

# Healthy Food Systems, Healthy People

EXECUTIVE SUMMARY – October 1, 2015

The Association of Public and Land-grant Universities' Board on Agriculture Assembly and Board on Human Sciences launched the Healthy Food Systems, Healthy People initiative on July 23, 2014, to build on work previously submitted by the Extension Committee on Organization and Policy's Health Task Force. This report identifies research and education/outreach priorities, as well as the need to integrate these efforts across agriculture, food, nutrition, and health care systems to make a positive difference on human health and chronic disease. America's land-grant universities' colleges of agriculture and human sciences have the capacity to advance research, education and engagement as it relates to human health. Many institutions and professionals understand how agriculture, food and nutrition can independently affect a person's health, yet little work has been done that integrates these systems with health care to understand impacts on overall human health and incidence of chronic disease.

This unique initiative calls for collaborations and integration among agriculture, food, nutrition, and health care systems that have never before been explored or optimized. Working across these systems and developing solutions that combine multidisciplinary research and education efforts is a new and essential way to approach the issues facing human health and chronic disease prevention.

## PROGRAMMATIC PRIORITIES

In order to understand the depth and breadth of challenges and opportunities surrounding human health, input was solicited from experts representing agriculture, food, nutrition, and human health. Five programmatic priorities were identified that could successfully connect agriculture, food, and nutrition systems together with health care systems to improve human health and minimize the impact of chronic disease. Critical public and private partners were also identified to help achieve those priorities.

### • Integration Across Systems

Research and education priorities will require expertise in systems implementation science, identifying how to measure system variables, and implementing evidence-based strategies to change food systems and health care systems to impact human health and chronic disease. A greater understanding of the differences and challenges that have kept these systems separate could provide a means of building more sustainable and enduring relationships across systems.

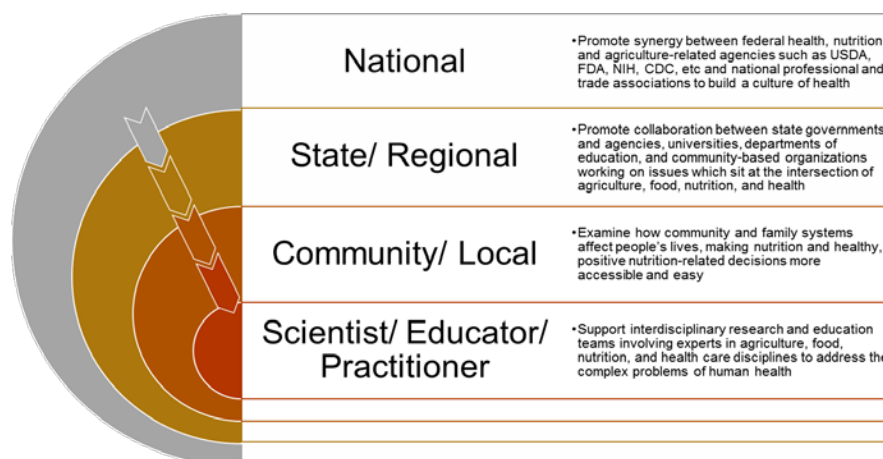


Fig 1. Integration must occur at many societal levels; including national, state/regional, community/local, and scientist/educator/practitioner.

### *Goal*

Realign the research and education approaches using a “systems thinking” model to remove barriers, incentivize the formation of interdisciplinary partnerships among various entities (i.e., academia, industry, federal and state governments and health care), resulting in responsive systems approaches for positive health outcomes of individuals across communities, states, the nation and the world.

### • Drivers of Food Choices and Consumer Behavior

Obesity is a complex issue influenced by consumer behavior, including food consumption choices. The role of policy, systems, and environmental drivers of consumer behavior is not well understood. There is a need

to examine the complex interrelationships between various factors that could affect obesity. Research on determinants of food consumption/purchase behavior studies is extensive; however, additional behavioral research is needed in order to understand how consumers make choices.

#### *Goal*

Identify the main policy, systems, and environmental drivers of consumer behavior in relation to chronic diseases; and understand the drivers' inter-connectedness in terms of food consumption decisions and how that information can be used to influence better decisions.

- Impact of Food on Consumer Health

Effectiveness of bioactive food components in promoting human health and well-being is the result of complex interactions of food composition, human genetic predisposition/lifestyle factors, and the gut microbiome. To most effectively utilize food or food bioactive compounds to promote human health and reduce chronic disease requires a clear understanding of these interactions. Acquisition of this knowledge, which requires a systems biology approach, could allow us to tailor optimal nutrition programs for each individual for maximum effect in promoting human health and reducing chronic disease.

#### *Goal*

Better understand the complex interrelationships of the food-human-gut microbiome ecosystem and its roles in promoting human health.

- Definition and Availability of Quality Food

Food quality encompasses the characteristics of food that make it both safe and acceptable to a consumer. Considering the well-established relationship between diet and health, a broader definition of food quality is needed that can account for the diversity of factors that may impact human health. Consumers, producers and health professionals need a definition of food quality that incorporates the interaction of food constituents with human therapeutic targets to prevent chronic disease or improve metabolic function.

#### *Goal*

Broaden the definition of food quality in a manner that considers the true functionality of food and translation of human health promoting attributes to consumer food products and dietary supplements.

- Education, Outreach and Engagement

Many sources of misinformation about nutrition and lifestyle interventions have emerged in the last several decades. The best means of countering this is to provide research-based information, through credible sources to patients and clients throughout the communities. Improving the lab-to-community pipeline of information by providing education through Cooperative Extension regarding the impact of food and nutrition on health to health care providers will provide improved patient interventions, and to the general public will enable more informed health decision-making.

#### *Goal*

Improve the lab-to-community pipeline so that medical, public health, education, and Cooperative Extension professionals are well-prepared to use state-of-the-science food and nutrition recommendations to help their patients, clients, and the public improve their health and lessen the burden of chronic disease.

## **CONCLUSION**

All over our nation and across the world, people are suffering from a variety of chronic diseases and diminished health. With public and private partnerships in academia, industry, and government, the expertise is available to move this initiative forward. Strategic partnerships, coupled with appropriate funding opportunities, will revolutionize the way we approach integration of agriculture, food, nutrition, and health care systems when identifying solutions for challenging human health issues. A strategic investment is needed to create partnerships and to integrate food and health systems which will ultimately improve the lives of Americans.