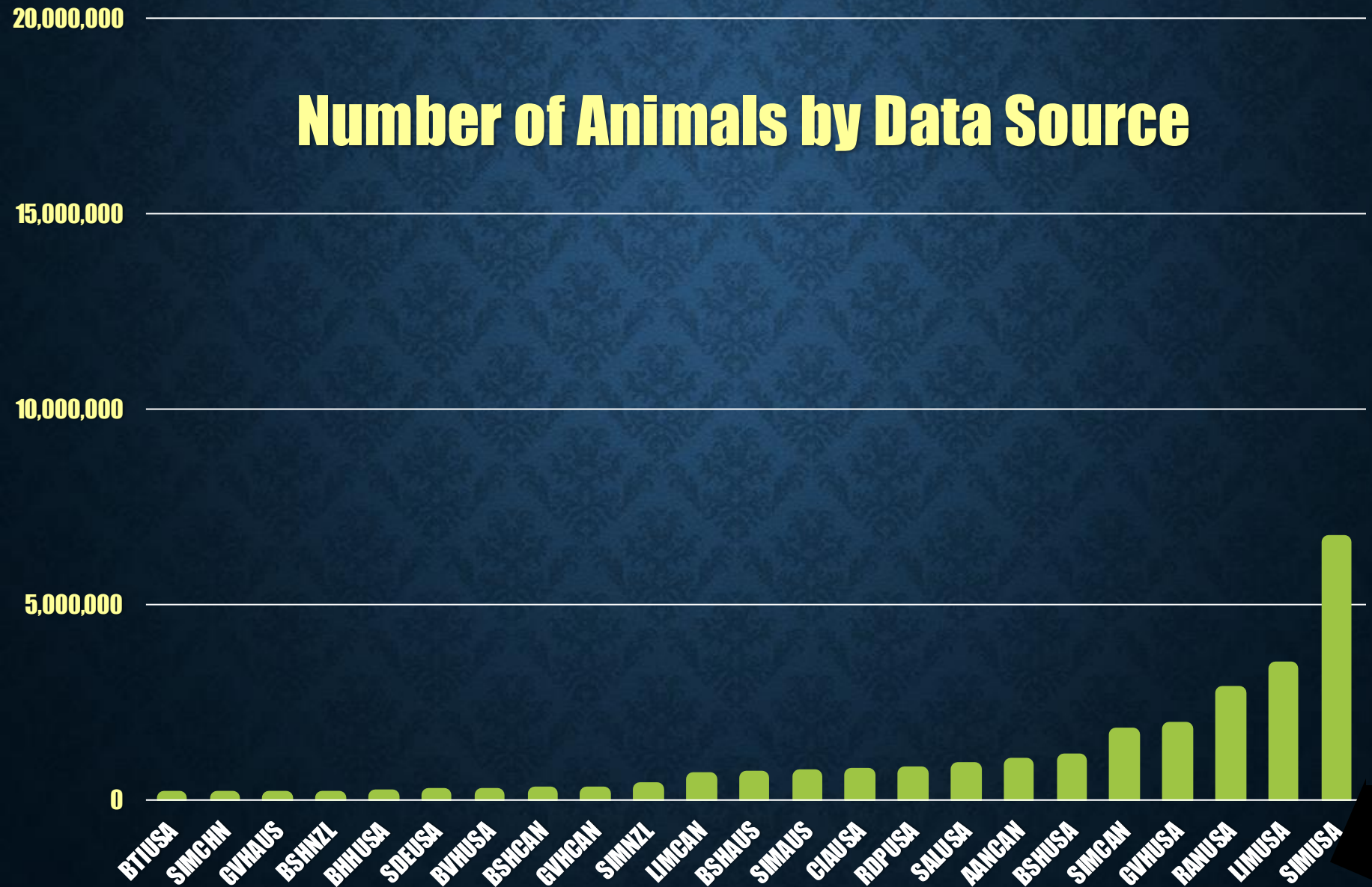


BOLT (Biometric Open Language Tools)

Revolutionary Genetic Evaluation Software

Most Accurate and Economical...

Number of Animals by Data Source



Most Accurate and Economical...



