

Blades of Grass

The Land-Grant Philosophy of Higher Education

Chester J. Teller

Gulliver, in his travels to Brabdingnag, made the following observation with the help of Jonathan Swift:

“And he gave it for his opinion, that whoever could make two ears of corn, or two blades of grass to grow upon a spot of ground where only one grew before, would deserve better of mankind, and do more essential service to his country, than the whole race of politicians put together.”

But, oddly enough, it is the politicians who deserve much of the credit for the establishment of the land-grant colleges of agriculture and the eventual development of hybrid corn!

Justin Morrill, a Vermont Congressman, sponsored the now-historic legislation that bears his name making grants of public lands to each state. The lands were to be sold; 10% of the proceeds to purchase a college site, including an experimental farm. Abraham Lincoln signed the Morrill Act on July 2, 1862 that provided for:

“The endowment, support, and maintenance of at least one college where the leading object shall be, without excluding other scientific and classical studies, and including military tactics, to teach such branches of learning as are related to agriculture and the mechanic arts, in such a manner as the legislature of the states may respectively prescribe, in order to promote the liberal and practical education of the industrial classes in the several pursuits and professions in life.”

An egalitarian society could demand no less! Thus was born the unique American contribution to the philosophy of higher education. Whereas the European tradition was to maintain a society where upward mobility was

virtually non-existent, the classical university was, in many instances, a church-related institution that provided for the enlightenment of the favored few.

The American democracy, however, required an opportunity for educational advancement for the children of the industrial workers, including farmers. In their time, these land-grant colleges represented an early form of "open admissions."

Soon after the funding of the colleges of agriculture, the need for research became quite clear. Federal funds of \$15,000 per year to each state were made available for research programs at the land-grant colleges with the passage of the Hatch Act in 1887. This act provided:

"That in order to aid in acquiring and diffusing among the people of the United States useful and practical information on subjects connected with agriculture, and to promote scientific investigation and experiment respecting principles and applications of agricultural science, there shall be established . . . a department to be known and designed as an 'agricultural experiment station'."

Here were the first two elements of a typical land-grant college — teaching and research. It was soon recognized that to provide the information necessary to advance agricultural production, a vehicle for extending this knowledge beyond the college campus was necessary.

The Smith-Lever Act of 1914 authorized Federal support for the development of off-campus educational programs. With the extension service, now called Cooperative Extension because of the funding by states and counties in addition to the Federal government, the tri-partite arrangement of teaching, research, and extension was completed.

Back to "two blades of grass . . ."

It is widely known, though not universally appreciated, that American agricultural efficiency is unmatched by any society in history. Output per man hour has been three times that of industry. Forty years ago one persons in agriculture supplied the food and fiber needs of ten persons — today, it's 56 persons.

Thirty years ago consumers spent 26% of their take home pay for food — today it's less than 16%. Thirty years ago, 25% of the nation's population lived on farms — today it's less than 5%.

It is not an exaggeration to say that the land-grant colleges are, in large measure, responsible for this superb demonstration of applied research. We not only feed ourselves quite well, but are able to export between \$20-\$25 billion worth of food to help balance our payments for imported oil. Basically, it's "our food" for "their crude."

It is this spectacular achievement — the release of 95% of this nation's population from the responsibility for food production — that has provided us with the highest level of living in the world. Of course, it can be argued that based upon our profligate use of the world's resources, in proportion to

the world population, this is undeserved and will be rapidly adjusted as sources of energy escalate in price and dwindle in supply.

Hubert Humphrey recently wrote:

“Without a sound, wholesome food supply, this country — or any country—cannot hope to progress, or even survive. Describe to me a country’s agricultural development and I will describe to you that country’s cultural and economic achievements.”

Even students and faculties at liberal arts colleges and universities like to eat, if only at McDonald’s!

The road has not always been smooth. On the part of the colleges of agriculture, there were periods of outspoken anti-intellectualism. There developed a close relationship with the United States Department of Agriculture, State and local governing bodies, and the American Farm Bureau Federation. Blanketing this agrarian establishment was an expected conservatism, but one that ill-fit an institution of higher learning.

On the other side of the university campuses, the classical scholars looked down their mortar boards at the college farm pragmatics. This dichotomy of “intellectualism” is still to be found at many of the 68 land-grant colleges and universities. There is a mutual suspicion between the “liberal long-hairs” and the “conservative crew-cuts,” with a case to be made on both sides.

A few years back one could somewhat humorously, though not totally incorrectly, ask, “How ya gonna keep ‘em down on the farm — after they’ve seen the farm?” Those of you who have not seen a farm in the last 10-15 years wouldn’t recognize the old place.

Farming has become industrialized, much of it attributable to the research done at experiment stations throughout the country. Eric Sloan had better keep his palette poised, for the weather beaten, sod-ramped wooden barn with the faded Chew Mail Pouch Tobacco on the side facing the dirt road, is fading fast from the American rural landscape.

