The
Agricultural Education
Magazine

May, 1991
Volume 63
Number 11

THEME: The Expanded Mission

THE
AGRICULTURAL EDUCATION
MAGAZINE

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ARTICLE SUBMISSION

Articles and photographs should be submitted to the Editor, Regional Editors, or Special Editors. Items to be considered for publication should be submitted at least 90 days prior to the date of issue intended for the article or photograph. All submissions will be acknowledged by the Editor. No items are returned unless accompanied by a written request. Articles should be typed, double-spaced, and include information about the author(s). Two copies of articles should be submitted. A recent photograph should accompany an article unless one is on file with the Editor.

PUBLICATION INFORMATION

THE AGRICULTURAL EDUCATION MAGAZINE (ISSN 7324677) is the [illegible] journal of agricultural education. The [illegible] published by THE AGRICULTURAL EDUCATION MAGAZINE, INC., and is printed at [illegible] Second Street, Henry [illegible]

Second-class postage paid at Mechanicsville, VA 23111; additional entry at Henry [illegible]

POSTMASTER: Send address changes to Glenn A. Anderson, Business Manager, 1803 Rural Point Road, Mechanicsville, Virginia 23111.

SUBSCRIPTIONS

Subscription prices for THE AGRICULTURAL EDUCATION MAGAZINE are $7 per year. Foreign subscriptions are $20 (U.S. Currency) per year for surface mail, and $40 (U.S. Currency) foreign airmail, except Canada. Student subscriptions in groups (one address) are $4 for eight issues. Single copies and back issues less than ten years old are available at $1 each ($2.00 for foreign mail). All back issues are available on microfilm from Xerox University Microfilms, 300 North Zeeb Road, Ann Arbor, MI 48106. In submitting subscriptions, designate new or renewal and address including ZIP code. Send all subscriptions and requests for hardcopy back issues to the Business Manager: Glenn A. Anderson, Business Manager, 1803 Rural Point Road, Mechanicsville, VA 23111. Publication No. 73246

Walking The Talk Challenge!

By Phillip R. Zurbrick, Editor

(Dr. Zurbrick is Professor, Department of Agricultural Education, The University of Arizona.)

A great deal of verbiage has been written and spoken about the expanded mission for agricultural education. A check of the calendar reveals that it has been nearly three years since the National Research Council study on agricultural education was released. A question begging for an answer deals with the current status and how far the profession has moved towards making the talk reality. Are we beyond the talking stage? Where is the action occurring? This month's theme deals with the expanded mission and provides the opportunity for the reader to assess the changes being proposed and/or implemented for themselves. Several authors have provided additional examples of the need for the expanded mission, emphasizing the additional clientele who could and should be served by an agricultural education program at the secondary school level (still talking!).

The two lead articles supporting this month's theme provide some solid evidence that at least two states are, in fact, moving forward in an attempt to "walk the talk" and make the expanded mission reality. Curriculum reform and expansion is a most necessary and crucial step in the process of making the expanded mission a reality. But, it is not the only step in the process! We cannot sit back and expect the curriculum development specialist or The National Council to take care of making the expanded mission a reality. Everyone must become actively involved and work closely together if agricultural education is to become ". . . more than vocational agriculture at the secondary school level." It is critical that the challenge be kept in perspective and not misconstrued to suggest that what is required is only a quick name change or the elimination of vocational programs in agriculture. Neither is the case and both actions would be disastrous.

As states begin the process of updating and expanding the curricula in agricultural education, it is highly desirable to clearly label those efforts as to whether they are designed for the "in agriculture" or the "about agriculture" programs. Failure to make such a distinction in the preparation and delivery of new courses will result in confusion and failure of the "about agriculture" curricula to reach the expanded clientele. A clear distinction must be made between these two program thrusts in terms of whom they serve, and in terms of content and delivery. We cannot afford to have the kind of confusion that currently exists with parents, guidance counselors and even students over vocational agriculture as we develop, implement and market the expanded mission programs.

A recent, non-scientific survey of students on the University of Arizona campus revealed that a vast number of the students did not perceive agriculture as any more than farming and ranching. Further, over half of those responding never considered a major in agriculture because they perceived limited employment opportunities unless a person had a huge fortune to invest. This confusion continues to exist today in spite of over thirty years of labor on the part of many groups and individuals to change the perception and broaden the perspective. Agricultural Education cannot afford to allow such confusion to exist as we market a new expanded program mission.

Everyone in the agricultural education "family" has an immediate challenge that must be dealt with in "walking the talk." Patrons and practitioners as well as teacher educators, supervisors and those in all the supporting roles must understand and clearly articulate the expanded mission, taking care to differentiate between the "in" and "about" agricultural programs. Teacher organizations must embrace the expanded mission by dealing with the name change and supporting/encouraging programs "about" agriculture.

