



Cobb Genetics
Breeding for a Sustainable Future

Borisuth Wunnasuth
Asia Technical Services

Overview



- Poultry meat consumption
- Genetics improvement
- Genetics selections today
- Sustainable Breeding
- Chicken is a safe food source

World Population



	1990	2000	2010	2020	2050
World	5295	6124	6907	7667	9191
Africa	636	813	1007	1228	1937
Asia-Pacific	3127	3707	4165	4593	5265
Latin America + Caribbean	444	523	599	667	783
North America	283	315	346	375	438
Europe	788	728	715	705	644
(source: UN)					

Poultry meat consumption



TABLE 1: Forecasts for world poultry meat to 2019

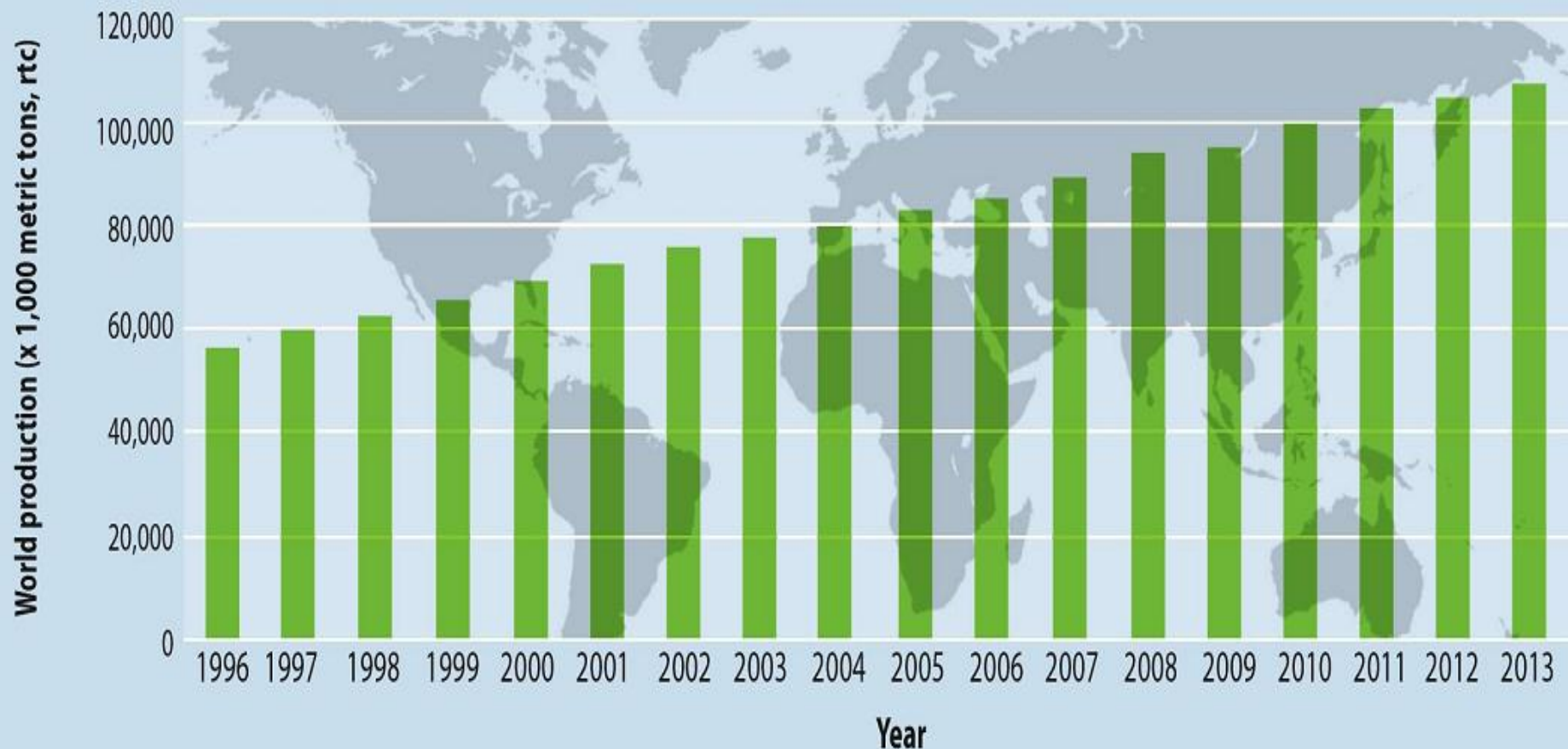
	2005	2010	2015	2019
Production (million tons)	83.23	95.03	107.56	117.85
Exports (million tons)	8.54	10.27	11.79	13.17
Imports (million tons)	8.01	9.33	10.36	11.38
Consumption total (million tons)	82.69	94.05	106.13	116.05
Consumption per person (kilograms)	12.72	13.64	14.56	15.3

