Six months ago we celebrated the 100th birthday of the Cooperative Extension Service, dated from the signing of the Smith-Lever Act on May 8, 1914, by President Woodrow Wilson.

Today it is a great honor for me to have a role in this event named for one of the pioneers of farm demonstration, whose work laid the foundation for Cooperative Extension. Seaman Knapp didn’t live to see Smith-Lever enacted, but the ripples from the work that he and others such as Booker T. Washington carried out in the late 19th and early 20th centuries are still widening through the nation and the world.

Extension has played an important part in the history of my university, my state, and my own life. While I was growing up, my father worked for a sister agency, the USDA Soil and Water Conservation Service. I began my professional career as an Extension marketing specialist at Mississippi State. When I moved on from there to the staff of U.S. Senator Thad Cochran, my primary duties for several years were focused on agriculture, and working with Extension leaders was an important part of that job.

Later, I had the privilege of serving as Under Secretary at USDA, and as my job entailed working with several international agencies, I came to appreciate the impact that the Extension model has had in many developing countries, and the huge benefits it can bestow in the future.

In Washington, D.C., two skywalks over Independence Avenue link USDA buildings on either side of the street. One of them named the Seaman A. Knapp
Memorial Arch. I used to pass by it frequently, and noted the bronze plaque mounted there, authorized by Congress and President Franklin D. Roosevelt in 1934.

That tablet identifies Seaman Knapp as the “Founder of Farm Demonstration Work.” It goes on to say that “He organized the system of county farm and home demonstration agents and boys’ and girls’ clubs from which developed the Cooperative Extension Service of the United States.”

(By the way, although there were many of those boys’ corn clubs and girls’ tomato canning clubs in several states, the corn club in Holmes County Mississippi became the first to receive federal funding support in a cooperative effort, when county schools superintendent W. H. Smith was named a “collaborator” by the U.S. Department of Agriculture in 1907. Smith later served as president of Mississippi A&M College from 1916-1920, soon after the state’s Cooperative Extension Service was established on our campus. In Mississippi, we like to claim President Smith’s corn club as the direct forerunner of today’s 4-H program.)

I was always struck by the fact the Seaman Knapp Arch was dedicated in 1934—20 years after Smith-Lever and during the Great Depression. I wondered whether the hard times that were engulfing the country sparked a renewed appreciation for the role of Extension as farmers and others struggled to make ends meet.

In a similar vein, I have always thought it noteworthy that the Morrill Act of 1862, a foundational document for many of our institutions, could have been hammered out by Congress and President Abraham Lincoln while the all-consuming Civil War was raging.
Even at moments of great crisis, our nation’s leaders have been moved to think about the role of land-grant universities and our federal and state partners. To me that says something about the centrality of the place they occupy in American history.

(I am very pleased, by the way, that Mississippi State University’s history department is leading the effort to develop an on-line national repository of historical information about land-grant universities. The Virtual Archives for Land-Grant History Project grew out of the many observances around the country of the sesquicentennial of the Morrill Act. The project, which APLU helped initiate, will gather links to both primary historical documents and current scholarship to create a one-stop, central website useful to academicians, policy makers, students, and the public. Already, documents from more than 65 universities are accessible on the website hosted by Mississippi State [http://lghp.msstate.edu/].)

The Cooperative Extension Service itself was born during an era of rising prosperity, although the start of World War I was just months away, and America’s entry into that conflict was just a few years down the road.

Later, looking back from the dismal Depression years of the 1930s, architects of the New Deal labeled the years around 1914 as the “golden age of agriculture.” Farm prices were high. The prevailing equilibrium between farming and industry made the period the basis for the “parity” targets first adopted in the 1930s in an effort to restore farmers’ buying power to that of the “golden age.”

Today we can look back with pride and satisfaction on what Extension has accomplished during its first century. And while we can scarcely guess what the world of
100 years hence will look like, we can have considerable confidence that a system of helping people learn by doing where they live and work can make it a better place.

Extension made life better for millions of rural Americans in the early 20th century, helping them move beyond subsistence farming and in many cases out of poverty. That is one of the great success stories in our nation’s history.

