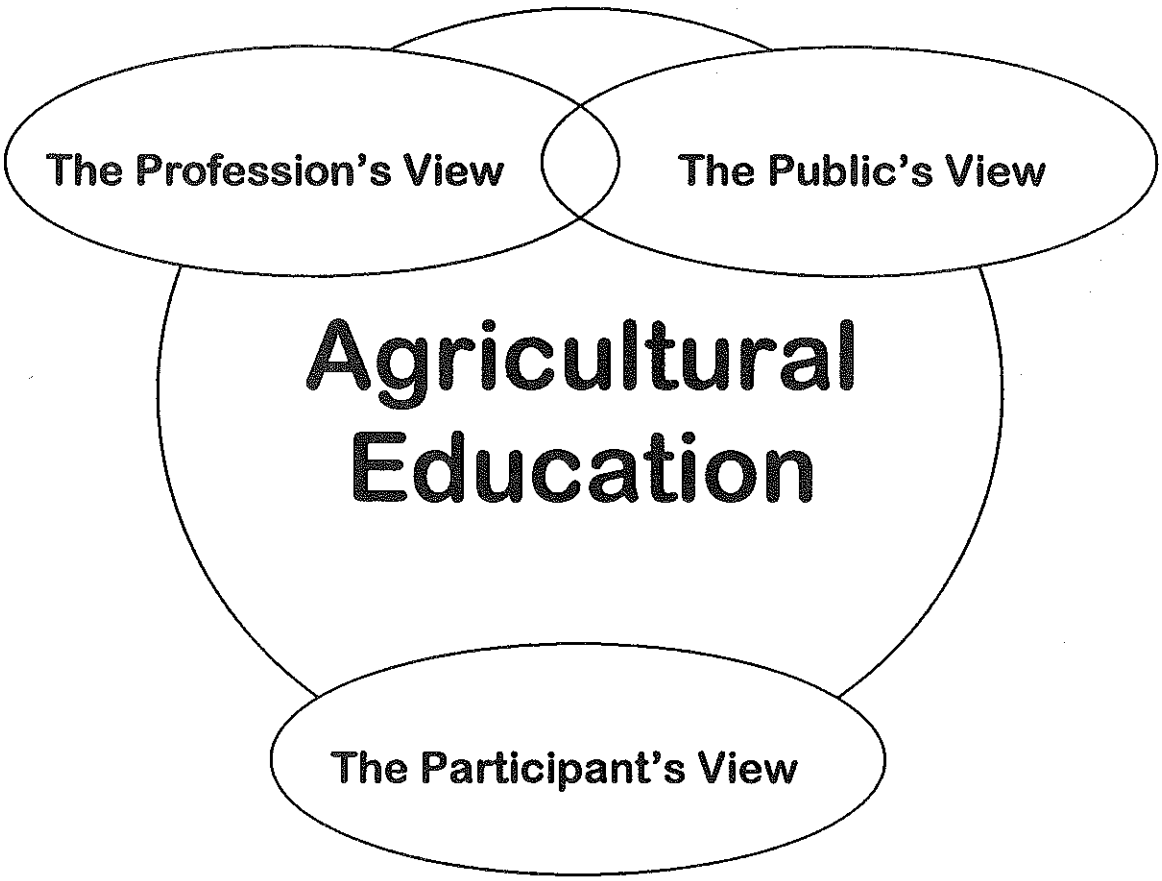
the magazine **Agricultural Education**

February, 1995
Volume 67, Number 8



Agricultural Education. . .

How is it viewed?
Whose perspective?
In what context?

THE
AGRICULTURAL EDUCATION
MAGAZINE

February, 1995 Volume 67 Number 8

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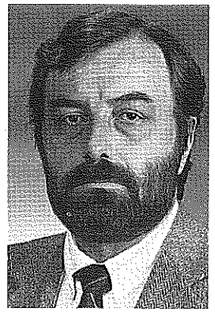
Is Agricultural Education Part of the Solution? We Could Be, But . . .



BY LOU E. RIESENBERG
Dr. Riesenberg is professor and head of agricultural and extension education at the University of Idaho at Moscow.

We, the agricultural education profession, could be part of the solution in the public schools' struggle to create real reform in its educational programs. We could be part of the solution in the public schools' effort to integrate academic and vocational education and subject matter. We could be part of the solution to the public schools' search for more effective and meaningful education for those students left to the so-called general track. We could be part of the solution in the public schools' attempt to provide to students a more seamless educational career path through the different levels of education. We could be part of the solution that public schools seek in order to implement a school-to-work transition initiative. To be sure, many other concerns or problems could be cited here, however, these seem to be paramount in the minds of many in the profession.

We, the agricultural education profession, could be part of the solution to all of the above initiatives or problems (depending on one's point of view). We could very easily be a part of the solution because we have been intimately involved in each of the initiatives, in one way or another, since we became a profession. We have players at all levels of education and have hundreds of examples (some even in this issue of *The Agricultural Education Magazine*) of agricultural education programs in the public schools moving forward with new thrusts and initiatives. Except for those of us that consider ourselves purists, we have always tried to bring 'academic' principles to bear on our vocational instruction. In fact, we started out as "science teachers" and then discovered the vocational method. We have always been articulating with different levels of agricultural education in order to give our students a better path to their career objective. As a basic part of our educational programming, we have been counseling our students as to the requirements for specifics careers or career paths. Our good old true blue Cooperative Occupational Experience Program surely was an attempt to transition students from school to work. If not, then what have we been doing all this time? Admittedly, we have been part of the solution. However, our participation has been very sporadic and, in all honesty, limited.

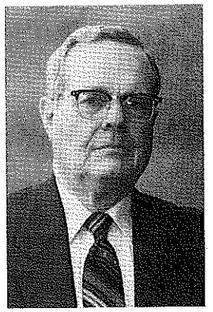
We, the agricultural education profession, could be a part of the solution, but . . . It seems the initiatives or problems mentioned above have formal names, Integrating Academic and Vocational Education, Tech Prep and School-to-Work Transition, and these concepts were formalized by someone else; don't we wish we could have been so inventive? If we could have devised these concepts, we sure could have been proud. After all, if we remove the formal tag and forget the origin, are not these initiatives sound educational principles that would enhance all of agricultural education?

Then why does there seem to be no national or regional concerted effort to bring agricultural education to the forefront on these issues? Possibly, we are not aware of the efforts underway, and in that case we would expect letters to the editor setting the facts straight. Possibly, we are so sheltered that we do not recognize the efforts underway.

We have been going to our professional meetings on the national and regional level for most of our professional lives. We bring together all our colleagues under the umbrella of agricultural education. We listen to motivational speakers, report our research, deal with our business, give ourselves awards and visit with our colleagues about everything (at some of our regional meetings we also educationally tour ourselves to exhaustion), but very seldom do we apply our unique problem solving abilities to a problem and solve that problem as a profession of agricultural education.

This issue of *The Agricultural Education Magazine* has as a theme "The Profession's View of Agricultural Education." We especially want to thank our colleagues in Texas for taking the lead in developing this theme. They have developed some very insightful and thought provoking views of ourselves. They have expanded on some very positive 'can do' examples of how agricultural education, as a profession, has moved forward and provided educational programming needed by students; needed by students everywhere. ■

The Profession's View of Agricultural Education



BY JAMES E. CHRISTIANSEN AND GARY E. BRIERS

Dr. Christiansen is professor and Dr. Briers is professor and associate head of agricultural education at Texas A&M University, College Station.

We are professionals in agricultural education, especially that area of agricultural education concerned in some way with formal instruction in agriculture at the secondary level. Some of us teach; some of us work with those who do so. How do we view ourselves? How do we view our profession from the chair in which we sit? How do we view our mission? We work with different clienteles. How do we view them? How do they view us? How do we think that they view us? Our clients in agricultural education have been changing. How do we view them? Programs in agricultural education have been changing. How do we view those changes? Have we contributed actively to those changes or have we accepted them passively? Is agricultural education changing too rapidly? We know or perceive that we know from whence agricultural education came. But do we know where agricultural education is going? Where do we perceive that agricultural education is going?

It is appropriate that this February issue of *The Agricultural Education Magazine* is dedicated to the theme, "The Profession's View of Agricultural Education," especially since the January issue was dedicated to "The Public's View of Agricultural Education" and next month's issue is on the theme of "The Participant's View of Agricultural Education." In this issue, we present views from secondary level classroom teachers, state level supervisory personnel, and people in teacher education. As you read their articles, please note that while they present viewpoints based on their different experiences, observations, and studies, and in the context of the settings in which they work, some common threads or themes emerge. For example, in several of the articles you will see addressed the changing and expanding missions in agricultural education, the emphasis on leadership development in the curriculum, the presence of diverse audiences or stakeholders, a reemphasis on experiential learning, and changing instructional technologies.

Gary Leske pointed out in the September 1994 issue of this magazine (p. 4) that we talk to ourselves too much, that we do not question very often what we do from the perspective of professional people in other fields. We agree wholeheartedly. We believe also that drawing together the viewpoints of people in our profession, such as those that appear in this issue, helps provide a composite view that can serve partially as a basis for comparison, questioning, and examination as we seek information and perspectives from people in other fields. Engaging in such activity becomes increasingly important as we enter more frequently and more broadly into collaborative arrangements with other disciplines and organizations, another thread that appears in the articles in this issue.

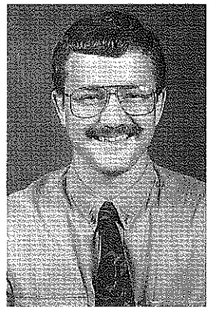
As we look at ourselves, what good might we see? Emphases on experiential learning, practical applications of knowledge, problem solving and decision making, and youth development are positive things that we see when we look inward. But all is not rosy. Lack of ethnic diversity, oft-encountered resistance to change, overemphasis on production agriculture, and too much emphasis on competition are "blemishes" on our programs. Finally, our insistence on trying to convince ourselves and others that agriculture is more than farming—more than "sows, plows, and cows" is counterproductive. Perhaps it is time for us to reexamine our stance. Doesn't the word, "agriculture," trace its roots (pardon the pun) back to Latin for "tilling the soil?" Thus, perhaps people outside our profession see clearly what "agri" - "culture" means: culturing, cultivating, or tilling the soil. Perhaps we need to view ourselves as "agriculture and agribusiness" or "agricultural industry." Simply put, how can we portray to others just what it is that we endeavor to do? As we look inward with one eye, we need to look outward with the other eye to ensure that others view us as we want to be, and should be seen. ■

About the Cover

Agricultural Education is practiced by the Profession, supported by the Public and utilized by the Participants. Each view has a perspective, a context and an influence. An understanding of each is a must.

