



The University of Georgia

College of Agricultural and Environmental Sciences
Office of the Dean and Director

Congressional Testimony
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Thank you for the opportunity to speak to you today. I am the Dean of the College of Agricultural and Environmental Sciences at the University of Georgia. I am also the incoming head of the Board on Agriculture Assembly which is the organization that represents agricultural land-grant systems around the United States. Our college, along with our friends and partners at Fort Valley State University, represent the land-grant system in Georgia, where agriculture is the largest industry and is responsible for 16 percent of the state's economy.

My background is in the area of soil science. I have specifically worked on ways to use agriculturally friendly means to clean up polluted soil. And, I am a farm owner.

I am here to talk about my assessment of agriculture of today and to discuss what I see as the primary issues facing agriculture both in the short term and the long term. Most of what I discuss will relate to the southeastern region of our nation.

While the world has plenty of food today, it is clear that much more food will be needed in the near future. It is predicted that we need to double world-food production by the year 2050. Unfortunately, many areas of the world will be unable to respond to this challenge.

Asia has poor soils and limited rainfall and will be hard-pressed to significantly increase food production. Africa remains hopeful, but until political instability is resolved, the continent will never be able to feed itself. South and Central America, while blessed with good soils and rainfall, will not likely cut down rainforests for enhanced production. And Europe, also with good soil and rainfall, will likely produce less food in the future due to a variety of social policies that are causing the continent to stagnate.

This leaves North America as the world's hope for meeting the challenge of producing more food and feed. But even here, production patterns are changing. As you know, water availability in the western U.S. is declining. There will be less food produced west of the Rockies 10 years from now than is produced there today. And in the northern part of the U.S., temperature and sunlight will limit the amount of new food that will be produced.

U.S. production must increase and the Southeast will be, in my opinion, the primary area where production must and will increase.

This is not just an obligation; it is an opportunity as well. In 2007, the U.S. imported \$79 billion of food, feed and fiber while we exported \$116 billion of the same. We have the opportunity to widen this

surplus even more. As noted, the Southeast is especially well positioned for increased production. The Port of Savannah and an efficient transportation infrastructure make this is an ideal region for growth.

It is my opinion that past federal policies have not always focused on southeastern agriculture. However, with the need for this region to step up production, we must have good policies coming from the new Farm Bill that will allow this region to meet the challenge and obligation to produce more food for the rest of the world.

Federal policy can either promote production in the Southeast, allowing this need to be met, or it can limit production, forcing more of the world's poor to continue to go hungry.

The only way that the Southeast can increase food production is through science and technology. Yet, science and technology development in agriculture are unlike any other industry. Boeing Corporation and the Ford Motor Company have in-house research and development capabilities as well as training. They have all the needed support for future innovation. Agriculture, however, is different.

Agriculture's disparate nature means that no single farmer is capable of supporting the needed research and development for future production improvements. The vast majority (90%) of American farms are privately owned. Individually, they don't have the means to invest in technology development and education; hence, the need for the land-grant system of higher education.

Much of the needed research is to find ways to reduce production costs with the goal of increasing profitability. While some research is generated within the private sector, the private sector has no incentive to help reduce inputs which also reduces their profits. Further, no private concern will invest in technologies that have limited potential for economic return.

Some crops or commodities, such as specialized fruits and vegetables, are grown in small quantities and don't generate sufficient income to attract outside investment.

Technologies that have a "public good" also see little investment interest from private companies. Reduced pesticide and fertilizer use, integrated pest management, water-use efficiency, and natural resource conservation are all public goods. We need research and outreach programs in each of these areas and only local, state and federal governments will support this important investigation.

The land-grant system was established to fill this void of agricultural research, education and extension. Our federal, state and local partnership has become the envy of the world. Many studies of agricultural policy credit much of the success in American agriculture to the knowledge provided by the land-grant system.

Our country has come a long way since the Great Depression when nearly four out of every 10 Americans were involved in food production. Today, as you know, less than 2 percent of the country's population work on the farm. The cost of our food today is much less of our total income than it was when 40 percent of our population was working on a farm. Many of the improvements that help farmers produce abundant, affordable food for exponentially more people came about through technology developed at land-grant institutions. The land-grant system is poised to continue to increase production efficiency to meet the challenges ahead of us.

Land-grant universities are crucial in most states. Notice that I did not say land-grant colleges of agriculture are needed in every state. There are some areas where information and research may indeed

overlap. Today could be that historical juncture when we take a critical look at the entire land-grant system. A study to investigate potential improvements in our national structure may well be needed and productive to set our future course and ensure our continued success.

