The Challenge of Change: Engaging Public Universities to Feed the World

BACKGROUND

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.

APLU has established a commission that will examine challenges to food security and make recommendations on the actions required by public research universities to meet global food needs by 2050. Historically, our public universities have been instrumental in solving agricultural challenges, but today’s food security issues are even more complex. These issues are multidimensional, crossing disciplinary & national borders, and solving them requires systems to change. Universities may be the only place where all relevant disciplines come together to address these complex, systemic issues.

Randy Woodson, Chancellor of North Carolina State University, is chairing the project. The members include university leaders, experts, a representative from the private sector & a former senior public official. The commission also includes university leaders from Canadian & Mexican APLU members, as well as developing country universities.

PROJECT OBJECTIVES

The objectives of this project are to identify:

- Key constraints to our food system’s ability to sustainably feed the world
- How institutions of higher education can best provide knowledge to remove food security constraints
- How resources from the public and private sector can be aligned to support solutions

THE WORK OF THE COMMISSION

The commission will identify, drawing on external expertise, an initial framework of the required research, institutional strengthening, human resources development & university organization needed to meet this challenge. It will appoint appropriate task forces to develop &/or expand on the components of the initial framework & will work with these groups to develop the final report. The report will focus the attention of the international university community, the US government, the private sector & the international development community on how to realign resources & efforts to best tackle the 2050 food security challenge. The project objectives will be addressed through the work of inter-disciplinary working groups that will focus on both domestic and global production and non-production issues related to feeding the world sustainably by 2050:

- **Sustainable Production Systems**, including how to increase plant and animal agricultural production yields, enhance and maintain soil health, and utilize water sustainably and efficiently;
- **Plant and Animal Performance**, including needed advances in plant and animal breeding and increasing yields;
- **Supply Chains, Distribution, Loss and Waste in Food**, including challenges across the food supply chain both domestically and globally;
- **Enabling Environment for Access and Solutions**, including policy environments that enable local participation and input into food systems;
- **Inclusion and Equity**, including growth that promotes equitable access for everyone to food
- **Nutrition, Human Development, and Health**, including both over- and under-nourishment and how early childhood nutrition affects social and economic productivity;
- **Food Safety, Sanitation and Public Health**, including food and non-food related factors such as safe water and hygiene & their impact on public health; and
- **Knowledge and Education**, including the importance of consumer food and nutrition education as a component of food security.