Graphic courtesy of Agricultural Education, Texas A&M University, College Station.

Agricultural Education: A View from Inside the Classroom



BY GAIL PIENIAZEK AND RAY PIENIAZEK

Ms. Pieniazek is the agricultural science teach at Clear Brook High School, Friendswood, TX, and Mr. Pieniazek is the agricultural science teach at Clear Lake High School, Houston, TX

"You people in agricultural education really run a class act" is a comment often heard from a fellow Career and Technology teacher as he sees the excitement on the faces of the youngsters leaving the agriscience classroom with satisfaction from learning a new skill, or after succeeding in contests, or even upon returning from camps or conventions with more self confidence. Unfortunately, while our vocational colleagues look at us with envy, others see us as a dinosaur. We may hear comments from fellow educators and community members such as "You teach what?" and "Why are we teaching agriculture here in the center of NASA?" Although our program is second only to athletics in terms of publicity, it is amazing how many people in the community and even within the school are still unaware of the outstanding program we have in agricultural education.

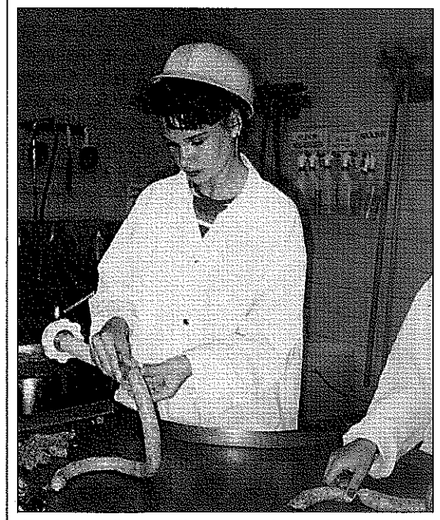
Essential Ingredients of a Successful Program

We have taught in this suburban area of Houston for more than six years and have watched our agriscience programs grow and prosper as is the case with most agriscience programs in Texas. At the same time we have had set-backs of our own and have watched other programs that were once prosperous now dwindle in enrollment. We believe that commitment of the teachers, administrative support, and community backing are essential to successful programs. At the core of the agricultural education program are the curriculum, the FFA organization, and the SAE program. Successful agricultural science teachers use these essential tools to prepare students with practical knowledge and transferable skills, to foster self confidence in students, and to gain respect for their program.

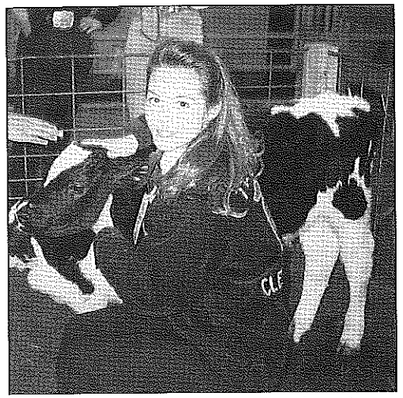
The New Agriscience Curriculum

For nearly a decade, agricultural science teachers in Texas have been teaching a curriculum that is based primarily on semester coursework in a number of separate subject areas, such as Animal Science, Floral Design and Interiorscaping, and Wildlife and Recreation Management. Initially many teachers met this new curriculum with resistance, but now most attribute the growth of our program to this curriculum change because it reflects current trends in agriculture, is appealing to non-traditional students, and is more respected by administrators, parents, and community members. Students like the freedom they have to enroll in agricultural subject areas that appeal to their interests. With the diversity of course opportunities, it serves as an opportunity for a wide variety of students to enroll in agricultural education. Guidance counselors like the flexibility the curriculum offers in scheduling, and parents see the curriculum as more practical and applicable to local career opportunities. The agricultural science program allows the instructor to focus on a subject per semester, rather than a subject per grading period as with the old curriculum. This enables more efficient planning and time can be spent on units more pertinent to local student needs. Also, as agriculture goes through technological changes, the curriculum can be easily adapted to meet those changes.

As with most educational concepts, the semester curriculum concept has its share of negatives. Students often enter and exit various agricultural science classes without even knowing that they are in an agricultural education program. They might have taken the course for "fun" or were scheduled into the class because the semester course fit easily into their graduation plan. Also, students who intentionally enroll in a fall course may be inadvertently →



Hands-on skills are still an essential part of every agricultural education program.



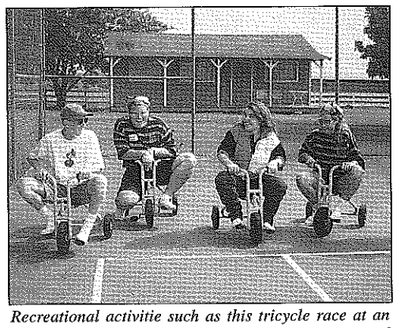
Production agricultural concepts are taught to elementary children during a tour of the Houston Livestock Show and Rodeo.

enrolled in the follow-up spring class with no knowledge of what the subject may be. Another problem is that due to the diversity of courses, the instructor may have excessive preparation periods in one day. This can add to the stress that most agricultural educators already experience. Nevertheless, the positives outweigh the negatives and the majority of the teachers, students, and significant others would never want to turn back. Our knowledge of curriculum changes throughout the nation is limited, but we know that other states have adopted a revised agricultural education curriculum and they are also experiencing positive results.

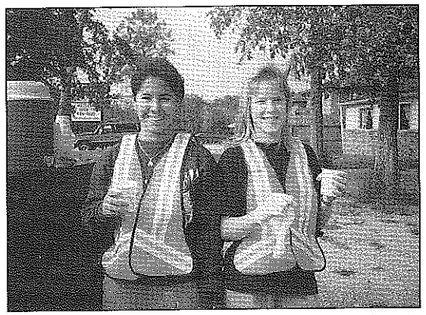
Changes in the FFA Program

With curriculum changes in agricultural education comes changes in the FFA program. We see these changes at local and state events, at the National FFA Convention, and with every issue of the *FFA New Horizons* magazine. One change is less emphasis on production agriculture. Although we all know that production is the foundation and "backbone" of agriculture, it has also served as a negative stereotype that the public uses to criticize our program. With high school students being so sensitive to ridicule, this can cause a decrease in agricultural science enrollment and difficulty in creating an increase in FFA membership. Many suburban and an increasing number of rural FFA chapters are redirecting their emphasis from mostly production to that of leadership development, cooperative efforts, and general agricultural education. Many programs have found success with this emphasis.

Programs for FFA meetings have shifted from the normal focus of how to groom a steer to topics such as becoming a game warden or being involved in a landscaping business. Likewise, the focus of our chapter's activities have shifted from traditional programs like tractor safety to seat belt or railroad crossing safety programs. Many of our other programs deal with the fact that our students are dealing with many social influences that were not as apparent some ten to twenty years ago. Many activities must focus on how to deal with the social pressures our students face in today's world. Other activities that many chapters sponsor have agriculture only as an underlying theme such as a pumpkin carving contest, a contest to determine which teacher is the "biggest turkey," or a chili cook-off. Many still do have some traditional activities like "Go Texan Day" where all those who really want to be cowboys or cowgirls can show their true selves. One of the parts of the program that will always draw students is the animal project program. This part will continue to draw even the non-traditional student who may wonder what it would be like to raise a project, which may very well end up to be more like a family pet.



Recreational activitie such as this tricycle race at an officer camp are essential in teaching cooperation and fellowship.



With community service projects, such as this Adopt-A-Highway Clean-Up Program, students learn about stewardship for their community and following safety precautions.

One of the major goals of any FFA program should be to foster leadership development. In Texas, the fall of the year means leadership contests. There are always the competitive students who give it their all and encourage others to become involved with these activities. Throughout the many activities in our chapters, students can take a leadership role that they may not otherwise have the opportunity to do. Many other clubs on campus do not offer this opportunity. Their sponsors for the clubs may do all the work without the students experiencing any leadership roles. Without the cooperation within our FFA Committees, all these activities would not be possible. Administrators and counselors are impressed at our FFA banquets because it is the students who are conducting the banquet and not the advisors. They are encouraged by the fact that the students are willing to take on such responsibilities even with all the demands of school, family, and other social activities. As teachers, we should be proud that our programs are strong enough to develop students who are confident enough to plan, organize, and conduct these events.

Even though some programs are criticized for over emphasizing leadership and judging contests, there is no better way to put our classroom learning to a test than in these contests. These contests have always been a way to teach students how to exercise analytical thinking skills based upon educated fact. As the FFA motto

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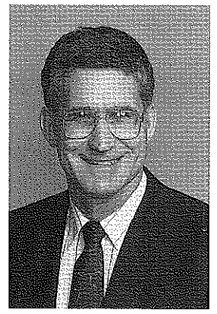
Managing Change in Agricultural Education



BY DON R. HERRING

Dr. Herring is professor of agricultural education at Texas A&M University, College Station

I like to think of agricultural education as being "under construction." This implies that we are in process, that we don't have a finished product yet. But it also implies that we have a program; we aren't starting from scratch. And that is important to keep in mind, because we have a fine program that merits our pride. But therein lies part of our problem, because we can be lured into complacency. All of us are familiar with the old adage, "If it ain't broke, don't fix it". Perhaps we should develop a new adage, "If it ain't broke, fix it anyway!" Some people don't like this statement, and admittedly it does sound a little ridiculous at first hearing. Closer inspection, however, reveals that it has merit. It is building a case for continuous evaluation, continuous renewal, and continuous change — change that is responsive to needs — societal needs and needs of our clientele.

Challenges We Face

What would you identify as the five greatest challenges facing agricultural education in the next 5-10 years? My list would include the following:

- What should be the mission and content of agricultural education?
- What clientele should we serve?
- What should be the delivery system for agricultural education?
- How do we modernize supervised experience programs (experiential learning) to accommodate our changing program and our changing clientele?
- How will teacher education programs provide knowledgeable, innovative, and forward-thinking teachers?
- How will we provide effective in-service education programs to keep teachers abreast of the dynamic changes they face?
- How can the mission of Departments of Agricultural Education in universities be expanded (international agricultural development, extension education, agricultural communications, etc.) and still fulfill our unique mission (preparing agricultural science teachers) in an effective manner?
- How do we reform agricultural mechanics instruction to keep it a viable part of agricultural education?
- How do we embrace the concept of Tech Prep in agricultural education?
- How do we continuously update curriculum materials to reflect tomorrow's agriculture, materials that incorporate problem solving and science and mathematics needed by our students in today's world?

