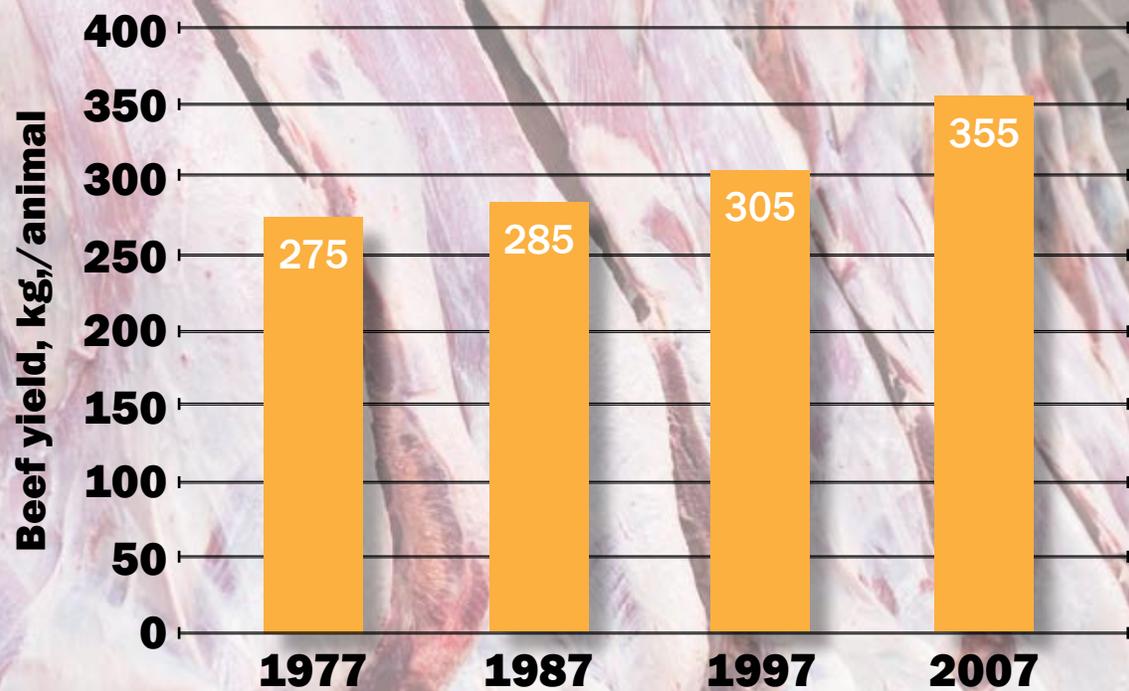


## SNACK AND FACT:

# The Use of Performance-Enhancing Technologies in Global Livestock Production



February 27, 2017

1300 Longworth House Office Building/ Washington D.C.

Hosted by the American Society of Animal Science

**G**lobal demand for food is expected to continue to increase with population growth. Since there is limited additional land that can be used for agriculture, there is a need to continue to increase the yields and the efficiency of production from existing lands while expanding opportunities to use aquatic natural resources for sustainable food production. In both plant and animal agriculture, we have seen tremendous improvements in productivity that have allowed us to feed more people from the same amount of land. These improvements have been the result of genetic selection, improved nutrition, and better management practices that have increased the efficiency and yield of both crops and livestock.

Photo courtesy of National Pork Board and the Pork Checkoff. Des Moines, IA USA



Today it takes only 5 pigs to produce 1,000 pounds of pork, compared to 8 pigs in 1959.

**12:00 – 12:10 PM**  
**Introduction and Goals**  
 Dr. Penny Riggs  
 Texas A&M University & ASAS  
 Public Policy Committee Chair

**12:10 – 12:25 PM**  
**A Brief Overview of Performance-Enhancing Technologies and Their Impact on Animal Agriculture**  
 Dr. Michael Azain  
 University of Georgia

**12:25 – 12:50 PM**  
**Realizing Opportunities in Aquaculture**  
 Dr. Caird Rexroad  
 USDA-ARS

**12:50 – 1:00 PM**  
**Discussion concludes**



The US pork industry has greatly improved the efficiency of production compared to 50 years ago.

Source: National Pork Board



**1944**  
548 gallons

One dairy cow makes almost five times more milk than one cow did 70 years ago.



