


# Who owns your data and where is it?

Moderator  
Darrh Bullock  
University of Kentucky



Julian Assange  
WikiLeaks Founder



Wade Shafer  
Executive VP ASA



Michael Cohen  
President's Lawyer



Matt Cleveland  
Director, Genus ABS



Mark Zuckerberg  
CEO of Facebook



John Genho  
Livestock Genetic Services





Chris Wylie, Whistleblower  
Cambridge Analytica



Dan Moser  
President, AGI



Vladimir Putin  
President, Russia



Larry Benyshek  
B&H Consulting



## Procedure

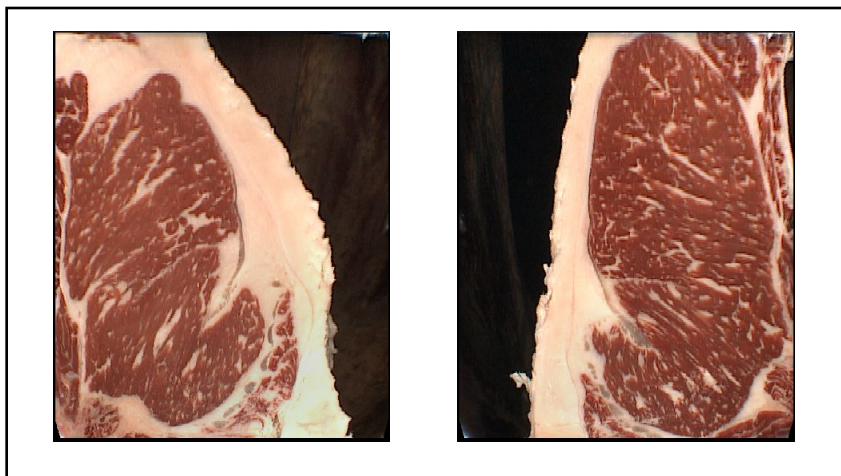
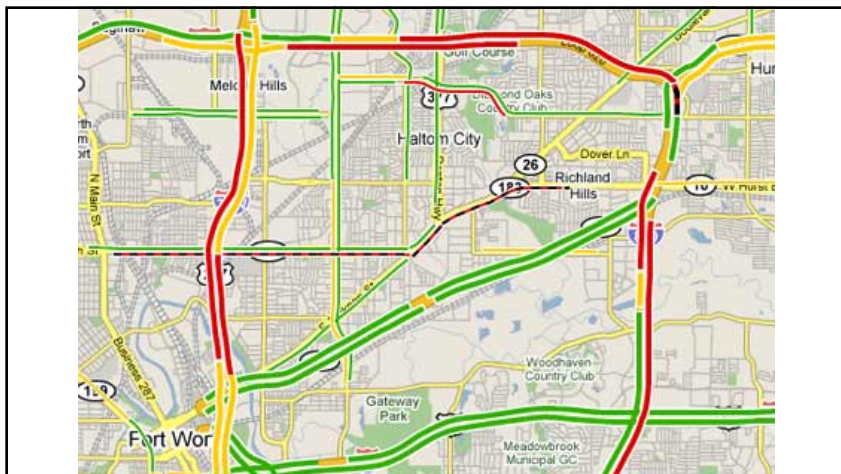
- Each panelist will give a 5-10 minute overview of their organization and address how they utilize and manage “their” data
- Each panelist will ask the other panelists a question they would like answered pertaining to data utilization/management
- Questions and discussion will be taken from the audience



