

Capitalizing On Our Strengths

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I want to raise three simple questions to try to stimulate thought and action on the part of our profession.

What is happening around us?

How does "What is happening" relate to agricultural educators?

How should we respond?

One of the strengths of successful professionals in agricultural education is the ability to recognize and deal effectively with changing situations. We see this in our problem-solving approach to teaching; we see it in sound extension education philosophy; and we see it in successful international development programs. How we respond to a situation depends on the perspective from which we see it.

Many of you can remember with me some of the discussions related to passage of the 1963 vocational education legislation, which redefined agricultural education programs. I was an undergraduate from 1963 to 1967, and can remember discussions and literature with confident but varied assertions that, on the one hand, this meant the end of the program, and on the other hand, that it meant new life for the program. It is good that we reacted positively to that legislative program shift. It is even better to think that some of our profession reacted to changes in society and provided leadership for changes in our programs and legislation. Consider the range of behavior. Some refused to recognize that society was changing and, thus, resisted program change. Others merely accepted and accommodated change, while others courageously led the charge.

What is happening today that we need to consider in terms of our agricultural education programs? Our Association president said that "We must work together as we face the challenges of changing environments in agriculture and education" (Stewart, 1991). Agricultural and educational environments are changing. Like the change from production agriculture to a more broad-based program in 1963, some of today's changes are on-going movements in economic, labor market, and technological trends. For example:

There are continued economic problems as evidenced by a deficit in the U. S. for 1990 of \$227 billion, interest on U.S. debt of \$200 billion per year, and a federal domestic debt of \$3 trillion.

The number of farmers continues to decrease and in the minds of many, agriculture is farming only, and continues to decline in importance.

"The population of the world more than doubled between 1950 and 1990, increasing from 2.5 billion to 5.3 billion and is projected to double again by the middle of the twenty-first century...(Population Newsletter, p. 10, 1991)."

You and I have heard these kinds of statements for years, and know that there are on-going trends, such as these, which influence our programs.

There is a different category of trends, however, that we must recognize and address. They seem to be based more on social behavior than on economic behavior. Weiner and Brown (1990) said that "...Americans used to vote largely on the basis of economic concerns but are now more often basing their voting decisions on such noneconomic factors as law and order, abortion, and race" (p. 36). They mentioned the Nestle case as one where morality became more important than economics. This is the case where infant formula was marketed to African countries. Economics of the situation were positive but other factors, such as hygiene and illiteracy, resulted in an unanticipated and unacceptable increase in infant death, traceable to the switch from breast feeding to formula. They further stated that "Physical and mental well-being are perceived in some quarters to be 'entitlements' which are not supposed to be subject to economic concerns." (p. 38).

You and I can both remember the importance of providing an economic incentive as the basis of motivating our students, and I am not disputing this practice. People still operate in what they believe to be their own self interest, and change their behavior in favor of more satisfying options. What I am trying to do is to call to our attention some trends that are not based on economics alone, but more to social and political values that have a very real influence on our programs.

Socio-Political Trends

Political changes in Eastern Europe are rapid and unparalleled. The East has disintegrated out of a failed communist-totalitarian system. The West is forming three trade zones -- the dollar zone of North American, the mark zone of Western Europe and the yen zone of East Asia (Tweeten, 1991). These changes are based on political values which shifted more rapidly than most people thought possible.

"The United States spends at least \$500 billion a year on health care-- more than 11% of its gross national product. As a percent of GNP, national health-care expenditures have almost tripled since 1940. At least four strong long-term forces are boosting the soaring cost of health care in the United States.....(The U.S.) has huge institutionalized health care obligations created by factors such as the aging U.S. population. Insurance and liability costs in an increasingly litigious society are enormous. New medical technologies, such as those used for heart and other organ transplants, (are) tremendously expensive. And the public's expectation of universal entitlement to health care and health protection continued to grow" (Coats, Jarratt, and Mahaffie, p. 17, 1991). The United Way Strategic Institute (1990) predicted that national health care costs will triple (again) by the year 2000.