But Extension remains relevant and important today because it has evolved and adapted to meet the changing needs of a changing society. Its role has expanded to encompass not only the farms, but the suburbs and the cities. Its reach expanded years ago, albeit belatedly, to better serve our diverse population through the 1890 land-grant universities and tribal colleges.

The lessons being taught and the problems being solved have evolved alongside advances in technology and scientific agriculture. Extension will be important and relevant in the future to the extent that it continues to focus on what helps people live more secure, healthy, and fulfilling lives.

Already, many of the direct beneficiaries of Extension work aren’t rural and they aren’t farmers, as those demographics make up a much reduced part of our population. In 1914, more than half of Americans lived in rural areas and nearly one-third were farmers. Today, less than one-fifth live in rural areas and only about 2 percent are directly engaged in farming and ranching.

The fact that farmers are fewer today is in large part a testament to their own productivity and efficiency, which of course has been aided by Extension. It simply takes fewer people working in agriculture to feed our much larger population.
That does not mean that the role of Extension should therefore diminish; it means, rather, that we should keep our eye on the true purpose of this great method of non-formal, practical education—helping people receive and apply current knowledge to lead better lives.

As Seaman Knapp himself observed in a speech in 1907 at the State Teachers' Association of South Carolina, “The teacher who really enters into . . . flooding the people with knowledge about helpful things, will never want for friends nor for places to teach.”

The nature of “helpful things” has of course changed since then. Today’s demonstration agents spend less time teaching about the importance of crop rotation and canning techniques and more on things like precision agriculture and family health and finance.

Who knows what the focus will be 10 or 20 or 30 years from now? The pace of change, particularly in the realm of technology, has been accelerating for hundreds of years, and it shows no sign of slowing down.

Dr. Lowell Catlett, Dean of the College of Agricultural, Consumer and Environmental Sciences at New Mexico State University, gave many illuminating examples of how fast-evolving technologies are changing the way we live in his excellent address at the Centennial Celebration back in May.

He challenged us to imagine looking back to our time from the not-too-distant future, and wondering at the quaint and antiquated notions that prevailed way back in 2014. But Dr. Catlett’s larger point was that despite the dizzying rate of change, the
fundamental premise of Extension work—“to let people help people add value to their lives”—is unchanging.

He reminded us that what the struggling farmers at the start of the 20th century needed was not so much new technology as the human touch of educators who were willing to immerse themselves in the life of a community and embrace the philosophy of learning by doing.

Technology has made Extension more efficient, allowing fewer professionals to accomplish more. Today’s agent may not have to drive out to somebody’s farm to look at an animal or a plant in order to help evaluate a problem. Agent and producer may be able to share pictures over their smartphones and have a conversation via Skype, and that’s great. But we must be careful to maintain that human connection that leaders from Seaman Knapp to Lowell Catlett have recognized as central to Cooperative Extension.

Extension continues to have a major role in helping farmers be productive and efficient. It helps them employ new technologies such as genetically engineered crops, protect our natural environment and navigate the regulatory environment in areas such as pesticide applications and water use, and ensure the safety of the food supply.

It helps communities, both rural and urban, deal with issues ranging from extending broadband connectivity to preparing for natural disasters.

And the Extension role in helping families make better choices—from choosing healthier foods to picking the right health insurance plan—continues to expand.

Yet the pace of change makes it increasingly difficult to predict exactly what Extension agents will be working on in the years ahead. That uncertainty, however, doesn’t prevent us from preparing for an unknowable future.
I sometimes tell our students that they may spend most of their careers working at jobs that don’t exist yet.

How do you prepare to do a job that doesn’t exist? By focusing on acquiring those fundamental skills that will always be relevant and valuable—critical thinking, problem solving, and communication—along with a commitment to lifelong learning.

For 100 years, Extension has been investing in the nation’s future in just that way through its vast youth leadership development program, 4-H. Today’s 4-Hers are just as likely to be doing projects in science and technology as in farming or homemaking. But I think the key to the program’s lasting value is that you can learn the essential skills of critical thinking, problem solving, and communication whether your project is raising a prize hog or building a robot.

