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MAGAZINE

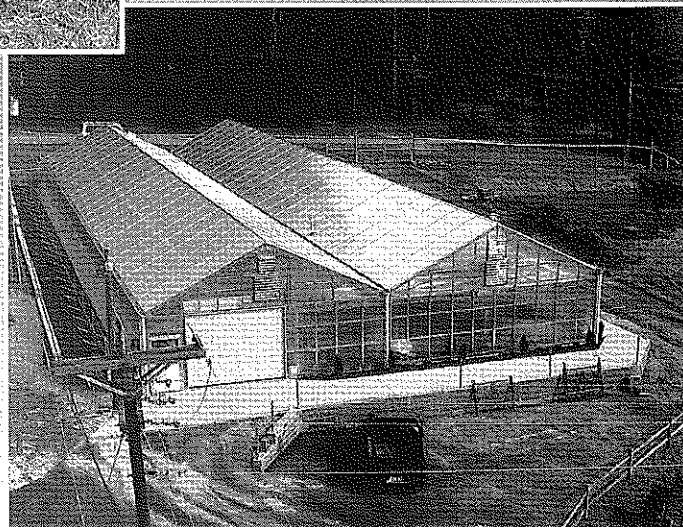
*November-
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1997
volume 70
issue 3*

*Changes in
Agricultural Education*



- **Changes In Agricultural Education in Tennessee: 1952-1997**
- **An Evolving Focus for Agricultural Education Graduates?**
- **Researching Adult Organizations in Agricultural Education**

- **The Past 25 Years: Dynamic Changes in Agricultural Education**
- **Don't Look Back, You Might Trip Over an Opportunity**
- **Reflections on Our Dynamic Field**
- **The Techno Owl**





By Lou E. Riesenberg

Dr. Riesenberg is professor and head of agricultural and extension education at the University of Idaho, Moscow.

Has agricultural education changed from what it was in 1970 to what it is today? Most certainly it has changed in form and substance, but the value agricultural education has added to the lives of students—value that could not be added by any other form of education or training—has not changed. While the previous statement may be very bold to some, those of us in agricultural education believe it to be fact. Notwithstanding, agricultural educators still encounter some difficulty when attempting to convince the rest of society of the value added by agricultural education.

It seems reasonable to assume society would have survived if agricultural education had been discontinued at the secondary, post-secondary and the university level. To assume differently would be quite pretentious.

However, it would not be pretentious to assume the lives of the students that have and will participate in agricultural education would be considerably different; the lives of

those students would have less value to the individual and less value to the constituent society in which those students participate.

Today, the forward-looking, modern secondary agriculture program is still comprehensive and is still designed to provide social development, occupational exploration and job preparation. Agricultural education still contributes considerably to career and general education. And for the student enrolling in a university agriculture curriculum, a high school agriculture program is still a valuable background.

For some students, secondary agriculture still provides the technical competencies and human relation skills to enter directly into the agribusiness job market or into production agriculture itself. This entrance has not been achieved with a background of a nine-week exploring agriculture program. Agreed, the number of students in this category has been small, but where would these students have developed the competencies if there had been no secondary agriculture?

Today's comprehensive secondary agriculture programs still provide students with opportunities to apply competencies gained from a broad spectrum of high school disciplines. Through classroom study and the student's supervised agricultural experience program, the principles of biology, mathematics, economics and communications are still being applied in the most "real world" situations available to high school students short of dropping out of school and entering the real world.

The modern secondary agriculture program still emphasizes values, work ethic, problem-solving

skills and decision-making abilities. The student is not successful in his or her supervised agricultural experience program unless she or he is adept at goal setting, problem solving and decision-making. Again, it should be stated that these skills and/or abilities are still being practiced in "real" situations.

The modern secondary agriculture program still stresses development of social and leadership competencies in public speaking, parliamentary procedure and other organizational activities. The program still promotes cooperation and competition. For competitive events, every student will still receive basic preparation in the classroom; and through additional concentrated training, every student will have the opportunity to achieve to the level of her or his ability.

To provide the student with a "real life" situation in which to practice and improve the aforementioned competencies, today's secondary agriculture program still encourages each student to be a participating member of the local FFA chapter. For exploration alone, involvement is still critical. Many individuals are still attesting to the value of this experience for many different occupations from many occupations.

Today's modern secondary agriculture program, through its comprehensive curriculum, still provides the student with a broad spectrum of experiences because agriculture does not pertain only to farming and ranching; it also involves manufacturing, sales, service, management, marketing, communications, science and technology. The secondary agriculture student still develops competencies useful in many occupations

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COVER PHOTOS

Top left: Farm machinery of this type was still being used on farms in Tennessee during the early 1950's.

Bottom right: A 9,000 square foot aquaculture facility at the Johnson County Vocational School, Tennessee.

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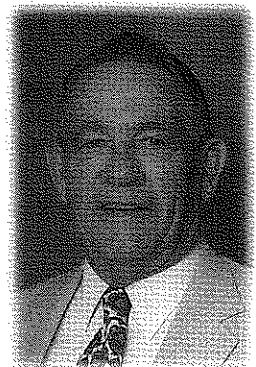
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Changes In Agricultural Education

in Tennessee: 1952—1997



By Paul Byerley and
John D. Todd

Mr. Byerley taught vocational agriculture for 38 years in Union County, and has been serving as full-time vocational director in the same system for four years. Dr. Todd taught vocational agriculture for 10 years and has been an agricultural education teacher educator at The University of Tennessee, Knoxville for 31 years.

Agricultural education in Tennessee has experienced many changes during the past 45 years. These changes were necessary to keep pace with similar ones in the agricultural industry and society in general. Agricultural education programs have changed from preparing students for farming in many areas of agriculture, including farming.

In the early 1950s, programs in agricultural education, or vocational agriculture as it was known in that day, were conducted according to the provisions of the Smith-Hughes Act (1917). This act specified that programs shall be "...for present and prospective farmers." Mostly males were enrolled and the Future Farmers of America (FFA) excluded females until 1969. The FFA was considered an integral part of vocational agriculture.

According to the Smith-Hughes Act, all vocational agriculture students were supposed to have supervised farming programs (SFP) which consisted of productive enterprises, improvement projects and supplementary farm practices. Teachers attempted to adhere to those provisions because a final SFP report was required at the state and federal levels. Some students were even refused admission into vocational agriculture because they could not conduct supervised farming programs. Many teachers realized that agriculture was more than farming and permitted students to enroll in vocational agriculture with token SFP's or allowed employment in off-farm agricultural occupations. This latter practice was not in accord with the Smith-Hughes Act.

The curriculum consisted of integrated agricultural courses—Agriculture I, II, III and IV. Many students enrolled as freshman and completed all four courses through their senior year. The integrated courses were considered better adapted for vocational agriculture students than the separate subject courses used during the 1920s such as farm crops, livestock production, horticulture, farm management or even work animals. An

integrated course consisted of several agricultural areas designed to meet the needs of individual students who conducted farming programs consisting of crop and livestock enterprises and requiring mechanical and managerial skills.

During the 1950s, most vocational agriculture programs had shops and farm mechanics as part of the integrated courses. Small group rotational practice was used to teach skills in woodworking, welding, tool fitting, soldering, electricity, plumbing and other areas. Rope and forge work were even taught in some programs. These eventually gave way to more relevant skills. There were no greenhouses. It was reported that a teacher in West Tennessee built a greenhouse in the 1950s and was told by the state director to tear it down. His reason, "This is not a farming enterprise." The structure was destroyed but the foundation was left and a new greenhouse was built on it in the late 1960s.

Change to Agricultural Education

After the Vocational Education Act of 1963, vocational agriculture changed. The name soon gave way to agricultural education and agriculture was defined as production, processing, distribution and related services. This definition included all occupations in agriculture and wasn't limited to farming. Teachers slowly accepted this definition, but school administrators, guidance personnel and the general public were much slower in recognizing the change. There are still some people who look upon agriculture as simply farming.

Change to SAEP

Supervised farming programs became known as supervised agricultural experience programs (SAEP). Students could still conduct farming programs if they had the facilities, but cooperative work experience programs in agriculture became a reality and school laboratories (agricultural mechanics and greenhouses) were available for students who lacked farm facilities to get hands-on experiences.



Threshing machines were still being used by some farmers in Tennessee during the early 1950s.

Change to Include Females

In 1969, FFA changed its rules and allowed females to become members. This, along with the broader definition of agriculture, helped increase enrollment in agriculture classes. This led to increased demand for agriculture teachers in the 1960s and 70s. There were not enough certified teachers to fill all positions and several teachers were employed who did not meet certification requirements. They became certified on-the-job by completing required courses in summer and evening schools.

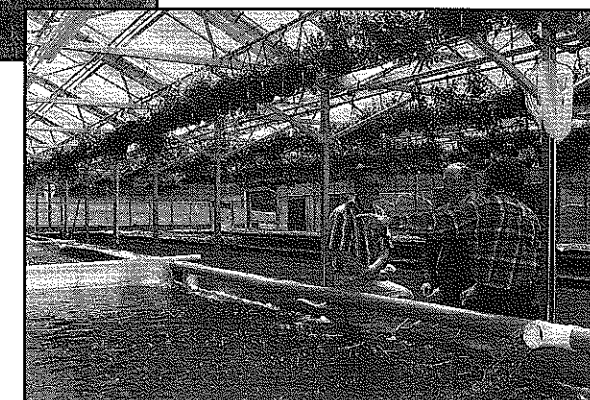
Change in Funding

In 1968, the Comprehensive Vocational Education Act was passed by the Tennessee General

Assembly. This resulted in better funding for all of vocational education, including agricultural education. Money became available to purchase equipment and improve facilities for teachers conducting specialized programs in ornamental horticulture, agricultural mechanics, production agriculture, forestry and other areas. In more recent years, some teachers in Tennessee have added facilities for hydroponics and aquaculture.

Change in the FFA

Changes have also occurred in the FFA. During the 1950s, there were about 10 farming-oriented proficiency areas. As agricultural education programs changed, similar changes occurred in the FFA. Today, degrees can be obtained in both production and agribusiness areas of



Mr. Kenneth McQueen (center), agriculture teacher at Johnson County Vocational School, explains the operation of the aquaculture facility.

agriculture, and "stars" are selected in each area. In 1997, there are more than 40 approved proficiency areas affording opportunities for recognition in all fields of agriculture. In earlier years, FFA membership was nearly the same as the number of students enrolled in vocational agriculture classes. In more recent years, FFA membership in Tennessee has declined despite steady enrollment in agricultural education. Today there are about 12,000 FFA members in Tennessee compared to more 20,000 during the 1960s.

Change to School Consolidation

In the 1950s, there were more than 300 vocational agriculture programs in Tennessee. Today, as the result of school consolidation, there are about 175 programs. The number of teachers has also declined, with 240 teachers today compared to more than 300 in earlier years. In the 1950s, most programs were operated by a single teacher. Today, more than 25 percent of the programs have multiple teachers. A few programs have three to four teachers.

