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NEWSLETTER

U.N. Releases Report: *The Future of Food and Agriculture: Trends and Challenges*

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Product Stewardship and Sustainability Report

On February 22, 2017, the United Nations Food and Agriculture Organization (FAO) released a report on 21st century agriculture and food security. Titled "The Future of Food and Agriculture: Trends and Challenges" (http://www.fao.org/publications/fofa/en/), the report raises serious concerns about the likelihood that future global populations will have uniform food security. The report finds that the primary challenges jeopardizing food security are intensifying pressures on natural resources, increasing global socioeconomic inequality, and the undeniable impacts of climate change.

The report notes that significant worldwide progress has been made during the past century "in improving human welfare." This includes progress in reducing global hunger, as worldwide agricultural production has more than tripled between 1960 and 2015. These gains in worldwide food production are the result of the technologies associated with the "Green Revolution," and greater use of land, water and natural resources in agricultural production. However, the report notes, these gains "have often come at a heavy cost to the natural environment," as forests disappear, groundwater sources are depleted, and biodiversity declines.

Moreover, according to FAO, the future portends the likely possibility of a global population of 10 billion people by the year 2050, resulting in a rise in global demand for agricultural production of up to 50% over present levels. Coupled with changing diets that will demand more protein, fruits and vegetables, and climate change-induced increasing variations in precipitation and severe weather events, along with more droughts and floods, the strains on food production

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will be substantial.

The core question addressed by *The Future of Food and Agriculture* is whether, collectively, the world's agriculture and food systems will be able to sustainably meet the nutritional needs of the global population. In short, the report concludes that global food systems are capable of producing enough food to meet the demands of growing human populations, but that doing so sustainably will require "major transformations" in the way that food is grown and distributed.

Of course, one of the major transformations that will be required will be greater acceptance of agricultural technology, including agricultural biotechnology – which can be a major driver of improvements in productivity and resource-use efficiency. The report recognizes this: "The world will need to shift to more sustainable food systems which make more efficient use of land, water, and other inputs and sharply reduce their use of fossil fuels, leading to a drastic cut of agricultural green-house gas emissions, greater conservation of biodiversity, and a reduction of waste. This will necessitate more investment in agriculture and agrifood systems, as well as greater spending on research and development, the report says, to promote innovation, support sustainable production increases, and find better ways to cope with issues like water scarcity and climate change."

While the report is reasonably optimistic that the challenges to achieving global food security can be met, agrifood observers should note that it is not a given that the necessary investments in research and development and corresponding changes in regulatory policy will occur. Regulatory authorities in the European Union and the United States, which are generally considered progressive jurisdictions, have yet to institute fully risk-based regulatory approaches to agricultural biotechnology. Rather, in both the EU and the United States, agricultural biotechnology has been subjected to policy-based regulatory hurdles that have delayed the development of promising technologies and imposed significant unnecessary costs on vital agronomic advances. It is crucially important that these policy-based impediments to regulatory approvals be replaced by decisionmaking that is based on the actual risks of the technologies, and that takes full account of the benefits of this technology, if the challenges of the coming century are to be met.