(source: OECD 2010)

Poultry Production



FIGURE 1: WORLD POULTRY MEAT PRODUCTION TREND



Cobb Poultry Breeding Company



Cobb is the World's oldest Pedigree Broiler Breeder. From modest beginnings in 1916, Cobb has grown and progressed into one of the world's leading suppliers of Broiler Breeding Stock with distribution in more than 100 countries around the globe.

Cobb500 Improvements in SR Broiler 42 Days of Age (45 gm. per year)

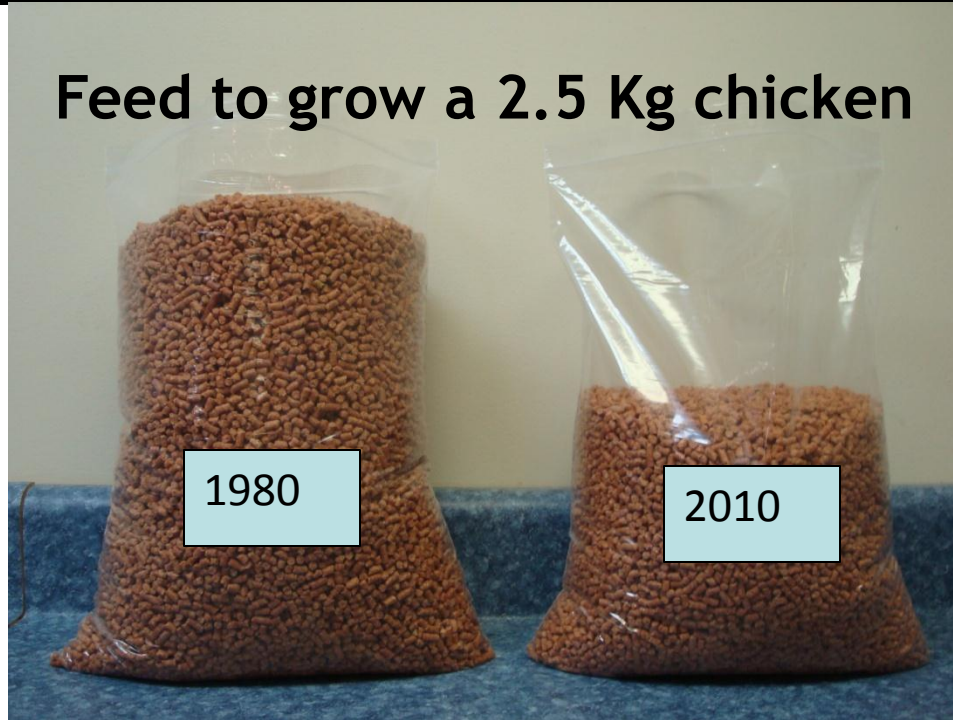


Trait	1980	1990	2000	2010	2020
Wgt (g)	1135	1588	2042	2495	2948
Wgt (lb)	2.50	3.50	4.50	5.50	6.50

Cobb500 Improvements in SR Broiler 42 Days of Age (Average .02 per year)



Feed to grow a 2.5 Kg chicken



Trait	1980	1990	2000	2010	2020
FCR	2.40	2.20	2.00	1.80	1.60

Cobb500 Improvements in SR Broiler 42 Days of Age (0.34% per year)