Until recently, merging land-grant programs was nearly impossible, mainly due to limitations in technology. But, as new and better communications methods are developed, we should begin to look at program and system integration. Reductions in state support may drive this process. The federal government should get ahead of the issue now to make sure the needs of agriculture are met, duplication is avoided and efficient use of available resources is maximized.

Making needed systemic changes won't be easy. Agricultural production is quite complex, especially in the Southeast. For example, Georgia produces over 100 major commodities with a value of at least \$10 million each. And while similar crops are grown in multiple states, best management production practices vary from state to state because of differences in soil, climate, markets, disease pressure and especially water. Information from one state is often not applicable to production in another state.

Keeping the land-grant system positioned to create and support necessary agricultural production increases requires a reliable, sustainable funding stream. Federal funds are provided to the land-grant system through three basic routes:

Competitive funding via the USDA is the life blood of agricultural research and to a lesser extent, teaching and extension. The funding level for research has been growing and we hope that it will eventually rise to the level where funding success rates mirror other competitive science programs. Thank you for your support of competitive funding for research.

Earmarks are the second important source of funding. As some of you know, I have been an advocate for federal earmarks to support agriculture research. Federal earmarks remain the only process for supporting this vital research that falls between the cracks of the high-minded studies supported by the National Science Foundation, USDA's AFRI and profit-driven research that private companies might support. So, until the scientific system is changed to recognize the importance of this highly applied research, federal earmarks are the only source to support it. Changes are needed to make the process more transparent, but I remain adamant that earmark-supported research is vital to the success of our farming community. More transparency, limited high level peer review, and greater accountability may allow a skeptical public greater comfort with the process.

The third source of funding is traditionally referred to as **formula funds**. The formula is a complicated equation that takes into account farmer numbers and the number of farms to distribute available federal funds to each state. For the more than 30 years I have been in the land-grant system, the drum beat against formula funds has been steady and each year we make protecting these funds our highest priority.

We so strongly support these funds against a background of concern for the process because formula funds provide the infrastructure that allows both competitive and earmarked funds to be used successfully. Unlike many other disciplines, you can't turn our infrastructure on and off when competitive or earmarked funds become available. Herds of cattle, flocks of chickens or orchards of oranges must be maintained in a system of research and training farms for our faculty's use.

When competitive funds are awarded to an institution, research and training can be initiated quickly. Most agricultural problems need quick answers. New diseases or insects can decimate an industry

within just a few years if no solution is discovered. The U.S. system of land-grant research and information transfer makes this immediate response to new and emerging problems possible.

I want to emphasize the importance of Cooperative Extension to the system. Without a way to deliver research information to those who need the help, why conduct the research? In fact, most other scientific disciplines are now discovering that information transfer is a vital link to successful research. They are searching for effective information delivery mechanisms. In agriculture, we are fortunate to have discovered this key to success nearly 100 years ago, and that Congress had the foresight to authorize establishing Cooperative Extension systems in each state.

Other countries seeking to improve their agricultural systems typically identify extension-type programs as their greatest need. We are the envy of the rest of the world.

At the university level, other colleges and disciplines see Cooperative Extension's value and remarkable tradition of success. Many are looking for ways to tap into extension's grassroots-education capabilities or to reinvent similar information delivery systems.

We are proud of advancements we have helped U.S. agriculture reap, environmental improvements we have furthered in the industry and hands-on, extension education we have provided that contributed to this remarkable success. But, challenges loom large on the horizon. We need help in four major areas that will be discussed for the 2012 Farm Bill. They are especially important to the Southeast where biomass and specialty crops are rapidly increasing.

1. Specialty crop block grants to states for research and marketing.
This is a very rapid method to get money to the research and extension system when new and emerging diseases, weeds and insects are found.
2. Specialty crop research initiative.
Many specialty crops, as noted previously, are not of sufficient acreage to warrant industry funding, nor is the research basic enough for competitive funding.
3. Biomass research and development program.
Most of us realize that biomass is important to agriculture and our security. The exact role agriculture will play in energy production has not been fully defined and needs additional government support before the private sector can carry the burden.
4. Biomass crop assistance program.
Scale up for production remains risky. USDA assumption of some degree of risk will encourage the private sector to enter this industry.

Agriculture has a bright future in most of the United States. It is going to change, but the unique partnership between local, state, federal governments and the private sector will make sure this industry continues to be successful. Strategic security needs for the U.S., a pressing need for a positive trade balance and the humanitarian need to feed the world are coming together in a way that makes agriculture more important today than ever.