Change in Curriculum

In the 1950s, the curriculum in vocational agriculture consisted of only four courses. In 1997, there are about 25 different courses approved for the agricultural education curriculum. These vary from production agriculture to aquaculture, with an approved course in leadership development and another is agriscience that can earn science credit approved for graduation and/or admission into colleges and universities in Tennessee. Many of the approved courses conform to the separate-subject format which was the norm in the 1920s. Times have changed and many students today enroll in agricultural education for specialty courses in ornamental horticulture, agricultural mechanics, forestry, wildlife, aquaculture, leadership development and others. Most all programs have access to computer laboratories, with some having such laboratories specifically for agriculture students.

Change in Scheduling

Block scheduling is becoming very popular. This permits students to earn course credits during a semester rather than an entire school year. Class periods are 90 minutes compared to the traditional 45- to 55-minute period. This is

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An Evolving Focus for Agricultural

Education Graduates?



By Kitty-Sue Schlink

Ms. Schlink is the assistant executive director of the California Farm Water Coalition, Sacramento.

The future development of agricultural education departments is a constant point of discussion. What classes should be offered, who should teach those classes, and where will the resources come from? This discussion should not concentrate on the actual structure of a specific department, but rather of the functions of what an agricultural education department should encompass or provide. Agricultural education programs should expand to include knowledge in such areas as the environment, business, value-added processing and global issues. I believe that agricultural education departments should concentrate more effort on preparing college students, including graduate students, for roles other than teaching in formal settings.

A 1988 report by the National Academy of Sciences entitled *Understanding Agriculture: New Directions for Education*, defined two avenues of interest within the scope of agricultural education. These are agricultural literacy, or education about agriculture, and vocational agriculture, or education in agriculture. Focus on these two major elements has not been quick in coming (Shinn, 1993). I believe

departments need to realize this dual role, and place an increasing emphasis on the education of students interested in pursuing careers in education about agriculture.

Agriculture is changing. People are moving off farms. Less than two percent of the United States working population is employed in agricultural production, however, 15-20% of the value-added jobs require knowledge and skills in agriculture. Foreign markets are opening and developing countries are seeing a need for more advanced agricultural programs. Misconceptions about agriculture from the remaining 98% of the population need to be dispelled. An understanding of products and consumer acceptance of agricultural products and practices is important. Communications specialists in agriculture have their work cut out for them. The increased use and need for technology awareness is crucial to understand and master in order to enter the 21st century competitively. All these areas of agriculture and more should fall under the umbrella of agricultural education.

An agricultural education department should provide opportunities and flexibility for students who, with their educational background, will be prepared for teaching roles in society. Here, the term "teaching" needs to be defined. Whenever knowledge is passed from one individual to another individual or group of individuals, teaching has occurred. Commonly, when talking about the role of a teacher or the act of teaching in the agricultural education setting, we are mistaken to believe that formal teaching in the classroom and, more specifically,

in the secondary school classroom is the only focus. Teaching occurs in many different areas of everyday life, not just in the formal classroom setting.

The number of students being trained to teach is on the decline nationally. However, undergraduate enrollment in colleges of agriculture is at an all-time high (Brown, 1992). These trends are cyclic. Departments and, more importantly the students within these departments, need multiple options. Quality teachers are extremely important, but employed students and viable agricultural education departments have value as well. Dr. Kirby Barrick stated this view perfectly when he said:

"While teacher preparation is the central mission, the application of the teaching/learning process can be made in a variety of other settings. Teacher preparation should be redefined to include the preparation of personnel who will apply the teaching/learning process in agriculture. Extension agents are teachers who utilize the teaching/learning processes in non-formal setting and with audiences that include youth and adults. Communication also involves the principles of teaching and learning, but typically through print media or in nonformal situations such as broadcasting and advertising" (Barrick, 1993, p. 12).

Agricultural education departments are also responsible for educating the non-agricultural sector. Dr. Corrigan, while guest lecturing in an Agricultural Education 615 class at Texas A&M University, stated that, "If anyone should deal with food, energy resources and

hunger, it's this group (agricultural education students)" (Corrigan, 1994). Educating the non-agricultural sector of society can only increase with placement of teachers into society with backgrounds in and a fondness for agriculture. A knowledge of the virtues associated with images affiliated with agriculture are exemplified in the following quote from *Sacred Cows and Hot Potatoes*:

"The images of farm life as harmonious with nature are promoted in the books we read to our children. We teach them the animal sounds as Farmer Brown makes his way from pen to pen, and we teach them that the seasons are tied to planting, growth, harvest and regeneration. These images also teach the virtues of independence, hard work, family and community and that the natural environment is interwoven with those virtues" (Browne, 1992, p. 100).

Agricultural literacy programs are a perfect example of teaching agriculture outside traditional agricultural settings.

A problem of resource availability within departments and educational levels could be questioned when implementing these ideas in the university setting. I believe these resources are there. Distance education is a way to meet some unmet resource needs (Newcomb, 1993). The benefits gained with this expansion of knowledge would create a situation where any possibility of loss of dollars or time would be offset. Increasing learning possibilities can only enhance the academic climate. There are always enough resources in knowledge and a willingness to expand methodology in any progressive department. I also do not believe that the added curriculum would cause a conflict of interest among the constituents of any specific department or in the profession as a whole. It would, instead, create synergy. Research should also be used as a tool in order to experience benefits with limited resources. A collaborative approach to research and learning

through distance education, electronic mail, telephone conferencing and facsimile transmission will enhance individual departments (Newcomb, 1993). It may take substantial efforts to create the cooperation necessary, but the end result would be rewarded (Newcomb, 1993).

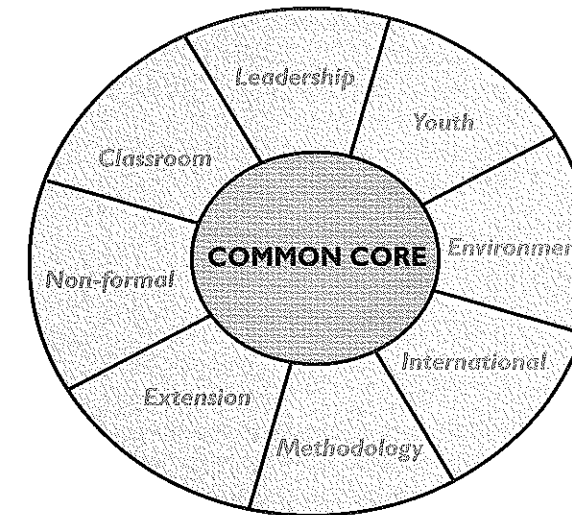


FIGURE 1: Agricultural Education in a Multiple Context

Critical mass is important (Shinn, 1994b). The core structure of the discipline must be common and basic, almost to the point of being considered traditional. A model was developed to illustrate this concept (see Figure 1). This base of instruction will then lead to specific study within a student's specific area of interest. This model was based on the land-grant mission in which there are three rings of teaching, research and service. Dr. Barrick expanded this model into four areas: teaching and learning; human resource development and management; communication; and research methodology and data analysis. Barrick's vision agricultural education departments is represented within a square (Barrick, 1993). This could be seen as restrictive to the flow between ideas. A circle may be more appropriate with each area building and learning from another, while still allowing for specialization.

Agricultural education departments were once incorporated within the umbrella of agricultural

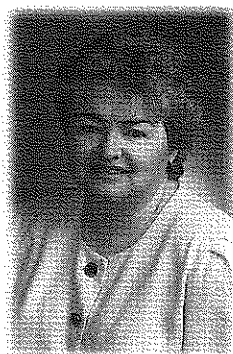
extension and professors were specialists within each of their specific disciplines. Their offices were in the buildings of their specific area of knowledge. Agricultural education now has its "own building" in many universities, and in many places, extension fits under the umbrella of agricultural education. The agricultural education mission has developed into what we now consider the best program for providing the best learning experience in the field of teacher training. The field of agricultural education now has the opportunity to expand this excellence into areas possibly never dreamed of in traditional agricultural education settings.

"As educators, we should constantly record the changing conditions in consumer expectations, environmental concerns, structure of agriculture, global economic and political forces, availability of funds, population demographics, and the functions of agricultural education in an information-driven society" (Shinn, 1994b, p. 1). Not only will these departments provide excellent teachers in the classroom, but specialists in the environment, international education, educational methodology, leadership, agricultural extension and youth development as well. National priorities can be incorporated into the agricultural education programs including water quality, waste management, youth at risk, food safety, quality of life, the structure and function of the family, and sustainable agriculture to name a few (Brown, 1992). I believe that the role of agricultural education departments is changing and these departments should concentrate more effort on preparing graduates for roles other than teaching in formal settings as well as continuing to provide excellent teachers for the formal settings.

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Researching Adult Organizations

in Agricultural Education



By Brenda Seevers
and Tom Dormody

Dr. Seevers is an associate professor and Dr. Dormody is a professor of agricultural and extension education, New Mexico State University, Las Cruces.

Introduction

In 1995 we became interested in the number of adult organizations affiliated with secondary agricultural education programs and what goals the organizations were accomplishing. Adult organizations such as advisory committees, FFA Alumni affiliates, National Young Farmer Education Association (NYFEA) chapters, and booster clubs are commonly associated with secondary agricultural education programs. Historically, agriculture teachers have had administrative, advising and other responsibilities for the adult organizations affiliated with their programs.

Commitment to these adult organizations can vary from a full-time adult educator to the absence of any adult programming affiliated with their program (NCR-158 Committee on Adult Education in Agriculture, 1990).

Numbers and Arrangements of Adult Organizations

Our national study revealed that 217 of the 218 secondary agriculture teachers surveyed had at least one adult organization affiliated with their programs. The most common arrangements were to have an advisory committee and one other adult organization (91) or just one organization (82), usually an advisory committee.

Within the discipline, professionals promote an ideal of secondary education programs being affiliated with an advisory committee, FFA Alumni affiliate and NYFEA chapter. Each of these adult organizations has unique goals that, if achieved together, should provide exhaustive and well-balanced advising support, continuing education and literacy education through the agricultural education framework. However, our results indicate that although most secondary agriculture teachers had a positive attitude toward the three-organization model, only 9 percent (19) had adopted it.

Teachers indicated the principle advantages of having all three organizations were increased levels and diversification of program support and resources, community involvement, promotion and public relations, support for FFA and other youth activities, program guidance,

and strengthened ties with the community and industry. Only a few teachers cited advantages for the adult members themselves. Principle disadvantages were increased teacher responsibilities and time added to the job, not enough adults to support three organizations, increased conflict within the program, and too many adults telling the teacher what to do or trying to run the program.

In summary, teachers perceived the three-organization model more as a source of headaches than a source of relief. The fact that agriculture teachers can have positive attitudes toward the three-organization model, but demonstrate 91% rejection of the model indicates the teachers weigh the disadvantages more heavily than the advantages. Factors such as the number of teachers in the program did not influence attitudes toward the model.

What Goals do the Adult Organizations Accomplish?

We determined from the literature that there are 21 primary goals for advisory committees (National Center for Research in Vocational Education, 1982), the FFA Alumni Association (National FFA Foundation, 1993), and the NYFEA (National Young Farmer Educational Association, Inc. 1992). Teachers participating in the national study were asked how frequently each of the 21 primary goals were being met by the adult organization(s) affiliated with their secondary agricultural education programs.