In its place are 400-foot long anodized corrugated steel and aluminum structures paralleling 4-lane interstate highways — incidentally bisecting many farms — gleaming stainless steel holding tanks; tall, blue glass-lined silos; environmentally-controlled, windowless structures to house animals — be they beef or dairy cattle, swine or laying birds — and an endless array of brightly colored items of sophisticated mechanization — tractors with air-conditioned cabs including multiple hydraulic controls and CB radios, milking machines that sense when they and the cow can reluctantly part company, portable endless conveyors, hay making and raking equipment, cultivation and harvesting behemoths truly mind and sight boggling.

Farmers who can afford \$25,000 tractors deserve to be called “agrifac-turers,” the author’s term to communicate the idea that farming and

agribusiness are not synonymous. Those in the agribusiness sector sell inputs — fertilizers, equipment, chemicals, energy — to the agrifactors who, in turn, supply the nation's food industry with relatively inexpensive ingredients.

Too many people think of colleges of agriculture in terms of the declining number of farmers, rather than in terms of the increasing number of students. Why, for example, does the most urban state in the nation need a college of agriculture 35 miles out of New York City?

Because agriculture, not "farming," has now become one of the basic environmental concerns of a rapidly urbanizing society. With traditional strengths in the studies of the behavior of plants and animals, it is reasonable to expect these colleges to assume instructional and research leadership in the fields of air and water pollution, land-use planning, genetics, insect and disease control, toxicology, food science and nutrition, to name a few.

The problems confronting contemporary society must be viewed in their totality. Technological solutions to environmental problems are not complete without taking into full consideration social, humanistic and political implications.

Pick up and peruse a catalogue of courses from any college of agriculture today. Do not be surprised to note curricular offerings in many instances interdisciplinary, embracing human ecology, anthropology, history, English, biochemistry, microbiology, computer science and statistics, meteorology, nutrition and environmental physiology. This listing is not meant to be exhaustive, merely indicative of the up-dated response of the typical land-grant college.

The missions, and ad-missions, have surely changed to meet current societal needs and student demands. The close relationship of the teaching, research and extension faculties provides broadened educational perspectives for the undergraduate students whose classroom instruction is often directly related to projects and programs underway throughout the state.

Apparently, the mission-orientation has struck a responsive chord in the college-bound student of the seventies. The world is on a different, wiser track since the first Earth Day was unearthed in 1970. Colleges of agriculture throughout the United States, heavily involved in the biological sciences, have long appreciated the fragility of our natural habitat. Young people instinctively knew that if *Silent Spring* were ignored, a loud *fall* would result. They perceived our natural environment was in danger of becoming Rachael Carson-ogenic.

High school graduates are now seeking admissions to the land-grant colleges in increasing numbers. Many are career-oriented. The land-grant philosophy understands that well. Others desire advanced training at graduate schools. The land-grant philosophy also accommodates these interests.

The thrusts of the land-grant institutions have remained faithful to their missions during the last 115 years. They provide educational opportunities for all; they conduct research, both basic and applied, for the improvement of society; they disseminate knowledge to all the people. Such is higher education in a democracy. Of all the American exports to developing countries, none will prove to be of more lasting value than the mission-orientation of the land-grant philosophy.

Gulliver would be pleased!

Editor's Note: It has been interesting to note the upswing in our land grant institutions in recent years toward undergraduate offerings in ag communications courses. Your headquarters has been mailing a surprising volume of the leaflet CAREERS IN AGRICULTURAL COMMUNICATIONS.

Some universities have ordered as many as 500 to 750 copies of the leaflet. Career counsellors give it to prospective students. High schools and other institutions with career guidance centers have requested copies for their reference file. Three or four career information columnists mentioned the leaflet this past year. Hundreds of individuals have requested single copies.

This is truly gratifying. The need for greater skill in the use of our language has been evident for years. In fact, it has been increasing. Some of us tried vainly over the last decade or more to get academic administrators to acknowledge the need. But, somehow the fact that students could not spell, or write complete sentences, or verbalize their ideas understandably in either written or oral form never hit home with enough impact to "sell" the need for course work in "ag journalism" to the right people in some institutions. Now we see a change in attitude.

Maybe the label "communications" did it. Whatever it was, we see only good in the increased attention to better understanding and use of our language. We have long contended, "There isn't much of a future for anyone who can't communicate effectively."

Although Harvard University is not among the institutions referred to by Author Teller, your editor thinks it is significant that non-land grant institutions are also awakening to the need for this kind of academic attention.

A recent news item announced that the Harvard University Faculty of Arts and Sciences approved a proposal to scrap the current "general education" program and replace it with a more structured "core curriculum" designed to guarantee that every Harvard graduate will possess "basic literacy in major forms of intellectual discourse."

Now, if our schools can structure their curricula a bit more, so their graduates will know enough about something to tell about it, and help them develop the skills to read, write and speak — to communicate — their knowledge, they will be moving in the right direction.