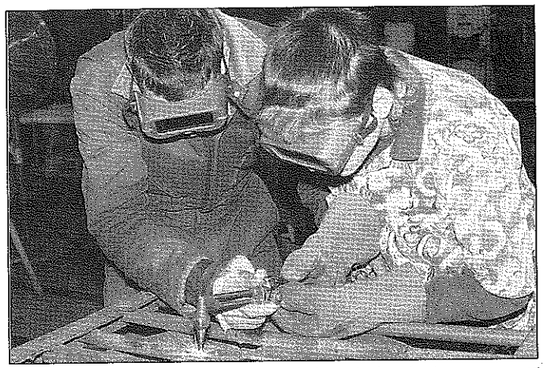
You may have come up with some different challenges than I did, but the point is, there are plenty of challenges facing us. In order to meet these challenges, and new ones that will arise constantly, we must look at them as opportunities. As Zurbrick (1991) stated: "What is sorely needed in education and agricultural education are visionary, dynamic leaders. Individuals who have the wisdom and intestinal fortitude to rise above the ruts and elevate agricultural education to a new, higher level of service.... We need LEADERS who perceive change as an opportunity for progress rather than those who fear it, fight it or fail to sense it entirely" (p.3).

Responding to Change

The Greek philosopher Heraclitus said, "There is nothing permanent except change." In a dynamic, ever-changing world, I believe that perhaps the greatest challenge we face in agricultural education is that of anticipating and managing change. The Strategic Plan for Agricultural Education (1989) reflects the serious nature of this task: "Change is rampant in agriculture, and agricultural education must keep pace or become an obsolete remnant of the past" (p.1). Herbert London (1988), Dean at New York University, says that four conditions must be present if we are to deal with change properly: (1) respect for the past, (2) ability to adapt, (3) confidence in the future, and (4) recognition of the inevitability of change itself. He says that without these conditions, change can be disabling. With them, change can be invigorating and even ennobling.

Robert Tucker (1991), in his excellent book, Managing the Future, stated:

> *Businesses that do not know how to change with change, that do not adapt and respond, do not survive. They become takeover targets, or are merged, purged and submerged out of existence. They go bankrupt; they disappear into oblivion. The reality is, being devastated by change can happen to any business that isn't taking specific steps to positively affect its future by the attitudes and actions it exhibits today.* (p.10)



Whether teaching skills traditionally taught in agricultural science, e.g., cutting metal with an oxygen-acetylene cutting torch; or skills involving new technology, e.g., using a computer in a class of ornamental horticulture to portray different versions of a horticultural layout, active involvement of the teacher with the student must occur if effective experiential learning is to take place. (Left: Jeffrey Braune, student teacher [cast on hand], helps a student learn to use a cutting torch. Right: Lori Patterson, teacher of horticulture, helps a student use a new graphics program. Both teach at East Central High School, Sayer, TX.)

I realize that Tucker was talking about the business world here, but what about us? Is it possible that if we don't anticipate and manage change properly, we might become takeover targets, or we might be merged, purged, or submerged out of existence? We too might go bankrupt and disappear into oblivion.

Managing the Future Instead of the Past

Tucker (1991) said that to meet the challenge of change, we must have two crucial skills. First, we must know how to manage the future instead of the past. Managing the future means riding the forces of change in the direction in which they are already headed. And it means paying attention to all kinds of changes — social, economic, cultural, demographic, lifestyle, technological, environmental, and global — and trying to see patterns in the changes taking place. It also means responding to change through constant innovation and making constant improvements. Perhaps we should spend just as much time reading books like Megatrends 2000 (Naisbitt & Aburdene, 1990) and journals like "The Futurist" as we do reading our own professional books and journals.

Attackers Rather Than Defenders

The second skill Tucker suggested is that we must be attackers rather than defenders. This simply means that we should be on the offensive rather that the defensive. We must be proactive, and concentrate on those things we can influence rather that those we can't. We can't control the weather, but how many of us let it control our emotions? If or when we face budget cuts, we must look for possibilities rather that limitations. We must use it as a challenge to focus on quality and look for ways to be more efficient. The pessimist looks at a glass of water and sees it as half empty. An optimist looks at the same glass and sees it as half full.

We must always be looking for a better way. How many changes in education (or agricultural education) have been mandated rather than the result of proactive changes initiated by those of us in the profession? If we were managing the future effectively, would it take a study and report from the National Academy of Sciences to spur us into action? Would we need mandates from state boards of education to get us to make significant programmatic changes? Would we have provosts and deans insisting on departmental reorganization or mergers and insisting on new initiatives? Wouldn't we be the shapers of our own destiny more often?

Paradigm Shifting

What is a paradigm? The word paradigm was a scientific term originally, and today is used most often to mean a model, theory, perception, assumption, or frame of reference. It's the way we see our world — how we perceive it, understand it, and interpret it. The problem is that we see the world, not as it necessarily is, but the way we are conditioned to see it from a lifetime of influences — from our family, schools, church, work environment, friends, associates, and current social paradigms (Covey, 1989).

Most every significant scientific breakthrough has resulted from a break with tradition, with old ways of thinking, with old paradigms. Copernicus, Newton, and Einstein revolutionized the scientific world of their day by breaking with tradition, breaking with old paradigms. I suspect the same thing can be said of agricultural education. And the same thing can probably be said of your personal life. For me, lasting, significant changes have resulted from paradigm shifts — from the way I began to see myself differently, from the way I began to see God differently, or from the way I began to see certain other people differently.

Several years ago, one of my favorite colleagues in the profession, Bill Drake, presented the distinguished lecture at our annual AAAE awards breakfast at the AVA Convention. I was amused at this comment in his summary statement: "We must stay pliable, open, and respon-

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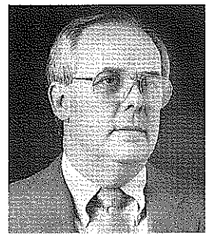
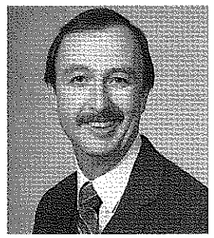
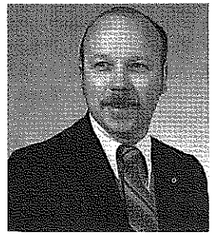
Image vs. Substance — A University Perspective







BY GLEN C. SHINN, DEAN SUTPHIN, JAMES LEISING, AND DENNIS C. SCANLON

Dr. Shinn is professor and head of agricultural education, Texas A&M University, College Station; Dr. Sutphin is director of academic programs, College of Agriculture and Life Sciences, Cornell University, Ithaca; Dr. Leising is professor of agricultural education, University of California, Davis; and Dr. Scanlon is associate professor of agricultural education, The Pennsylvania State University, University Park.

Introduction

- Differing perceptions of programs among constituents and community opinion leaders
- Megatrends influence education, agriculture, and society
- Synergy in program diversity in audiences, methods, and applications
- Need to teach knowledge that transfers to changing applications

Isn't image fickle? Even though plaid polyester slacks still have a service life, today's student does not view them as "cool". True or not, perception is reality in the eye of the beholder. Unfortunately, career decisions as well as fashion decisions are often made on perceptions. This image may be analogous to the agricultural education program. Our critics focus immediately on substance and conclude that image is symptomatic of a more serious problem. Historically, agricultural education relied heavily on problem-solving approaches. However, for the last 30 years, we have taught almost solely using behavioral objectives. Although we often talk about problem-solving, in reality our teaching is mostly a Mager-based behavioral approach listing ten of this and describing six of that. The science education community uses an approach that develops conceptual understandings that are transferable to various settings and new circumstances. A problem-based curriculum would fit well with that philosophy. What direction should we take to chart our collective future?

An Assessment of our Present

- Dramatic changes in educational structure
- Increased need for leadership, ethics, and career development
- Recognized need for continuous improvement
- Increased collaboration among groups and agencies

The publication of *A Nation At Risk* (1983) began a new wave of educational reform and launched a full complement of studies and reports that challenged existing curricula and pedagogy. The reforms of the `90s focus on learner outcomes and transfer of learning skills. New educational models are developing at an incredible rate. Many schools have modified curriculum using block schedules, extended days, and year-round calendars. Most schools have increased financial investments in capital improvements and technology. Administrators often encourage interdisciplinary approaches such as writing-across-the-curriculum. Some of these approaches have evolved from shared decision-making and a decentralized approach aimed at site-based management. Other approaches result from a public response to higher expectations while some grow out of frustration with programs that are just not working.

Education traditionally has been concerned with improving the three R's, but lately it has been charged with developing student leadership skills. Agricultural education has a history of enhancing communications, computational and analytical skills, as well as providing skills to work in organizations and cooperative group settings. Although the instruction has been zealous, perhaps we have not capitalized on the full benefits. Do students understand the intent of public speaking and parliamentary procedure instruction and view them as life skills? Have we allowed competitive events through FFA to make these activities too ritualistic and disconnected from real life activities?

Edward Deming, Peter Senge, and others advocate the need to create a learning organization. Peter Drucker (1994) predicted that "by the end of this century, knowledge workers will make up a third of the work force in the United States" (p.64). Demographers forecast that current high school students will likely be involved in six career changes during their work life. With growth in knowledge and changes in technology, there is a need for educational programs that focus on leadership and foster continuous improvement.

Professionals in agriculture and education recognize the value of increased collaboration. In 1992, the American Association for Agricultural Education (AAAE) solidified a collaboration with CAST — the Council for Agriculture Science and Technology. CAST is a coalition of agricultural scientists who develop much of the new scientific knowledge. At the 1994 AVA Convention, agricultural educators approved another collaborative initiative — CEEFAR— the Coalition for Education about Environment, Food, Agriculture, and Renewable Resources. The Internet and client-

server applications such as Mosaic provide collaborative opportunities to access and share information through a world-wide-web with small costs to users. Distance education technologies, including satellites, telephones, and compact disks encourage collaboration.