**2015**  
2,600 gallons



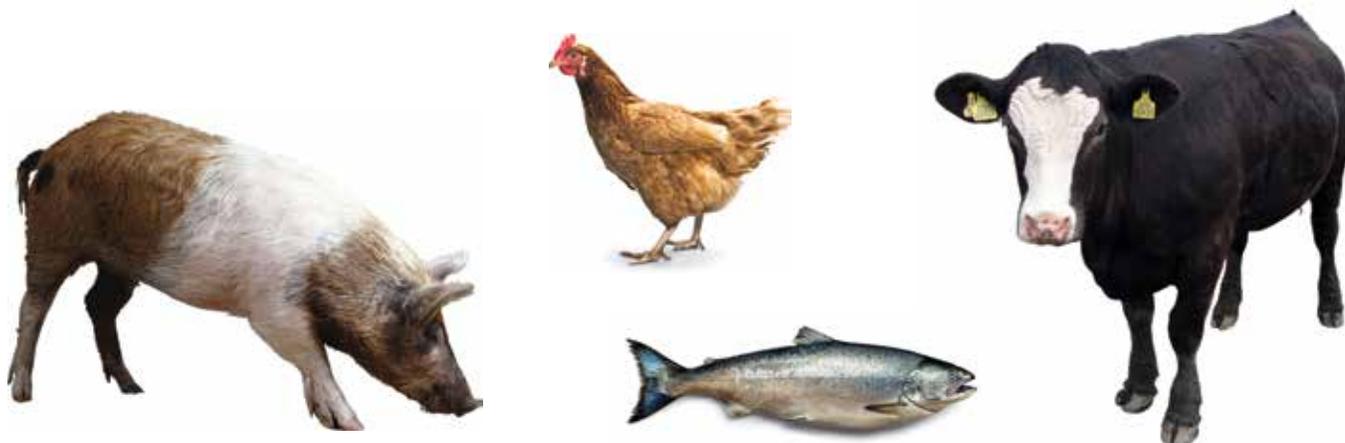
Photo: Peggy Greb

Market-size USDA 103 catfish ready for harvest. This new variety grows faster than other tested catfish.

The October 2016 issue of *Animal Frontiers* provides an overview of performance-enhancing technologies in global livestock production. The need to increase productivity is well-documented, as is the requirement that we minimize the impact on the environment.

In the *Animal Frontiers'* issue, Dunshea and colleagues use the term "sustainability imperative" and quote a U.S. EPA definition of sustainability as "meeting society's present needs without compromising the ability of future generations to meet their needs." The authors adds that there are three themes for sustainability: environmental responsibility, economic viability and social acceptability. They state that the focus on sustainability is often "hijacked" by groups lacking knowledge in the basis for common agricultural practices. This is very much evident in animal agriculture, and in particular how the public perceives the performance-enhancing technologies that are used or proposed.

Other articles in the issue review performance-enhancing technologies related to the production of meat from cattle, pigs, poultry, and fish. A better understanding of why these technologies are used and the science behind them is critical for our country to maintain its leadership role in food production.





**MICHAEL AZAIN** is Professor and Graduate Coordinator in the Animal and Dairy Science Department at the University of Georgia. Dr. Azain's previous research looked at the use of compounds that reduce body fat and increase protein deposition in the pig. He has conducted other research that examines the use of feed enzymes to improve nutrient digestibility and the overall efficiency of animal production. He teaches courses related to animal nutrition to undergraduate and graduate students.

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**CAIRD REXROAD** leads the USDA ARS National Program for Aquaculture whose mission is to conduct high-quality relevant fundamental and applied aquaculture research to improve the systems for raising domesticated aquaculture species, as well as develop and transfer technologies that enhance the productivity and efficiency of U.S. producers and the quality of seafood and other aquatic animal products. The portfolio includes freshwater and marine research conducted at 10 laboratories across the nation. Agency scientists use state-of-the-art approaches in genetics, genomics, physiology, nutrition, fish health, product quality and aquatic engineering to improve genetic stocks and develop scientific information on biotechnologies and management practices that ensure a high-quality, safe supply of healthful seafood and aquatic products.

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## ASAS Mission

The American Society of Animal Science is a membership society that supports the careers of scientists and animal producers in the United States and internationally. The American Society of Animal Science fosters the discovery, sharing and application of scientific knowledge concerning the responsible use of animals to enhance human life and well-being.