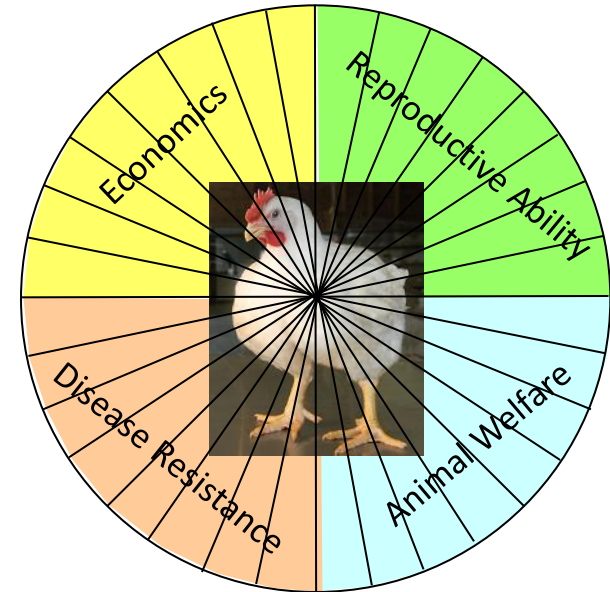


Trait	1980	1990	2000	2010	2020
Yield%	64.0	67.0	70.0	74.0	78.0
Breast%	12.2	15.2	19.2	23.2	25.7
Fat%	2.10	1.90	1.70	1.50	1.30

What we do today:

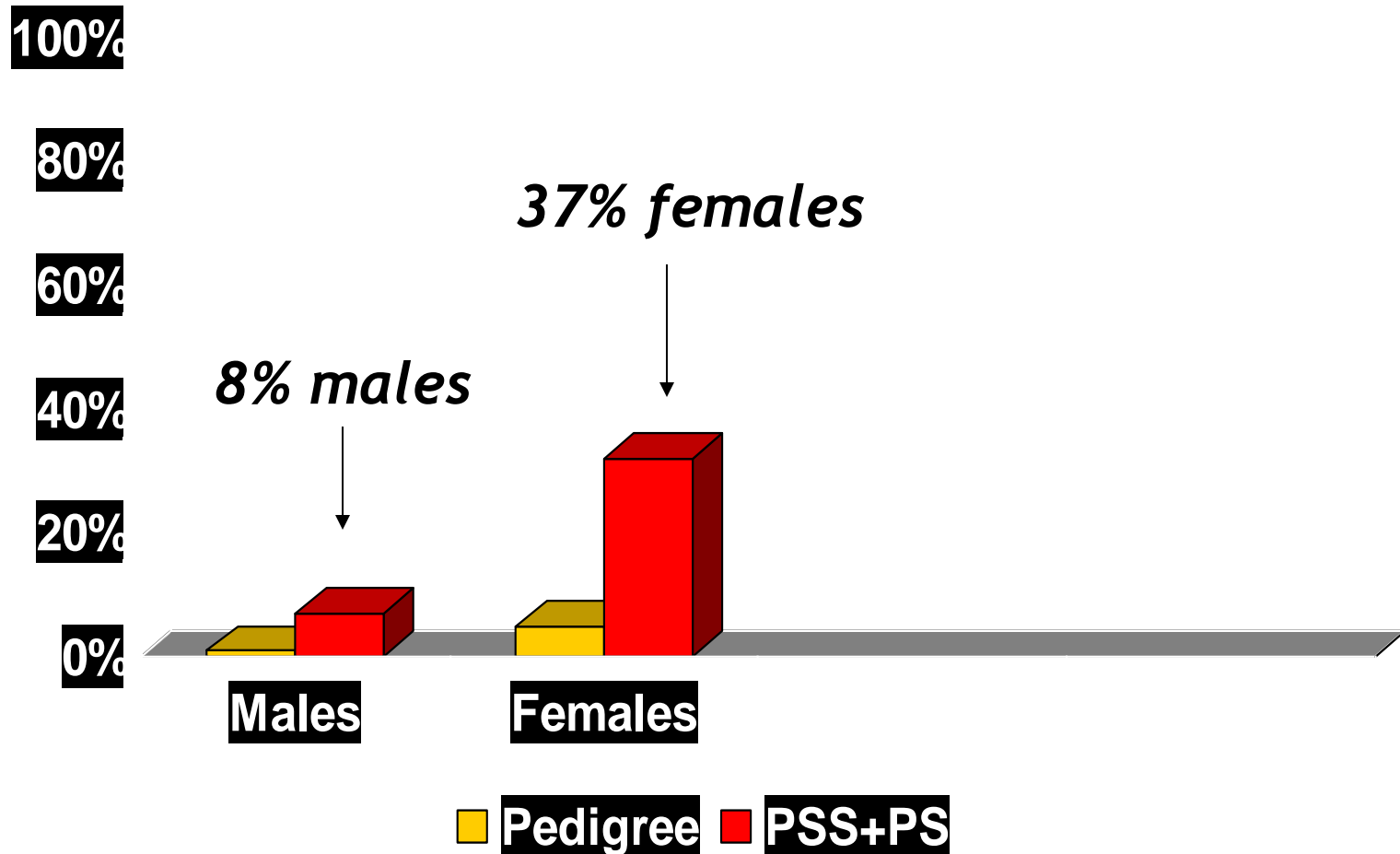


- Cobb places 2,000,000 pedigree birds/year.
- Only 1-2% are selected for breeders.
- Allows progress in many traits at the same time.