Teachers must be willing to consider appropriate courses and curricula, adopting those that serve an educational need in their school district. In some cases this may require teachers to avail themselves of educational opportunities so as to update technical knowledge and expertise in the newest applied sciences of agriculture and technology. This requires teachers who are willing and able to accept and deal in a positive way with change. Teachers who are in fact, "green and growing" in terms of their professional commitments and desire to serve their communities.

State supervisors and teacher educators must work closely with teacher associations in developing new and revised curricula for *both* the "in" and "about" agriculture programs. Curriculum development specialists must be employed and provided with the necessary support and directions to develop curricula and instructional materials that teachers can utilize. A variety of in-service workshops, courses and placement opportunities must be developed and made available to teachers in close support of the new curricula. Numerous institutions, agencies and industries have much to offer in terms of such in-service activities.

It is time for the universities to stop trying to impress and intimidate teachers with biotechnology terminology and start providing the opportunities for teachers to work in the laboratories and learn about "high science" in a manner whereby they can teach the concept, principles and skills to their students. Hands-on workshops designed to teach the concept involved as well as providing instructional activities teachers can use in their classrooms are sorrily

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A New Comfort Zone

By Eddy Finley, Theme Editor

(Dr. Finley is Associate Professor, Department of Agricultural Education, Oklahoma State University.)

Abe Lincoln once said, "People are 'bout as happy as they make up their minds to be." Obviously then, people have a choice. They can either be happy or sad, pleased or angry, and so forth. When people are asked to climb out of their "comfort zone" (the traditional environment they have grown accustomed to and accept), at first they are uncomfortable and generally unhappy and may view leaving as a risk (it could be that not leaving poses a greater risk?). However, as time passes and people become adjusted to a new environment, a "new comfort zone" becomes established and people are generally happy again. Presently, all of Agricultural Education, including policy makers, supervisors, teachers, students, courses, to name a few, is emerging into a "new comfort zone." The emergency is inevitable — it is the "Expanded Mission" and it should be approached with COMMITMENT, COMPETENCY, and CONSISTENCY.

An expanded mission does not necessarily mean that tradition, which is treasured, should be let go — it does, however, mean there is more to do or accomplish. For instance, as life in this society is examined, it is glaringly evident that people are forced to blend in, homogenize, conform. In the process, people may lose their sense of wonder or uniqueness; however, the consolation is less risk and less fear. This is not true in Agricultural Education (not that we are fearless risk takers) because Agricultural Education has always been unique.

We, as agricultural educators, have always been at the forefront because of our innovativeness. Rather than ask us to blend in, society has asked us for more innovativeness. Society is asking us, as agricultural educators, to do more things for more people in a better kind of way. This request undoubtedly presents new challenges and ultimately will establish a "new comfort zone." Therefore, we have a choice — we either do it or we don't and there is no such thing as trying. As this issue's theme implies, we are being called upon to broaden our expertise, educational offerings, and public services. Thus to succeed, we must be willing to sacrifice who we are, to some extent, for who we might become.

Traditionally, we have always believed in ourselves, have projected positive expectations, and have exhibited passion for what we do. As our mission becomes expanded so will we have to expand our beliefs and actions. More specifically, as we emerge into the "new comfort zone," we will have to strive to have a solid knowledge of and dedication to the "expanded" goals, values, achievement, and direction of Agricultural Education in both the rural and urban sectors of our society and at the local, state, national, and international levels. To do so, we must keep issues in focus and matters in perspective. In other words, we must continue to meet the manpower needs of society, increase the options available to each individual student, and serve as a motivating force to enhance all types of learning.

Since ol' Abe basically said it is up to each of us, as an individual, to determine whether or not we are happy, we first have to know and visualize what we want. In other words, do we want to be a part of the expanded mission or not? Undoubtedly, we will be intrinsically motivated relative to our wants. If we are the typical agricultural educator, we will want to do more things for more people in a better kind of way. This can only be accomplished via our commitment, competency, and consistency.

— COMMITMENT means asking what price we are willing to pay to reach new goals and/or objectives. Once committed, we must find enjoyment in it and infect others with enthusiasm. In other words, become excited about the new opportunities available.

— COMPETENCY means acquiring the skills, strategies and techniques we need to achieve the goals which have been established, whether it involves attending workshops, inservice, college, or obtaining individualized instruction. Regardless of the method(s), we must foster understanding, share, create new ideas, and reach agreement. Of great importance is remaining sufficiently competent in order to be innovative while maintaining an excellent knowledge base at the grass roots level.

— CONSISTENCY simply means giving our best everytime. The law of expectations states that what we can perceive and truly believe, we can achieve.

