

Leadership Summit

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Thank you for the opportunity to share a few thoughts with you this afternoon.

First, I would like to commend you for developing this leadership summit. By way of background, I have served as a university professor, teaching at both the undergraduate and graduate levels. I have served on numerous graduate committees as well as serving as major professor for both MS and PhD students. In serving as a Dean, I worked with curriculum committees and other aspects of university educational programs.

My experiences have, at times, been quite depressing, but more often quite uplifting. The openness and transparency of the academic experience and process provides the opportunity for all voices to be heard. I am convinced this helps to ensure that teaching programs maintain relevancy.

In preparation for teaching the course, “The Genesis and Future of the Land Grant University” I did considerable reading about how agricultural instruction came to Georgia.

It is interesting to note that at the time of passage of the Morrill Act, the common belief in Georgia was that agriculture could not be taught. To learn about agriculture, you should serve as an apprentice with a farmer. In fact, when Georgia was awarded the Morrill money, which was considerably later than 1862 because the State was still engaged in a rather unpleasantness with the U.S. Government, there was a real fight in the Georgia General Assembly. The University of Georgia (UGA) finally won the day, not because they wanted to develop a teaching program in agriculture, but they needed money to strengthen the Franklin College of Arts and Sciences.

There is more to the story. The university did just enough to justify receiving the Morrill money and with the help of people not necessarily directly involved in agriculture, teaching programs began to evolve.

I share these comments to illustrate that challenges in instructional programs are not new. Also, the active involvement by those outside of agriculture can contribute greatly. In Georgia, a medical doctor (Terrell) provided money to endow a professorship to augment the Morrill money to teach agriculture. The Terrell professorship was the first endowed professorship at UGA.

The evolution of higher education, as stimulated by the passage of the 1862 Morrill Act, has all too often not been properly recognized. In my course on the Land Grant system, I devoted an entire lecture on legislation that shaped our country. Obviously, I feel the Morrill Act was one of those pieces of legislation.

As teaching programs evolved, it became clear there was a lack of information to teach, thus was born the research mission. While research had been initiated in many locales across the nation, the effort was stimulated by the passage of the Hatch Act of 1887 that created the State Agricultural Experiment Station System. The concept of taking all this information directly to the people around the state gave rise to the concept of extension. The Smith-Lever Act of 1914 formalized this effort.

These congressional acts ensured a close and unique relationship between the universities and the Federal Government. This tripartite mission of teaching, research and extension is uniquely American. It has been emulated in many countries around the world, but to date, it has not been as successful as in the U.S. While this relationship is still solid, it requires constant nurturing if it is to thrive or even to survive.

The challenges we face in agricultural instructional programs are similar to the problems we face throughout agriculture. The highly dynamic nature of agriculture requires that we “re-invent” our programs on a rather routine basis. In recent years we have seen the need for new programs in organic agriculture, integrated pest management, wireless technology, biotechnology, functional genomics, bioinformatics, nanotechnology, agro-security, etc. Unfortunately, the normal reaction of university curriculum committees is to simply add new course offerings and new majors. Fortunately we have learned, often the hard way, that for everything we add, we need to take something away.

Another matter than concerns me is the plan to produce sufficient graduates for agricultural needs is changing in the higher education environment. For example, today the role of community colleges provides the easy access to higher education, once the purview of the Land Grant University. Of course, the fields of study offered are quite often not in agriculture but rather in fields quite unrelated to agriculture. Consequently, we often lose students who are potential agricultural majors. We addressed this problem at the UGA by initiating an undergraduate teaching program at two of our research and extension campuses. Time will tell whether this is a good approach.

We must not lose sight of the fact that we must turn out students who can continue to learn. This is especially relevant when we realize that the usual graduate will probably change jobs several times during the course of a career.

The Future

I think we have a good system. It is not perfect, but has gotten the job done in the past. For the most part, we have responded to changing needs - - at least after a fashion. My concern is that we must be able to move much faster in the future.

I would like to amplify on this point. There have been only a few truly significant paradigm shifts in agriculture in the past 150 years. The first was the concept of fertilization in the 1830's to 1840's. Mechanization occurred in the 1920's to 1940's. The era of agriculture chemicals occurred in the 1940's and 1950's. Biotechnology was another major development of the 1970's and 1980's. As we speak, we are a part of another major paradigm shift in agriculture - - the era of bioenergy and biobased products.

In the past, we spoke of agriculture in terms of food and fiber. Today, I think we should add fuel (energy) to that mix. Frankly, I think this idea will be more substantial than any development in agriculture in the past 150 years.

A key question for us as educators today is what does the future hold? I am reminded of a statement alleged to Wayne Gretzky, the great hockey player. When asked the secret of his success, he is alleged to have said, "I skate to where the puck is going to be." The question for us today is, "are we positioned in the right place for where the future is going to be in agriculture?" I could be pessimistic, but I would rather take a more optimistic approach. Recognizing the problem is always an excellent first step in solving the problem. This summit that brings together a cross section of academic leaders is an excellent beginning. Just as soon as you get these old administrators out of the way, you can get down to business and solve some of the problems.

I challenge you to think creatively as to how we can read the tea leaves (maybe soybean, corn, or cotton leaves) and anticipate where agriculture is going to be in 5, 10, 20, 40 or more years. We must become better at anticipating needs rather than reacting to changes in agriculture.

Indeed, there are many changes that have occurred or are still unfolding. Here are a few things that we should factor into our planning:

- (1) Agriculture will be expected to contribute substantially to addressing the nation's energy needs in the future.
- (2) Water will become a more limited resource requiring significant development in how water is used in agriculture.
- (3) Wireless technology will play an increasingly important role in all sectors of agriculture including processing and distribution.
- (4) Accountability in agriculture including history of animal inventories, pesticides applications and quality of input production applications will be expected and required by consumers in the future.
- (5) Robotics will become an integral part of the agricultural production and processing picture in the future.
- (6) More demanding expectation of properties of foods by the consumer to include nutraceuticals, nutrients, antioxidants, etc.
- (7) Globalization of the agricultural enterprise will require a different mind set regarding production, processing as well as marketing of agricultural products.

(8) Finally, let's face it, consumers are going to continue to increase their expectation of more stove (plate) ready food.

If these assumptions are on target and covered, how will we meet the new requirements?

How quickly can we move our instructional programs to address such new and emerging challenges? I do not know, but it was only in the latter part of my tenure as Dean were we able to develop a biotechnology major at the UGA. Moving at this speed will not "cut it" in the future. We need to do a better job of anticipating the needs in our instructional programs and "skate to where the puck is going to be."

In closing, I would like to challenge each of us to anticipate and be receptive to change. Being receptive to change is the best way I know to give ourselves the advantage of ensuring the relevancy of our agriculture instructional programs.

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