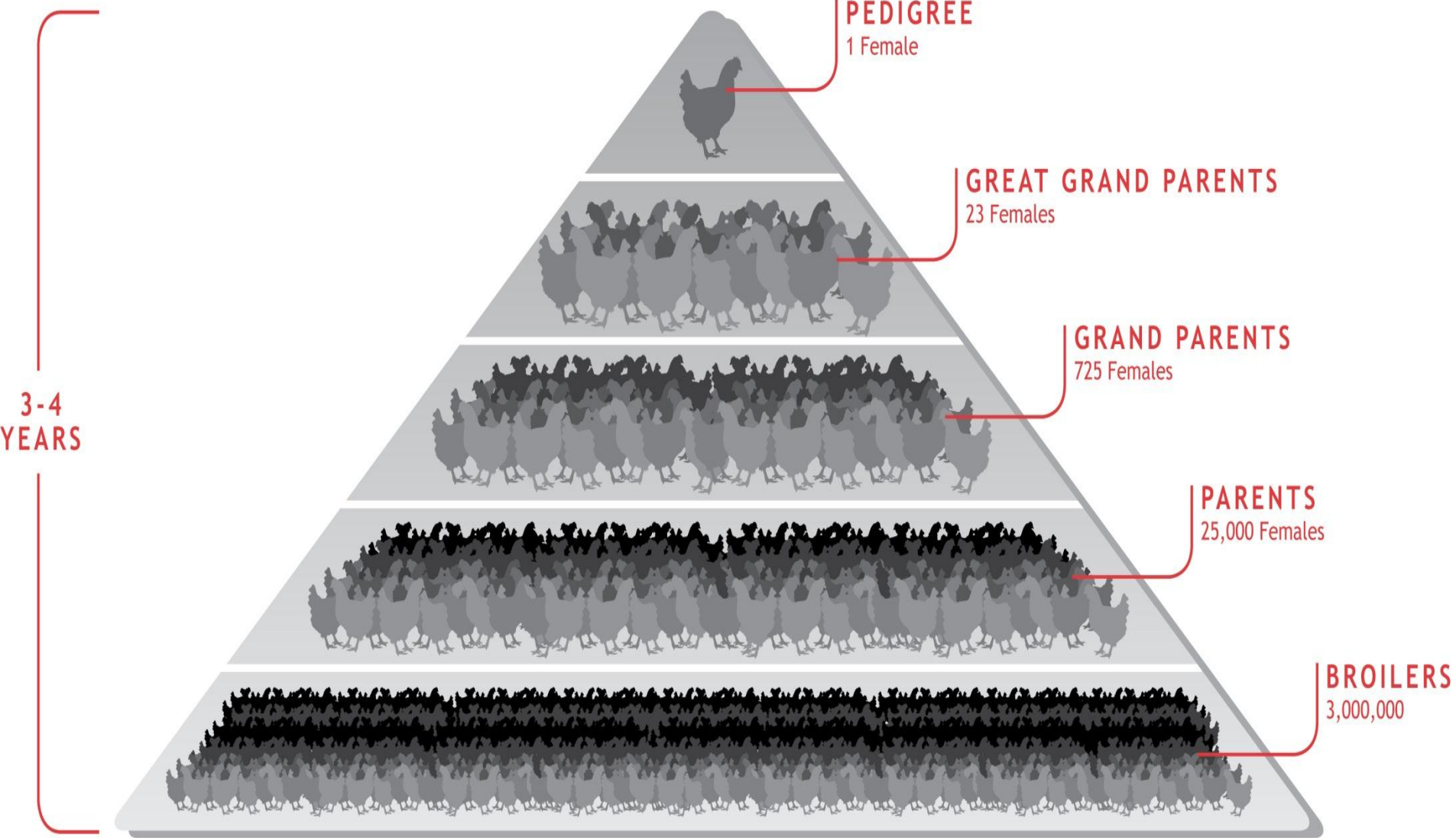


**Today >50
traits**

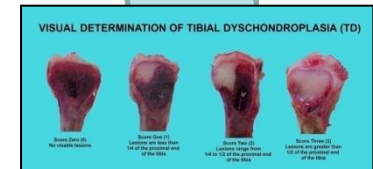
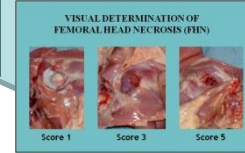
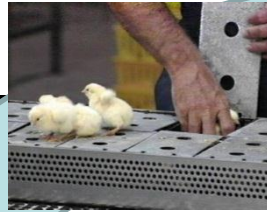
Balanced selection are possible partly due to large pedigree populations



Cobb Production Pyramid



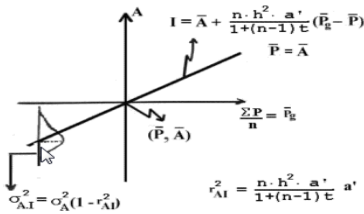
Data collection



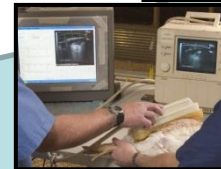
Selection of breeding stock



Traditional Breeding Program



Family data on livability & performance



Cobb Purpose



Serve our customer through the
use of innovative research
and technology to make protein
healthy and affordable
for everyone.

R&D Expansion & Investment

\$280M invested over 15 years!



R&D Facilities

1993

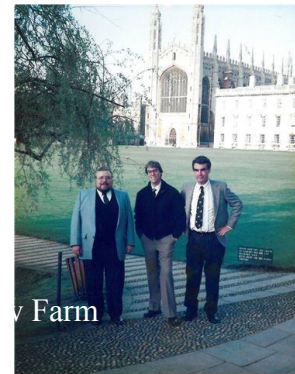


2013



Genetic Team

Pre-1996



2011



Balancing for Success



Economics

- Efficient
- Low cost
- High yielding
- Profitable

Environment

- Reduced inputs
- Reduced output
- Efficient growth
- Improved carbon footprint

Welfare & Ethics

- Compassionate
- Health oriented
- Research focused



Resources Needed for Food



- 1935 - Multipurpose breeds reached 1.3 Kg in 112 days with an FCR of 4 to 5 (Kg of feed per Kg of body weight)
- Today - Our broilers get to 2.6 Kg in < 42 days w/ FCR of 1.74
- 1900: > 40% of income used to buy food
- Today: 8% of income used to buy food
- 1900: 50% of workforce was used to produce food
- Today: 2% of workforce is in food production

Improvements in the poultry industry have resulted in:



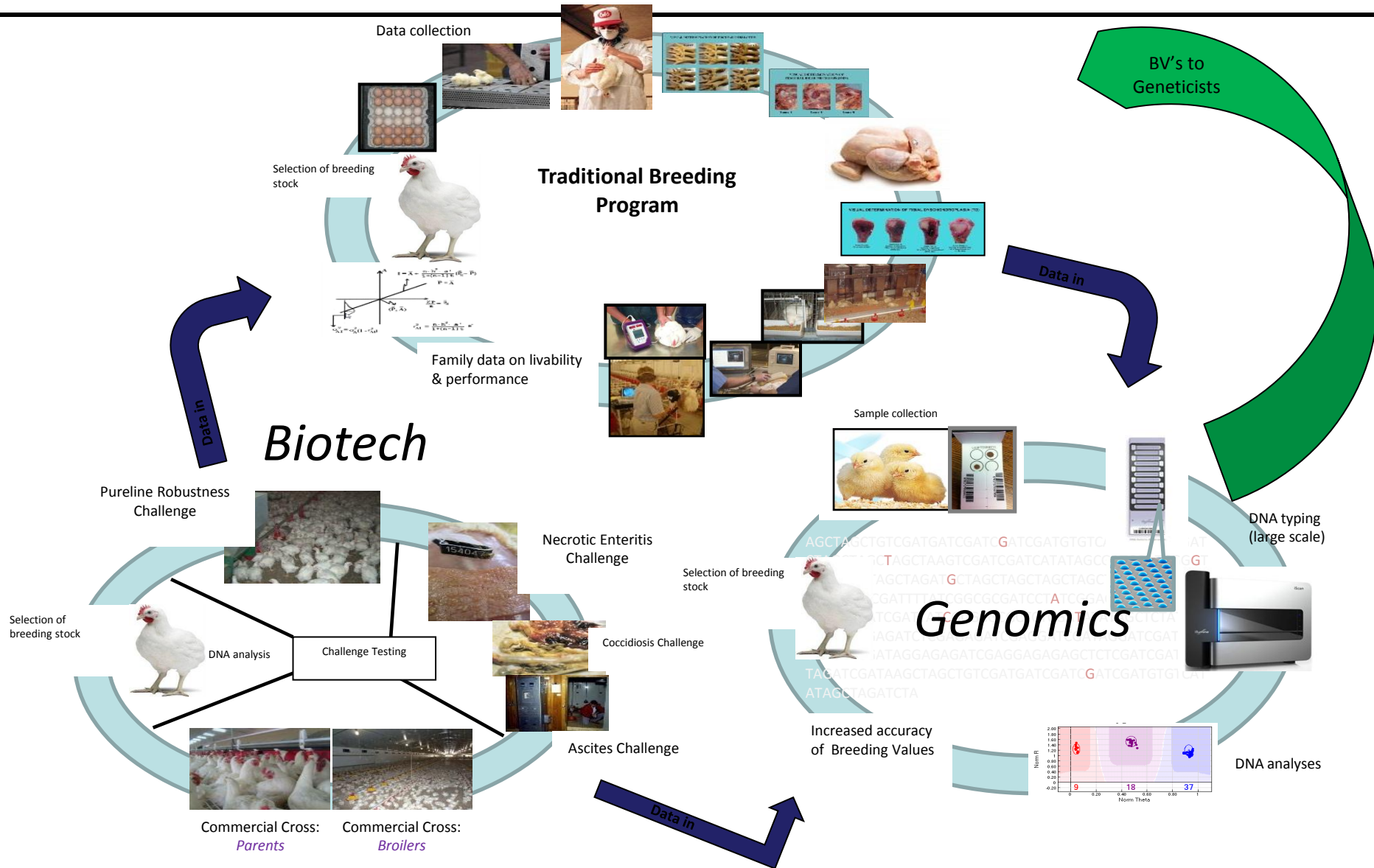
- Reduced food costs
- Increased food safety
- Allowed families to spend money on other goods
- Allowed resources that were used by farming to flow to other economic sectors
- Raised our standard of living