Quite honestly, as we emerge into this "new comfort zone," it is not implied that we should be all things to all people. It should be emphasized, however, that we do make a tremendous contribution to the quality of life via education, production, business, and research. We should be able to find comfort in that. We can also find comfort in that when new challenges or opportunities prevail, we strive for solutions, we do so together, and we convey a strong sense of unity. Of most importance, however, is that we continue to believe in ourselves. It is, after all, our choice.

MY ATTITUDE

I Promise Myself —

To be so strong that nothing can disturb my peace of mind.

(Continued on Page 5)

Editor-Elect Named

Edward W. Osborne, Associate Professor and Chair of Agricultural Education, University of Illinois, Urbana-Champaign has been named Editor-Elect of THE AGRICULTURAL EDUCATION MAGAZINE by the Editing-Managing Board. The Board officially named Osborne during its annual meeting last December in Cincinnati. Dr. Osborne will serve as Editor-Elect during 1991 and assume the role of Editor during the three-year period of 1992-94.

Dr. Osborne has been a faculty member at The University of Illinois, Urbana-Champaign for the past nine years. He accepted a position of Visiting Assistant Professor in 1982 and a tenure-line position as Assistant Professor in 1983. He was promoted to Associate Professor in 1989 and appointed Chair of Agricultural Education in May, 1990. Dr. Osborne graduated with his B.S. degree in agriculture from Virginia Tech in 1975, with a major in Agricultural Education. He earned his Master's degree from Virginia Tech in 1979. In 1980, he began the Ph.D. degree program at The Ohio State University under the direction of Professor Larry Miller, completing requirements in June 1982.

A Virginia native, Dr. Osborne was born and reared on a general livestock farm in Grayson County, Virginia. He was salutatorian of his high school class (1971) at Independence High School. He taught agriculture at James River High School in Buchanan, Virginia from 1975 to 1979. During the 1979-80 school year, Osborne served as an instructor in Agricultural Education at Virginia Tech.

Awards

Dr. Osborne has received numerous honors and awards. In 1988, he was recognized with the Outstanding Young Member Awards by the American Association for Agricultural Education.

Dr. Osborne has served as a Special Editor for THE AGRICULTURAL EDUCATION MAGAZINE for the past three years with an assignment of Co-Editor for the Feature Column entitled, "Teaching Tips." His publication record includes: one co-authored book, 30 referred articles and papers, 42 invited articles and papers, and 15 reports and monographs.

When asked to identify his goals as Editor of THE AGRICULTURAL EDUCATION MAGAZINE, Dr. Osborne listed the following:

Dr. Ed Osborne

1. Maintain the overall quality of the publication.
2. Increase manuscript submission from secondary and community college teachers, extension professionals, and educators in agribusiness.
3. Use "The Magazine" to address critical issues in agricultural education.
4. Increase rate of subscription among secondary teachers as well as other agricultural education professionals.
5. Use "The Magazine" as a medium for sharing ideas pertaining to all aspects of agricultural education.

Dr. Osborne will assume the duties of Editor with the January, 1992 issue. Individuals with theme ideas or who would like to serve as Theme Editors should contact Dr. Osborne immediately as he is currently identifying themes and theme editors for 1992 and beyond.

(Continued from page 4)

To talk health, happiness, and prosperity to every person I meet.

To make all of my friends feel that there is something in them.

To look at the sunny side of everything and make my optimism come true.

To think only of the best, to work only for the best, and expect only the best.

To be just as enthusiastic about the success of others as I am about my own.

To forget the mistakes of the past and press on to the greater achievements of the future.

To wear a cheerful countenance at all times and to give every living creature I meet a smile.

To give so much time to the improvement of myself that I have no time to criticize others.

To be too large for worry, too noble for anger, too strong for fear, and too happy to permit the pressure of trouble.

MY ATTITUDE . . . is my life.

ANON.

THEME

Modernizing Agricultural Education

By Eddie Smith

(Mr. Smith is State Supervisor, Oklahoma State Department of Vo-Tech Education.)

Imagine enrollment as being as much fun as standing in a cafeteria food line, picking and choosing exactly what you want. Now, many agricultural education students can do just that. A revamped curriculum in Oklahoma allows students to choose between taking an abundance of a particular subject or to sample a little of each one.

The smorgasbord of new classes is sure to fill the plates or needs of both current and prospective students. This change comes just in time to meet a projected shortfall of workers for the agricultural industry.

Agricultural Education has been an integral part of education in Oklahoma for many years. Now, as we enter the 21st Century, we think the best days are ahead.