Capitalizing on Sustainable Strengths

- Sense of communities and community needs
- Focus on interdisciplinary subjects within the curriculum
- Methods based on experiential learning
- Integrated leadership into all aspects of the program

Roots of early agricultural education programs were in the local community. Although the philosophy and structure of the curriculum were prescribed, the nature of the subject matter was largely deregulated. Instruction was organized for "day-students" and "adult farmers" based on community needs. In many cases, advisory committees championed local initiatives and made recommendations for local school board action. There was a pride in ownership that promoted a strong sense of community. As schools become more urban, they are increasingly being asked to serve a more diverse clientele and provide a smorgasbord of courses. Community ownership of the agricultural education program is a sustaining strength in contemporary corporate-style school organizations. Strategically, local advisory groups such as program advisory councils, booster clubs, and the FFA Alumni have impact upon the quality, vitality, and viability of the program. Yet, we must not allow ourselves the luxury of planning in isolation from the total school.

The curriculum of agricultural education traditionally promoted a broad cross-section of subject matter including animal science, plant science, agricultural mechanics, farm business management, and leadership delivered through classroom instruction, laboratories, and individually supervised experience. The interdisciplinary nature of the curriculum communicated utility and purpose, enhanced the understanding of complex relationships, connected cause and effect, and developed a sense of values. Because of the interdisciplinary nature, there was seldom a single textbook — rather a collection of reference materials gathered from diverse sources. The use of these sources promoted individual responsibility and sound strategies to develop generalized solutions. A cook-book curriculum was avoided in favor of problem and community-based learning using the rich resources in the community as the learning laboratory.

The motto of the FFA — Learning to do, doing to learn, earning to live, living to serve — is fundamental to experiential learning. Learning by its very nature is an active process involving the learner. Shinn (1993) observed that a spiral experiential model begins with a reason for knowing (purpose), develops an understanding of relationships (application), discovers cause and effect (experimentation), and ultimately forms a new understanding of ethics and values (philosophy). Established psychological principles, such as self-activity, and readiness are fundamental to the learning experience. Postman (1992) concluded that John Dewey's aim was to help the learner function in a world of constant change and puzzling ambiguities. We have done these things in the past and they have been our strength. Are we capitalizing on them today?

Megatrends that Affect our Future

- Increasing population growth and ethnic diversity
- Shift from rural to urban settings
- Shift from traditional secondary student to continuing education program (K-Adult)
- Environmental issues impact technology and economic decisions
- Rapid changes in information technology and access methods
- Dramatic new organizational structures fostering teamwork

John Nesbeit, Patricia Alberdeen, Joel Barker, and a host of others are actively engaged in a relatively new science — one of analyzing our present and projecting into the future. Mark Twain was quoted as saying 'the only sure things are death and taxes.' Perhaps we can be sure of a few more things; world-wide, surviving children born in February 1995 will be five years old in February 2000 and they will outnumber the five-year olds of today. The estimate of world population on February 1, 1995 is 5,756,017,000 with population growing at the rate of approximately 1,720,000 per week! World population is predicted to double by the year 2030. Demographics suggest that 40% of the babies will be born into families near the bottom of the income scale.

North America represents about 8% of world population and its share of world population is decreasing. In 1917, when Smith and Hughes crafted the legislation for vocational education, there was a vastly different mix of rural and urban population and occupations. In many USA communities today, "minority" populations now represent the ethnic majority. By the year 2010 the majority of new workers will be women and minorities. Nearly 50% of children will be living in female-headed, single-family homes. Consider that one-third of the African-American, Hispanic, and Native American populations are currently considered underemployed. You can be sure that these statistics →

will have a direct impact upon programs regardless of geographic location. The Smith and Hughes counterparts who are crafting today's state and federal legislation for education are writing for a very different constituency! We have different world issues, different value systems, and different sets of experience.

Even Rip van Winkle would recognize the increased controversy and concern about the environment in today's society. Daily newspapers dedicate several column inches to environmental issues: chemical use, water quality, endangered species, land use and erosion, and solid waste disposal. Many of these editors infer that agriculture is one of the "most wanted" villains contributing to environmental decline. Conservation, environment, renewable resources and sustainable agriculture are the battle cries of the '90s. Funding for low-input sustainable agriculture has increased substantially over the last decade. Researchers have consistently shown that agriculture and the environment are compatible. David Orr (1992), in *Ecological Literacy*, suggested several compatibility models. There is increasing need for education about environmental issues and improved public information about cause and effect relationships. Although many agriculture teachers understand the issues, most students do not. While students have trouble connecting and valuing the agricultural sector, they are interested in the environment, nutrition, world hunger and a safe food supply. We must develop a vocabulary and teaching approaches that connect with contemporary issues valued by students and society.

Technology and the "information highway" are transforming the way business is conducted in both agriculture and education. New knowledge —information— is doubling every 17 months. Much of the new information is available quickly through electronic technologies. AT&T, Microsoft, Turner Broadcasting, and Motorola, as well as smaller companies are increasingly interested in education and training. Thousands of children spend 20-30 minutes each school day tuned to "Channel 1" for an edited version of the news. The Internet system provides "at-home" opportunities for networking and world-wide access to data bases and information. Mike Powers (1994) observed that "from teaching reproductive management of dairy cows to modeling the complicated mathematical formulas used in genetics studies, computers are finding many uses in the college classroom of the `90s. They are providing increased flexibility for learning and allowing students to explore their subjects more thoroughly than ever before" (p.15). These technologies may be the catalyst for a major revolution in the way we teach.

The workplace has forever changed during the past two decades. Edward Deming's teaching about quality and system relationships has had tremendous influence, first in Japan and then worldwide. Cryovac, a giant in agricultural industry, has re-structured their organizational chart. The number of upper-level administrators has been dramatically reduced while the number of technical workers has increased. In doing so, new responsibility and authority have been transferred to individual workers. As a team, Cryovac workers are using cooperative leadership to improve product quality, solve production problems, and reduce costs. Jack Wilson, manager for Cryovac's North American HRD operations in Greenville, SC ,actively seeks former students of agricultural education and members of FFA because of their experience in teamwork, cooperation, and supervised experience.

Charting our Collective Future

- Design the curriculum around food systems and environmental stewardship
- Select teaching methods that foster experiential learning
- Integrate leadership into all aspects of the program
- Increase collaboration among allied groups and agencies

Food is intrinsically linked to natural resources and environmental issues. There is widespread concern about environmental practices that sustain the delicate balance of the ecosystem. The purposes of the curriculum must be congruent with environmental concerns and must convey a reason for being and communicate value. The program should deliver a systems-approach to education and training that infuses purpose, application, experimentation, and philosophy while serving a broad clientele group. Collectively, we must communicate national and state quality standards for programs and professionals tied to strong, dynamic disciplines.

Learning to do, doing to learn is a psychologically sound educational strategy. Research suggests that teaching should be student-centered and that the learner must actively participate in the learning process. Teaching methods should focus on learner outcomes and self-actualization where the learner gathers information and acquires knowledge about complex relationships. However, information is not knowledge. Practical solutions are the result of the application of knowledge to specific issues. The connection of cause and effect is fundamental to the selection of appropriate solutions. Cognitive learning coupled with practice and corrected feedback promotes a solid set of values and beliefs.

Max DePree (1989) described leadership as the ability to serve others while meeting your goals. L. H. Newcomb (1992) advocated that students "... would be well served to participate in courses and non-course experiential activities that develop and enhance their leadership capacity. No area of the campus is better equipped to meet this need than agricultural education departments" (p.6). Recent National Academy of Science recommendations hinge on innova-

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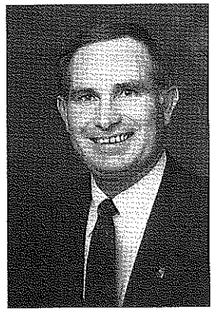
The Agricultural Education Profession: Becoming a Champion for the Future



BY EDWARD SMITH
Mr. Smith is state supervisor of agricultural education for the Oklahoma Department of Vocational and Technical Education, Stillwater.

What Does Agricultural Education Hold for the Future?

The mission of agricultural education in Oklahoma is to secure the economic and social well-being of Oklahomans by delivering quality educational experiences and opportunities in and about agriculture. We aspire to excellence as we seek to meet the personal, academic, career, and community development needs of our clients. It is our consensus that most Americans possess very little knowledge and information about agriculture, its social and economic significance in the United States, and in particular, agriculture's link to human health and environmental quality. We serve the people as we inform them about agriculture—its needs, opportunities, and challenges. We also value the individual and believe the future of society depends on the development of our human resources. As an agricultural education profession, we will continually be challenged to provide leadership and direction. We must continue to build systems for managing our future, rather than spending our energy in defense of the past.

As we recall the late 1980s, we remember the national study on agricultural education in secondary schools. This report, *Understanding Agriculture: New Directions for Education*, certainly has had an impact. The national committee's findings pointed to two basic challenges. First, agricultural education must become more than vocational agriculture. Second, major revisions are needed within vocational agriculture (National Research Council, 1988). In working toward both goals, educators should borrow from the best current programs, while creating new ways to deliver to more students educational opportunities in the agricultural sciences, agri-business, nutrition, and land resource stewardship. Modernization of our curriculum and the development of new programs and projects are two of the positive results of this study. We have moved away from traditional agriculture and moved into the agri-science, agricultural business, and agricultural technology areas. Since that time we have experienced increased enrollments and FFA memberships.

Where is Agricultural Education Today?

The agricultural education profession has and is still experiencing many changes. Naturally, some of these changes are discomforting. However, giant strides have been accomplished by modernizing the curriculum to meet the needs of our students more effectively. We have better aligned our contests and awards to support our instructional materials. Perhaps the most encouraging thing that we see today is a change in philosophy of what agricultural education is at the secondary level. The name change from vocational agriculture to agricultural education has been very productive in Oklahoma in that we have experienced greater than a 20% increase in enrollment over the past five years. We have experienced more collaboration and developed partnerships with academic teachers and business and industry. This has resulted not only in team efforts, but improved teaching methods as well. It has also allowed agricultural education to be reflective of instruction in and about agriculture.

We believe that our profession is as strong today as in the past due to these changes combined with our traditions and previous successes. The flexible nature of our programs, curriculum and activities are yet another reason for the success of the Oklahoma agricultural education system. The curriculum ranges from the traditional production agriculture to non-traditional areas, such as natural resources and bio-technology. This variety and quality of curriculum materials gives the instructor the tools to mold the program into one which will meet the needs of the community. We believe the overall image of the profession has definitely improved during the past five years, and at the same time we have been able to maintain our identity with agriculture.

