

Global Food Security

International Livestock Congress discusses how livestock production can play a role in global food security.

by Kasey Brown, associate editor



Trying to predict the future of food security is like driving at night in the fog. You can only see as far as your headlights, but you can make the whole trip that way, explained Kevin Ochsner, founder of Agcellerate. He moderated a panel consisting of Jimmy Smith, director general of the International Livestock Research Institute; Hsin Huang, secretary general of the International Meat Secretariat; and Berhe Tekola, director of animal health for the Food and Agricultural Organization at the International Livestock Congress (ILC–USA) in Houston, Texas, in March.

There is no question that food production has its challenges and opportunities in the

coming years. The population is projected to grow by about 77 million each year, and the middle class will increase as incomes rise. Global middle-class spending is projected to increase from \$21 trillion today to \$51 trillion in 2030, said Ochsner. Developing countries will account for 81% of the projected global meat consumption increases.

However, there are challenges, including natural-resource constraints, a growing focus on sustainability, technological advancements, animal welfare concerns, weather/climate, and global trade policies.

Smith emphasized that a person can be fed but not nourished, which is why protein, vitamins and minerals are so important. Four of the top five global commodities in value terms are livestock. He added that livestock is the fastest-growing set of commodities, and demand is growing rapidly in the developing world.

How can this demand be met? Smith suggested three possibilities. Food can be bought through trade, but most developing countries cannot afford to import all food. Importation of technology and knowledge of its use is the second option. The last, and his favorite option, is to transform smallholder livestock systems. He emphasized that smallholders need access to markets to incentivize increased production.

Tekola said that increased efficiencies will be needed to use fewer resources. He

admitted that livestock production is a resource-heavy sector, saying that livestock account for 17% of land use. However, he suggested looking inward to find the best solution to mitigate the shortcomings of the livestock sector.

Huang added that the global livestock sector produces 14.5% of global greenhouse gasses, but also 28% of global protein. The livestock sector mainly uses land that is not suitable for other activities, and 80% of livestock feed is not suitable for human consumption. Additionally, livestock provides

livelihoods and important byproducts — draft power, leather, medicines and manure — to many in

developing countries.

“Unless we bring smallholders to industries, industries cannot do it alone. We need to convert smallholders from subsistence farmers to marketing their products,” Tekola noted. All panelists agreed that partnerships are mandatory; no individual institution can do the job. The global livestock sector must collaborate to tackle food security.

Livestock production in Africa, Mexico, China

World food production has increased by 145% in the last 50 years, said John Paterson, executive director of producer education for the National Cattlemen’s Beef Association, and the world needs 70% more food production in the next 50 years.

Paterson moderated a panel consisting of Smith; Enrique Lopez, director general of the Cattle Fatteners Association–AMEG; and Joel Haggard, vice president of Asia Pacific for the U.S. Meat Export Federation (USMEF).

Smith said that seven of the fastest-growing economies are in Africa, and this is increasing demand for meat, milk and eggs. The gains in demand in developing countries are outpacing those of developed countries. The per-capita calorie availability from edible animal products is very low in Africa, he said,



Technology use to feed a growing world

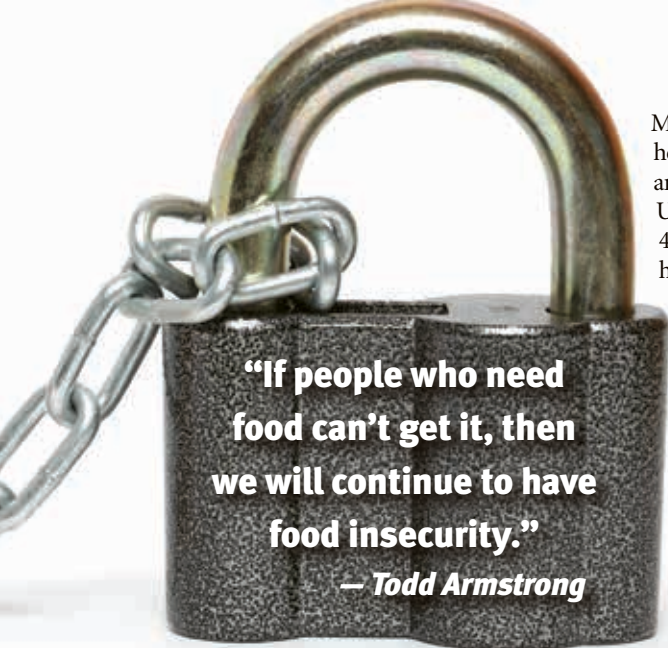
“We’ve talked about food security enough and read about it enough; now we need to act,” urged Todd Armstrong, senior director of U.S. beef operations at Elanco Animal Health. Speaking to attendees of the International Livestock Congress (ILC–USA) in Houston, Texas, March 5, he said until you determine the face of what food insecurity looks like to you, food security will continue to be a philosophical discussion.