Based on the teachers' responses, we recommend establishing a framework of seven essential goals that should be addressed by an advisory committee and up to one other adult organization. This framework includes three advisory committee goals (goals #1, 2 and 3 below), and three goals common to all types of adult organizations (goals #4, 5 and 6 below). Despite teachers' low ranking, we also recommend including an NYFEA goal for continuing education (goal #7 below). The framework of 7 goals is:

1. Advise teachers in the agricultural education program on course content.
2. Assess equipment and facility needs of the agricultural education program.
3. Evaluate the agricultural education program.
4. Assist with public relations and promotional efforts for the agricultural education program.
5. Identify community resources for the agricultural education program.
6. Support FFA youth activities.
7. Assist the agricultural education program in involving former students who remain in the community after graduation in worthy activities, including continuing education in agriculture.

It is worth noting that teachers did not consider the seventh goal, "Assist the agricultural education program in involving former students who remain in the community after graduation in worthy activities, including continuing education in agriculture," to be an essential activity for adult organizations. Teacher comments tended to focus on what the adult organizations could do for their secondary programs rather than what the organization could do for adult members. There is a danger to this thinking. Adult organizations should meet the needs of its adult members as

"Sometimes the best way to determine where to pour a concrete walkway is to plant grass and observe where people walk. We feel this is the case for adult organizations in agricultural education."

well as those of the secondary agricultural education program.

Furthermore, teachers indicated that agriculture students who remain in a community after graduation are obtaining continuing education in agriculture from other sources such as post-secondary institutions, Cooperative Extension Service, Farm Bureau and commodity groups, rather than through secondary agricultural education programs.

Despite its low initial support, the seventh goal should remain as part of the essential framework. Continuing education and support in agriculture are important for former students who remain in the community after graduation. Existing, effective programs should be continued and expanded. However, for this to happen, agriculture teachers need to maintain or develop linkages with existing continuing education programs in the community rather than duplicating efforts to provide quality adult agricultural education.

Conclusions

Sometimes the best way to determine where to pour a concrete walkway is to plant grass and observe where people walk. We feel this is the case for adult organizations in agricultural education. The teachers who responded to our national survey indicated that it should only take an advisory com-

mittee and one other adult organization to meet the needs of the secondary programs and adult members. The framework of seven essential goals, developed from the teacher responses, can be used as a guide for building or maintaining an effective adult agricultural education network. Are these goals exhaustive and inclusive for every program? Probably not. Other goals for adult organizations affiliated with secondary agricultural education programs should be based on local needs.

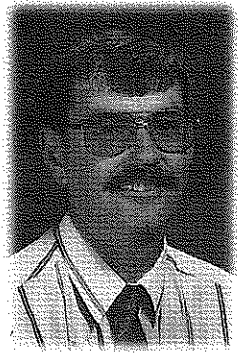
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The Past 25 Years: Dynamic Changes

in Agricultural Education



By Tom Klein and
Vernon D. Luft

Mr. Klein is an agriculture teacher at Spring Creek High School, Elko, NV, and Dr. Luft is a professor of occupational education, University of Nevada, Reno.

Agricultural education has been a dynamic profession. Many changes have occurred in the profession over the last 25 years as a result of a changing student population and agricultural industry. Our writing is based on more than 50 years of combined experience in four states and several agricultural education positions. This article is not intended to be all inclusive, but to provide some of our observations of changes in the agricultural education profession. We have chosen to prepare our comments by categorizing them according to various aspects of the program.

Students

The student population enrolled in agriculture has changed over the last 25 years. Years ago, boys enrolled in secondary vocational agriculture because they planned to go back to the farm. A majority of today's students enroll because of other interests in agriculture, and they do not have a farm or ranch background experience from which to draw. Many students enroll because they wish to acquire the leadership development skills that our instruction and the FFA have to offer. More students today come from single-parent or step families. Some students are found to be living alone. Often these factors contribute to a lack of a support system, which makes it difficult for them to participate in FFA or have a strong Supervised Agricultural Experience Program.

When we started teaching, females were not allowed in FFA, therefore, they did not enroll in vocational agriculture. Today's secondary agricultural education classes are composed of many young women who will make substantial contributions to the agricultural industry.

Curriculum

Most of the curricular changes that have occurred over the last 25 years are in the areas of the agricultural sciences and business. Instruction in production agriculture has been reduced considerably. Today we see more horticulture being taught and greenhouses are a part of our instructional facilities. Wildlife management and other environmental subjects have become a part of our curriculum.

Students used to be taught more farm business management. With the change in student interests and backgrounds, the emphasis is now on agribusiness management, including marketing and sales. A global understanding of agriculture and marketing of its products has been included in the curriculum. In general, our secondary agriculture curriculum has been changed to meet the needs of the agriculture industry and our students. Many curricular changes have occurred in secondary agriculture programs as a result of the recommendations made in the publication, *Understanding Agriculture: New Directions for Education*. Curriculum materials available from the National Council for Agricultural Education have also influenced many of the changes in agriculture programs across the country.

We have not experienced as much change in agricultural mechanics. Agricultural mechanics shops contain much of the same equipment as years ago, some of which is outdated and some newer models. However, interest in mechanics at the secondary level still seems to be there. In contrast, agricultural mechanics at the university level has become non-existent in some institutions. The emphasis has changed to other technologies. The agricultural mechanics labs at the University of Nevada, Reno were closed about seven years ago. Students in agricultural education now have to take mechanics courses at a community college and transfer them to the university.

FFA

Our changing student population has contributed to changes in the FFA. Females and students with diversified interests have influenced change in the Career Development Events (CDE) and awards offered. Our observations indicate that females have a keen competitive nature and seem to mature earlier than male students. In general, females thrive on the opportunity to "beat out" male student for places on CDE teams. They tend to get their work done on time and it is often of higher quality than males.

What used to be called judging contests are now called Career Development Events. Several new events have been established including horse selection, agricultural sales, agricultural marketing, parliamentary procedure and floriculture. All CDE's have been updated to reflect industry changes. New award areas have also been established. The proficiency award program has been expanded. Computer-generated applications have been developed and are in use, and computerized record books are common.

The number of resources available to help agriculture teachers be successful with their FFA organization is tremendous. Twenty-five years ago, we had the *FFA Manual* as a reference. Today we have the *FFA Student Handbook* and the *Advisor's Guide to the FFA Student Handbook*, the new *Guide to Local Program Success*, and other references for completing proficiency awards, organizing and staging Career Development Events, for completing the American FFA Degree application, and many others.

Scholarships for FFA members have become more available. This past year, ten seniors enrolled in agriculture at Spring Creek High School of Elko, Nevada, garnered in excess of \$30,000 of scholarship monies—\$3,000 of which was from local and National FFA sources.

Supervised Agriculture Experience Programs

The changes in our supervised agriculture experience programs, too, have come about to meet the needs of our students of today. SAE programs have become more diverse. Most students worked on farms when we began teaching. Now most students have placement or entrepreneurial programs. We find students working in veterinary clinics, dog kennels, golf courses, feed stores, western clothing stores, recreation facilities such as bed and breakfast establishments, ski resorts and as hunting guides. Students own small businesses such as lawn care services, sheep breeding services, welding services, raising exotic animals and fish, and raising their own production enterprises as they have done in the past.

Facilities and Equipment

Changes in enrollment and the curriculum in agricultural education have spurred changes in our facilities. Most agriculture departments now have lavatory facilities for females instead of a lock on the boy's room. Many schools have greenhouses, aquaculture tanks, agriscience labs, computer labs, land labs, livestock facilities, turf and landscape labs, and small animal care facilities. Virtually all departments have at least one computer. Many are linked to the Internet, Agri-Data or another provider of electronic information.

Electronic instructional equipment has improved over the years. Most teachers have the capability to show videos and CD's as well as slides and overheads. We haven't seen a film-strip shown in years! Photocopiers provide the capability to enlarge, reduce, collate and staple.

Teacher Education

The preparation of agriculture teachers has changed to reflect the needs of today's teachers.

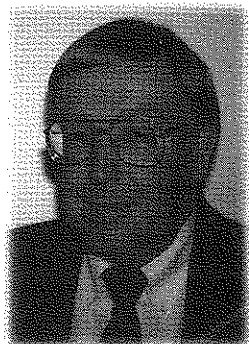
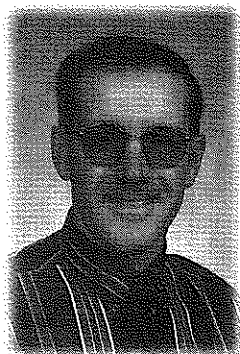
Additionally, and probably more notable, is the fact that the university structures in which these teachers are prepared has changed dramatically. In the 1970s and early 1980s, there was a national shortage of agriculture teachers, and agricultural education programs in universities thrived. We were in a situation where it was necessary to recruit heavily in order to try to meet the demand for teachers. The shortage was attributed, in part, to the good agricultural economy. There was a demand for good people in various agricultural occupations, and good agriculture teachers left the profession after two or three years of teaching to enter those jobs, leaving a continuous demand for teachers. University students often choose their major based upon the demands of the job market. Agriculture students knew they could obtain a job teaching. This enhanced recruiting efforts and enabled agricultural education departments to remain strong.

In the mid-1980s, the agriculture economy became tight, causing businesses and agencies to close or restructure. Job opportunities became less available, so agriculture teachers stayed in their positions for a longer period of time. The demand for teachers was not as great as it previously had been. As such, it became more difficult to recruit students into agriculture teacher education. Many agricultural education departments had to restructure to continue to be a viable unit in their university. The restructuring led to consolidation of several units including such disciplines as communications, rural sociology, human resource development or agricultural technology. Some departments were absorbed into other existing units on campus. The agricultural education program at the University of Nevada, Reno, is a teaching major in secondary education in the Department of Curriculum and Instruction in the College of Education. With these various changes, it is often difficult

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Agricultural Education: Changing

Because You Change



By Michael P. Sibiga
and Alfred J.

Mannebach

Mr. Sibiga was department head and agricultural science and technology instructor at E. O. Smith High School in Storrs, CT, retired June 30, 1997, and Dr. Mannebach is a professor of education at the University of Connecticut, Storrs.

There have been many changes in agricultural education over the years. The authors started their careers as teacher and teacher educator respectively some 25 years ago in Connecticut. What changes have taken place in agricultural education during those years? What were the major factors that caused agricultural education to change?

Over the years, we have witnessed a changing societal, educational and agricultural environment. Gone are state highway tolls,

free tuition at U-Conn, ten-cent pay phones, free road maps at service stations, *The Hartford Times*, about 40 banks and the Hartford Whalers. With us are shopping centers and outlet malls, shopping on Sunday, personal computers, cable TV, the state income tax, Lyme Disease, AIDS and legalized gambling. Major changes have taken place in agriculture, in education, in the students, and in the teachers themselves, all in the context of major societal changes including the aging population, advances in technology, shifting demographics, increasing diversity, corporate mergers and downsizing, globalization and a host of other factors.

Changes in Agriculture

All of us have witnessed major changes in agriculture. While farms once dotted the landscape, much production agriculture has given way to urban sprawl. The dairy buyout program, the rapid rise in housing costs, increased governmental regulations and many other factors have substantially decreased the number of family farms in Connecticut. Concern about the quality of life for suburbanites has replaced interests in maintaining quality of life on the family farm. Efforts to preserve farmland and the environment are underway. Advances in mechanization, computerization, transportation, robotics, hydraulics, animal and plant genetics, and chemical and biological processes and products have changed agriculture greatly.