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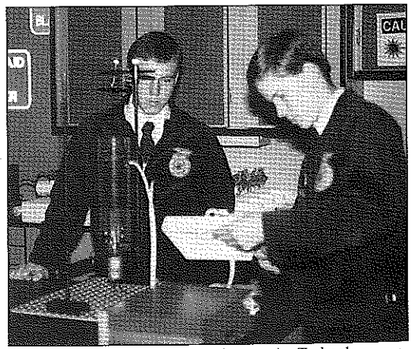


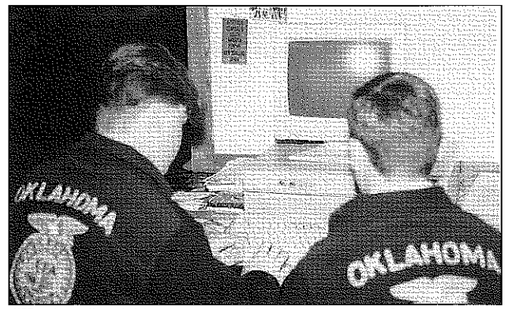
Students perform experiments in new Ag Technology curriculum during the Ag Classroom of Today exhibit at the Oklahoma State FFA Convention.

The biotechnology lab made learning an exciting experience during the Ag Classroom of Today exhibit at the Oklahoma State FFA Convention.

Where is Agricultural Education Going?

We believe it is an exciting time to be involved in agricultural education. There are many agricultural related jobs available for our students after graduation. To prepare them for future employment we must deliver and promote a more vigorous climate. We must require high expectations, better use of instructional time, more emphasis on classroom attendance, more emphasis on agricultural literacy, and more emphasis on the promotion of basic skills and academics.

As we chart our course for the next century and beyond, we must reform our coalition. We must strive to articulate and collaborate with our agricultural education family. The local teacher is always going to be the key to success of any program, but state supervisors, administrators, and teacher educators have to continue to provide the necessary resources and motivation to the teachers and local advisory groups. We must also share in the outcome and results by informing the general public and other educators of our progress and success. The "whole person" concept should continue to be developed. We have the natural linkage within our programs to do this with our classroom instruction, leadership programs (FFA) and Supervised Agricultural Experience (SAE) programs. Our students must be provided greater flexibility with a broader selection of courses to be offered. We will need to see more progress in the areas of Competency-Based Education, Tech Prep, and Applied Academics, just to mention a few.



"Hands-on" activities prepare students for computer technology.

Agricultural education must become industry-driven. We need to build educational partnerships with employers in the agricultural industry. Challenges and obstacles lie before us as we construct this new system. We've already begun to forge partnerships with business and industry, labor, higher education, elementary and secondary education, and a host of other partners. The ability to harness this power of partnerships to its fullest potential is an important component of the School-to-Work Transition initiative which we must implement in order that we may someday have a seamless education system. Through Oklahoma's new School-to-Work Transition initiative, we stand on the brink of creating a new education system that will better prepare students for the job market and for college. But paving the way for students to move successfully from the classroom to the workplace will not happen unless we are all willing to make a personal commitment of our time, resources, and energy. We have the unique opportunity to revolutionize the way our students are prepared to succeed in the workplace and in life.

At the same time we must stay on the forefront of technology. We must continue to offer new and innovative programs to our students. The era of the printed textbook is ending. In its place, educators need a new form of interactive learning, one that melds the vast power of computer, video, information, and communications technologies with the best research in learning strategies. For the task of delivering instruction, computers are better than books in almost every way. They are able to present not only text and pictures, but also animation, video, and sound. Our goal should be to move students beyond content mastery to information seeking and problem solving skills. This will provide the student of the future with the power to become effective and creative learners.

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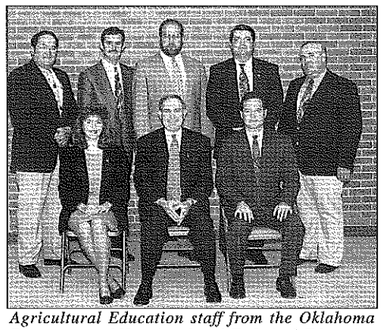
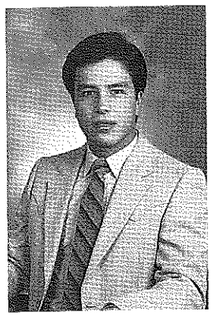


Agricultural Education staff from the Oklahoma Department of Vocational and Technical Education pictured from left to right: First row: Rose Bonjour, program quality specialist; Eddie Smith, state supervisor and FFA advisor; Les Tilley, NW district supervisor. Second row: Raymond Cockrum, SW district supervisor; Kent Boggs, FFA executive secretary; G.T. Moody, C district supervisor; Phil Berkenbile, NE district and assistant state supervisor; Jim Meek, SE district supervisor.

Expanded Mission, Expanded Challenges for Preservice Agricultural Education



By Robert M. Torres and Thomas J. Dormody

Dr. Torres is assistant professor and Dr. Dormody is associate professor of agricultural extension education at New Mexico State University, Las Cruces.

We begin with a simple question: How well are we doing in preservice agricultural education? To answer this question, it is best to follow the advice of Stephen Covey (1991) and "begin with the end in mind." In other words, what is our mission, and how well are we accomplishing it?

Within our department at New Mexico State University, we have written a new mission statement by hybridizing Covey's (1991) universal mission statement with the university mission. This new mission is "to improve the economic well-being and quality of life of all stakeholders in agricultural, extension, and technology education through needs-based, high-quality, and dynamic teaching, research, service, and extension programs." The mission statement is general enough to relate, at least in part, to other preservice agricultural education programs in the country, and provides us with a reference point for our discussion.

Who are Our Stakeholders?

Covey (1991) defined stakeholders as those "who will suffer if the enterprise fails." Who we consider stakeholders determines our preservice education programming. By expanding our mission, we also expanded our list of stakeholders, who belong to three groups. Stakeholders within the department include our undergraduate, graduate, and non-degree students; faculty; and staff. Our clientele-based stakeholders are our graduates placed in formal and nonformal, domestic and international, agricultural and technology education professions, and the adults and youth they serve. The third group, affiliated stakeholders, includes others with a stake in educating people in and about agriculture and technology, such as other departments in our college; state supervision; and business and industry, civic, commodity, and governmental organizations.

What are Some Challenges?

With the adoption of an expanded mission and an expanded group of stakeholders, our department is experiencing five new challenges for preservice education.

Expanded Options

Economic principles suggest that product diversification is key to a successful enterprise. With changing American demographics, many in the profession are calling for the re-examination and diversification of preservice programming in agricultural education. The goal of diversifying is to develop a more viable and marketable product; our programs should appeal to a larger and broader base of students. The results of diversification are still forthcoming; nevertheless, agricultural education departments seem to be moving toward program diversification, preparing students for employment in traditional and emerging areas of agricultural education.

In addition to preparing secondary school agricultural education teachers and extension agents, departments are beginning to offer degree options in agricultural communications, agency/industry education, and technology education. Like many other programs nationwide, our department is adding these options not by adding faculty or resources, but by tapping resources in other departments. Other departments within the university provide the technical preparation for preservice students, while we in agricultural education provide the professional education courses that are common to all preservice students. For example, the Department of Journalism and Mass Communication provides the communication courses (and a minor) for agricultural communication majors. Our "expanded" faculty makes it possible to provide new options for our students.

Advising

Expanded degree options makes student advising more complicated. No longer do advisors have the convenience of advising only agricultural education and extension education students. Advisors must be either experts on all degree options or specialists in one or a few options, advising students in those options only. Advising has become a monthly agenda item for our faculty meetings where faculty learn about all degree options.

With multiple degree options, faculty must prepare a core of professional education courses and experiences common to all options as well as professional courses and experiences specific to each option. For example, the types of internship opportunities need to be expanded to secure quality, individualized experiences for students in the different options our department, one faculty member has been assigned to coordinate all internships in communications, agencies, and industry, while others specialize in coordinating extension intenships or student teaching.

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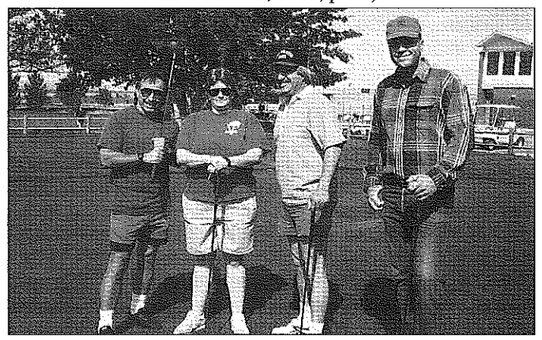
Recruiting Diverse Audiences

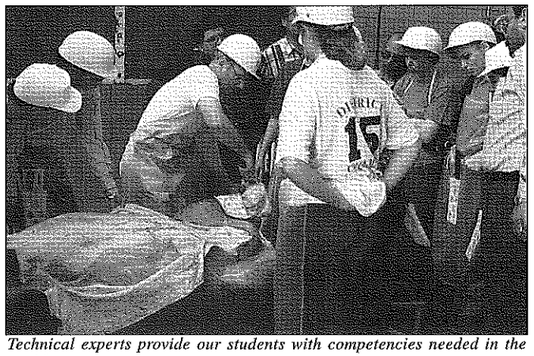
The June, 1994 issue of *The Agricultural Education Magazine*, dedicated to "Supporting Professional Diversity," expressed a common concern for recruiting and retaining women and minority students into preservice programs in agricultural education. One source estimates that more females are enrolling in secondary agricultural education, but "minority enrollment remains disproprotionately low" (National Research Council, 1988, p. 29).



Departmental activities at New Mexico State University break down barriers to embracing individual differences among students and faculty.

If membership of the National FFA Organization (1993) can be extrapolated to enrollments in agricultural education, then only 27% of students are female and only 12% are minority students. Yet the number of minority students in the U.S. continues to increase. By the year 2000, minority students will comprise an estimated 33 percent of the school population, increasing to 39 percent by the year 2020 (Johnson, 1991).

Although the call has been initiated, teacher educators are still having difficulty recruiting a diverse group of students into agricultural education. Successful recruiting will depend on our ability to build an environment that attracts diversity, beginning with faculty and staff who welcome and celebrate differences. Through class, student organizations, and departmental social activities and trips, students will become comfortable with each other and with their individual differences.



Technical experts provide our students with competencies needed in the workforce.