It has been said vocational agriculture began primarily as a program to train workers in more efficient methods of agriculture production. Because the main focus was on production, so was our curriculum. Today, the needs of the agriculture industry have evolved and the manpower demand for workers in agribusiness exceeds the needs for production workers by nearly seven to one. It could be assumed that the environment in which vocational agriculture has thrived no longer exists. To survive, agricultural education must change with the times.

We have broadened the agenda of course offerings in order to attract urban as well as rural youth. It is also our philosophy that curriculum is the driving force to the success of any program. Just this year, we requested funding for five new urban agricultural education programs. The need was expressed to us, not only by people in urban settings recognizing the need for our type training, but also by our Governor and the Secretary of Education. They feel students need our training to be successful citizens.

Agricultural Education programs must consist of three components in order to be successful:

1. Classroom instruction - Basic skills - Thinking skills, writing skills, communication skills
2. Supervised Experiences - Hands on — Unique because of the relationship the instructor has with students
3. Leadership/FFA - Leadership development

In a recent study done by the National Academy of Sciences on Agricultural Education in secondary schools it was concluded that at least some instruction in agriculture should be offered to *all students*, regardless of their career goals or whether they are urban, suburban or rural. With this in mind, the idea of agricultural literacy was developed.

Agriculturally literate people will have practical knowledge needed to care for their outdoor environments, including lawns, gardens, recreational areas, and parks. This will also provide an understanding of the food and fiber system, and include enough awareness of nutrition to make knowledgeable choices about diet and health. Agriculture is too important a subject to be taught only to the relatively small percentage of students considering careers in agriculture. It is our position that all students K-12 should have access to education about agriculture.

As we approach the future, the world in which we live is changing at an ever-increasing rate. If we are to remain competitive, we must not only meet the challenges of tomorrow, but lead the way. As agriculture changes, we see things such as protecting our environment, managing new technology, and marketing for a global economy becoming more important today than ever before. Agricultural education and FFA are rising to the occasion. We've broadened our programs to include agriscience, marketing, computer technology, natural resources, and international agriculture.

The accelerated change, so characteristic of recent times in this country, has had greater repercussions on agriculture than any other industry. All phases of agriculture have been affected by the forces of change radiating from inside as well as outside. Agriculture has certainly experienced the effects of technical change, but the situation has been further complicated by the general deterioration of the agriculture economy.

Coinciding with these pressures, has been the increasing demand for educational reform. In general, these movements have called for improved student performance and greater significance of curriculum content.

Many have a misconception about agriculture in this state and nation. They think it is strictly farming and ranching. Enrollments have been down in high schools and colleges because of this. Every statistic and piece of data we find shows that we will have a shortage of trained workers in many areas of the agriculture industry by the year 2010. As we listen to the needs of students, teachers, administrators and people in business and industry, we are taking bold steps to broaden the scope of instruction by stressing emerging occupations in agricultural education.

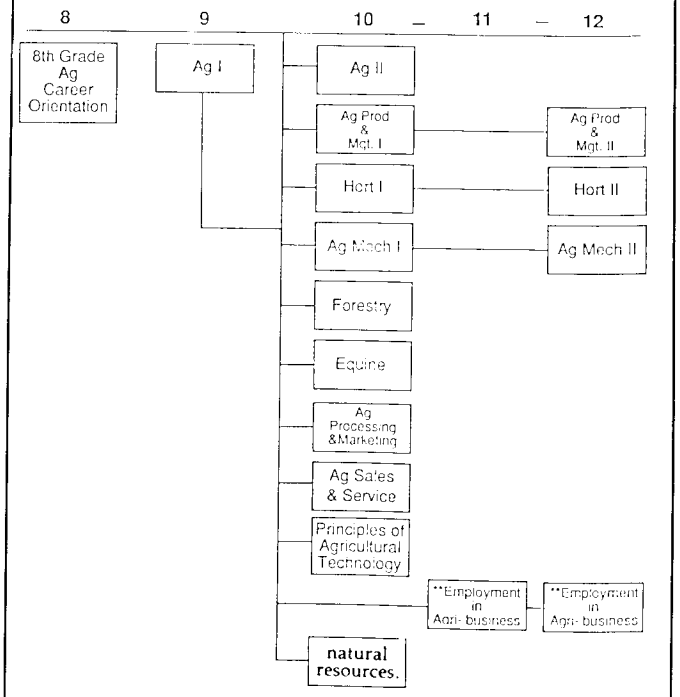
A scientific and technological revolution has swept agriculture since vocational agriculture was first established in America's public schools in 1917. Hybrid seeds, synthetic fertilizers, pesticides, sophisticated machinery and other innovations have resulted in a tremendous decrease in the number of farm workers needed, but has caused the number of workers in new agriculture fields to skyrocket.