Production agriculture, generating some \$2.1 billion of revenue annually, remains important in Connecticut and is the core of what we do in agricultural education.

However, its growth, magnitude and success have spawned many employment opportunities in agricultural research and development, marketing, distribution, sales, communication, management, engineering, finance, education and other areas of specialization. Globalization, specialization, technology and niche marketing are emerging areas of agriculture, all in the confines of conserving natural resources, concern for the environment and maintaining and enhancing quality of life.

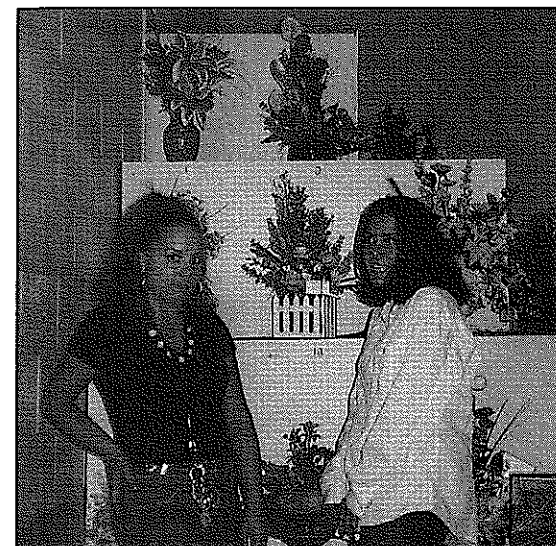
With the changes in agriculture came concurrent changes in agricultural education. Emphasis shifted from production agriculture and farming programs to students studying any occupation which involved knowledge and skill in agricultural subjects. With the release of the National Research Council Report on Agricultural Education (1988), emphasis was expanded again, from preparing students in agricultural occupations only to an emphasis on teaching both in and about agriculture and agricultural issues. As a result, enrollments have increased as increasing numbers of students seek the kind of education offered in the expanded agricultural education program.

Changes in Education

Many changes have taken place in education over the years. Emphasis over time has been placed on meeting the needs of individuals, increasing academics, and on meeting the needs of the labor market. In the early 1970s, career education and emphasis on meeting the needs of the individual was the focus. The publication of

A Nation at Risk (1983) shifted the emphasis back to the basics and academic rigor. Passage of the School-to-Work Opportunities Act (1994) again shifted emphasis back to meeting the manpower needs of the nation, increasing standards and preparing students for the global economy.

A number of other social, economic and political changes have also affected education. Proponents of back-to-the-basics, rigorous academics, integrated curriculum,

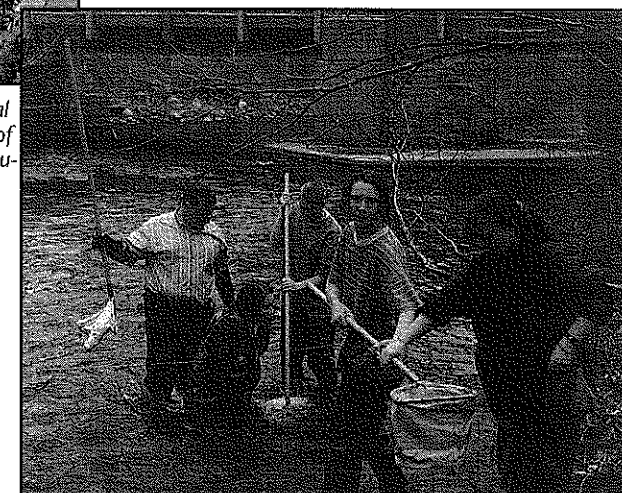


Inter-city students have found a niche in agricultural education through floral design. Active recruitment of inter-city youth is a major change in agricultural education. (Photo courtesy of Michael P. Sibiga.)

experienced-based learning, outcome-based education, AIDS awareness, testing and higher standards have had their say. Agricultural education in Connecticut has adapted and adjusted to these changes by soliciting community support, renovating and building new facilities, keeping laboratories and equipment current, building aquaculture schools, expanding land laboratories and school farms, integrating agricultural education with other subjects, joining tech-prep consortia, and continually revising and updating curriculum. In this manner, agricultural education has maintained its important role in this fast-changing educational environment.

Changes in Students

A major change in agricultural education has been in the students enrolling in the program. In the past, students were more likely to come from farms, be male and have extensive work experience in agriculture. Students today are more likely to come to the program with less agricultural experience than before, an interest in animal, plant or environmental science, and little or no farm background. In addition, students are almost as likely to be female as male. Today's students, however, are likely to be more diverse, more academically and technically prepared and more ready and willing to learn. With the widespread availability and ownership of personal computers, students today have more access to the tools of knowledge and resulting information than ever before in our history.



"Hands-on" learning experiences offer agriculture students a challenge while stimulating interests in future careers and higher education. (Photo courtesy of Michael P. Sibiga.)

Changes in Teachers

Agriculture teachers in the past tended to be male, have a farm or extensive agricultural background, and be generalists. Today in Connecticut, while a general, broad agricultural background is desirable, teachers tend to be special-

ized and teach in one or more of the major areas of animal science, plant science, agricultural mechanics, natural resources, aquaculture or veterinary technology. They are highly paid professionals who have completed a rigorous teacher preparation program, and new teachers have performed successfully in the state's beginning teacher induction, support and training program. As in the past, today's successful agriculture teacher needs knowledge of technical content, pedagogy, students, the community and more.

One of the things that has not changed over the years has been the demand for quality teachers of agriculture. Attracting and maintaining quality agriculture teachers remains a major challenge to the profession. Teaching agriculture is a great opportunity for talented and dedicated young people who seek a dynamic career in agriculture.

Elements of Success

Agricultural education has been successful in adapting to these changes in the context of a rapidly changing societal, agricultural and educational environment. It has continued to serve its clientele and the agricultural industry. The strength of agricultural education has been that it has had the capacity of adapting to change while remaining essentially the same. While content, clientele, facilities, equipment and

resources changed, the underlying organization, structure and philosophy of agricultural education has remained essentially unchanged since its inception some 80 years ago. In addition to the classroom and laboratory instruction, the supervised agricultural experience program and the FFA—which are the core of the program—certain program components and philosophical beliefs undergird our

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Don't Look Back, You Might

Trip Over an Opportunity



By Dale R. Butcher

Mr. Butcher is an agriculture instructor at Benton Central Jr./Sr. High School, Oxford, IN.

atchel Paige, the famous Negro League baseball pitcher and philosopher once said, "Don't look back, something might be gaining on you." I have always felt that looking back can give you a bad perspective on the future. History can, however, teach some valuable lessons. If I examine the past with the future in mind, I can maintain a balanced position. At the risk of stumbling over an opportunity or two, I am going to reflect upon the past.

When I started teaching in the summer of 1964, students, teachers, parents and administrators were facing problems similar to the ones they face today. Students were confronted with tremendous peer pressure to conform. Vocational agriculture teachers were concerned with teaching classes, recruiting students, motivating FFA members to succeed, and balancing all their professional commitments with a family life. Parents were hopeful that their children would do their best and would be part of a strong agricultural education pro-

gram at school. Administrators wanted quality programs, while keeping the cost to the taxpayer as low as possible. The classroom is a lot more high-tech today than it was then, but the teacher still has to teach and the students have to learn.

"I got involved in the professional organizations because I knew I had gained so much that I needed to give something back. My heroes taught me that the profession could remain viable only if the members took an active part."

I believe I have changed more than the things around me. Back in '64, I had my teacher heroes. If I could only speak and have the personal presence of Si Deeb; if I could only have the experience of Bill Burnett or Glenn McDowell; if I could only be as dedicated as Bob McBride or as well liked as Odell Miller; if I could develop the desire of Jim Guilinger or the positive air projected by Virgil Telfer; if I could just tell a story as well as Leon Crowe, coach a soil judging team like Byron Calahan, win proficiency awards like Richard Grubaugh and Ron Hefty, or get as much out of a small school as Jerry Cook; if I could just analyze a problem and present a learned solution the way Glen Shinn could; if I could only

be as effective a leader as Layton Peters or be able to express myself like Tom Jones; and most of all, if I could earn the respect of my peers like Albert Timmerman, then I could be a success.

As time went on, I found that my heroes became my colleagues. They shared with me and gave me an opportunity to get a glimpse of "The Professional Agriculture Teacher." I found I couldn't be any of those persons or copy their successes, but I could adopt bits and pieces of their philosophies, ideas, programs, methods and characteristics. Something from here and something from there and suddenly, I wasn't sitting in the crowd watching my heroes. I was doing my part to improve the profession and becoming a model to others. Other professionals were looking to me for leadership.

I started mentoring younger teachers by working with sophomore agricultural education students and student teachers from Purdue. I attended every Indiana Vocational Agriculture Teachers Association (IVATA) activity I could and took an active role whenever I could. Local, state and national agriculture teacher activities became more important to me professionally because that was what my role models had taught me. As leadership opportunities presented themselves, I made a special effort to get less experienced IVATA and National Vocational Agriculture Teachers Association (NVATA) members involved. Many young teachers were introduced to NVATA regional and national meetings. Several were also involved in American Vocational Association (AVA) activities. I hoped to demonstrate

that the local agriculture teacher is a very talented individual.

I got involved in the professional organizations because I knew I had gained so much that I needed to give something back. My heroes taught me that the profession could remain viable only if the members took an active part. I saw my heroes taking on all the tasks no matter how big or small. All anyone needed to do was ask.

When I started teaching in 1964, agricultural education was wrapped in tradition. Many of the influential people from 1928 were still alive, and their names and accomplishments were still the standard. Expectations were that a young teacher would pay his IVATA dues, attend state meetings, and fill out requests from university agricultural education programs, state department staff members, or professional organization officers just because it had always been so.

Somewhere along the way, tradition took on less importance and what went on in the classroom—the instructional process—became the overriding model for agricultural education. Teachers who were successful in the classroom as well as in leadership events began to come to the forefront. Everyone in Indiana knew Bill McVay was an outstanding leader, now we realized the value of his teaching philosophies and methods.

Today I believe the emphasis has changed again with a business model being followed. What is important today is the customer. Who is the customer? Our students are considered our customers, and educational outcomes are the products. Education professionals spend a great deal of time determining their customers' needs and polishing their image with the public by writing mission statements and performance-based objectives.

Today, many of my former heroes are no longer actively involved. The strange thing is that there are teachers today doing many of the same things my heroes were doing way back then. Along the way I have come to realize that there are no age limits on role models. To be a role model, regardless of your years of experience, you need to serve your community, teach in the classroom, and be involved in your professional organization. To find role models, all you need to do is observe, ask questions and get involved yourself. Suddenly, you'll find you are surrounded by individuals who have outstanding qualities you never realized they possessed.

Where will the next 30 years take agricultural education? No one knows for certain. What I do know is that the future is bright for those who focus their attention straight ahead. You learn from the past, but you succeed in the future. And if you don't watch out, you might trip over an opportunity!

The Past 25 Years: Dynamic Changes in Agricultural Education, continued from page 11

for prospective students to find the agriculture teachers preparation program on their campus.

