



Breeding Scientific Innovations, Harvesting Global Commercial Breakthroughs
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FOR IMMEDIATE RELEASE

World Food Supplies Threatened by Climate Change, Rising Wages and Population Growth, Experts Forecast at Global Ag Innovation Showcase

ST. LOUIS (May 23, 2011) -- A volatile recipe of exploding population growth, climate change, falling crop yields and more demand for meat and dairy will put world agriculture under tremendous pressure, experts said at the third annual global Ag Innovation Showcase, held at the Danforth Plant Science Center in St. Louis, MO.

Private industry, governments and social welfare groups must move quickly to invest in agricultural science, rural farming and infrastructure in all regions across the globe, to mitigate the evolving spiral, a panel of agriculture scientists, educators and business leaders said during the Showcase's Ag Economic Forum.

"You're going to see a fairly bleak picture in business-as-usual scenarios," Mark Rosegrant, director of environment and production technology at the International Food Policy Research Institute, said Monday in the forum's agriculture economic keynote address during the two-day conference.

With world population projected to hit 9 billion people by 2050, food production must escalate globally because of lower crop yields due to climate change in all agricultural regions and rising wages in Asia (especially China), Latin America and Africa. Increased family incomes in less developed countries will fuel increased demand for meat and dairy, Rosegrant said. At the same time, demand for grains will double in Latin America and triple in sub-Saharan Africa and, he predicts, fuel prices could rise to \$125 to \$150 a barrel by 2050, putting more pressure on agriculture worldwide to produce biofuel alternatives.

"There will be a lot more pressure on the land to feed people," he told an international gathering of corporate industry leaders, venture capitalists, institutional investors and entrepreneurs involved in advancing agriculture.

He even projected a future where, due to climate change, the U.S. would not export corn overseas because of demand at home.

"In a lot of the analysis we've done, the U.S. is really under threat of climate change, which will significantly reduce yields from the American agricultural heartland without changes in practices and crop characteristics. Parts of Latin America, Asia and Brazil also will be hit hard," Rosegrant said. "Climate change poses a significant risk to productivity growth if we don't adapt to it well."

Without changes in crop productivity and other agriculture policies, food prices will also rise globally, and calorie consumption could drop on average a dramatic 12 percent in the developing world. That, in turn, will cause more childhood malnutrition particularly in Southeast Asia and Sub-Saharan Africa, he said, unless major investment is made in agriculture infrastructure, farming techniques and other crop adaptations. He estimates the number of children afflicted by malnourishment could drop by 30 million by 2050 with at least a \$32 billion in public investment in agriculture, infrastructure and social programs.

If such investments are not made, “there is a fairly dismal outlook on the goals we had to cut childhood malnutrition, but we can make significant progress despite the future scarcity by making this investment,” Rosegrant said.

In the meantime, the world’s most populous country--China--will cease its population growth by 2026 and some 500 million Chinese will move from the countryside to cities. They will eat less rice and wheat and, with their rising incomes, demand more meat, dairy and fish, which will boost demand for livestock feed.

China will become an agricultural importer and is already trying to boost farm productivity by investing more in biotechnology, outspending U.S. government ag research twofold, said panelist Scott Rozelle, the Helen F. Farnsworth Senior Fellow in the Freeman Spogli Institute for International Studies at Stanford University.

“China is going to be part of the world food change in the future, and it’s going to be part of the answer--maybe,” Rozelle said.

There are some bright spots. Brazil will produce about 40 percent more agricultural products by 2019 and continue to boost its global exports, especially to China, India and Africa, said Elisio Contini, deputy of the Strategic Studies & Training Center at EMBRAPA (the Brazil Enterprise for Agricultural Research). Brazil has doubled its output of grains to 160 million tons a year since 1977, quintupled sugarcane production to 625 million tons a year in the same time, and produced 31 million tons of meat and poultry last year.

“We have had a big revolution in poultry, beef and pork,” Contini said. “Brazil is providing food meat for our population and for export to other countries.”

Some solutions to the coming agriculture crisis involve financing and opportunity for farmers in developing countries, such as increasing access to financing for farmers in Africa, investing more in mobile-phone banking in the developing world and infrastructure investment, plus educating women and children, said Joyce Cacho, chief sustainability officer for animal health and nutrition company Novus International of St. Louis.

“We must invest in rural development, reduce energy cost while increasing energy availability, increase accessibility to quality, nutritious, affordable food, improve environment management, and address social justice,” Cacho said.

Techniques such as better water harvesting, modernizing farming practices, reducing post-harvest losses, and using mobile phones to give farmers more ag information are necessary as well, panelists said.

About the Ag Innovation Showcase

Established in 2009, the Ag Innovation Showcase is the leading annual global event for agriculture’s industry leaders, entrepreneurs, venture capitalists and investors. It promotes

emerging technologies in ag-bio, food and nutrition, biofuels, sustainable materials, clean-tech, information technology and animal health. Held at the Donald Danforth Plant Science Center in St. Louis, MO, the largest independent plant science research institute in the world, the Ag Innovation Showcase is a joint effort of BRDG (“bridge”) Park at the Danforth Plant Science Center and the Larta Institute, as well as a number of sponsors. More information is available at www.agshowcase.com