Animal welfare is another growing social concern with great potential economic impact, despite the relationships of animal research to the polio vaccine, antibiotics, cardiac drugs, cancer treatment, insulin for diabetics, and possible Alzheimer's disease, cystic fibrosis, and AIDS treatment. "In April, 1989, members of the Animal Liberation Front (ALF) raided two animal care buildings at the University of Arizona in Tucson. They stole 1200 animals and set fire to the buildings. In July....(They) broke into a laboratory at Texas Tech University, vandalized equipment, stole five cats that were being used in the research of Sudden Infant Death Syndrome..... With a diversity of activist behavior, there are at least 400 groups involved.... State legislators, yielding to their pressure, introduced more than 80 bills to restrict animal research..." (Rushford, p. 22, 1990). The Chronicle of Higher Education (1990) reported that one of these groups, People for the Ethical Treatment of Animals (PETA), is 325,000 members strong with an annual budget of \$7 million, and a quarterly magazine for kids called "PETAKids" that uses rock stars and actors to deliver their message.

Another important growing concern of society involves the issue of protection of the environment. This concern involves beliefs which range from those who desire a sustainable agricultural system to those who wish for a system completely devoid of technology, and expresses itself on a continuum that runs from the passive to the very active. However defined, it is not small. The ten largest groups have a membership total of almost eight million and an annual budget of more than \$212 million (The Economist, 1990). By comparison, the American Farm Bureau Federation has 3.8 million members and an annual budget of \$13.8 million (American Farm Bureau Federation, 1991).

In agriculture, the results of the Green Revolution of high yielding varieties show signs of running their course. The agricultural productivity growth rate is slowing. "To be sure, crop and livestock productivity continued to grow but... if 1950 - 1986 U.S. trends continue, predicted yields will increase only half as fast in year 2000 as they did in 1950" (Tweeten, 1991, p. 41). Dennis Avery (1991), Director of the Center for Global Food Issues, asserted that "Without high-yield agriculture, the world would have to plow down another 10 million square miles of wildlife habitat just to produce today's food supply. By the middle of next century, the re-doubling of the world's population would face the plow-down of 25 million square miles of what is now wildlife habitat." This is more than 2.5 times the land area of North America.

Biotechnology seems to offer promise, but is expensive. Furthermore, its application in areas such as pest-resistant plants and animals, nitrogen fixing grasses, phosphate saving plants, growth hormones, acid tolerant plant materials, cloned tree crops, and others runs head-on into a growing societal concern with ethical issues related to applied biotechnology. This concern with, and in some cases opposition to, biotechnology is not completely independent of our current funding problems in national agricultural teaching, research and extension programs. Luther Tweeten, holder of the Anderson Endowed Chair in Agricultural Policy at Ohio State University, said that, "Under investment in domestic science and technology denies the nation a low-cost source of future output in the form of productivity advances. Declining real federal outlays for agricultural and other sector research and extension retard the nation's ability to compete with others... U.S. agriculture will have to compete against countries investing a larger portion of their gross national product (GNP) in education, research, and extension..." (1991, p. 38).

In response to the larger social and political environment, the agricultural research and education establishment is broadening its focus beyond increasing production to issues of food safety, environmental quality, and animal welfare. In the Joint Council on Food and Agricultural Sciences report of FY 93 Priorities for Research, Extension, and Higher Education, we see a definite slant toward current socio-political issues: water quality, environmentally safe agriculture and natural resource systems, global change, animal health and welfare, waste management and use, and quality of life, among others (1991). The executive committee of the Extension Committee on Organization and Policy (EECOP) described a significant response to today's social issues when they said "...change is the only common denominator in the world economy, demographics, the structure and function of the family, the environment, the nature of work, the vitality of cities and rural communities, technology, and access to information. The challenge of change requires the Cooperative Extension Service to change even more dramatically... New programs have been designed within the National Initiatives to meet priority needs associated with water quality, waste management, youth at risk, food safety, (and) sustainable agriculture... among others (1991).