Traditionally, our course offerings have been directed primarily toward production agriculture. That was fine when the majority of our agriculture workers were involved in raising livestock and crops. But that is not true any more. Only about 10% of the 22 million workers in today's agriculture industry are involved in production agriculture. The other 90% work in agribusiness, natural resources, and other new fields.

That has caused us to re-think our course offerings and expand into several new areas (see Appendix 1). This fall, curriculum was completed and disseminated to instructors for these new courses. Up until now, we have been teaching the same thing in all areas of the state. Now we have a course agenda from which students and instructors can choose. This allows more flexibility to the students, teachers and administrators. Instructors in one part of the state might wish to continue the Ag Production component and an instructor in another part might want to advance into horticulture or natural resources.

APPENDIX 1

Offered Courses In Agricultural Education



**Employment in Agribusiness may be taken as a Co-op Program for 2 hrs. credit

What many of the new courses strengthen in students is basic skills — communications, mathematics, science, critical thinking and problem-solving. That's exactly what business and industry leaders across the nation are demanding of public schools.

This is reinforced by John Loulan, plant manager of Goodyear's world-class tire plant in Lawton, Oklahoma, who spoke at the "Basic Skills and Tomorrow's Workforce" conference last spring in Oklahoma City. "We need employees who have the basic skills — who know how to think, who know how to learn, who can communicate ideas, and who can collaborate with others. Students must come to us conditioned for change because they may be doing a job today which will be obsolete five years from now," Loulan said.

While we are very excited about the opportunities that lie ahead with these changes, we also understand the challenges. One of the biggest obstacles is to educate the public about our new agricultural education curriculum and the role of the instructor.

Our awareness campaign began with a live via satellite teleconference to school administrators, counselors and teachers. The one-hour broadcast featured state vocational educators explaining the content of the program.

Last June nearly 500 agricultural education teachers were brought together for an intensive one-week inservice workshop to learn how to implement the new courses into their agricultural education program. Throughout this process, our goal has been to modernize the means that provided this nation with such a rich history of agricultural education accomplishments — not throw it away. We think the glory days are ahead for agricultural education as this nation enters the 21st Century.

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National Research Council (1988). Understanding Agriculture New Directions For Education, Agricultural Literacy (pp. 9-24). National Academy Press.

FEATURE COLUMN

Computer Technology Resources
A Computer Standard for Agricultural Education 91/92

By Nat Jaeggli, Special Editor
(Mr. Jaeggli is Instructor, Department of Agricultural Education, The University of Arizona.)

About two years ago I wrote an article that described minimum computer standards for agricultural education programs. It's time to revisit that article and address those minimum standards based on the current technology. These recommendations are an attempt to answer one of the most often asked questions: "What kind of computer should I buy?" The answer to that question must be based on two functions, power and flexibility. The amount of power and the degree of flexibility are based on the needs of system overhead (operating system) and the application software that is expected to be used.

Power conjures up images of tire-burning torque and a screaming engine. Our computers don't need that kind of excess; however, they do need to work at least as fast as we do, provide enough memory for bullish software, and furnish enough electrical power for components added beyond the standard configuration. Flexibility as it applies to computers means that they are able to execute many different tasks equally well, without having to be redesigned or reconfigured each time a different function is desired. The recommendations that follow are for MS-DOS or compatible computers, a standard most often found in agribusiness.

CPU — Central Processing Unit

This single chip and the chips mounted on the systems board that supports it determine the qualities a computer possesses. The 386-SX chip is now the entry-level standard with versions operating at 16 and 20 megahertz. Although 8088 and 80286 (XT and AT) computers are still sold, they may not provide the flexibility to take advantage of enhancements in software and system design.

RAM - Random Access Memory. RAM refers to the amount of usable work space available inside of the computer. RAM is most often rated in Megabytes (1 million bytes). 2 Meg of RAM is minimum for computers running current operating systems, DOS 4.x and Windows. RAM is much cheaper to add now than it was two years ago, and is often expanded to 4 Meg in standard configurations.

Disk Drive — 2 Floppy Drives (3.5 and 5.25)
1 Hard Disk (40 Megabytes)

A disk drive is both a storage device and one of the links to the outside world for the computer. Two floppy drives allow the functions of copying disks, files and programs to be performed easily. A hard disk allows many programs to be loaded to a single drive, making access to them nearly instantaneous. 80-100 Meg drives are not uncommon even for modest systems.

A CD-ROM (Compact Disk-Read Only Memory) drive is an option that provides access to vast information resources that are currently being published in a variety of areas critical to agribusiness/ science and education in general.

Monitor — VGA (Video Graphics Array) Color or Monochrome

A monitor is much like a window; the better the view, the longer you will want to look at it. Color not only adds another dimension to the images displayed, but VGA also improves the resolution by increasing the number of pixels or dots used to create the image. If color is not a characteristic that is needed, VGA Monochrome provides the same resolution in shades of black, gray and white.

