

This meeting recap was prepared by National Academies staff as an informal record of issues discussed during public sessions of the October 22-23, 2008 meeting of the Government-University-Industry Research Roundtable (GUIRR). The document is for information purposes only and supplements the meeting agenda available online at www.nas.edu/quirr. It has not been reviewed and should not be cited or quoted, as the views expressed do not necessarily reflect the views of the National Academies or members of GUIRR.

**Government-University-Industry Research Roundtable
Food Security – Global Challenges and Directions
GUIRR Meeting: October 22-23, 2008**

This particular meeting served to lay out the big issues around a complex worldwide problem and examine a handful of creative science- and technology-based solutions initiated by the three sectors of GUIRR.

Meeting Summary

Our keynote dinner presenter, Dr. Joachim von Braun, set the stage for the meeting with a broad-stroke overview of the “big picture” and a bold declaration: The future of the world food system needs to be governed differently if we are to be able to feed a global population of 9 billion by the end of the next century. He emphasized the need for greater investment in science and technology, suggesting that the U.S. double (from \$5B to \$10B) its poverty-reducing agricultural R&D in the developing world. He went on to identify 14 “best bets” for research investments, including six approaches to produce more food for people, four approaches designed to better secure the environment for people, and four approaches supporting innovation for people on a global scale. Dr. von Braun closed by identifying three key areas, namely: (1) markets, (2) nutrition, and (3) productivity, that require immediate policy responses if we are to adequately address the world food crisis. (Dr. von Braun’s presentation, along with those of all other guest presenters, may be viewed at <http://www7.nationalacademies.org/quirr/Meetings.html>, with the presenters’ permission.)

Opening the meeting day, our set of early morning presenters teased apart various aspects of the current crisis, looking at the impact of rising food prices (the villain is not high grain prices, we learned; it is *volatile* grain prices), the convergence of valuation between energy and corn, and issues around agricultural trade and aid. The case was made that food is part of a complex global system that is fraught with challenges that demand better government-university-industry interaction and coordination going forward. “We need international consensus on immediate needs,” stated one guest speaker, who added: “Collective action is the only way to go.”

After this “Defining the Challenges” portion of the meeting, we heard from numerous experts who showcased innovative technology responses to the food security crisis originating from the government, university, and industry sectors. We learned of Monsanto’s corporate commitment to doubling yields in corn, soy, and cotton through improved genetics, and of the USDA’s federal investment in agricultural science with an emphasis on genomic research, sensors and measurement, and nanotechnology. We also heard about NASA’s work with remote sensing technology, providing early warning of impeding decline in agricultural production and introducing vital, non-controversial data into the decision-making process. Finally, we learned about an important organizational initiative of the University of California-Davis (PIPRA) to improve agriculture and alleviate poverty by decreasing intellectual property barriers and increasing technology transfer from developed to developing nations.

The meeting was capped with a luncheon presentation highlighting the distinction, albeit relational, between food security (availability) and food safety (public health impact), speaking mainly to the latter.