Statement of Former Secretary Dan Glickman before Senate Agriculture Committee December 2, 2020

It is an honor to appear before this Committee, which confirmed me to the post as Secretary of Agriculture over 25 years ago. It is also a pleasure to be here before my longtime friend and Kansas colleague, Senator Pat Roberts, who has done so much to advance the issues of agriculture research and highlight their importance to the country. I also want to pay special tribute to my friend Debbie Stabenow, who has equally worked to prioritize and support agriculture research. Both are wonderful examples of what bipartisan cooperation can mean to achieve a common goal of improving food and agriculture research, help sustain farm productivity, consumer trust in the food supply, fight domestic and global hunger, and promote a sustainable and environmentally friendly agriculture. Both legislators have been extremely supportive of the Foundation for Food & Agriculture Research (FFAR) which is becoming extremely critical in finding out-of-the box solutions and utilizing public-private sector partnerships to solve important challenges of the future. So many others on this Committee have also been bipartisan leaders in prioritizing agriculture and food research; that research apparatus is one of the most important functions of the U.S. Department of Agriculture.

It goes without saying that resources and help for food and agriculture research should continue to be a very high priority for this Committee, for the United States Department of Agriculture (USDA) for a myriad of other federal agencies, for the land-grant and non-land-grant university communities, and for the private sector. Even in a period of tight budgets, the benefits of increasing these resources should be understood to be critical for our nation's economic growth. In this statement, I wish to discuss the priorities I would hope this Committee and the new secretary and Administration will consider as you develop spending priorities over the next several years. What are these priorities?

In the short term, COVID has been nothing short of a disaster for the country and for agriculture and the food supply. While scientists are working to examine its origins, causes, and impacts on human and animal health, research into zoonotic diseases must be a much higher short-term priority. COVID, SARS, avian influenza, other strains of bird flu and even Ebola have wreaked havoc on our country and continue to be a source of destruction for the food system. It is clear that these diseases jump from animals to humans. We need to invest heavily into the causes and cures of these diseases. It is estimated that 70 percent of all human viruses come from animals. The cost of COVID and other diseases, many yet to be discovered, has been monumental for agriculture workers, businesses, the frightening increase in domestic hunger, and the entire food supply. This pandemic could, and likely will happen again, and the costs to our country and to the food and agriculture system will be profound. A concerted national effort, perhaps led by the agriculture research community, is desperately needed. The National Bio and Agro-defense Facility (NBAF), located at Kansas State University, can be a leading player in this area.

In the area of nutrition and health, diet-related diseases are the leading causes of poor health and early mortality and contribute to hundreds of billions of dollars of public and private spending to deal with preventable diseases like type 2 diabetes. The relationships between food, agriculture, health and medicine are often neglected in our health care systems. The federal spending for type 2 diabetes is over \$160 billion a year and growing fast. This is a major budget threat, as well as a threat to our military readiness and national security. New strategies and research funding are needed to deal with suboptimal nutrition, especially focusing on food and health, the content of our federal feeding programs, and the elimination of hunger both domestically and globally. The agriculture sector should be a key player in these research discussions and decisions. A better understanding of the science of nutrition is needed across the entire U.S. government research apparatus. I am pleased to see Congress and the private sector becoming much more active in the relationships between food, medicine and health.

Exactly 51 years ago today, December 2-4, 1969, President Nixon hosted the first White House Conference on Food, Nutrition and Health, a seminal event bringing leaders from the public private sector to discuss ideas on how to improve nutrition in America. As a result of that conference, Congress created many of the federal food and nutrition programs which have fed hundreds of millions of people and led to the reduction of poverty and elimination of famine in America. But we are still plagued with hunger and food insecurity in our country. Much of our nation's poverty is tied to hunger and poor diet. Given the continued existence of hunger, and the evolution of the science of nutrition and health, I believe that this Committee and the Congress should encourage the next Administration to hold another White House conference on Food, Nutrition and Health bringing together the nation's food and agriculture leaders, scientists and health and nutrition experts to redouble our efforts to better understand these issues and the impact on poverty, health and longevity.

In the area of climate change, bipartisan cooperation among various players in the agriculture community is really starting to happen, and this is a critically important development. Agriculture research to help farmers and ranchers - at home and abroad - cope and maintain predictable revenue streams in the age of changing climate, volatile weather, increasing droughts, floods and heat, is critical for the future of a healthy agricultural system. I am particularly concerned with declining water tables and their impact on crop production, pest and crop diseases worldwide particularly impacting wheat and rice, animal health, and the terrible damage done by the increasing number of forest fires throughout the U.S. and the world. The Committee's work on improving crop insurance and risk management has been extremely important, and will become more important, as climate change begins to hit agriculture even more directly. I should add that more and more farmers, ranchers and others participating in the agriculture industry are recognizing that climate change is real, not political, and working together is the only way to develop sensible, reasonable and impactful solutions.