State Funding Trends

In state budgets, the emphasis placed on social issues such as medical care, prisons, welfare, retirement system financing, and in some cases elementary and secondary education, has meant cuts to agricultural research, extension and higher education. A Phi Delta Kappan article quoting an Education Commission of the States study by Augenblick and Van De Water reported that:

in 43 states, state aid for elementary and secondary education per pupil increased at a rate greater than inflation;

in 42 states, state aid for elementary and secondary education per pupil increased at a rate greater than personal income per capita;

in 33 states, state aid for elementary and secondary education per pupil increased at a rate greater than property tax revenue per pupil; ... and

in 24 states, state aid for elementary and secondary education per pupil increased at a rate... greater than state aid for higher education per student" (Pipho, 1991).

Sylvester (1991) in an article titled "The College of Hard Times" wrote that, "...of the 32 states that had mid-fiscal year cuts in their budget, 29 chose to take chunks out of higher education" (p. 28), and more are doing so now. At the 1991 NASULGC Annual Meeting, more than half of the institutions represented by the Council for Administrative Heads of Agriculture reported cuts in teaching, research, and extension budgets.

Many of us have faced budget cuts over the past few years. The agricultural research and extension units in my state faced 12.7% and 13.2% cuts, respectively, this year. In an October 2, 1991 letter from Vice President Zachariah to University of Florida alumni, he indicated that the Institute for Food and Agricultural Sciences had budget recalls in 1990-91 of \$5.1 million, which included 25 positions. The 91-92 of funding was reduced an additional \$6 million below that received after recalls in 91-91; this included another 90 positions. At the time of his letter, they were processing another recall for \$3.91 million, while College of Agriculture undergraduate enrollment is at an all time high.

Governor Zell Miller of Georgia called attention to the problems with public support and understanding that we all face when he said, "There are fewer farms and fewer farmers, yet the Extension Service is growing." He offered this statement as a prelude to calling for a 42% cut in Extension. With a compromise 28% cut, the Georgia Extension Service suffered a major part of the budget decrease that cost 684 jobs (415 full-time equivalents).

Relationships of Trends to Agricultural Education

Society is placing increased value on the environment, animal welfare, poor children, long-term care, welfare reform, medical care, and other quality of life issues, and less value on agricultural research, extension, and higher education. How do these relate to agricultural education? The lesson for us is that the citizens of Georgia and Florida, and your state and mine, fund agricultural research, extension, and higher education, including agricultural education, in accordance with their perceived self-interests. They also support other issues to the degree that they believe the issues serve their interests.

"The conditions of the new age demand at least as much attention to the ever-changing external environment as to the internal or organizational environment... The larger social, political, economic, technological, international, and institutional

environments...are at least as important. It is in this larger environment that the major changes have been occurring. Leadership success now requires more attention to the indirect and often ambiguous effects that these changes in the larger environment have on the operations of an organization. For example, a cereal manufacturer has major concerns beyond customer acceptance such as government regulations on labeling and additives, international competition, agricultural policy, packaging technology, food industry mergers, medical findings on cholesterol, world sugar prices, and foreign exchange rates, to name just a few" (Nanus, 1990, P. 15). Likewise, the environment of agriculture and education is becoming broader and more diverse. But I fear that we work too much to "protect our cereal" and give too little consideration to changes in the larger environment.

We manage as if societal changes and corresponding budget impacts are temporary, with a resulting deterioration in infrastructure and a misalignment of priorities. Or we ignore what is happening around us and refuse to change.

We are guided more by our professional association than by the people we serve because we are structured in a way that rank, tenure, and other rewards are driven by professional acceptance. This is not unique to departments of agricultural education, however. Amberson (1989) alluded to this problem when he advocated that agricultural education move toward a free market model and suggested that it must be based on identified needs, and consumers must be willing to pay a competitive price for the service. One working example of this is INTSORMIL, the Sorghum and Millet Collaborative Research Support Program. In a time of decreasing resources for international agriculture research from the U.S. Agency for International Development, funds for INTSORMIL and other similar programs were increased because U.S. sorghum producers recognized the value of the program and made that known to members of Congress.

We too often work alone. Crawford (1988) said that agricultural education departments are characterized as being small in size, focused on high school agriculture teachers, teaching few or no service courses, with terminology focused primarily on school orientation, and having few associations with other parts of the agricultural establishment.

