

# Reflections on a Quality Education

Bruce R. Poulton

After looking at your program, I realized full well that there is very little that I could tell you about practical agricultural education following Dean Legates and Dr. Shearon, so I've decided to be philosophical and bring into focus our common, sacred trust, namely our responsibility for undergraduate education.

As context for my comments, I offer two perspectives that come from my own experience. The first is that while the agricultural and life sciences, and indeed all sciences, are built on bodies of theories and laws or principles, societies like our own and other cultures are built on values. In this global village of ours that is each day getting smaller and smaller, our students will have to negotiate in both of these worlds if they are going to be successful, in a world of diverse cultures as well as in the world of objective science.

The second perspective is that, while I admire and support fully the need to train students for job entry, I suggest that probably the biggest career challenges our students will face are the ones that we can't train them for. How do we train someone to be president of the United States, or governor of a state? How do we train someone to be chancellor at an enormous, multifaceted institution like this one, or to be dean of a school? Let me focus then from this context on the two words that you have given me to talk about, education and quality.

There has been a rash of criticism about education at all levels in this country recently, and it has touched North Carolina State University as well. We established a Commission on Humanities and Social Sciences about a year ago. That commission has done a great deal of work here on the campus and caused a lot of discussion. Though their final report is not even out yet, people are already taking sides. One of the things they have had to say to us deals with the first assignment — defining education.

I take the concept of education to be a normative and not merely a descriptive concept. It implies worthwhile activity, a worthwhile state of affairs. Minimally, it may be said of education, therefore, that it has to do with cultivation or transmission of states of mind or a disposition. Not just any disposition but a desirable disposition combined with skills, abilities, perceptions, understanding, and knowledge that enable people better to promote their own interests in the milieu in which they find themselves.

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Remarks presented by Bruce R. Poulton, Chancellor, North Carolina State University, during the 31st annual conference of the National Association of Colleges and Teachers of Agriculture, June 16-19, 1985.

To say that someone is educated is to say that his or her life has been improved, made richer, fuller, or more civilized simply by being educated. That person has achieved a better understanding of self and the world, and can perform those activities that make life good. As a result of being educated one is better able not just to cope with one's life but to create it in a significant and civilized way. That is a powerful idea.

How does one become educated? I'd argue that the stuff of education is the stuff of human civilization. What we have done over many, many generations is assemble our human heritage into bodies of knowledge, each with its own particular set of principles, theories, values, each with its own approach and logic, and those represent the traditional disciplines of education.

I would argue that if we do nothing more than initiate our students into those traditions, we probably will have done as much for them as we could ask — or they could ask. Indeed, although no one can anticipate what the world is to be 50 years from now, if we have initiated our students into the company of educated men and women, we cannot have prepared them better for whatever the world turns out to be.

Now I want to turn to the second half of my assignment, quality. I am not sure that an audience like this needs to be commended, but if we were to step back from all of American higher education and let the rules of evidence determine who has done the superior job, it cannot be argued but that those of you who have been involved in agricultural education have been enormously successful. Surely if we were to rank the disciplines in this country that over the last five decades have been successful by any measure, we would have to begin with agriculture. This reflects quality education and is a tribute to your practices and goals.

I would argue that if we are going to speak seriously about quality, we have to make, before the fact, a declaration of what it is we are trying to achieve. I would argue that if we are to be serious about quality, we must have for the students of our institutions at this point in time, a well developed set of expectations, a well developed set of outcomes that we expect students to come away with — a set of competencies. These are, I think, the stuff of which the new standards for accreditation in the Southern region will be made. The next time this institution is accredited we are going to have to provide hard data to show that we have, before the fact, set expectations in place and then demonstrate that we are meeting them.

What we are talking about here is a clearly verifiable index for intellectual achievement that we set down in black and white as students enter. At the end of their programs we can then demonstrate through

standardized testing that they have achieved whatever outcomes are appropriate for our institutions.