To address all of these problems, and to increase agriculture productivity to sustainably feed a hungry world, calls for an interdisciplinary approach to the vexing issues of the future. USDA must collaborate with other agencies of the federal government, especially the National Institutes of Health (NIH), National Science Foundation (NSF), Department of Defense (DOD), and the White House in a true interagency process to solve the problems. Too often in the past, food and agriculture issues were often not deemed a priority outside of USDA. COVID has proven that this perspective must change. We need collaboration across the federal government, along with the university community, and the private sector to develop new technologies in many areas including: reduction of carbon in the atmosphere; soil health; water utilization; plant and animal health and diseases; food production to deal with a growing population globally; and many other areas. These issues will NEVER get fully resolved in one agency or department. We need strong leadership in this Committee, and across the board from the White House on down, to develop the comprehensive research strategies to solve these problems and challenges.

On a related matter, we must create better leverage and linkages across the federal government. As I mentioned before, cross-agency collaboration and visionary leadership must be a priority of the White House and the next secretary. The goal is to focus strategically on those "asteroids" or threats that food and agriculture will be coping with over the next decade. Sometimes these decisions have been understandably made with budgets in mind, and sometimes the protection of "turf" becomes a driving factor. The National Academy of Sciences Breakthroughs 2030 identifies innovative emerging scientific advances for making our food and agriculture systems more efficient, resilient and sustainable and provides a good analysis of those asteroids as well as highlighting the need for both basic and applied funding to achieve results. The report asks the following: What are the big questions in agriculture research that need to be answered in the next decade? What are the strategies needed to produce adequate food supplies sustainably to feed a hungry and healthy world, and how do we best achieve these enhanced new technologies in a safe and transparent manner with the necessary human capital and people power to get it done?

Finally, let me comment on the impact of two outside organizations with which I have been engaged. The Foundation for Food and Agriculture Research (FFAR) was authorized by Congress in 2014 with the specific "parentage" of Senator Roberts and Senator Stabenow and others on this Committee. FFAR has been an important out-of-the box public-private sector model to enhance food and agriculture research, very much like the National Institutes of Health (NIH) and the Centers for Disease Control (CDC). FFAR has benefited from \$385 million in congressionally authorized federal funds, and engaged over 400 outside funders, emphasizing many research areas, including farm profitability, environmental stewardship, human health, and helping develop a talent pool of younger scientists across the country. It has been leading the way in a new Agriculture Climate Partnership. Dr. Sally Rockey and her team have been extremely creative in advancing new technologies, working with USDA, the private sector, major foundations and the academic community. One example is a project at Kansas State University seeking higher yielding varieties of wheat and maize. Related projects are occurring at colleges and universities all over the United States. I also commend the work of the Chicago Council on Global Affairs, where I serve as a Distinguished Fellow, which has become an acknowledged world leader promoting research into ways to reduce global hunger. The work of the Chicago Council has been seminal in tying global and domestic hunger and research agendas together. There are still tens of millions of people in the developing world suffering from malnutrition and hunger, often facilitating violent ethnic and regional conflicts. The Feed the Future initiative was in large part developed through the work of the Chicago Council, in collaboration with US Agency for International Development (USAID), USDA and the private sector.

I might add that the Feed the Future initiative, coupled with sustained U.S. financial assistance to the World Food Programme has continued to be transformational in feeding a hungry world during these turbulent times. This has been a GREAT example of American leadership. It is my hope that this Committee will continue to provide the leadership, in collaboration with the Foreign Relations and Appropriations committees, and the White House, to maintain and even increase support for global humanitarian efforts and the necessary research to support those efforts. The problems we face in food and agriculture are global and not confined to one country. In this world we are all inextricably linked to each other, and all of us have much to gain from research programs on hunger and food security which have a foundation of global collaboration and sharing of data and information. It would be a mistake to go it alone on the issues I have spoken about, whether eliminating hunger or fighting climate change.

Mr. Chairman, Senator Stabenow and Members of the Committee, it has been a pleasure to be able to give you my thoughts on these critically important subjects. Again, I thank my friend Pat Roberts for his leadership in all issues related to food and agriculture, domestic and global.