Swanson (1991) inferred that we, along with other agricultural education entities, "function as a collection of independent and competing republics with overlapping budgets, boundaries, and missions" (p.2). We are inflexible; we have our own way of doing things. We place more emphasis on SOE or SAE than on experiential learning, and more emphasis on FFA than on leadership development. We too often major on the minors as we resist change!

Considerations

So society has changing values and our programs are not perfect. What do we do? First and foremost, we must subscribe to a professional problem-solving attitude that encourages open and flexible exploration of opportunities for the future. As last year's Distinguished Lecture Review Committee recommended, we must spend more time on sessions and debates that move us away from comfort and tradition (AAAE Newsletter, 1991, p. 28). The 1989 Review Committee (AAAE Newsletter, 1991, p. 40) said that we need to improve our ability to sense changes that are occurring both within and outside academic institutions, and provide necessary leadership for future direction. We spend too much time talking to ourselves; we need to hear from 'outsiders'; and need to be politically literate.

My recommendation is not that we shyly approach our agricultural teaching, research, and extension counterparts and try to become accepted as part of the family, but that we exert active leadership on behalf of the entire agricultural research and education system. Fuller (1990) said that "....our emerging market niche in higher education is as

behavioral scientists who focus on the education issues related to economic development of the food, fiber, agriculture, and natural resources systems within our nation. As behavioral scientists, we have a capacity to expand beyond the roles traditionally assigned by our institutions" (p.3).

I believe he is correct. If we consider our strengths as behavioral scientists and recognize the social, political, and economic trends occurring around us, we must conclude that our skills and leadership are needed and are appropriate in several areas. It is up to us to take the initiative.

At our institution, the experiment station system follows an interdisciplinary approach to project planning and development. Because economics is integral to most projects, the faculty of Agricultural Economics spends a great deal of time on projects headquartered in other departments. With an increased emphasis being given to social concerns, we as social scientists should play a similar role. Just recently, we escorted members of our Board of Trustees of Institutions of Higher Learning on a tour of Cal-Maine Food's poultry layer operation where more than 1.5 million eggs per day are collected, packaged, and shipped--all computerized, with no eggs touched by human hands. The plant manager was very complimentary of our relationship with the operation, but as we left he said "I sure wish you could help us better understand the animal welfare issues." At seven "listening sessions" held with clientele groups throughout the state this past summer, attitudes about environmental issues were mentioned more frequently than anything else. These issues have an aspect to which we as social scientists can contribute, working cooperatively with our agricultural and life sciences colleagues.

Another area ripe for interdisciplinary participation is constituency building. We have faced for two decades a need to convince students and their parents of the vitality and importance of agriculture. Recent evidence tells me that our experience in this area is needed across the agricultural teaching, research, and extension system. We have a group of faculty serving as liaisons with some seventy plus agricultural, natural resource and related organizations in the State which comprise a Coalition for Support of Agriculture and Natural Resources and for the teaching, research, and extension units at MSU. Groups like this need leadership and provide a great opportunity for involvement of agricultural educators. Research is needed which will lead to a better understanding of what is expected of agricultural research and education systems, and how they can best be organized and supported. Swanson (1991) said that it is imperative for the future for us to recognize and act upon agriculture's leadership crisis, not just convening, appointing, or managing budgets, but identifying and developing talents and directing these toward elevating human possibilities.

International agriculture is another area appropriate for our participation with interdisciplinary teams. We should take the lead and involve other disciplines in international training and development, and in internationalizing curricula.

Of course, teacher preparation cannot be forgotten. Neither should we overlook the opportunities in pedagogy and staff development for graduate teaching assistants and faculty in our peer departments. But we cannot expect non-majors to take 15 to 24 semester hour sequences of agricultural education courses. Program evaluation and development are also areas to which we should contribute.

We need to take the initiative in forming alliances with our peers in other disciplines and with the private sector in agricultural and natural resources. In doing so, we must follow Swanson's (1991) advice and "recognize and reduce the effect of ideological rigidities, the propensity to find the one best way to do things and to find it excessively easy to substitute means for ends" (p. 8). John Gardner, quoting from his book No Easy

Victories said "The first and last task of a leader is to keep hope alive" (p. 10). For agricultural educators hope is alive and well. Societal changes are creating opportunities in our paths. Let us take the lead and capitalize on our strengths!

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