Printer — Dot-Matrix, Ink Jet, Laser

The printer, like the monitor, is one way of displaying the work a computer is able to do. It's hard to believe that something as basic as a printer could change so drastically from year to year, yet improvements are constantly being made in paper handling, speed, print quality, and color options. Speed and print quality are probably the most important factors when considering printers. In addition to dot-matrix and laser printers, ink jets offer superior (near-laser) print quality on plain paper at bargain prices.

A summary of general specifications for a current (3/91) entry level computer would look like this, and should cost between $1,500 and $2,000. Add $300-$500 for a printer.

386/SX-8/16 MHz	2-MB RAM Expandable to 16
1.44 MB 3.5" Drive	1.2 MB 5.25" Drive
40 MB Hard Disk	1 Parallel/2 Serial Ports
14" VGA Color Monitor	16 Bit VGA Card 2/512K
6-16/2-8 bit Expansion Slots	101 Key Keyboard
200 Watt Power Supply	MS-Compatible Mouse
MS-DOS 4.1	MS-Windows 3.0

The Expanded Mission: It Is Time To Walk The Talk

By Jay Eudy

(Mr. Eudy is Director, Agricultural Science and Technology, Texas Education Agency.)

The agricultural education efforts in this nation have been the topic of many hours of discussion and many pages of print during the past six to eight years. A number of clichés have found their way into our vocabulary. We are more than "COWS, SOWS, AND PLOWS"; "SEEDS, FEEDS, AND WEEDS"; and then my favorite, "IT IS TIME TO WALK THE TALK."

Basically we all agree it is no longer business as usual in agricultural education. It is a time when much of our enrollment consists of nontraditional students (whatever that means). Our curriculum has to attract students, and we have to present it in a way that will motivate students to return for other courses. So, what else is new? Those in our ranks who desire to return to the "good ole days" need to seek other employment. The agricultural education profession is moving rapidly down the road. As leaders, we are out front; but are we leading — or just running from the pack?

Through the years, our curriculum became more youth-activity oriented with less emphasis on technical (scientific) agriculture. Our programs, in many communities, became known as the FFA class taught by the FFA teacher, with very narrow class offerings. A number of teachers adopted a curriculum patterned after the National FFA Contests when in reality the curriculum should be shaping the contests. The personal interests of the teachers were more important than the curriculum that was needed by the students.

There was much talk about our leadership training. Many times we were merely allowing the students the opportunity to expand their interests while we provided very little formal instruction. Some teachers taught public speaking only if a student with potential expressed an interest in the topic. Our curriculum had not kept up with the times and was in need of repair.

We now have an expanded mission. What should our curriculum include and what is the plan to get it developed? As this is being written, our country has thousands of military personnel in the Arabian Desert. The sand dunes and ridges all look very much alike. It is extremely difficult to find your way across that terrain without good maps and a compass. Our leaders have defined a mission for the military forces; tactical plans have been developed and rehearsed.

In agricultural education, our Strategic Plan includes a definition of our mission and our goals. Our tactical plans will provide the details needed to accomplish the mission. Today's students must have transferable skills if they are to compete in the modern work force. Our programs can provide excellent reinforcement for math; our supervised experiences can be an ideal area for reinforcing the writing and speaking skills normally taught in language arts; and the science taught throughout our curriculum can reinforce — or in many cases — replace science taught in academic education. International Agriculture relating to a global economy can reinforce social studies and economics classes.

We talk much about agricultural literacy, both in UNDERSTANDING AGRICULTURE NEW DIRECTIONS FOR EDUCATION, by the National Research Council, and THE STRATEGIC PLAN. This effort is a new challenge which we can successfully meet. Just as agricultural literacy is a problem among students, academic teachers face literacy problems in their classrooms. By combining the agricultural literacy efforts of our teachers with the efforts of academic teachers, both literacy efforts will be strengthened. Through careful evaluation and application of our curriculum, our Supervised Experience, and our youth activities we can overcome agricultural literacy deficiencies, assist the academic teachers, accomplish our mission, and most of all, ensure that our students will be intellectually prepared for the future.

An alternative is to ignore all these new trends, keep the same cadence we have had for the past 50 years and become a part of history. As the pace quickens, we must adapt to change to protect our way of life. Teachers who have not taught for six or more years and then return to teaching are bewildered by technological changes. Textbook publishers are having a difficult time staying current and in many cases, they are far behind. We are on the cutting edge of technology and educational change and we must move forward at an ever-increasing pace.

Teacher education must accept the challenge to provide a supply of knowledgeable, innovative, and forward-thinking new teachers. Our teachers must provide the teacher trainers with those academically superior students capable of becoming top flight teachers. Teacher educators will be asked to provide dynamic inservice training to keep teachers abreast of the vast changes we will face.