Conclusion

We would not expect 25 years to pass without some change and advancement. The changes we've experienced in agricultural education have contributed to a strong profession and excellent preparation of students for employment in the agricultural industry or other professions. When we think of these changes, we realize a lot has changed, yet our goal is still to prepare students with the skills necessary to enter and succeed in agriculture.

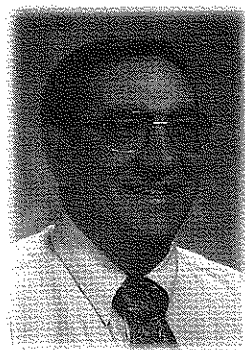


Answers to this issue's quiz from page 28:

1. A. USDA officials first started promoting secondary agricultural education in 1893. By the late 1890s, articles were appearing in every issue of the annual USDA Yearbook promoting secondary agricultural education.
2. B. Dick Crosby was hired to be a special assistant to the director of the USDA Office of Experiment Station, A. C. True. Crosby's job was to promote secondary agricultural education.
3. C. The Hatch Act of 1887 created agricultural experiment stations but also called for the dissemination of agricultural information. USDA officials saw secondary programs of agricultural education as a method of disseminating agricultural information.
4. D. At the turn of the century the National Education Association did not look on vocational education favorably. USDA officials and other agricultural leaders joined the NEA, and then, using the rules of the organization, successfully created a Department of Rural and Agricultural Education.
5. D. The USDA Division of Agricultural Education was a clearinghouse of materials for the development of secondary agricultural education programs.
6. A. In 1913 and each year thereafter, the USDA held regional conferences for agricultural educators in the Eastern, Southern and Central Regions. After the passage of the Smith-Hughes Act, the Federal Board for Vocational Education continued this practice.
7. B. The *Agricultural Education Monthly* was published monthly between Jan. 1915 and Dec. 1916.
8. C. More than 60,000 students were taking agriculture in 2,981 schools in 1916.
9. C. C.H. Lane.
10. B. The USDA continued to produce bulletins, film strips, slides, motion pictures and curriculum to support secondary agricultural education programs until 1929. In 1929, the George-Reed Act was passed and provided additional funds to the Federal Board for Vocational Education to continue the types of activities being performed by the USDA.

Changes in Agricultural Education

in Pennsylvania



By Steve Kline

Mr. Kline is an agricultural science teacher, West Snyder High School, Beaver Springs, PA.

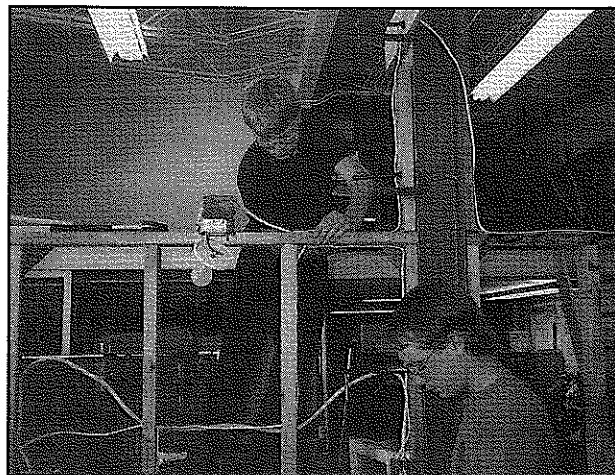
Since the publication of *A Nation at Risk*, our nation has been obsessed with educational reform.

Evidence of that obsession is observable on every level of the educational bureaucracy—local, state and national—and in every educational institution, private or public. School reform is on the agenda of most state legislatures and local school boards. Increasingly, we see teacher in-service programs centered on reforms ranging from outcome-based education to school-to-work initiatives.

The agricultural education community has endured similar reforms. In the 1980s, the National Research Council established the Committee on Agricultural Education in Secondary Schools at the request of the U.S. Secretaries of Agriculture and Education: "to assess the contributions of instruction in agriculture to the maintenance and improvement of U.S. agricultural productivity and economic competitiveness here and abroad." The report of that committee, *Understanding Agriculture: New Directions for Education*, has fostered change in many agricultural programs. Is change good? It depends on whom you ask. Consider the following:

"Change is good. I changed my school over to block scheduling because I thought we needed change. It works well. Student attendance improved and, after our second year, our SAT test scores started to improve. I like change. Maybe after 10 years on block scheduling, I'll change back to the traditional eight-period day just for the sake of change."

The above statement was made by a principal of a south central Pennsylvania high school on September 23, 1997, to a visiting team from my home school district.



Students are shown here practicing hands-on education in the electricity laboratory at West Snyder High School. (Photo courtesy of Steve Kline.)

My school district is contemplating a move to block scheduling and we were completing yet another round of school visitations prior to voting (January 1998) on block scheduling. This principal firmly believes that change is a good thing.

Unlike the principal in the example above, many of us fear change. I believe that change for the sake of change is not the right answer. I also believe, however, that we need to constantly search for ways to improve our delivery system to

allow us to do a better job of teaching. I wholeheartedly agree with L.H. Newcomb (1987) who stated:

"A profession grows or it dies; it changes or it faces atrophy, stagnation and slow demise. These clearly cannot be viable options. The profession must become a hotbed of experimentation in education, not guardian of the tombs of bygone success."

It is in the spirit of Newcomb's above statement that change was implemented at my high school (West Snyder). This article focuses on changes that my agricultural education program has undergone in the last 10 years to improve its delivery system and make more opportunities available to more students.

The Need for Change

My tenure at West Snyder High School began in 1970. When I joined the program, the majority of the secondary program was my responsibility. The vocational agriculture program that I inherited was successful, ongoing and had a traditional production-oriented focus that offered double-period classes. Approximately one-half of the instructional time was devoted to agricultural mechanics. Since the high school is located in rolling hill country that is approximately 60% forested, I sought program approval from the Pennsylvania Department of Education to add instruction in forestry. The requested approval was subsequently granted.

A federal grant was written in 1973 to obtain equipment for an expanded forestry program. The additional forestry courses completed the curriculum which included dairy, swine, beef, crops, soils and agricultural mechanics instruction in electric arc and gas welding, engine overhaul, basic electricity and wiring, carpentry, and tractor and equipment reconditioning. FFA and SAE were, and still are, integral parts of the program.

The program prospered and our enrollment grew from an average of 55 students to 85 at its peak in 1977. We attributed our increased numbers to our expanded course offerings without realizing that the same enrollment trends were occurring elsewhere across Pennsylvania as well as the United States. During 1977, I petitioned the school board for an additional agriculture teacher. The request was granted and an additional teacher was hired for the 1978 academic year.

Facing Facts

Small but persistent decreases from 1977 until 1986 allowed numbers to fall to 55, the 1970 level. What was needed to stop and reverse this trend? Analyzing the situation as objectively as possible, I reached the following conclusions:

- Enrollment in a traditional, double-period production-oriented program would continue to decline.
- Active participation in FFA, even during the peak of 85 students, was limited to about one-half of that number.
- Students interested in more general agriculture and agricultural mechanics classes were



Practical application of horticultural skills is being learned by FFA members by growing geraniums. (Photo courtesy of Steve Kline.)

not enrolling because FFA membership was required, i.e. FFA membership was a negative recruitment factor.

Making the Decision

Armed with the above "facts," a decision had to be made as to how best to remedy the enrollment situation. Serious thought was given to making significant changes in agriculture course offerings based on the following speculation:

1. Agriculture enrollment would increase if quality courses were offered on an elective basis.
2. FFA membership would continue to decrease initially, then level off. Our FFA chapter would have to "do more with less" if FFA membership was limited to enrollees in an FFA/SAE elective course. Our FFA chapter would have to become "leaner and meaner" because only those interested in FFA/SAE would enroll.

We decided to "go for it." I rewrote the curriculum and, for the first time, every vocational agriculture course was to be offered on an elective basis. The changes I suggested were approved by our high school principal and 1990-91 was the first year for agriculture electives.

Results

As predicted, agriculture enrollment numbers increased. Eighty-four different students have enrolled for one, two or three of our single-period, 45-minute classes during the 1997-98 year, a typical enrollment level since 1990-91. Also as predicted, about one-half of our students are not FFA members. Our FFA membership decreased to 42 during the 1996-97 school year. This year, our FFA membership

increased due to 33 enrollees in FFA 1 (This number is double our usual 15-16 FFA 1 enrollees which I attribute to an aggressive recruitment program in the elementary schools for the last four years. This recruitment program is the basis for my entry in the 1997 NVATA Region VI Harvest of Ideas Contest).

Has the West Snyder FFA Chapter become "leaner and meaner" as a result of the program change implemented in 1990-91? Our chapter has been named Pennsylvania's #1 chapter in the National Chapter Award Program four consecutive years. The chapter has produced five state officers, one national officer candidate, five American FFA Degree recipients, numerous state FFA degree winners and proficiency awards, and a state-winning parliamentary procedure team.

Is Change a Good Thing?

We tend to second-guess our ability to adapt to changes such as those mentioned above. Change is never as comfortable as the status quo, but we really only have two choices. We can change our programs to meet the needs of our clientele or we can go out of business. I chose to change. How about you?



other than the field of agriculture. Also, the student still gains avocational competencies useful for the rest of his or her life.

Today's modern secondary agriculture program still continues to deal with the basic competencies and skills in agriculture. Students of this age level still assimilate facts and data much more easily than

theory. This exposure to and experience with basic facts and data still provides a concrete basis for the study of the theory and technology of agriculture which the student will have to master if he or she continues at a post-secondary school or university. In this way the secondary agriculture program is still a valuable background for advanced study.

So where does secondary agriculture fit? Is it vocational? Is it general? Is it of benefit to the college bound? Does it prepare for life? Is it career exploration? Does it prepare students for jobs? Is it vocational for those students who desire it?

These questions can better be answered by more questions. Are there still students who want the program? Are there still students who need the program? Are there still students who can benefit from the program? Approximately 800,000 students in 8,000 secondary agriculture programs in the nation should serve as some indication. Secondary agriculture is an elective, not a required subject. But, as has been pointed out, today's secondary agriculture program has to meet many of the objectives of required course work in the high school.

Some educators criticize secondary agriculture programs for not being completely open entry. However, the comprehensive nature of the program is its greatest asset. To break down the comprehensive program to allow easier entrance for some students would destroy the continuity for the students already enrolled. This would be especially true for single-teacher programs. The very fact that the successful program still builds on

“The most prevalent positive view of participants in agricultural education is not about the academic or vocational subject matter of agricultural education, but about the impact or difference agricultural education has made in the affective, rather than the cognitive domain, of participants.”

previous work (as do other disciplines) is of paramount importance.

Critics who espouse the claim that all agricultural education should be delivered at the post-secondary or university level should also have to answer to the students who do not continue past secondary school. Why should these students be compelled to continue their formal education to gain access to agricultural education?

To be sure though, agricultural education has changed significantly. But the question remains “How has agricultural education changed?”

If the overall objective of secondary education is to prepare youth for their role in society and if one can assume that this objective is never completely met, that is, there will always be room for improvement, then it is inevitable that the new educators coming into the profession attempt to improve the situation they have inherited. They attempt to improve the situation by applying new methods. These new methods lead to change in how programs are delivered. This, of course, is not to say that all of the changes have improved secondary education, however, sim-

ply because of the fact that new educators are coming into the profession and are applying their ideas to the problem will make for change.