World's Largest Beef Cattle Evaluation

- ✓ Over 24 million animals
- ✓ Over 450,000 new animals/year
- ✓ Over 900,000 genotypes
- ✓ Over 150,000 new genotypes/year



Most Explosive Value in Commercial...

Explosive Value of Unification!

Data Source	Fold Increase
Australian Gelbvieh Association	140.9
Performance Beef Breeders (Focus)	61.3
Simmental Australia	25.5
Braunvieh Association of America	22.6
American Black Hereford	19.7
North American South Devon	19.4
Simmental NewZealand	15.9
American Speckled Park Association	14.0
Canadian Gelbvieh Association	12.4
Canadian Limousin	6.8
American Salers	5.9
Canadian Shorthorn	5.9
American Shorthorn Association	5.3
Australian Shorthorn Society	4.8
Canadian Simmental	4.4
Canadian Salers	4.4
American Gelbvieh Association	4.1
Canadian Angus	4.0
Shorthorn Beef (Australia)	3.1
Red Angus Association of America	3.0
North American Limousin Foundation	2.2
American Simmental Association	1.9
Canadian Speckled Park Association	1.1

Most Accurate and Economical...

Data Source	Sires with additional progeny in other IGS databases	Number of progeny by those sires in source database	Number of additional progeny in other IGS databases	Multiple increase in number of progeny records
American Simmental	16,022	2,606,542	2,363,953	1.9
Canadian Simmental	5,193	641,211	2,210,759	4.4
Australian Simmental	1,308	53,064	1,298,171	25.5
New Zealand Simmental	317	19,514	290,953	15.9

Results of Movement...

- ✓ Unprecedented Human Resources
- ✓ Cutting Edge Software/Methodology
- ✓ World's Largest Database



IGS

International
Genetic Solutions



**World's Most Accurate & Economical
Genetic Evaluation of Beef Cattle**



We're Better Together

US Simmental's Journey ...