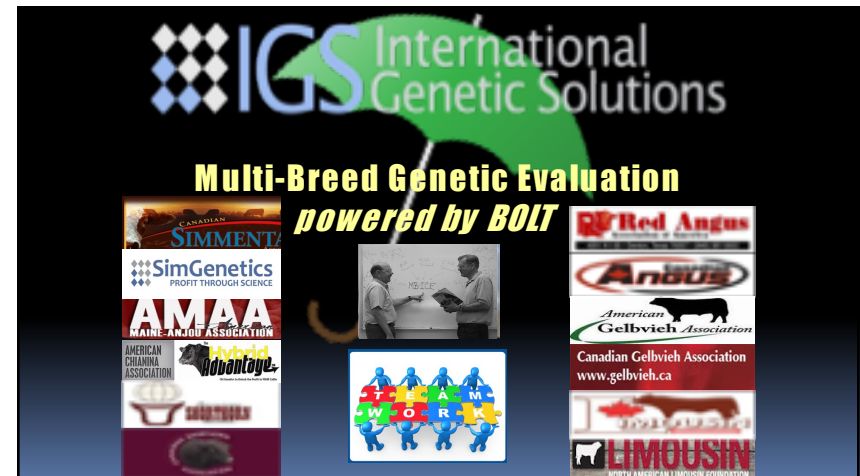
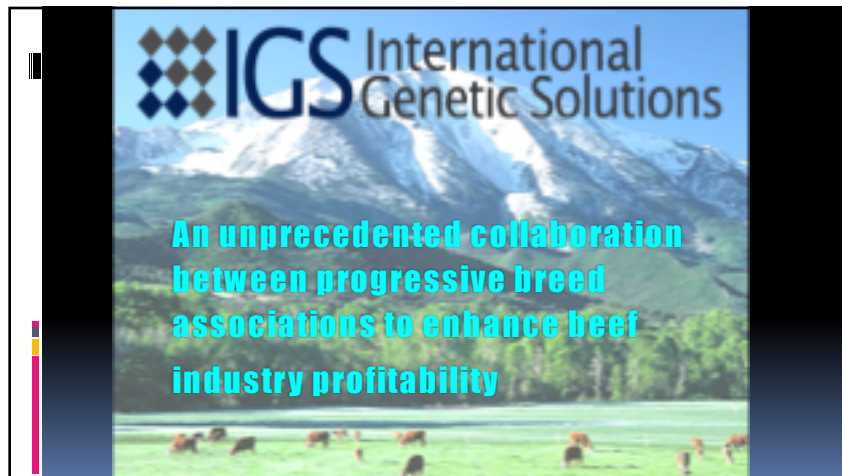
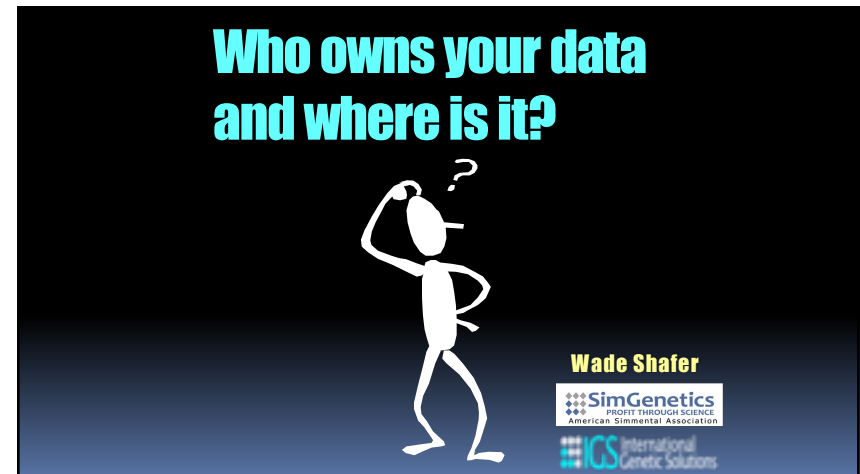
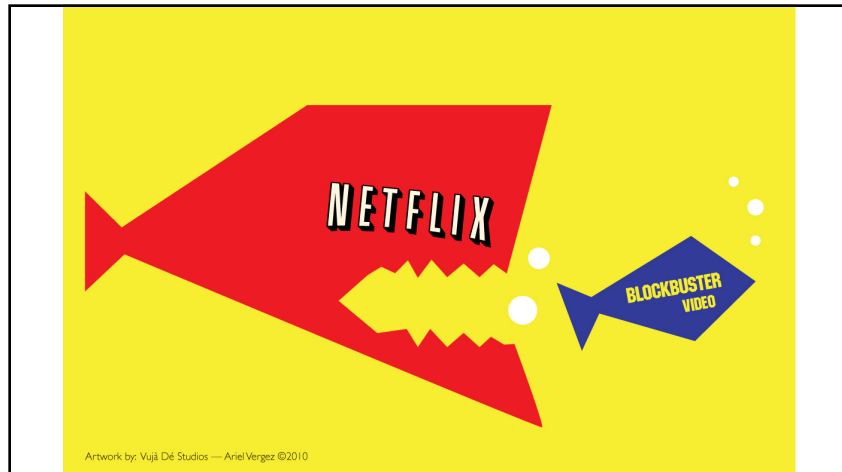
**LIVESTOCK GENETIC SERVICES**  
PEDIGREE + PERFORMANCE + GENOMICS

John Genho











## Who owns your data and where is it?



### IGS Multi-Breed Genetic Evaluation *powered by BOLT*

- ✓ All data submitted to IGS becomes permanent part of evaluation database
- ✓ Evaluation database (phenotypes, pedigrees, genotypes) resides at ASA
- ✓ Any use beyond the evaluation is at each breed association's discretion