To cope with this phenomenon, agricultural educators have to be prepared, more than ever, to be change agents and have the capabilities to use the inevitable change to their advantage rather than take the position “If it ain't broke, don't fix it.”

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.

The most prevalent positive view of participants in agricultural education is not about the academic or vocational subject matter of agricultural education, but about the impact or difference agricultural education has made in the affective, rather than the cognitive domain, of participants. Participants seldom highlight the subject matter of their agricultural education experience. Participants usually go into considerable detail about the impact agricultural education has made in how they act and react, not about how agricultural education has impacted their knowledge in agriculture. In praising their agriculture instructors, students do not allude to the instructor's methods of teaching animal science or agribusiness management or agriscience; instead, the accolades tend to praise the instructor's long-term affective interaction with students as having the most value. We, for a long time, have held the view that

while the specific subject matter is important in agriculture programs; it is the long-term quality affective interaction with students where our greatest strength lies. The specific subject matter of an agriculture program can certainly enhance or detract from that quality affective interaction. However, if an agriculture instructor does not have quality affective interaction with students, the instructor's specific subject matter, be that 20-year-old production agriculture or the latest in agriscience, will not carry the day.

By now, many are wondering “what is the point?”

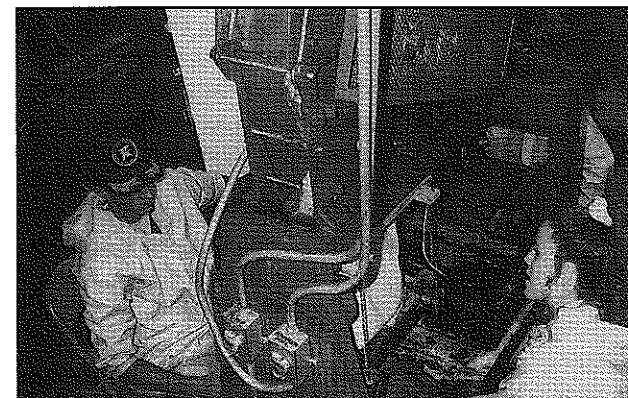
In agricultural education, we are very well equipped to develop the agricultural subject matter competencies in future instructors, and even to enhance those competencies in current instructors, but, we are ill equipped to ensure the competencies required by agriculture instructors for long-term, quality affective interaction with their students. Of all the problem programs we have worked with over the years, lack of subject matter competency by the instructor is seldom the issue. That is the point and the dilemma!

Furthermore, if agricultural education is as beneficial to participants as one would be led to believe, why the constant struggles to maintain programs and enrollment in those programs? Why the constant struggle to convince administrators that our programs have significant value for students and that our programs should be enhanced rather than just allowed to exist? If agricultural education is as beneficial to participants as one would be led to believe, why still are only certain high school students electing to enroll in our agriculture programs rather than just taking some of our classes and why are we constantly facing a shortage of quality agriculture instructors?



stability. Some of the most essential, from our viewpoint are:

- The close relationship between theory and practice. Whether taught in a classroom or laboratory or on a farm or in an agricultural business, agriculture students have the opportunity to relate theory to practice in a meaningful, hands-on, integrated approach.
- The use of consulting committees for program planning and evaluation. Quality programs are developed and maintained by the involvement and support of community members.
- The close involvement with parents. By working with students over a period of several years, agriculture teachers get to know the students and parents well. Parental or guardian support and involvement are important in providing quality experiences for the students, making educational and career plans, and making experience-based learning a success.
- Quality facilities. Modern and well-equipped classrooms, greenhouses, laboratories and equipment attract students, involve students in the learning process, and make agricultural education a pleasant place for students to learn.



Students learn all aspects of an agricultural business by pressing cider every fall on a press purchased by the FFA through an acquired loan. Profits from the sale of cider help fund ongoing FFA activities. (Photo courtesy of Michael P. Sibiga.)

- Extended and individualized instruction time. Sufficient time for laboratory instruction, field trips, in-depth projects and individualized instruction are essential in a quality agricultural education program.
- Quality, competent and caring teachers. Agricultural education is successful in communities with a competent, caring agriculture teacher or teachers. Without good teachers, the program has little chance of success.

Agricultural education has changed from a time when the terms “vocational agriculture, Future Farmers of America, farming programs and Supervised Occupational Experience Programs in Agriculture” were standard in the profession to a time where “agricultural education, agriscience and technology, food systems education, the FFA and Supervised Agriculture Experience Programs” are the terminology of the day. The future, with change accelerating at an even more rapid pace than before, promises to bring even more change in terminology and program content. If we adhere to our basic organization, structure and philosophy, agricultural education should be viable long into the 21st century.

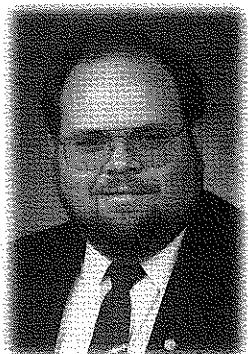
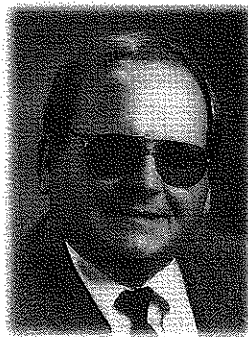
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Transitions in Texas: Are We Pushing

or Pulling the Rope?



By Craig Edwards and
August Wunderlich

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From Whence
We Came...

Winston Churchill once said, "The longer you look back, the farther you can look forward" (Hayward, 1997, pg. 9). If reflection is the wellspring of perspective, then it can yield context, understanding and synthesis. An appreciation of where we have been does indeed aid us in defining where we are, and perhaps, where it is that we are going. The following is a Texas perspective of the significant changes made in sec-

ondary-level agricultural education during the 1980s and '90s. The major strands of change involve those made in curricula, students, teachers, SAEPs, the FFA program and selected thoughts about the future.

Curricula, Courses and Conflicts

As the 1980s dawned, Texas instructors were teaching a very traditional, production-driven model of vocational agricultural education. A yearlong, sequential format of Vo-Ag I, II, III and IV was predominant, with an assortment of cooperative part-time training and pre-employment labs. This production-oriented approach was "a mile wide and an inch deep," with attempts made to deepen it on a unit-by-unit basis each successive year.

Class sizes were often small. Multi-teacher departments with fewer than 100 students were common. A minimum of 20 production agriculture students would provide a school district with state funding for one foundation production unit (teacher). Another 30 students would support funding for a second production unit, and only 20 if it was a combination unit, and so forth. Obviously, this student-to-teacher ratio and its inherent funding scheme were quite favorable.

The passage of state legislation that stressed assessment and accountability did much to change the landscape of education in Texas, not the least of which were alterations to vocational education, now known as career and technology education, and vocational agricultural education, now emphasizing

ing agricultural science and technology. The most fundamental curricular shift was to offer courses on a semester basis.

Although not forsaking the general production agriculture concepts, greater emphasis is now focused on preparation for multifaceted agriculturally related career pathways. A premium is placed on those skills that are highly transferable across all domains. In the late 1980s following implementation of this format, class sizes mushroomed, often exceeding 30 students. On the positive side, this enrollment spike was exciting and beneficial. Less positive are the concerns that have arisen regarding classroom management, student discipline, laboratory safety and a host of other issues. Currently, course offerings include those of an introductory nature, sequenced pathway-specific courses, pre-employment labs, work-based learning, and opportunities for independent study. Different courses now number near 50. As a result, variety and opportunity for specialization in agricultural subject matter is no longer a problem, beyond the limitations of facilities, resources, and most importantly, teacher expertise.

Today's Customer

The flexibility of semester courses, as opposed to the year-long format, permits more students to enroll in more courses. Statewide, for the 1996-97 school year, more than 100,000 students enrolled for one or more agricultural science and technology courses (K. Edney, personal communication, August 11, 1997). In some school districts, this trend has intensified with the advent of alternative scheduling

patterns, such as the A/B block and, in some cases, a trimester system. Yet, the implementation of more rigorous graduation standards, as recent as the 1997-98 school year, continues to absorb precious schedule space once reserved for electives. Obviously, this drives the need for even more creative and flexible scheduling patterns if agriscience is to keep its place at the table of high school course offerings.

Depending on one's perspective, the evolution of semester courses has presented Texas agriscience programs with special challenges and unique opportunities. Many of the students attracted by the flexibility are more diverse or "non-traditional." Frequently, high school juniors, and even some seniors are taking their first agriscience course without the benefit of introductory-level work. Granted, some school districts have implemented specific career pathway prerequisite courses. But for many, they are only recommendations and are often unevenly enforced. As a result, an "in-and-out" syndrome develops, which often presents special problems at the classroom level and to the overall program.

The upshot is that many of these students do "buy in" to the program, remain enrolled, and become a part of the program's core student body. More pragmatically, state funding for career and technology is now weighted at a 1.37 level per student, as opposed to 1.00 for regular education courses. Therefore, more students mean more money. There is at least one caveat to the aforementioned. These funds are earmarked for career and technology education in general, and not specifically the program responsible for their generation.

Teachers Are Changing

As a parallel to increased student diversity, Texas agriscience teachers are becoming more diverse. This is especially true regarding gender. A recent survey by the Department of

Agricultural Education at Texas A&M University revealed that 36% of the first- and second-year teachers for school years 1995-96 and 1996-97 were female (Briers, Edwards, Herring and Shinn, 1997).

Changes in the Texas State Teachers' Retirement System, specifically, "the rule of 85," means that at 55 years of age and 30 years of teaching experience a teacher is eligible for a 100% retirement benefit. Hence, speculation is that the average age of a Texas agriscience teacher is becoming younger, and their average length of tenure, shorter. The consequences of this trend may only be starting to surface.

Through the lens of a jaundiced eye, meaning "experienced or seasoned" teachers, it appears that more and more "younger or less experienced" teachers are doing less and less. Or, at least having less success in motivating students to participate in many of the more traditional Career Development Events (CDEs), especially certain Leadership Development Events (LDEs). Challenge this contention if you wish. We have no empirical evidence to support it. But, a "hip-pocket" survey of most major FFA events in Texas, with some exceptions, will produce a similar conclusion. Whether this is a result of the "gaps" teachers may have endured during their agriscience student/FFA member career, lack of student/member experience, a deficit in their pre-service training, or merely their own unique world view of work, we can only conjecture. It may well be an issue of meaningfulness or felt need on the part of the student, and/or that of the beginning teacher. If that is the case, then obviously the issue of relevance should be evaluated.

One might casually say, "Well, they are not on the same contract status as their older peers." This is not necessarily the case. The survey cited earlier found that 80% of those responding held contracts of eleven months (203 days) or

greater. Interestingly, the missing month (more or less, July) is when the Texas State FFA Convention is held, and its attendance level is not declining. Might it be these teachers are doing wonderful things in their school and communities that do not generate the professional notoriety associated with competitive, above-the-local-level success? This may be the case. If so, they are to be commended and our profession must devise a better system for recognizing their efforts. If a less positive supposition has greater validity, then it, too, should be addressed. At any rate, not knowing the answers to these questions indicates a need for research so that we can make informed decisions.