Having said that, I am going to be brazen enough to offer suggested criteria of quality education. If someone were to say to me, "Chancellor, what are your desired outcomes for an undergraduate at North Carolina State University?" this would be my response.

First is communication skills. I expect those who graduate from this institution should be able to receive and interpret and express ideas effectively, utilizing language or symbolic systems.

Second is critical thinking, to reason logically and apply problem solving techniques appropriately.

Third is self-directed learning. If there is anything that you can be certain about for the future, it is that students will need the ability to direct themselves in further learning because they won't be able to turn around before they will find the game has changed.

Fourth is functional understanding in the humanities and fine arts. My hope would be that they would understand the relationship between the human condition and the creative activities and products that are the expression of the human spirit. I recall a course at Rutgers University in art history. The marvelous thing about that course was that I learned that the evolution of the human condition could be traced in the creative works of people through the ages. In terms of social and behavioral sciences, I would hope that our graduates understand the development of the individual and the dynamics of social institutions within which individuals function.

Fifth is an absolute must — a knowledge of science and technology. If someone does not understand physical and biological environments and the laws that govern them, there is no way that they are going to keep pace with modern society.

Sixth is historical perspectives. I would hope a student could interrelate a series of events over time and draw from them some of the implications for today.

Finally, cultural understanding. Appreciating and understanding the impact of diverse cultures on the global village definitely is another must in our society. Our graduates must be able to examine the ethical implications of questions they will face in life and formulate a reasoned and value-oriented position concerning other cultures. If there is any capability that our society and particularly our public servants need, it is a broader cultural perspective.

Obviously to be educated implies worthwhile purpose — to perform worthwhile activities. To that end the basic requirements of a knowledge base and skills and tools are essential.

In closing, I draw your attention to the most significant changes in agricultural education over the last four years. I would say first is putting agricultural education within the context of the broader considerations of the environment and natural resources. I

think that has been a marvelous step forward. The world we live in demands that. I compliment agricultural educators for that step. I think second I would list the effort to put agriculture within a context of a national and international energy agenda.

Looking to the future, what needs to be done? Clearly one task is to reexamine the relative roles of land, labor and capital in the context of modern-day agricultural production. In that reexamination I think a great deal more consideration must be paid to financial management, cash flow, and equity protection. In addition we must reexamine market elasticities in both domestic and international markets. Some of the old ideas about market elasticities may no longer apply. Certainly in this state where 35 percent of our production is going into world markets, it would be a disservice to let a student graduate without a real understanding of where the international market place fits into agriculture production.

## The Agricultural Image

Kyle Jane Coulter

I am pleased to be with you today to discuss the image of agriculture and related implications for the U.S. food and agricultural sciences higher education system. While the topic is too complex to fully explore in a few minutes, I'd like to share with you some major issues that appear to be surfacing at the national level and, hopefully, suggest some alternatives for resolving these issues. We, who are trying to attract the best young minds in the Nation, are acutely aware of how important it is that these young men and women recognize the multiplicity of exciting scientific and professional career opportunities in agriculture.

Mounting evidence suggests that we must do a better job of helping today's students become aware of these opportunities. Between 1977 and 1983, baccalaureate enrollments in agriculture at our land-grant universities declined approximately 30 percent. During this same time period, graduate enrollments diminished by a factor of 5 percent. Furthermore, enrollment projections through the mid-1990's suggest a continuation of these trends. To some extent, a portion of projected declining enrollments may be attributed to demographic realities. However, the fact remains that between 1977 and 1982, total U.S. college enrollments were continuing to increase while agriculture enrollments were declining. Total U.S. college enrollments did not reflect a decrease until 1983. Hence, demographic changes, such as a diminishing pool of college age youth, cannot be used solely to rationalize declining enrollments in agricultural fields of study. Rather, we must recognize that the unidimensional public image of agriculture as production, combined with increasing competition

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Remarks by Kyle Jane Coulter, Director of Higher Education Programs, U.S. Department of Agriculture, at the 31st Annual Conference of the National Association of Colleges and Teachers of Agriculture, June 17, 1985, Raleigh, N.C.