Bovine Reproductive Technology from a Producer’s Standpoint

Coleman H. Locke, President
J.D. Hudgins, Inc.
Impacts of Reproduction to the Poultry Industry

YEAR
1957

Day 43  Day 57  Day 71  Day 85

2010

(Miles et al., 2011)
Impacts of Reproduction to the Swine Industry

85% of operations with >500 sows use AI
Impacts of Reproduction to the Dairy Industry

180% decrease
375% increase

(Capper et al., 2009)
The US Beef Industry

Beef cattle no. \( \times 10^6 \)

Beef production, kg \( \times 10^9 \)

Year

17% more beef

28% fewer cattle
Country Comparison of Beef Production

(USDA, 2014)
Cattle Global Distribution

Reproductive Efficiency = Pounds of Beef!

FAO, 2005; Robinson et al., 2014
Opportunities for Stem Cell Technology

(Honaramooz et al., 2013)
Opportunities for Stem Cell Technology

- Use stem cells from genetically superior bull transplanted into testis of less desirable bulls

- Use stem cells from bulls in bulls that are adapted to tolerate tough climatic conditions (i.e., heat stress)
Final Thought!

Even today, simple technologies such as castration, breeding season management, or weaning may be more appropriate than more developed reproductive technologies and provide a significant improvement in production efficiency.

However, continued improvement in new reproductive technologies will provide opportunities that will affect beef production in the future.
Thank You!

Coleman H. Locke
President, J.D. Hudgins, Inc.
Hungerford, Texas

Phone: (979)533-0756
E-mail: clocke@wcnet.net