Task forces sponsored by The Council are providing tactical advantages for teachers through implementation of the Strategic Plan. There are some interesting concepts being worked out to provide inservice training for teachers. The agricultural industry supports our effort to provide the proper training to our students. Plans are being developed

for a conference during the summer of 1991. State teams will have the opportunity to participate in hands-on training arranged by The Council. Those state teams will be responsible for going back to their states and providing inservice training for the other teachers, teacher educators, and state staff.

The Council originated inservice will feature technological advances in agriscience, international agriculture, agrimarketing, aquaculture, supervised experience, and personal skills with only minor emphasis on production agriculture.

Our expanded mission will require us to look carefully at the student we are targeting. Recently Franklin Higgins, Agriscience teacher in Aldine Schools (located less than 20 miles from downtown Houston), stated during his presentation at The Southern Agricultural Education Conference that none of his students were nontraditional students. He said they were all the same inside but some of them came wrapped a little differently. Does the wrapping on the package make any difference? Aren't the basic needs of those students much the same, regardless of appearance and opinion? Students must be prepared for employment in the modern work place regardless of the wrapping on the package.

Has our Young Farmer program served its purpose? Are we no longer in need of this effort as it is now structured? Perhaps that student too is now wrapped differently. We have the ability and contacts to articulate with community colleges and technical schools in providing continuing education to our former students and agricultural constituents. This is another form of agricultural literacy that needs to be addressed. How do we better serve these former students? Does the answer include the combining of some of the organizations into fewer but larger groups? Is there a need for all these — The FFA Alumni, Collegiate FFA, PAS and Young Farmers? Perhaps change is not needed, but our Extended Mission does require us to look at our resources and our capabilities as we serve the agricultural community. Adult education in agriculture cannot be ignored, and a review of the process should enable us to keep in step with the times and maintain a forward pace.

We must move rapidly into the arena of animal rights and environmental issues. It may become necessary for us to join some of the more radical groups in order to tell our story to their ranks. Who could better do this than animal scientists, water conservationists, or others trained through our program? Now is the time for us to be on the offense, move forward with a positive campaign and tell the correct story through the agricultural literacy effort. As we make others aware of agriculture, we must stress that we are the original conservationists and caretakers of the natural resources including air, land, water, wildlife and plants.

This Expanded Mission may become too large for us to accomplish with our limited resources; but wait, let's take a tip from our friends in the extension service. Those folks allow adults in the community to help with the many tasks involving extension activities. The parents of some of our students would readily accept the opportunity to help with many of our tasks. A well-organized group of parents along with capable students could give a teacher considerable leverage. Our program is not an island and similarly teachers cannot isolate themselves from the expanding technology which surrounds us. Our teachers are experienced in leadership skills and have the ability to organize committees. Tom Corey, teacher at North Polk High School in Iowa and 1989 AVA Teacher of the Year, is a master at using volunteer help with his classes. Tom identifies areas of interest and places students in contact with adults who have expertise in that field. The student learns, the adult becomes a supporter and the teacher accomplishes the mission!

International agriculture must take a more prominent position in our scheme of things. Increasingly tough competition from developing countries having less expensive labor causes us to seek ways to be more efficient in production and more competitive in the global marketplace. Our technology is being made available to those countries as rapidly as it is to our farmers and agribusinessmen. We must make international agriculture curriculum as interesting and challenging to our students as it is important to our economy.

Years ago we were able to develop livestock shows and judging contests in an effort to stimulate interest in good livestock and good management practices. Now is the time to come forward with new innovative ideas and activities that will generate the same interest and create the same dynamic effect in the international agriculture arena. To be more competitive in the world marketplace we must teach our students to be better managers. They must have agricultural science training which includes managing technological advances in economics, natural resources, energy conservation, and biotechnology. Our curriculum and teaching efforts must include international agriculture to allow us to keep pace with a world economy.

Our walk must match our talk. Our challenge includes making the student aware of the many opportunities available in the agricultural education program. We must develop the student to the greatest possible depth in the shortest period of time available, provide direction for further study and encourage continued education.

Yes, we have talked and written much on the subject of agricultural education. We have developed a very fine Strategic Plan to guide us along the path. Now our EXPANDED MISSION will require us to put into practice our tactical plans necessary to accomplish the goals. These are exciting times for agricultural education. We shall succeed — the cost of failure is too great.

What Really Happened to the Class of '79?

By Bill Weeks

(Dr. Weeks is Assistant Professor Department of Agricultural Education, Oklahoma State University.)