Out-of-the-Box SAEPs

The days of every agriscience student conducting a production-oriented animal or plant enterprise are history. SAEP requirements still exist for all agriscience courses, excluding the most introductory one. The focus of this requirement has as its mainstay, a systematic method for assuring all students gain some modicum of outside-of-class, hands-on, learning experience(s) related to the agriscience course(s) in which they are enrolled. Consistent with tradition, the overarching objective remains an opportunity for greater enrichment, enhancement and extension of the agriscience curriculum.

Unlike the former system, the method for keeping score is no longer just dollars and cents; but, a point system that governs, regulates and quantifies activities (*Supervised Agricultural Experience Program Guide for Agriscience and Agribusiness*, 1989). There are several ways for reaching this destination. The major ones are entrepreneurial activities (often, traditional animal or plant projects), work-based experiences (paid employment), and applied activities (both suggested and instructor developed). Beyond the traditional live-

...continued on page 22

stock show project model, SAEP recognition and award alternatives with potential for including all students are evolving. Local programs are developing opportunities for participation by those students limited solely to applied activities (Edwards, 1995). Regardless of the method or approach, record-keeping skills are still important and more frequently they involve the use of computers.

Challenges and Opportunities for the FFA

The FFA component in today's agricultural science programs face unique challenges. Many students fall into the "in and out" category previously described, and are late arrivals to the program. Therefore, threats to continuity and cohesiveness are of special importance. In short, the days of every student who graced an agriculture classroom being an FFA member are gone. Membership itself is an issue. Without the initial step of student membership, there is little opportunity for achieving the FFA mission of, "premier leadership, personal growth and career success" (1996-97 *Official FFA Manual*, 1996). The most recent year on record shows that Texas FFA membership, although nearly twice the size of any other state (excluding California), is just slightly greater than 60% of those eligible (K. Edney, personal communication, August 11, 1997). National and state initiatives have been devised to combat this problem, but both continue to produce mixed results. We are not proud of this fact, but at the end of the day, it persists.

Where local programs have maintained consistently high rates of membership (ideally 100%), it appears the program advisor(s) have been creative and flexible.

They have attempted to create a package of reasons for membership (benefits, if you will) that are attractive and meaningful to today's youth. Many advisors realize that the survival of their FFA program is linked to creating and nurturing a core group of agriscience students/FFA members. These are students who will be "there" every year, if not every semester. This has become increasingly difficult, due to a constant reduction in elective space being driven by heightened graduation requirements. As is often the case, the best and brightest students are those most affected. The more creative advisors continue to cast their nets about, ever so widely. They attempt to fashion and customize opportunities that provide motivation for the transient students to become FFA members, develop a spirit of ownership in the FFA chapter, and build a sense of inclusion.

Assuming the objective of FFA membership has been reached and the student is inclined to participate, often another hurdle rears its head. The question of academic eligibility, namely, the famous or infamous "no pass, no play" reform that first appeared in 1984 and was revised in 1995. This legislative mandate requires that for a student to be eligible to participate in any extra-curricular activity, he/she must earn passing grades for all course work each grading period. In Texas, most FFA functions, especially those above the school/chapter level, classify as extra-curricular. The period of ineligibility is three weeks. Reinstatement is possible, assuming the student is passing all courses, at mid-six weeks. We shall not bemoan the philosophical appropriateness that underlies this system, its efficacy, or lack thereof. Let it suffice to say that upon implementation its consequences, both intended and unintended, were of great magnitude and remain so today.

The waves of educational reforms that washed over Texas in

the mid-1980s also brought a massive reduction-in-force of Texas Education Agency (TEA) field staff. Specifically, for secondary-level agriscience education, this meant the loss of all 10 field-based consultant positions (area supervisors). Additionally, there was a loss of numerous support staff positions, both in the field and at the state administrative level. A large proportion of these individuals' efforts went toward the planning, supervision and implementation of district, area and state-level FFA activities.

When these highly essential positions vanished, in what seemed like the blinking of an eye, a gaping organizational chasm was created. Initially, this void was filled by area-level presidents/coordinators (who were still full-time, practicing agriscience teachers), other assorted appointees, and the remaining state staff. These groups shouldered often Herculean tasks and responsibilities, for which they have not and probably never will receive proper compensation and gratitude. Even today, this model continues to be refined.

Visions for the Future

As our curriculum advances (i.e., biotechnology, agricultural electronics, local and global issues of environmental sustainability, etc.) and our technology becomes more powerful (i.e., the Internet, global positioning systems, robotics, etc.), there is an increasing demand for higher levels of teacher expertise. With limits on both time and resources for acquiring pre-service and in-service education, the 'teacher as facilitator' of the learning process is becoming more of a reality. Simply put, there is just too much to know. Therefore, being able to facilitate environments that permit the learner to maximize self-directed behaviors, must become the norm. This presents special challenges to all teachers, and for the novice they are often magnified. One remedy emerging in Texas is a structured mentoring program

aimed at beginning agriscience teachers. A pilot for this effort, to include 10 mentees, is being supported by the Texas FFA Foundation. The Foundation is also attempting to fill the administrative gaps created by the State Education Agency reductions in force.

Furthermore, the role of agriscience and technology in our schools may be poised for unparalleled ascension and a renewed sense of esteem, namely, as the hub for a scheme of truly integrated education. What may prove to be a model for this effort is the A&M Science Academy, launched this fall at A&M Consolidated High School in College Station, Texas (S.R. Johnson, personal communication, August 11, 1997). This program involves a cohort of ninth grade agriscience students who will be the beneficiaries of curriculum designed and instruction delivered via the collaborative efforts of an agriscience teacher, an English teacher and a science teacher. Curricula integration, interdisciplinary team teaching, teaching through modules, sharing facilities—these and other innovations may just be the beginning. This could, in fact, represent a paradigmatic shift regarding scheduling conflicts. In the future, agriscience might be the solution, instead of a heretofore scheduling problem or obstacle. Perhaps it may become an exemplary model for bringing context to the learning process. It also speaks to the need for redirecting and reconfiguring facilities to meet these demands. Changes that include biotech labs, natural resource technology, computer-assisted-drafting tools, computer labs with Internet access, agriscience land laboratories with experimental and demonstration themes, and a host of other (many yet to be envisioned) advances in infrastructure.

What happens to the student leadership development dimension, a.k.a. the FFA, of agriscience education? Decline, diminish, disappear; anything, but! These demands

and challenges will most assuredly place an even greater premium on leadership training and development. The packaging may change (i.e., FASTA, Future Agricultural Scientists and Technologists of America), but the essential products of communication skills, analysis and decision making, collaboration, teamwork and service will always be in demand. Paramount will be opportunities for accommodating greater diversity and building more and stronger partnerships. Demographic trends for our state, and we suspect nationally, do not merely foretell this, they demand it.

Great challenges one and all, but more importantly, great opportunities. As Churchill reminded us, we must periodically glimpse backward if we are to clearly see forward. May our field of vision, in both directions, be true.

Authors' Note: A special thank you to Dr. James E. Christiansen, professor of agricultural education at Texas A&M University, for his assistance and expertise in guiding and editing this effort.

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The Techno Owl



By Daniel Foster, Jack
F. Elliot, Cynthia
Blackey, Stacey Rich
and Curt Bertelsen

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What changes have taken place in agricultural education that affect the profession more drastically than technology? This, at least, was the conclusion of the joint authors in this article. Read this from the eyes of an aspiring agriculture teacher who has experienced two of the finest agricultural educators in the business as well as an excellent agricultural English teacher. The article blends the sage advice of several "techno owls" into a challenge for the future.

*"Why Stationed by
the Owl?"*

"The owl is a time honored emblem of knowledge and wisdom. Being older than the rest of you, I am asked to advise you from time to time as the need arises. I hope that my advice will always be based on true knowledge and ripened with wisdom" (1994-95 *Official Manual*, p.25). I have definitely needed my agriculture teachers' advice over the past four years for many things. Whether it consisted of motivation to compete in that first public speaking contest, an extra set of eyes to make sure I acted right, reminders of responsibilities, or just an open ear for listening, my advisors have always been there to help me. The needs of today's student enrolled in agricultural education vary dramatically. The individuals we have come to know as teacher, friend, parent, role model, mentor and "owl" have truly made a difference in our lives.

Agriculture teachers have been making a difference in the lives of students since the inception of agricultural education in 1917 (1994-95 *Official Manual*, p. 5). As teachers, they have had to adapt to keep up with the world as it changed. John F. Kennedy said, "For time and the world do not stand still. Change is the law of life. And those who look only to the past, or the present are certain to miss the future" (*JFK Quotes*, 1997). Changes have made the job of our admired "owl" very chal-

lenging. What will it take to allow our agriculture teachers to continue to make a positive difference in the lives of students in the upcoming millennium? It will take the "techno owl." The techno owl embraces the rapid pace of technology in agriculture, and is prepared to use this technology for the betterment of his or her students. The new millennium demands the techno owl.

Conscious of the rapid pace of technology, the authors of the *Strategic Plan for Agricultural Education* stated: "There was a time when people struggled to cultivate 10 acres of ground and provide for their family. Today, agriculture and agricultural education have the power, knowledge and equipment to build a world beyond our imagination" (*The Strategic Plan*, p. 5). As an example of this change, let's look at reproductive technology. We started with selective breeding, moved on to artificial insemination and then to embryo transfer. Next we refined genetic engineering and now we have Dolly, a fully cloned Dorset ewe (Hill, 1997). Imagine how that could change livestock production. If we could have the exact same

*"The responsibility of
recruiting and preparing
these future leaders falls
to our agricultural
educators."*

animal being produced over and over, our product consistency problems would disappear—but talk about some hard livestock judging classes!

Now think about the Internet: in the blink of an eye you can buy wheat futures from Australia and sell your April calves to Japan. Remember that educational tool we call the FFA? An organization not to be left behind, www.ffa.org will take you to the FFA home page so you can check out what's happening in the blue and gold world right in your own living room! The Internet expands our communication abilities ten fold. In fact, while preparing this manuscript, I contacted universities from across the nation using electronic mail.

In his State of the Union address, President Clinton said, "We live in the age of possibility. A hundred years ago we moved from farm to factory. Now we move to the age of technology, information and global competition" (1996). The age of "possibility" demands that America's agricultural education system provide individuals who have the skills, abilities and desire to lead us to success. The responsibility of recruiting and preparing these future leaders falls to our agricultural educators. When asked to identify the greatest challenge facing agricultural educators, Dale Crabtree, teacher services specialist with the National FFA Organization, responded, "I believe that the biggest challenges lie within the ability of our teachers to stay industry current. If agricultural education is not delivered at the level it should be, (challenging students to the maximum) our students will not be ready to compete in the real world. We must not only be concerned with agriculture in and around our surrounding communities, but on a national and world scale as well."

As science and technology competencies become more important for students, our teachers continue to redirect their methods of teach-

*"Teachers must not
only teach about
technology, they must
also use technology in
their teaching."*

ing. They must, because we are asking them to prepare us for careers that don't even exist yet! Job titles like: cloning specialist, space farming engineer or maybe global marketer of agricultural products—all are possibilities, if not yet realities. Is it an impossible task? Maybe, but the "owl" takes the challenge.