1968.....2026

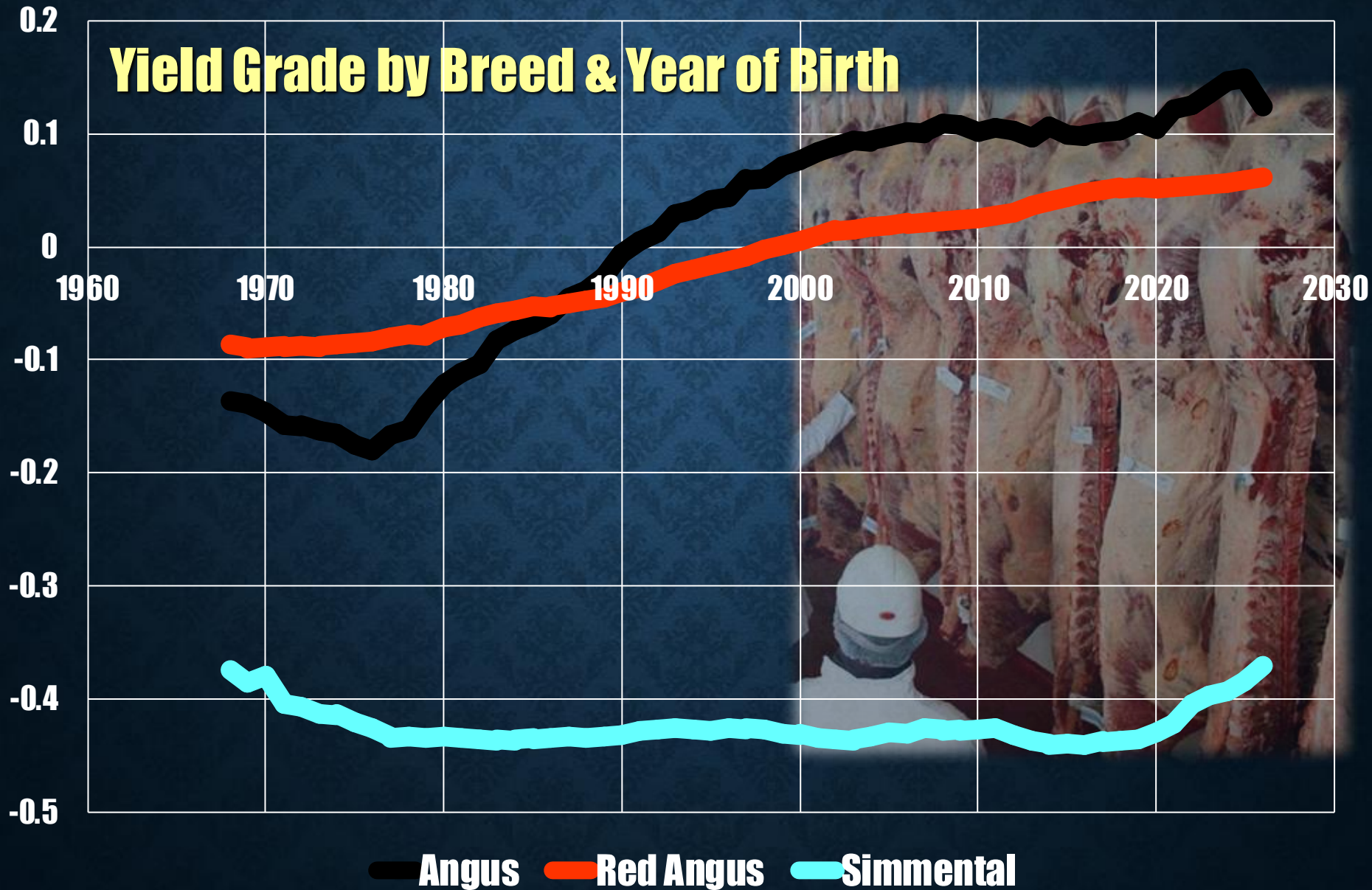
0%.....98% Polled

0%.....81% Black



They're Angus!

Trait Assessment...



Pedigree Assessment...



Progeny: 20,466
Grand progeny: 121,631



Name	X
ABR Sir Arnold G809	2
Abricot	21
Amor	1
Ballybane Edwin	2
Banz	3
Bar 11 Ueli	9
Beat	4
Benz	1
Bismark	14
Bulls Eye Dominic	1
Capitaine	24
Cezon	19
Cyr	1
Dor_Maur Salvador	1
Eiger	3

Name	X
Extra	5
Firn	1
Galant	35
GR Aquarius 11E	1
Great Western	2
Harald	8
Hardi	1
King Arthur	5
L7 Mr. Big-N-Tall	1
Lacombe Achilles	9
Lacombe Bandit	1
Lohner	5
LPSR Supreme 3A	4
Mars	3
Milord	1