## Who owns your data and where is it?



### Association Level



## Who owns your data and where is it?



DNA: Share Delta  
Phen/Ped: ABRI

DNA: Share Delta  
Phen/Ped: Digital

DNA: Share Delta  
Phen/Ped: Digital

DNA: Share Delta  
Phen/Ped: Digital

DNA: Share Delta  
Phen/Ped: In house

DNA: Assoc GS, ZO  
Phen/Ped: In house

DNA: P GS, ZO  
Phen/Ped: Digital

DNA: Share GS  
Phen/Ped: Digital

DNA: Share GS, ZO  
Phen/Ped: Digital

DNA: Assoc GS  
Phen/Ped: Digital

DNA: Share GS  
Phen/Ped: In house



## Who owns your data and where is it?





## ABS – Using data to maximize customer profit from genetic progress

Matthew A Cleveland, Ph.D.

Director, Global Beef Product Development  
matthew.cleveland@genusplc.com



Profit From Genetic Progress



**Genus**  
"Pioneering animal genetic improvement to help nourish the world"



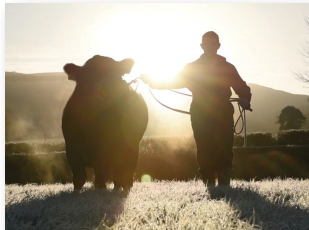
Our role as a genetic improvement company - maximize the profitability of our partners by offering the right genetics and services to reduce the cost of production of high quality pork, milk and beef.

Profit From Genetic Progress



**ABS** Founded in 1941

- ✓ Sales presence in 70+ countries
- ✓ 50k+ customers
- ✓ 17m+ inseminations and embryo transfers
- ✓ Focused on providing better genetics to help customers produce better quality beef and milk



Profit From Genetic Progress



## Pioneering data collection

**1960** – ABS initiates large scale, multi-herd, Progeny Testing program

**1973** – ABS publishes the first EPDs from our progeny test program data

**1996** – Circle A Angus and the Angus Sire Alliance release the Beef Industry's 1st modern Selection Index and ABS begins marketing the high indexing Sire Alliance winning bulls

**2007** – ABS and Circle A Angus Ranch initiate an exclusive progeny testing partnership through the Angus Sire Alliance program.



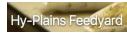
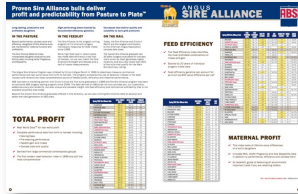
Profit From Genetic Progress





## Data programs in the US

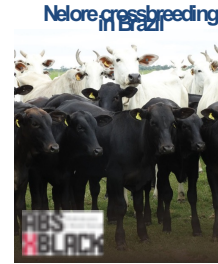
- The Angus Sire Alliance continues to be an important part of our program
- Developed significant PT and validation capabilities to collect full lifecycle data (maternal, performance, feed intake, harvest, etc.) with other partners in Angus and other breeds
- Full lifecycle data for Beef x Dairy



Profit From Genetic Progress



## Data programs around the world



Profit From Genetic Progress



## The data challenge



- Collecting data for economically relevant traits to drive genetic improvement and maximize profit for customers
- Targeted and tailored approach

Profit From Genetic Progress



Profit From Genetic Progress





## Who Owns The Data And Where Is It?

BIF Panel Discussion

Larry Benyshek, President  
Benyshek and Hough  
Consulting Services  
Manhattan, KS  
[www.benyshek-hough.com](http://www.benyshek-hough.com)

$Y = XC + ZS + E$   
 $Y = XC + ZS + E$   
 $Y = XC + ZS + E$   
 $Y_w = X_wC + Z_wU_w + Z_mU_m + Z_pU_p + E_w$   
 $Y = XC + ZS + ZD + E$   
 $ZS + TSC + E$