Dr. Glen Shinn, Texas A&M University, stated, "New web-based technologies are making knowledge more available. Learners, especially high school and post-secondary students are becoming more self directed. Tomorrow's teachers must be able to facilitate and assist in using the technology and assisting in analyzing appropriate solutions that bring many scientific facts together." In agreement with this philosophy, Dr. Jack Elliot of the University of Arizona believes, "We must move teachers to be academicians. We have far too many teachers who only teach students 'how' to do something and never teach the 'why' [the science]."

Who will empower you with the "why and how?" Your local "techno owl."

Teachers must not only teach about technology, they must also use technology in their teaching. Dr. Robert Terry of Oklahoma State University said, "Teachers of the next millennium must know how to use computers, the Internet and modern laboratory equipment as they deliver their lessons." The request for the techno owl has been made: the industry demands it, the future needs it, and our students want it! The new millennium demands the techno owl.

Agricultural education needs women and men who comprehend the rapid pace of technology in agriculture and who are prepared to use it to their advantage in preparing their students for the future. We need "techno owls." In the recent presidential election, we heard a great deal about the bridge to the 21st century. The techno owl is the FFA's bridge to the future. I want to help build that bridge. I want to make a difference. I am going to become a techno owl. Whether agriculture teachers have been stationed by the feathered owl of the fifties, the digital owl of the eighties, or the techno owl of the new millennium, their advice will always be based on true knowledge and ripened with wisdom.

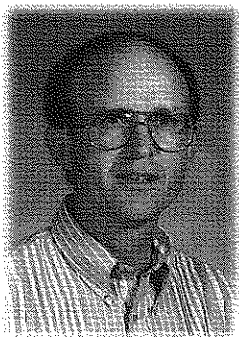
Shhhh...do you hear it? Is it the wind? The wind of change? I believe it is the sound of beating wings, the wings of techno owls headed toward the future.

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Reflections on Our Dynamic Field



By Les Purcella

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I recently returned from attending my 23rd annual state agricultural educators' conference. While driving home, I began to think about the changes, not only in our conference content, but also in the field of agricultural education during my career as an agriculture teacher. When trying to remember that first day in the classroom, I recalled two things. 1) I thought I was extremely knowledgeable in the field of agriculture and ready to teach, and 2) I had much more hair than I do now. At the end of day one, I realized I had a lot to learn and that scratching your head excessively accelerates hair loss.

On a more serious note, the changes in education during the last 20+ years are mind boggling. If we could turn back the clock or glance into a crystal ball, what we considered teaching technology in 1975 is antiquated today. There's no doubt that the technological changes in our society have far surpassed what we could have predicted 10 to 20 years ago.

In the program where I began teaching, my classroom technology consisted of a filmstrip projector and a manual typewriter. Our agricultural mechanics program was

well equipped with numerous hand tools, one pedestal grinder and four stick-electrode welding machines. Not a bad facility for a first-year teacher in the fall of 1975! I could never have dreamed of the technology that is in use in our local program today. I can recall when we purchased our first computer for the agriculture department—it seemed that we were at a technological high point that couldn't and wouldn't be surpassed. Grants for software were to follow, and we were in the computer business. After numerous computer classes, I began to realize this was just the tip of the iceberg. We were a far cry from the technology used in our classrooms today.

Our agriculture facility now has three computers, a DTN satellite system, Channel 1, two televisions, and a VCR. The Internet is now available for student use. One of the issues discussed at our state agriculture educators' conference was preparing agricultural education for the year 2020. I find it difficult to conceive what the technology of the 21st century will bring to the classroom.

Technological changes have not been limited to the classroom. The agricultural mechanics program has evolved to include plasma cutting, and MIG and TIG welding instruction. These areas were unheard of during my college preparation, yet it is common technology in our programs today. The program at Goddard High School now includes a greenhouse and meats cutting laboratory. The content areas associated with these facilities were unknown to me as I prepared for employment in the mid 1970s. These areas of instruction have carried over to new student SAE opportunities. Students are now placed in training positions or have developed entrepreneurship pro-

grams in areas that didn't exist just a few short years ago.

This era of change has also been seen in the participation in our local FFA chapter. As with all FFA programs, the number of farm and ranch students dwindle even as enrollment and FFA membership skyrocket. Fewer and fewer students raise livestock and participate in the "stock show" program, while we see increased interest elsewhere. The changes in CDEs have caused teachers and students to learn new skills while exploring new areas of instruction. Years ago, CDEs were basically unchanging, but updates and new content areas have made them more challenging and relevant than ever before. These events draw more interest in and participation by our local chapter members than any other activity.

Other areas where our local programs have changed are in methods of instruction and curriculum content. When I began teaching, my content was the good old generic production agriculture curriculum. A great deal of emphasis was placed on animal science and plant science, and let's not forget that at least a third of our time would be spent working in the shop on students' individual projects. I still remember a couple of close calls teaching the vocational agriculture students to drive a tractor. Times have certainly changed—I haven't had anyone learn to drive tractors in class in many years. Our curriculum now includes such topics as wildlife science, environmental science, animal rights, communication skills and on and on. These are certainly content areas I never dreamed of when my teaching career began. Partners in education and school-to-work initiatives are now common methods of supporting education. Not only has the curriculum changed, but my teaching

methods have also evolved. I can't remember the last time I used a chalk board other than to jot down notes about FFA meetings, field trips or something of that nature. Transparencies, video tapes, visual aids and hands-on instruction have become my primary teaching methods, as my personal style of instruction has developed through years of trial-and-error experimentation.

Not only has technology changed over the past 25 years, but I believe that agriculture students have changed, too. In an environment where young people are exposed to technology from a very early age, it has definitely changed their attitudes. In years past, many students participated in vocational activities for the rewards; the trips in particular were a big incentive. In our increasingly mobile society, I don't think we can rely on that sales point as we once did. I believe we have to work harder today to motivate young people to become active in the FFA. The changes in competitive areas and the development of new FFA activities and curricula have aided in this never-ending task.

Many students today possess a great deal of ability; they just have to be pushed a little harder to utilize it and to use it for their own benefit through programs such as FFA or other vocational areas. The ability is there, we just have to find creative ways to awaken it. That, in my opinion, is our most difficult task as educators. As a young teacher I felt FFA's primary objective was to aid in career preparation. Now, as a more experienced veteran, I think FFA's goal is still career preparation, but it's also a way to guide young people away from the many negatives in our society today. The evolution of our organization must continue into the future, just as it has in the past.

Agriculture teachers experience more highs and lows with young people than anyone else in education. I've certainly experienced my share of both extremes of the emotional scale, but I wouldn't trade the experience for anything. As we look

toward agricultural education in the year 2020, let's remember to learn from the past. There will be unforeseen obstacles and challenges before us. We must be flexible, daring and willing to change. Only then can we hope to maintain the success that we now enjoy.



Coming
Next
Issue:
January-
February
Block
Scheduling
and Its
Impact on
Agricultural
Education

Changes in Agricultural Education in Tennessee 1952-1997, continued from page 5

an innovation, but during the 1950s, two 45-minute class periods were required of freshmen in vocational agriculture classes. The rationale for this innovation was to permit more hands-on time for students working in the farm shop.

Block scheduling has become necessary because of increased graduation requirements. In the 1950s, only 16 units were required for a high school diploma. Today, many school systems require 22-24 units. With block scheduling it is possible for students to earn 28 or more credits during four years of high school. Block scheduling also encourages specialization in agriculture courses. It is possible for a school to offer at least six agriculture courses during two semesters, with multiple teacher programs offering 8 to 12 courses.

Conclusion

Many changes have occurred in agricultural education during the last 45 years. To a person witnessing these changes, they have appeared gradual and even unnoticeable at times, but to compare an agricultural education program in Tennessee in 1997 to one in 1952, the changes appear drastic and unbelievable. Changes will continue as time moves on and agricultural education responds to industry and society. Most of the changes have benefited agricultural education. Without change, agricultural education or vocational agriculture would have been pushed into oblivion.

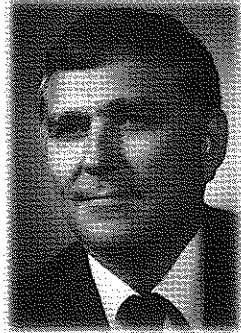
The authors have witnessed many changes in agricultural education in Tennessee since the early 1950s. May the changes in the future be as in the years past, conducive to educating individuals who can adjust in society and make intelligent choices toward becoming prepared for employment in the ever-changing field of agriculture.



What Do You Know About the USDA and Agricultural Education?

By Gary E. Moore

Dr. Moore is a professor of agricultural and extension education, North Carolina State University, Raleigh, and is historian for the American Association for Agricultural Education.



During the past couple of years there has been some discussion about whether or not agricultural education would be better served if our federal leadership was housed in the United States Department of Agriculture (USDA) rather than the U.S. Department of Education. What many folks do not realize is that the USDA actively provided leadership to secondary agricultural education during its formative years. This quiz looks at the early relationship between USDA and secondary agricultural education. If you can answer half of the questions, consider yourself an expert on agricultural education history.

- Officials in the USDA first started to actively promote agricultural education below the collegiate level in what year?
 - 1893
 - 1901
 - 1906
 - 1914
- The first federal official who had primary responsibilities for secondary agricultural education was hired by the USDA in 1901. His name was:
 - A.C. True
 - Dick Crosby
 - C.H. Lane
 - Charles Prosser
- According to USDA officials, the legislative mandate for their secondary agricultural education work was the:
 - Morrill Act of 1862.
 - Morrill Act of 1890.
 - Hatch Act of 1887.
 - Smith-Lever Act of 1914.
- In 1906, USDA officials were successful in their efforts to get a "Department of Rural and Agricultural Education" created within the:
 - Farm Bureau
 - U.S. Department of Education
 - Progressive Farmer
 - National Education Association
- The USDA established a Division of Agricultural Education within the Office of Experiment Stations in 1906. Employees in this division:
 - Prepared slides, bulletins and charts for use by agriculture teachers.
 - Maintained a card index of all agricultural teachers in the country.
 - Visited schools and educational meetings to develop agricultural education programs.
 - All of the above
- In 1913, the USDA Agricultural Education Division started something that still exists today. This is:
 - Regional conferences for agricultural educators.
 - The Agricultural Education Magazine*.
 - The National Vocational Agriculture Teachers Association.
 - The Agriculture in the Classroom program.
- Starting in January of 1915, the USDA published a monthly magazine titled:
 - County Agent and Agriculture Teacher*
 - Agricultural Education Monthly*
 - The Agricultural Education Magazine*
 - Agricultural Education Today*
- Due largely to the work of the USDA, agricultural education was taught in numerous schools prior to the passage of the Smith-Hughes Act. In 1916, two years before the passage of the Smith-Hughes Act, agricultural education was being taught in how many public schools?
 - 576
 - 1,310
 - 2,981
 - 3,624
- After passage of the Smith-Hughes Act a number of USDA employees were transferred to the Federal Board for Vocational Education to continue their work with agricultural education. One of these individuals later became the first national advisor of the FFA. This person was:
 - H.O. Sargent
 - J.C. Wright
 - C.H. Lane
 - J.A. Linke
- After passage of the Smith-Hughes Act in 1917, the USDA:
 - Shut down their secondary agricultural education operations.
 - Continued their support of secondary agricultural education programs until 1929 because they wanted to ensure that secondary agricultural education would develop and grow.



The answers to this quiz are located on page 15 of this issue.