Integrating Academic and Vocational Education

Teachers' roles are continuously evolving. With the amendments to the most recent vocational education legislation, secondary agricultural education teachers were presented with the challenge of integrating academic skills across their curriculum and relating these skills to the real world. The 1990 Carl D. Perkins Vocational and Applied Technology Act provides federal dollars for improving vocational educational programs by integrating both academic and occupational skills that students will need to work in a technologically advanced society.

Being able to integrate both academic and occupational skills will place new professional requirements on our preservice students. Additionally, one source suggests preservice students should be competent in teaching team building, cooperative learning, joint planning, and interpersonal skills (Cobb, 1992). As the role of the teacher changes, so must teacher preparation. Preservice agricultural education programs should instill in preservice students the commitment to integrated teaching by addressing multiple approaches to teaching (e.g., problem-solving approach) and teaching methods (e.g., case studies).

Process vs. Content

Graduates leave our programs educated in three content areas: general education, technical education, and professional education. Universities and colleges establish a requisite core of general education courses to develop graduates who are "generally well-educated." The principal function preformed by preservice agricultural education professional courses is teaching "process" knowledge, attitudes, and skills, that is, how to teach and learn in the context of agriculture.

Much too often, however, our clients perceive teacher educators as experts in technical content in addition to being experts in the educational process. However, our students learn technical competencies from the content experts — teaching faculty in agricultural disciplines such as agricultural economics, animal science, horticulture, and entomology. In the case of our technology education degree option, students learn technical competencies from our extended teaching faculty in engineering technology and related areas. Teacher educators, in contrast, prepare technically competent graduates by outlining the core curriculum in the technical areas of agriculture and technology.

We have discovered that we must continually "sell" the concept of being "process" experts to our students and traditional stakeholders. Only through constant communication and effort are we able to teach them to value "process" as a skill for improving their ability to educate others.

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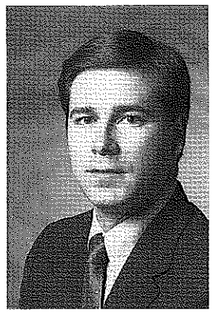
Is Agricultural Education Changing Too Fast?



By William G. Weeks and Billye Foster

Dr. Weeks is associate professor of agricultural education and 4-H youth development at Oklahoma State University, Stillwater and Dr. Foster is interim assistant professor of agricultural sciences at East Texas State University, Commerce.

Education functions like a pendulum — sweeping back and forth — bringing in new ideas and replacing the old, only to later replace the now "old" new ideas with the former "old" theories. It might even be said that like fashion, if we hang on to educational materials long enough, they will become useful again. Agricultural education, however, has always followed its own drum. While it is true that changes have occurred, over the years those changes have been more in line with changes in agriculture than in education. Over the last decade agricultural education has experienced change at an unprecedented rate. The secondary student organization changed its name, degrees, and creed; curriculum has been completely redefined; and student "projects" are anything from working in a grocery store to giving a speech. All of this change has some people in agricultural education asking the question, "Are we changing too fast?"

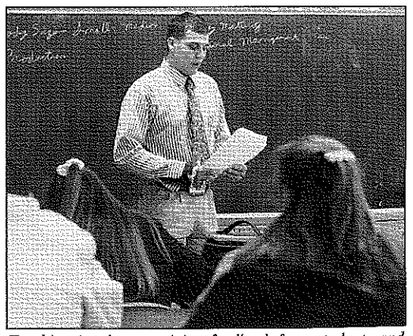
"Don't throw the baby out with the bath water;" "Don't fix it if it ain't broke!" and "You can't come back from where you ain't never been!" are all clichés that beg for those who advocate change to resist. But surely it is a question worthy of debate: "Are we changing too fast?" Are we changing so fast that our stakeholders won't or can't recognize us? Will trying to be "all things to all people" leave agricultural education without an identity? Maybe some answers lie in the changes agricultural education has already endured.

Agricultural Education Before 1917 — An emphasis on science would describe most programs. Agriculture was primarily taught as a science or nature study. We know that some of that instruction was truly vocational, as some schools were built around school farms and were, in fact, boarding houses for agricultural education. In the early 1900s agricultural education was certainly growing, expanding from 400 schools in 1900 to nearly 4,500 schools by 1915. Farm boys were being taught agriculture through "corn clubs." One thing was for certain, and that was that there was nothing for certain. Agricultural education was headed in many directions. That is, until the federal government became involved.

Smith-Hughes Act of 1917 — The follow-up to the Morrill Act defined what the federal government thought agricultural education should be. In one motion vocational agriculture replaced any and all other agricultural education being taught in the public schools. The "Smith-Hughes teachers," as they were often called, had the mission of educating boys who wanted to be farmers. Vocational agriculture was also seen as a way to not only advance technology and introduce new agricultural concepts to future producers, but also as an incentive, much as athletics is sometimes used, to keep rural boys in high school. Vocational agriculture created an environment that was both natural and secure while at the same time providing unique and exciting experiences.

The Golden Years — It has been said that life is change, and no person can escape it. But vocational agriculture managed to hold change at bay for nearly 50 years. While enrollment grew in the '30s and '40s, the FFA increased in reputation and influence. Awards and prestigious degrees became goals that helped drive the excitement in the classroom. Although numbers increased, the basic concepts that produced vocational agriculture changed little throughout the '50s and '60s. The Vocational Education Act of 1963 opened vo-ag to teach more than just production agriculture, but little really changed. Vocational agriculture remained a conservative, production-based vocational program, the same ol' vo-ag.

Cosmetic Changes — In 1965, the Future Farmers of America voted to allow former members of the all black New Farmers of America to join their ranks. No real merger took place between the organizations; it could be better described as an absorption. There was no plan to recruit minorities to vocational agriculture; they could simply enroll in an already existing program. In 1969, the same process provided the admission of females to the organization. Many years later the National FFA Supply Service began carrying a girl's jacket — convinced that the boy's jacket just wasn't fitting girls right. Future Farmers of America, and likewise, the vocational agriculture classroom was still a white, rural, male social club, with a few subtle changes. *The world may be changing around us, but we can still count on vo-ag.*



Teaching involves receiving feedback from students and giving feedback to students. Jeffrey Braune, student teacher at East Central High School, Sayer, TX, compliments a student on her solving of a problem in agricultural science.

The Hard Years — With fewer and fewer of the original group for which vocational agriculture was developed, available educators were also faced with the plight of maintaining student numbers. And so an additional need for change arose — how to tap the unused resource of non-farm students. While the '70s and '80s saw an increase in the number of girls enrolling in ag classes, minorities were still limited in numbers. As society began to call for students to look more to higher education in planning their futures, vocational education in any form began to lose some of the luster and prospect it once had held. Students became wary of any classes that weren't traditional "college prep." Everything in the world is changing; at least vo-ag stays the same.

The Floodgates Open — In 1988, the publication titled *Understanding Agriculture: New Directions for Education* opened a floodgate of change in agricultural education. The gate was opened, and decades of overdue change flooded our profession. The book put in writing what many in agricultural education were afraid to admit. It found that only a small percentage of high school students enrolled in agriculture, that enrollment of minorities was disproportionately low, and that vocational agriculture (agricultural education) programs were of uneven quality. The report called for a broadening of the scope of SOE and FFA, the improvement or elimination of weak programs, and the development of better instructional materials. In short, the report said that agricultural education had best ready itself for change.

And, we should be bracing for more change. Food safety is the newest and possibly the most important curriculum available. There are some who wish to move the National FFA Center, and there are even some who might like to change the blue corduroy FFA jacket. Can we sit back and relax, content that the flood of change has past? As golfer Bill Murray said, "I don't think the heavy stuff is goin' to come down for quite a while."

Has agricultural education changed too much? It is difficult to say. What we can say is that while the profession is no stranger to change, the change from a science-based program to a "farmer-training" program must have been quite a change. The seemingly endless changes we are now experiencing may well be the result of a resistance to change for so many years. In his book, *The Walking Drum*, Louis L'Amour noted, "A ship does not sail with yesterday's wind." Agricultural education must honor our history, but we must equally be willing to embrace developments that have forever changed agriculture and society. If we do that, then surely we can be led out of the darkness of immutable patterns and into the glorious sunlight of new and exciting possibilities in agriculture! ■

Image vs. Substance

(Continued from page 11)

tive programmatic leadership at the state and national levels. Evidence available over the past five years leads one to conclude that the influence of state agricultural education program leadership is diminishing. Many state supervisors find they have less dedicated time for program and teacher services. Leadership cannot be a sole source commodity; rather, everyone can make important contributions. However, to be an effective leader, one must fully understand the vision and strategic plan of the organization. John Gardner (1990) reminded us that "the first and last task of a leader is to keep hope alive" (p.10).

Bill Boldt and Ken Kingsley (1992) have studied strategic marketing of educational programs. They concluded that marketing must begin internally and be infused throughout the organization. Boldt and Kingsley recognized that the program must strive to meet the needs of clientele by creating a consistent, highly visible and top-quality organizational image, mission, and identity. Positive relationships must be developed, maintained, and expanded with key school officials, community leaders, clientele and media representatives. Boldt and Kingsley developed a marketing framework which involves an eight-step process:

1. developing a clear statement of need,
2. writing measurable goals and objectives,
3. identifying the specific audiences,
4. analyzing competition for time and resources,
5. positioning the program in the educational marketplace,
6. designing a marketing strategy,
7. developing the program delivery system, and
8. maintaining continuous evaluation.

Because agricultural education courses are elective, some student recruitment strategies may appear to be self-serving. If agricultural educators are to enhance our creditability in the educational community, what language should we speak and what should be our approach; marketing a product or developing a value? Perhaps this is not an either/or situation; marketing without reform will be problematic for our long-term future. Reexamination of our

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Donald Bird, Agricultural Science and Technology, West Jefferson High School

BY L. DEVERE BURTON
Dr. Burton is state supervisor of agricultural education for the Idaho State Division of Vocational Education, Boise and Success Story Editor.

Agricultural Science & Technology instructor, Donald Bird, knows how to create student interest and zest for learning. He teaches in a rural community in eastern Idaho where ranching and potatoes are "King of the Road". What do you do in cowboy country to stir students to action? You win the state "Envirothon" contest and take your country kids to Niagara Falls, NY to the national Envirothon competition.

And how does a busy agriculture instructor find time to gather materials and coach the fourth place winner in the national contest? He teams up with a science instructor whose talents complement his own, and they share the experience of a lifetime with their students. Have you ever heard of "integration of vocational and academic education"? This is integration in its finest form. And who benefited the most? The students who were fortunate enough to have a instructor who could see beyond his own program.