Reducing Broiler Waste

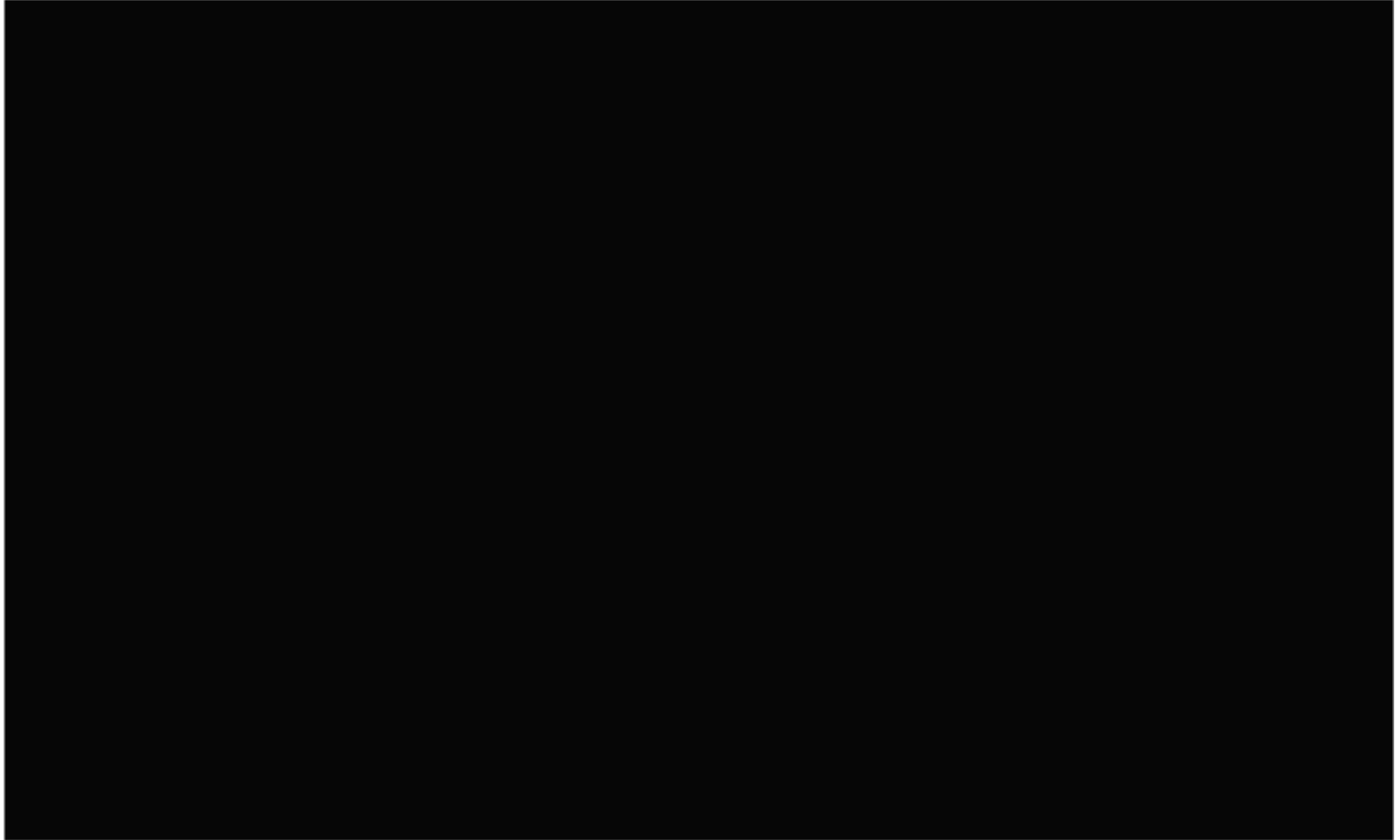


- *The same genetic progress in efficiency has helped reduce poultry waste. Broilers from 2010 produce 16,500 metric tons less dry manure than in 1980 for a broiler complex that processes 1 million broilers per week @ 2.27Kg.*
- *Cobb's genetic programs will continue to reduce Cobb's environmental footprint in the future.*

Evolution of Cobb Breeding



No GMO's & No Hormones in Chicken



Chicken is a safe food source





Thank You!!!



FAMILY

Work and communicate with people in the same way you expect others to treat you. Treat people like family. Be impartial and respectful. Focus on the best possible result for each other and the company.



INNOVATION

Encourage creative thinking to effectively use resources and technology within the company. Openly assist in creating objective free thinking and responsible risk taking. Participate in the development of business solutions and services.



INTEGRITY

Expect and provide honest communication and interaction at all times. Maintain the highest ethical standards, be sincere and candid in difficult situations. Comply with all laws and regulations. Question unethical behavior.



BEING THE BEST

Manage daily tasks to the best of your ability and accept full accountability for your actions. Encourage the team to do the same thing. Improve the company's performance, product quality and customer service.