The nation’s need for Extension in all of those broad areas—agriculture and natural resources, family dynamics, community development, youth leadership—will exist for a long time to come.

But as our world grows smaller and global challenges multiply, I believe the Extension Service should also be ready to step into a broader arena, either directly or by sharing a century’s worth of expertise with others.

Today almost a billion of the world’s people don’t have enough to eat, according to the United Nations World Food Programme. That’s more than the combined populations of the United States, Canada, and the European Union.

And by 2050, the world population is projected to increase from 7 billion to 9.5 billion. These additional 2.5 billion people at the world’s dinner table will put incredible pressure on the world’s farmers to meet demand.
If world food production does not grow substantially over coming decades, the number of people living in poverty and chronic hunger will significantly increase. This, in turn, could precipitate rising political instability and possible conflict.

We know that most global population growth will be in developing countries already facing food insecurity. The world is going to need much more food, and it must be produced using our finite land and water resources in the face of uncertainties associated with climate change, among other challenges.

More than 60 percent of chronically hungry people are women. About 10 million children under 5 die in developing countries each year, and hunger and malnutrition are contributing factors in most of those deaths.

Lack of Vitamin A alone kills a million infants a year. Iron deficiency is impairing the mental development of half of the children in developing countries. Large parts of the world struggle with a lack of access to clean water and the associated health risks.

American universities, and particularly land-grant institutions such as ours, are well equipped to help governments, international organizations, the private business sector, and NGOs in addressing these pervasive problems.

We have only scratched the surface of what research, extension and teaching at academic institutions will be able to contribute to the fight against world hunger in the years ahead, improving the health, safety and security of millions. We have the ability to help, and we should seek new ways to put our resources to work.

Land-grant universities have knowledge, infrastructure, and experience pertinent to every aspect of the food chain, from the laboratory to the farm to the market to the table. Our challenge is to bring our resources to bear on critical global issues.
And one of the greatest tools at our disposal is the Extension model. We know, based on the past century of experience and innovation, how to take science-based information and deliver it directly to people where they live and work, teaching skills to build a better life.

The Extension method that has delivered such enormous benefits to the United States over the past 100 years, particularly in poor rural areas, is well suited to the needs of many developing regions of the world. I know that several countries, in South America, in India, in the former Soviet states, for example, have made progress in adapting our Extension model. Much more can and should be done.

A progress report prepared in 2011 by the Global Agricultural Development Initiative of the Chicago Council on Global Affairs, for which I serve as an advisory group member, highlights the need for greater involvement in global food security by American universities. Another report released earlier this year examines the threats to food security in the face of a changing climate, including expanding ranges of native pests and the proliferation of invasive species.

These are problems that our universities know how to do something about, through research in areas such as modeling of climate change, hydrology, and plant and animal biology, along with the collection of the relevant data. Our research into drought-tolerant crop varieties is obviously pertinent. We can design farming systems that are more sustainable and put less pressure on our fragile environment. Of course we have relevant expertise in areas such as crop production, post-harvest processing, livestock, aquaculture, food policy, water resources, geospatial technologies, and biofuels.
And, of critical importance, we know how to take that science-based knowledge to the people who need it, in a way they can use it.

As Extension enters its second century, one filled with promise, I hope that we will continue to act locally as we begin to think more globally. I know that each of you and the institutions you represent are committed to helping people everywhere add value to their lives, and we are grateful for all that you do in this great cause.

As I recall the beginning of my own career, when I was a young Extension professor, and as I think back on that experience, I appreciate Seaman Knapp’s great insights into what constitutes the essence of Extension work.

He said, “Extension agents must be people their neighbors will listen to and believe in.”

And also, he said, “What a man hears, he may doubt. What he sees, he may possibly doubt. But what he does himself, he cannot doubt.”

Those observations are as true today as they were more than 100 years ago. I am glad to know, and our nation is fortunate, that today’s Extension Services continues to put them into practice.

Thank you.