Agricultural Science & Technology students at West Jefferson High School are learning what it means to integrate academic and vocational education. Their agriculture instructor, Donald Bird, has taken advantage of opportunities to team up with other instructors at the school to strengthen academic skills in agricultural settings. Students are taught to use common sense skills and modern science to solve problems.

Mathematics is a common component of agricultural courses. The planning and layout of even the most simple projects involves algebra, geometry and trigonometry. Applications for mathematics are emphasized in every agriculture course. English is the basis for communication, and communication skills utilizing the written and spoken word are reinforced in agriculture courses. In addition, students who complete a semester-length specialized course entitled Farm Business Management receive credit for Consumer Economics, a required class for high school graduation.

Mr. Bird has been an agriculture instructor in the same high school for the past fourteen years. The traditional production agriculture program has evolved in that time into a modern program featuring a number of nontraditional initiatives. Students still learn basic mechanical skills, but they also learn the principles of physics and chemistry that they are applying in their work. They still learn plant propagation in the horticulture laboratory/greenhouse, but they also learn principles of botany. Students continue to study the culture of crops and livestock, but they are exposed also to such "high tech" procedures as embryo transfer, and science experiments using Wisconsin "fast plants" and "bottle biology". They still measure, cut and fasten as they build projects, but through these projects, they also learn applications for the principles they learned in algebra, geometry and trigonometry. They still learn public speaking skills and prepare award applications, but they depend on the English instructor to critique their manuscripts and applications for correct word usage and grammar. This is the modern way to educate young people using all of the resources that can be brought to bear on the activity.

Instruction is enhanced through the use of "bottle biology" and Wisconsin "fast plants", and through the use of the greenhouse which provides a laboratory for instruction in botany. Science in agriculture tends to reinforce the academic science classes, and future plans include offering science credit for specific agriculture courses. The agriculture science classes are demanding, and the hands-on aspect makes them relevant and understandable.

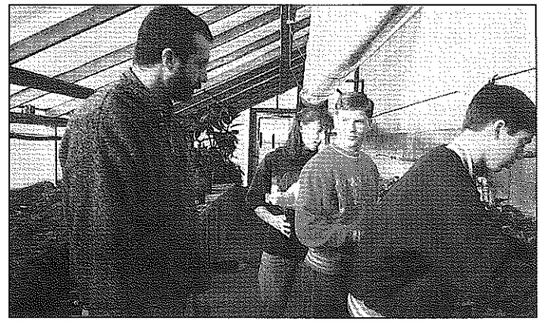
Recently, the instructional program incorporated environmental science into the curriculum to help educate the students about the environment, and to help them understand the importance of becoming better stewards of land and water resources. Botany and chemistry are utilized in course work as it applies to agricultural subject matter. Science instructors are involved in the program as consultants, and as active participants in preparing students to participate in a state and national competitive event known as the "Envirothon." →

State Dairy Judging Contest Team 1st Place 1994.

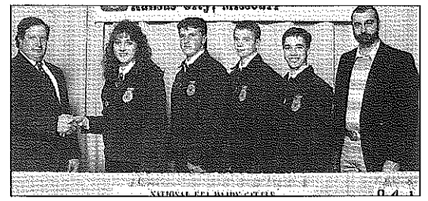
Crops class working in the greenhouse, 1994.

While many agriculture instructors were worrying about how school reforms such as School-To-Work Transition could restrict their programs, Mr. Bird was figuring out ways to take advantage of the changes that were taking place. He pioneered an effort to develop student competencies associated with the FFA award program. At West Jefferson High School, you will find students who earn up to two high school semester credits toward their high school graduation requirements outside of school time for completing their Supervised Agriculture Experience (SAE) programs in which work-based competencies associated with FFA proficiency awards are recorded in student record books. This credit is awarded to students for the time they spend outside of class throughout the year working with their SAE programs. An exciting part of this initiative is that this activity meshes with the goals for the School-To-Work Transition initiative. Part of the agriculture instructor's summer salary to supervise these programs was paid through the regional Tech Prep consortium.

This agriculture program has evolved from a traditional production agriculture program to one that consists of semester-length courses encompassing a much expanded vision of the total industry of agriculture. Modern technology in many forms is evident in the facility with applications ranging from computerized accounting systems to high-tech shop and mechanical equipment. All of this has occurred in a very rural farming and ranching community whose economy depends on the production of range cattle, sheep, and short-season crops such as small grains, seed peas, potatoes, and alfalfa hay. Students are exposed to modern agribusiness techniques that portray agriculture as a modern and dynamic industry.



Crops class working in the greenhouse, 1994.

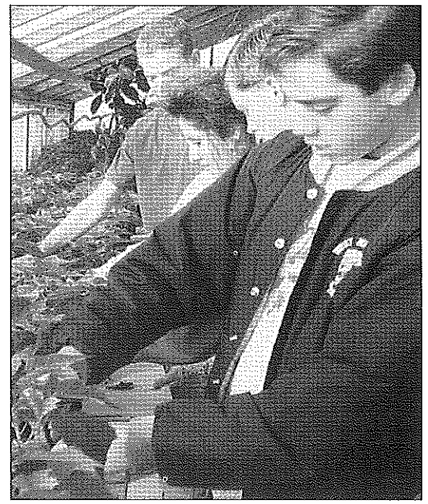


Dairy team at FFA National Convention.

The Agricultural Science and Technology program at West Jefferson High School serves approximately one-third of the students who are enrolled at the school. The students and instructor are highly motivated, and learning is an exciting experience. The students in this agriculture program are also the student leaders in the school, and they excel in FFA leadership activities as well. They have been particularly successful in competitive events such land judging, the Envirothon competition, and the FFA leadership events.

How can an agriculture instructor find time to engage in, and benefit from new educational reform activities? He or she must first believe that such changes can provide benefits to students, and that they can be assimilated into agriculture programs. Innovative agriculture instructors can always find willing partners to share the work load and the rewards of creative effort.

For more information, Mr. Bird can be reached at: Donald Bird, Agricultural Science and Technology Instructor, West Jefferson High School, 1260 East 1500 North, Terreton, ID 83450, (208) 663-4390. ■



Crops class taking samples of soil to do soluble salts test, 1994.

The Transition of Individuals with Disabilities from School into the Horticulture Industry

By Lillian H. Daughtry
and P. Diane Relf

Ms. Daughtry is a graduate student of vocational and technical education and Dr. Relf is an associate professor and horticulture extension specialist at Virginia Polytechnic Institute and State University, Blacksburg.

As educators assist in the development and implementation of transition plans from school to work for students with disabilities, the horticulture industry is a potential career path for those individuals who desire to work outside or have an interest in plants and the environment. The American Horticultural Therapy Association has taken a leadership role in the development of model programs and has found horticulture employers to be receptive to hiring individuals with disabilities. Likewise, the model programs have found individuals with various disabilities to be effective workers. Enhanced communication between schools and the horticulture industry is essential to utilize the available employment opportunities.

Transition

In the public schools, students with disabilities are mandated to receive assistance in planning for their future upon exiting school [PL 101-476, 300.18(A); PL 101-392]. To aid in the transition, plans are developed to reflect the interests and abilities of the individual student as well as the employment opportunities available in the local area.

Horticulture is a fast-growing, expanding segment of the agriculture industry (Davis & DeRiso, 1992). Many workers are needed with varying levels of skills (Dehart-Bennett & Relf, JVSNE, 1990). Horticulture jobs include landscape installation and maintenance, greenhouse or field plant production (including vegetable and fruit production or harvesting), interior landscape maintenance in shopping malls or office buildings, and wholesale and retail firms.

The horticulture industry is labor intensive, requiring minimum skilled, manual labor. The industry need for workers makes it receptive to hiring the disabled. Dehart-Bennett and Relf found that horticulture employers in Virginia who have employed individuals with disabilities, specifically mental retardation, have very positive perceptions of workers with disabilities (HortScience, 1990). They reported that many horticulture employers are willing to hire individuals with disabilities, but desire more knowledge on the potential of workers with special needs (JVSNE, 1990). Employers feel unprepared to train an individual with a disability. Increased communication and cooperation between educators or vocational rehabilitation specialists and the horticulture community regarding opportunities can increase the placement of individuals with disabilities within this industry. By establishing the communication early in career planning, horticulture employers can provide valuable input to aid in transition planning and future employment opportunities.

Career Options

As populations become more urban, more prevocational and high school vocational programs shift toward horticulture from traditional agriculture. Some high school students with disabilities are involved in horticulture classes and are very likely candidates for post-school opportunities in horticulture. However, other students with disabilities may not have an opportunity to participate in horticulture classes, but would also benefit from transition options in the field.

Transitional activities that would help both student and employer are work co-op, youth apprenticeship, job coaching, and on-the-job training. The vocational teacher, the special educator, and the transition specialist at the school can collaborate to implement one of these strategies even if the student is not enrolled in a high school horticulture class Through work co-op, the student gains work experience while still enrolled in high school courses. For example, a student may spend the morning in school and the afternoon or weekend working in a local nursery. As a youth apprentice, a formalized program is arranged in which a student is assigned a mentor at a horticulture business who assists in the training which usually begins while the student is still in high school or immediately following school. Job coaching might be an option for an individual with a more severe disability, and the job coach would work on site with the individual for a limited time to help with adaptations or modifications and provide individualized training.

Another opportunity available for individuals with disabilities is supported employment. A successful program is the Virginia Tech ground maintenance department contract with a local sheltered workshop to employ two enclaves of individuals

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(Dobbs & Relf, 1993). These individuals work as a team under the supervision of a team leader provided by the workshop and make a valuable contribution to the campus environment.

American Horticultural Therapy Association Transition Programs

Based on the philosophy that today's education consists "not only of schools, teachers, students and parents but also the business community" (The American Horticultural Therapy Association [AHTA], P. iii), the federal government has provided incentive programs for the horticulture industry through demonstration or model sites to develop transition programs for the disabled that may be replicated. The transition programs implemented thus far have provided transition services not only for students from school to work, but for adults with disabilities who may or may not have ever worked and need assistance in preparing and finding employment. Recognizing the growing needs of the horticulture industry, the AHTA responded by developing Project HIRE (Horticulture Industry Rehabilitation and Employment) which was funded by eight Projects with Industry (PWI) grants from October 1983 to November 1991 (Davis, 1991). Three other projects coordinated by AHTA during the same time were Project Plantwork, Horticulture Hiring the Disabled-Transitions Project (HHD-Transitions), and Project ACCESS. The mission of Project HIRE was to involve representatives from the horticulture businesses in the "training and employment of workers with mental and physical disabilities" and "increase employment opportunities for workers with disabilities in the horticulture industry" (Davis, 1991, p. 1). Four segments of the horticulture industry were targeted: "landscape and horticulture services; retail nurseries and lawn and garden supply firms; retail and wholesale florists; and nursery and greenhouse product suppliers" (Davis, 1991, p. 9). Of the participants securing jobs in horticulture through Project Hire in horticulture, almost 90 percent were services companies, such as lawn or grounds maintenance or greenhouse/nursery operations.