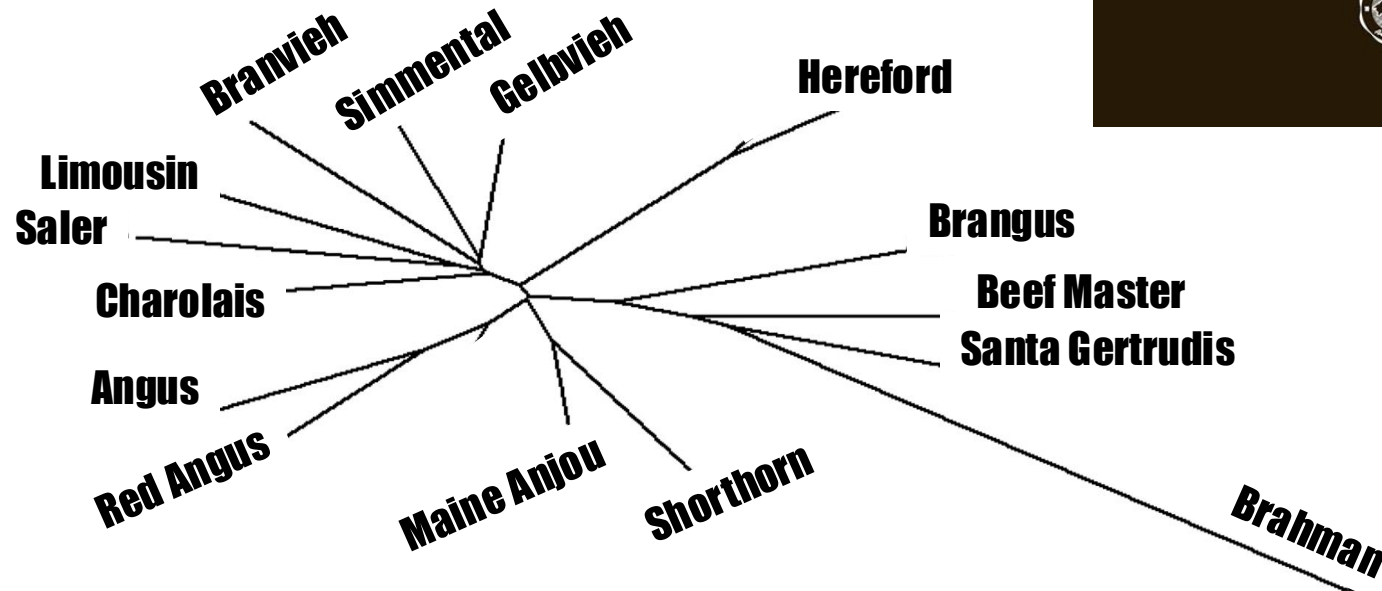
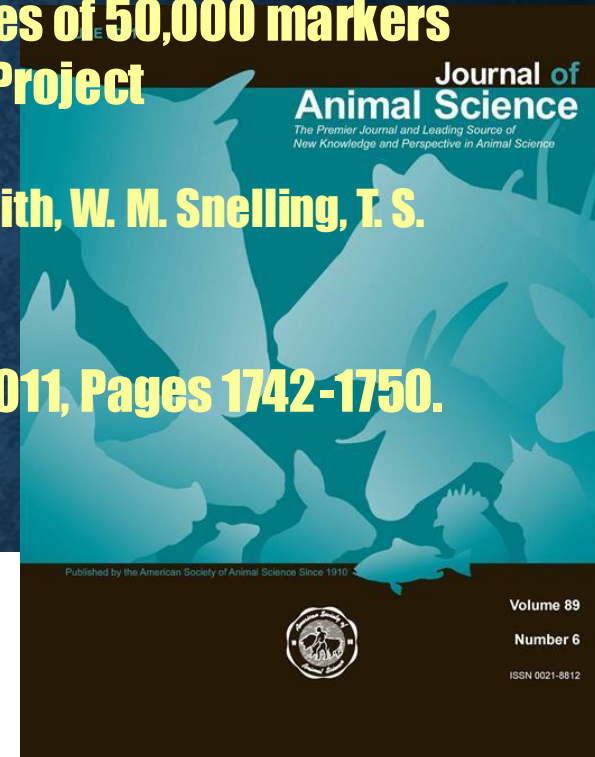
Name	X
MMV Taquin	2
Mr Herkules	8
Pacific	2
Parisien	8
Prairie Boy	1
Quartier	2
Renz	1
Scottish Neff	1
Semeur	1
Sieger	1
Siegfried	2
Signal	28
Sultan	2
Toni	2
Uhlmann	1

Genomic Assessment...

Predicting breed composition using breed frequencies of 50,000 markers from the US Meat Animal Research Center 2,000 Bull Project

L. A. Kuehn, J. W. Keele, G. L. Bennett, T. G. McDanel, T. P. L. Smith, W. M. Snelling, T. S. Sonstegard, R. M. Thallman

Journal of Animal Science, Volume 89, Issue 6, June 2011, Pages 1742-1750.



Heterosis Assessment...

Estimation of breed specific heterosis effects for birth, weaning, and yearling weight in cattle.

L. N. Schiermester, R. M. Thallman, L. A. Kuehn, S. D. Kachman, M. L. Spangler

Journal of Animal Science, Volume 93, Issue 1, January 2015, Pages 46-52.



There has been no decline in heterosis since original Simmental were introduced

US Simmental's Journey ...



1968.....

0%.....

0%.....

2026

98% Polled

81% Black



They're Simmental!