There are three realities to food security — a growing middle class; an increasing demand for meat, milk and eggs; and feeding more with less. The world population will grow by 3 billion people, with the fastest growth in the next five to 10 years, he said, so we will need 60% more animal-sourced foods. However, it takes about 1.5 years for the earth to regenerate our annual consumption of resources.

He shared his vision for a food-secure world, which started with access to food, having enough meat, milk and eggs for all. Affordability was next, with better food at better prices. Healthy, nutritious food would help prevent disease, hunger and obesity. More-efficient resource use would allow more people to be fed with fewer resources. This would create stability because plentiful food limits unrest.

By 2050, the world will need 43% more beef, Armstrong said. In 2010, 66.7 million metric tons were produced, but 95.2 million metric tons will be needed by 2050. Innovation, choice and trade will be the solutions to accomplish that need.

Innovation has unlimited potential, he noted. Nutritional advances, genetic selection and breeding practices, and improved animal health practices would help grow beef more efficiently. He shared a study that indicated with optimal nutrition alone, the worldwide



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— Todd Armstrong

though with increasing incomes, availability is changing.

Africa has the highest concentration of arid and semi-arid rangelands. He said these rangelands are the largest land-use system on Earth, accounting for 24% of total land. He added that the area supports 50% of the world’s livestock. These rangelands are often associated with wildlife, which attracts tourism. Smith noted there is opportunity to share benefits between the two sectors.

So many people in developing countries depend on livestock for their livelihood. Productivity of African livestock is low, and efficiency in reproduction, nutrition and management will reduce emissions of greenhouse gases.

Lopez said Mexico is working to increase its organization, productivity, sustainability and competitiveness in its beef industry.

Mexico has 32 million cows in its herd. It exports 144,000 pounds, and 83% of their exports are to the United States. Nationally, there are 450 feedlots, which feed 1.4 million head.

He highlighted several national livestock-enhancement programs that are working to increase national identification and traceability, welfare practices in feedlots, Mexican beef brand classification, and domestic and international beef promotion.

Haggard explained that the future of Chinese livestock production is murky at best. China’s red meat sector is the world’s largest. China is the

largest producer of red meat and also the largest importer, though he said livestock reporting is sketchy.

China does not want to be dependent on food imports. Production is modernizing, but smallholders still dominate the industry, he said. Currency and the high cost of grain (more than \$9 per bushel of corn) make Chinese red meat uncompetitive.

He added that China is the land of contrasts. He cited that many farmers are subsistence farming, yet the cities boast local Wagyu beef. Urbanization is a current driver of demand, though he said the government restricts movement.

In cities, he said more than 50% of beef is eaten outside the home, and most beef is grass-fed due to extremely high corn prices. Wet-cooking methods are still most prevalent, though dry cooking of marbled beef is growing in prevalence.

However, market access for other countries is the strictest in the world and changes often, Haggard explained. Policy will heavily influence future development, and he admitted that the market does not necessarily drive demand. Additionally, domestic producers also face increasing domestic regulations. Haggard concluded that, because of these factors, the long-term outlook for China livestock production is murky.

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average of steer growth accomplished in five years could be accomplished in two years instead.

Consumer choice is another key. The measurements of consumer demands have changed from headlines, aided questions and call enquiries to media mentions, unaided questions and consumer spending. A metadata study of international consumer attitudes indicated 95% of consumers make their food choices based on taste, cost and nutrition. Four percent were luxury buyers, but he added that the two are not mutually exclusive. Many consumers buy luxury products, like Starbucks® coffee, but also conventional products in other buying decisions. One percent makes up the vocal fringe of consumers who support food bans, restrictions and propositions.

“Consumers want choices. We must move from an ‘or’ mind-set to an ‘and’ mind-set. We can have conventional beef and organic beef,” Armstrong offered.

Trade is the last key.

“The bottom line is that food must move,” he explained. “If people who need food can’t get it, then we will continue to have food insecurity.”

Trade increases availability and affordability, and increases sustainability by growing food in places with optimal resources and using them most efficiently. However, trade is most often blocked by politics.

“Politics cannot be allowed to trump food security,” he concluded.

To take action on food security, he suggested starting by visiting www.sensibletable.com or www.enoughmovement.com.