According to DeRiso and Matthias (1994), AHTA presently coordinates two employer incentive programs as part of the National PWI Program. These programs, Horticulture Hiring People with Disabilities (HHPD) and Rural Horticulture Employment Initiatives (RHEI), are available for employers on a first-come, first-served basis as long as the funds are available. Prerequisites necessary for qualification are certification of a disability by vocational rehabilitation and successful employment for at least 60 days. The HHPD grants offer placement incentives of:

- $200 for a full-time placement-at least 30 hours a week, or
- $100 for a part-time placement-at least 20 hours a week.

In rural areas, the RHEI grants are higher to encourage involvement. The individual with the disability and the employer must be in a "rural" area. The grants are:

- for a full-time placement, or
- for a part-time placement.

AHTA assists in this effort by offering a National Referral Network. Employers seeking employees with disabilities may contact the network listing a job, and placement or transition coordinators may contact the network to find out about available jobs. There is no charge for using the network. For more information, contact AHTA at 1-800-634-1603 or write to 362A Christopher Avenue, Gaithersburg, MD 20879.

The response to the programs coordinated by AHTA are indicative of the industry's interest and willingness to integrate individuals with disabilities into the horticulture workplace. "Since 1982, over 2,500 people have been placed in a variety of horticultural jobs paying salaries from $3.35 to $10 per hour through various programs of AHTA" (DeRiso & Matthias, 1994).

While economic incentives for companies to hire the disabled are appealing, there are long-term and lasting benefits for employers as well. Individuals with disabilities make reliable workers who desire to do a good job even if it takes long hours or much repetition. They are enthusiastic about work and have low absenteeism while maintaining a positive attitude (Dobbs & Relf, 1991).

Beyond the direct benefits of employment, individuals with disabilities benefit from horticulture in other ways. According to Relf (1981), individuals with disabilities who work in horticulture environments benefit emotionally, intelligently, physically, and socially and develop positive work habits. The benefits realized from the horticulture work transfer to their personal lives as well as to other jobs settings.

Conclusion

Through the coordinated efforts of school and community agencies, the connection between students with disabilities and the expanding field of horticulture may be realized. The link benefits both employer and other employees through a job well done and the individuals with disabilities through seeing tangible evidence of their contributions to society.

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Managing Change . . .

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sive at every level. The sorest boil on the buttocks of education is probably the idea that what is ought to be. If I were ever to have the opportunity to speak to this group again, my topic would very likely be the roping, throwing, tying, killing, and cutting of sacred cows" (Drake, 1982, p.14).

The Necessity of a Vision

Most contemporary leadership authorities agree that an essential element of effective leadership is the ability to draw others through a compelling vision. A simple definition of a leader is one who knows where he/she is going and is able to persuade others to go with him/her. Not everyone can or should be a leader in the strictest sense of the term, but remember, like a team of dogs pulling a sled, unless you are the lead dog, the scenery never changes.

Kotter (1988), in describing the leadership skills of Lee Iacocca in the transformation of the Chrysler Corporation, noted that Iacocca developed an agenda that included a bold new vision of what Chrysler could and should be. It was a vision that valued all the important groups with a stake in the business—customers, employees, stockholders, and others. Tichy and Devanna (1990), in their book *The Transformation Leader*, described the kind of visionary leadership required. "The challenge for transformational leaders is both to find and create a vision of an organization that is in some way better than the old one and to encourage others to share that dream. They must provide people with an image of what can be and motivate them to move ahead into the future they envision" (p. 122).

Needed: Synergism

What is synergy? Basically, it means that the whole is greater than the sum of its parts, that the relationship which the parts have to each other is a part in and of itself. It is not only a part, but it is the most catalytic, the most empowering, and the most unifying. In mathematical terms, one plus one equals three or more (Covey, 1989). In an organization, synergism releases creative energy. It means there is a climate of openness and communication. Differences are valued rather than being perceived as a threat (Covey, 1989).

Sharpen the Saw

As individuals, all of us need to build more time into our schedules for quality thinking, meditation, and reflection. We live in an action-based society where the emphasis is on continuous activity. Go, go, go. Burn the candle at both ends. We have little time for meditation and reflection. "Don't just stand there, do something" becomes our driving force. But we would all be better off if we would reverse the process occasionally. "Don't just do something, stand there" would serve us better every now and then.

Gordon MacDonald (1985), in his book, Ordering Your Private World, wrote about a phenomenon in Florida called sinkholes. Sinkholes occur when underground streams drain away during times of drought, causing the ground at the surface to lose its underlying support and suddenly cave in. MacDonald said we can experience the sinkhole syndrome in our lives if we ignore our inner, private world. If we become too publicly oriented or outwardly focused, our neglected private or inner world can not hold the weight, resulting in fatigue, disillusionment, failure, or defeat. I am a great believer in living life in balance. Areas that need our attention include the intellectual, spiritual, physical, family, and social dimensions of life. All five dimensions need constant renewal. It is what Covey (1989) called "sharpening the saw." He makes a case for balanced renewal in all the dimensions because it results in optimum synergism. The things we do to sharpen the saw in any one dimension impacts in positive ways the other dimensions because they are so highly interrelated. To neglect any one area impacts the others negatively.

Summary

Let's summarize the major points:

1. Change is inevitable.
2. We face great challenges in agricultural education as we attempt to respond to change.
3. We must respond to change in a positive manner by
   a. learning to manage the future,
   b. being attackers rather than defenders,
   c. shifting our paradigms,
   d. having a vision for the future,
   e. practicing synergism, and
   f. sharpening the saw.

Conclusion

We know from studying the change process that the greatest single inhibitor to change is satisfaction with the status quo. It has been said that the greatest enemy of the best is the good. We can be content with "good" programs and miss the best that students deserve. Not only that, we will miss the best that we deserve. As Chuck Swindoll (1987) pointed out in his book, Living Above the Level of Mediocrity, mediocre living becomes dull, drab, predictable, and boring. We can be content with grubbing for worms or scratching for bugs like a pen full of chickens, or we can soar like powerful eagles. The choice is ours.

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■

A View from Inside the Classroom

(Continued from page 6)

says, "Doing to Learn," very few of the academic areas in our schools have a way of putting the knowledge of students to a test. As our curriculum has changed, so has the focus of our contests. With the development of the curriculum-based agriscience contests in Texas, we have a new way to allow the academic prowess of our students to be tested. Some schools such as ours in suburban areas find it hard to compete in contests such as livestock judging due to lack of access to live animals. We now have a way for our students to achieve success and win that much sought after state championship. As long as we are giving our students a chance to test and practice their knowledge from inside the classroom, we can always call our extracurricular programs a success.

What Should Be Our Focus?

Has agricultural education really changed over the last 20 years? We have always been in the business of developing agricultural leadership, citizenship and cooperation in students. The only real thing that has changed is our focus to make more individuals aware of the vastness of agriculture. Teaching students about animal and plant production will always be a part of the agricultural education program, but we have to focus on the opportunities outside of production agriculture. Many agricultural educators are doing just that. Thousands of jobs are available in new and growing areas outside of the normal realm of agriculture. Too many students slip through our educational system without even knowing about the opportunities in agriculture. We have to constantly be looking to stay up with current technologies. Instead of trying to teach every student about the mechanics of a new technology, sometimes just letting them know what is really out there in the real world would be of greater benefit.

We in agricultural education have a successful program that many professionals in other curricular areas envy. We have already experienced many of the trends and changes that our national educational system is currently undergoing. Focus on learning styles, cooperative learning, and forms of alternative assessment are nothing new to the agricultural educator. Committed instructors who foster success in all students and strive for excellence in all realms of agricultural education usually gain the support of administrators and get community backing. From inside the classroom, the view is clear. **Agricultural education programs are only as good as the instructor, the students, and those significant others who desire that the program achieve excellence.** ■

Image vs. Substance . . .

(Continued from page 17)

philosophical base and curricular reform will help connect us with a higher percentage of the population that we intend to serve. Doing so will also increase our collaboration with other groups with similar concerns and missions.

What Direction should we take to Chart our Future?

Future direction must be based on a shared vision that recognizes the mission of agricultural education. The transformation of agricultural education programs cannot be led successfully by a small group of agricultural educators. Newcomb (1992) recommended that "... we enlist the aide and support of state and local policy makers. The magnitude of change that is required cannot be accomplished without the direct involvement of state and local boards of education as well as state and local superintendents. It will also be necessary to team up with the political 'movers and shakers' in the various states. We must forge a coalition with farm bureaus, key consumer advocates, the environmental lobby, commodity groups and others. Deans of agriculture must be enlisted if we are to be successful in developing such coalitions" (p.10). Our task should be to engage in a critical analysis of the future and draft an action plan delineating a contemporary purpose for instructional programs in agricultural education. Henry Ford warned that **thinking about the future is the hardest work there is, which is probably the reason so few engage in it.**

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Becoming a Champion . . .

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Through the leadership provided by the agricultural education profession, we will continue to meet the challenges necessary to keep our profession moving in a positive direction. We have an excellent record of producing top-notch individuals who become productive, responsible, and successful citizens. To compete and survive in this competitive, global marketplace, America's businesses and factories must have workers who can communicate and work in teams, who have good math and critical thinking skills, as well as strong technical skills. **We are confident that our profession will rise to the challenge and that we will continue to expand our presence in the nation and in the world.**

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Expanded Mission . . .

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So, How Are We Doing?

Preservice programs in agricultural education cannot meet these challenges alone. Some would suggest we are taking on additional responsibilities, and warn us not to "spread ourselves too thin." Indeed, our roles need to be more clearly defined. Partnerships and networking with faculty in other departments will be key to accomplishing our expanded mission.

With a broader mission in preservice agricultural education, we are more likely to attract a broader student clientele. With a broader student clientele we hope to begin to see more diverse students in our classrooms and programs.

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