

Producing Meat on a Finite Planet—Challenges and a Way Forward

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Meat will play an important role in feeding an increasingly hungry world. Today's population of 6.9 billion people is expected to grow to more than 9 billion by 2050. Feeding these people in a way that provides for the needs of future generations while not completely exhausting the planet's resources is a key issue. Global consumption already exceeds a sustainable level for which the earth can provide. A practical solution that accounts for today's needs as well as those of future generations means that "we need to use less to produce more."

Global trends provide distinct challenges and opportunities. The global population is expected to grow by another 3 billion people by the year 2050. Incomes will likely increase over the same period, resulting in a doubling of meat consumption. Meat demand is predicted to increase the most among food products. Additionally, urban centers will grow to represent a greater portion of the global population, resulting in an increasing dependence on already strained food supply chains. These trends will have significant impacts on many key issues, including food security, water scarcity, greenhouse gas emissions, deforestation, and supply chain risk resulting from social pressure. Members of the meat industry must recognize these risks and address these challenges in a precompetitive, meaningful, and insightful way.

The World Wildlife Fund (WWF) recognizes the need to work together on these important issues, and the organization has developed relationships with many food supply chain participants from around the world and across the food value chain. The reason for WWF's engagement in the food value chain is that the global footprint of agriculture is significant, accounting for 33% of the earth's surface, representing 58% of the inhabitable area of our planet. Additionally, specific to beef, grazing lands and cattle populations geographically match the areas that WWF has identified as priority places, meaning biomes that account for the greatest biological diversity on the planet.

Given the challenges that meat production faces, impacts that are acceptable with a global population of 6.9

billion people will *not* be acceptable with a population of 9.1 billion, which is the expected human population in 2050. The food production system, including (and most especially) the meat supply chain, needs to use resources more efficiently and intensify production; in other words, we need to freeze the footprint of food. This will be accomplished through increasing yields by adopting better genetics, adopting better management practices, using technology, improving the productivity of underperforming lands, protecting property rights (both real and intellectual), and decreasing waste throughout the supply chain, including consumer waste.

An important question that all the industries (especially the meat industry) need to answer is, "On a planet of finite resources, should consumers be forced to choose sustainable products?" Sustainability, defined as environmentally sound, socially responsible, and financially viable, is a precompetitive issue that affects everyone. The entire value chain must work together to improve the sustainability of meat production. There is very real risk in doing nothing, including increased legislation that is inflexible and stifling to innovation and continuous improvement.

Science-based multistakeholder solutions that focus on key impacts offer an opportunity for continuous improvement in sustainability focused on the triple bottom line. Examples of multistakeholder initiatives in the beef system are beginning to take shape. The Global Roundtable for Sustainable Beef is in the process of developing a way forward, as are regional and local initiatives. The initial phase of the Global Roundtable for Sustainable Beef is being led by a diverse group of stakeholders whose vision is to "be an action-oriented informational coalition of beef supply chain stakeholders committed to a sustainable global beef system." Additional stakeholders at the global level and additional work at the regional level are needed to continue the work and deliver meaningful results.

The meat industry will play an important role in feeding a growing world population; however, sustainability issues must be addressed to mitigate effects that challenge the industry. If members of the industry do not decide on a path that leads to improvements, social and political pressure will increase, with results that are undesirable and limiting to the industry and less helpful to sustainability than what could have been achieved from innovation fostered through multistakeholder initiatives.

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