## GLOBAL AGRICULTURE



- Competition
- Low Cost Producers
- Added Value Products



**CONSUMER  
REIGNS  
SUPREME**

- Domestic Markets
- International Markets



**CHALLENGES FACING  
THE FUTURE BEEF  
INDUSTRY**



**G. E. M.**  
**Genetic and Economic Management**

**Main Login Page**

**Benyshek and Hough  
Consulting Services**

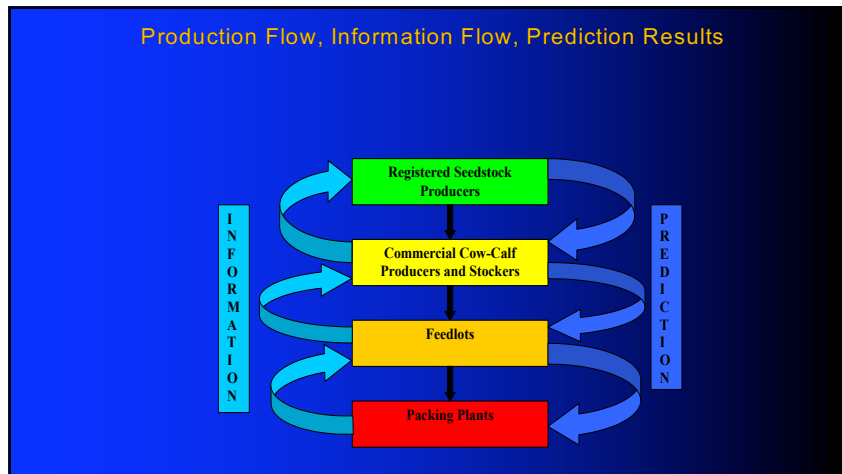
**Login to Genetic and Economic Management (GEM)**

Username

Password

To see only public information, leave username and password blank





## Benyshek and Hough Consulting Services

*“Data to Information”*

**Larry L. Benyshek, President**  
**John D. Hough, Vice President**

Manhattan, KS 66502  
 706-296-9757 or 706.202.5528  
[www.Benyshek-Hough.com](http://www.Benyshek-Hough.com)

### Data Stewardship

American Angus Association  
and Angus Genetics Inc.

Dan W. Moser, Ph.D.  
 AGI President  
 AAA Director of Performance Programs


**ANGUS**  
THE BUSINESS BREED

### Angus Genetics Inc.

- For-profit, wholly-owned subsidiary of the American Angus Association
  - Four geneticists
  - Eight customer service representatives
  - Significant support from AAA Information Systems, Angus Media
  - Strategic partnerships

**ANGUS**  
THE BUSINESS BREED






**Top Row:**

- Dan Moser, Ph.D. AGI President
- Stephen Miller, Ph.D. AGI Genetic Research Director
- Kelli Retallick, M.S. AGI Genetic Service Director
- Duc Lu, Ph.D. AGI Research Geneticist
- Andre Garcia, M.S. AGI Intern Ph.D. Student at UGA

**Bottom Row:**

- Lou Ann Adams, Director of Information Systems
- Jason Kenyon, Assistant Director of Information Systems
- Janice Blair, Software Engineer
- Gayle Gillispie, Software Engineer / Database Administrator
- Marg Dreesman, Software Engineer

**ANGUS**  
THE BUSINESS BREED



**Top Row:**

- Alexia Ball
- Ashley Blumner
- Jaycee Farmer
- Gayle Ruston

**Bottom Row:**

- Terje Knudsen
- Suele Brown
- Emily Smelser
- Wendy Sowards

**ANGUS**  
THE BUSINESS BREED

### AGI is the World's Leading Provider of Beef Genetic Information

- Deliver genetic evaluation services to the American Angus Association, and five other breed organizations
- Offer genomic testing services for Angus seedstock and Angus-influenced commercial cattle



**ANGUS**  
THE BUSINESS BREED

### AAA Members Have Made a Significant Investment in Data Recording

22M pedigrees  
8.2M birth weights  
8.9M weaning weights  
4.4M yearling weight records  
1.6M heifer calving ease scores  
119K carcass records  
2.1M ultrasound records  
22K individual feed intake records  
280K docility scores  
68K heifer pregnancy observations  
212K mature cow weights



As of 6/22/2018

**ANGUS**  
THE BUSINESS BREED



### AAA Shares Ownership of Phenotypes with Submitting Members

- AAA owns phenotypic information submitted by members
- Members retain a copy of that information, which they may use at their discretion
- AAA shares phenotypes with research organizations
- AAA does not publish raw or adjusted phenotypes



**ANGUS**  
THE BUSINESS BREED



### AAA Members Have Made a Significant Investment in Genomic Testing

500,000 genotypes in weekly genetic evaluation

Over 1 million samples stored



As of 6/22/2018

**ANGUS**  
THE BUSINESS BREED



### AGI Genotype Policy Serves the Membership and the Industry

- AGI Customers transfer ownership of samples while ordering tests
- AGI may conduct further testing of samples
- AGI may share samples and/or genotypes with other entities for research purposes



**ANGUS**  
THE BUSINESS BREED



### Angus Supports Research Initiatives with Funding and Data

Dozens of research studies have been published using data from AAA

Angus Foundation budgets \$250,000 annually to support beef cattle research, and has initiated a \$1 million research endowment campaign



**Angus Foundation**

**ANGUS**  
THE BUSINESS BREED







*Thanks for the opportunity to visit with you!*

Don W. Mozer, Ph.D.  
dmozer@angus.org

ABI President  
816-385-6196

**ANGUS**  
THE BUSINESS BREED



# Questions?

