THE CHALLENGE

Despite progress toward the goal of eradicating hunger worldwide, nearly 800 million people (1 in 9) are food insecure (FAO, 2015). In the US, an estimated 14.3 percent of households (17.5 million people) were food insecure at some time in 2013 (USDA, 2015). The World Food Program estimates that 1 in 6 children (nearly 100 million) are underweight, 1 in 4 are stunted, and poor nutrition causes 3.1 million children under 5 to die each year. Global demand for agricultural products is expected to grow 1.1 percent per year from 2005/2007-2050, primarily due to population growth, increases in per-capita consumption, and changing diets. In order to match this projected increase in demand, by 2050 global food production must be 60 percent higher than it was in 2005/2007 (FAO, 2012). This level of production must be achieved within the context of growing environmental problems, water demands, energy costs, and issues related to the distribution, utilization, and waste of food.

The costs of continuing business is usual is great. The global food crisis of 2007-2008 offers a glimpse of what a food insecure future could hold. Costs of staple cereals, such as rice and wheat, by some estimates doubled and tripled around the globe; political protests and riots broke out across Asia, Africa and Latin America. Developed countries were also impacted, with declines in food-related expenses by low-and middle income households.

OUR RESPONSE

Universities are uniquely equipped, by virtue of their broad-ranging subject matter expertise and global experience, to respond to the multi-dimensional issues that impact global food security. Historically, public and land-grant universities have been instrumental in solving food and agricultural challenges both in the US and overseas. But today’s food security issues have grown in complexity – they are multi-dimensional, cross-disciplinary and multi-national. They occur in conflict zones around the globe and in areas severely impacted by weather-related shocks. Systemic change, new funding patterns, innovations in public policy and governance, and unprecedented global partnerships are needed.

At public and land-grant universities all relevant disciplines are present and can come together to address these complex issues. Existing private sector/university partnerships are in place and can be leveraged to complement public investment.

APLU, an association of more than 230 public research universities of North America, has established the Challenge of Change Commission to examine contemporary challenges to food security and to make recommendations on the actions required in research, education, and global outreach to meet the future challenges. Universities must better align their resources and structure, incorporate the rapidly expanding array of new technologies, and engage cultural and social input to solve these complex problems. Governments must also play a crucial role in facilitating and supporting the vast public university resource that has contributed to economic and social well-being if we are to meet global food needs by 2050.

OBJECTIVES

The objectives of this project are to identify:

- Identify critical areas constraining our food system’s potential;
- Determine how universities, working with key partners, can mobilize to remove constraints;
- Recommend actions that will enhance and align resources to foster innovative solutions.

THE WORK OF THE COMMISSION

The commission is chaired by Dr. Randy Woodson, Chancellor of North Carolina State University. Members include university leaders (domestic and international), subject matter experts, as well as current and former
private and public sector officials. Drawing on university and external expertise, the commission is proposing a framework articulating innovations needed domestically and globally in production and non-production areas.

Interdisciplinary task forces have been working to further develop components of the framework and help shape a final report on realigning resources to tackle the 2050 food security challenge. Focused in three components largely agreed upon as the basis of food security, availability, access and utilization, these working groups, established by the Commission in its initial meeting in Washington, D.C., are considering challenges across eight areas:

- Sustainable Production Systems
- Plant and Animal Performance
- Supply Chains, Distribution, Loss and Waste in Food
- Enabling Environment for Access and Solutions
- Inclusion and Equity
- Nutrition, Human Development, and Health
- Food Safety, Sanitation and Public Health
- Knowledge and Education

Cutting across all three components of food security, as well as the domestic and global aspects of the work of the commission are four factors: institutional transformation of public universities, climate change, the policy and trade environments, and environmental effects and impacts. These four cross-cutting issues will be embedded across all eight working group topics.

Following the completion of the identification of potential challenges by the working groups, the Commission will meet to make final decisions on recommendations of challenges that public universities can and should address in order to set a public university vision for food security and to make recommendations to the administration on investments. We anticipate supplements to the report to address recommendations to appropriate Canadian and Mexican government authorities.

The Association of Public and Land-grant Universities is a research, policy, and advocacy organization dedicated to strengthening and advancing the work of public universities in the U.S., Canada, and Mexico. With a membership of 238 public research universities, land-grant institutions, state university systems, and affiliated organizations, APLU's agenda is built on the three pillars of increasing degree completion and academic success, advancing scientific research, and expanding engagement. The association's work is furthered by an active and effective advocacy arm that works with Congress and the administration as well as the media to advance federal policies that strengthen public universities and benefit the students they serve.

APLU undertakes a wide array of projects and initiatives along with its members and provides a forum for public higher education leaders to work collaboratively and better meet the challenges and opportunities facing public universities. Annually, APLU member campuses enroll 4.7 million undergraduates and 1.2 million graduate students, award 1.2 million degrees, employ 1.4 million faculty and staff, and conduct $42.7 billion in university-based research.

LEARN MORE ABOUT THE CHALLENGE OF CHANGE

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