Fifteen years ago Michael Medved and David Wallechinsky wrote a best-selling novel, What Really Happened to the Class of '65?, that followed-up on the Palisades California High School class of 1965 just before their ten-year class reunion. The authors interviewed everyone from the football star to the homecoming queen to the intellect to the class nobody, and found that their lives after high school bore little resemblance to their high school labels.

The class of '65 spent a memorable ten years, complete with tales of drug smuggling, Mexican jails, successful business ventures, and failed entrepreneural attempts. Television producers caught the idea and aired a short-lived television show based on the book authored by Medved and Wallechinsky, each week focusing on someone from a factitious class of '65 who had famous or infamous experiences. It was the ultimate follow-up study, and I wondered if the class of '79 would have such adventures?

I remember looking forward to our class reunion even before we graduated. What would we all be doing ten years from now? Who would be bald and fat? Which homely girl would be the late bloomer? Over the years I thought of our class reunion many times, maybe because I lost contact with most of my classmates. I was anxious to see old friends I hadn't seen in years, and those classmates I didn't particularly like — well, I was ready to see them again too! But, more than recall glory days, I wanted to know what my friends had done with their lives. In preparation for our impending reunion I reread Medved and Wallechinsky's book, secretly hoping that our lives would turn out as interestingly. Had anyone become the leader of a religious cult, made a million dollars in real estate, or moved to Greenland? Had one of my classmates moved to Northern California and started an herb farm? Maybe someone's neighbor was the Dahli Lama.

Naturally the Vocational Agriculture teacher in me wanted to know how many of my fellow classmates ended up working in agriculture. After all, our community was as agriculturally oriented as any other I know of. Our community businesses were all based on agriculture; we had two grain elevators, a feed store, a chemical supplier, a restaurant where farmers ate breakfast and lunch, a lumber yard, a bank where farmers received loans, and an oil cooperative. Even our school district was involved in agriculture, for it was largely supported by taxes on agricultural land. As I wondered if any of my classmates ended up working in agriculture, I discovered many were; but of 43 graduates, not one was in production agriculture (no one even married a farmer). What greatly surprised me was the number of my classmates who never enrolled in Vocational Agriculture but were currently working in agricultural occupations. Here's how I found five of my former classmates (real people, fake names):

Carl — Carl didn't really graduate, he was expelled in the spring of our senior year for throwing a desk at a teacher (actually he slid it, but you know how stories grow). If he had graduated, it is likely he would have been voted "most likely to serve time." Carl lived in town with his grandmother and he never enrolled in an agriculture class. Nothing in school interested him and I think he was glad to be expelled. After graduation he took a job with a public utility company as a tree trimmer, worked there eight years, and now has his own tree trimming business. Yeah, I think Carl ended up in ag!

Dean — While not as "bad" as Carl, Dean spent every Saturday of his sophomore year washing police cars for the county sheriff. Juvenile offenders got to wash the cars that chased and apprehended them. Dean wasn't in Agriculture either; as a matter of fact, I can't remember anyone in the "smoker crowd" who took Vo-Ag. A year after graduation he started on the sorting line at the Ralston-Purina mushroom farm in a neighboring town. Today Dean has a wife and two children, and has moved up through the ranks to supervisor. Yeah, I think Dean ended up in agriculture too!

Mike — Mike was voted "most likable" of our senior class, and it was well deserved. He was involved in most every school activity at one time or another. I remember Mike and I were in Vo-Ag I together our freshman year, but only that year. His "project" was a breeding pair of English Bulldogs. He was going to raise pups and make a mint, until he found out Samantha was infertile (not much he could do with the profit page of his record book). I think that left a sour taste in his mouth. I remember Mike loved the outdoors and thought he wanted to be a game warden. After graduation he got a job as a crane operator with Continental Grain loading barges on the Mississippi River. He's now plant manager for a grain exporting terminal in St. Louis. Yeah, Mike ended up in agriculture!

Tammy — The leader of the pom pom squad, Tammy should have been voted "most likely to be seen on the cover of a magazine." She grew up on a farm and I think she was in 4-H for a time. Tammy didn't take Vo-Ag (trust me, I would have remembered). I think Business classes were scheduled opposite Vo-Ag classes. After high school she got married and started a family. Today she is a successful real estate agent and raises horses in her spare time. Yeah, Tammy works in agriculture!

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THEME

Expanding The Mission: Supervised Experience in Community Development

By Mark A. Lelle

(Mr. Lelle is Director of the Albion Civic Life Project and Coordinator of Albion Volunteer Service Center, Albion, Michigan.)

Supervised Occupational Experience (SOE) remains a vital component of high school agriculture. However, traditional SOE programs may not be appropriate for students who lack access to land, capital, school laboratories, or agricultural employment, or who are not interested in traditional careers in agriculture. In addition, many teachers do not know how to develop a meaningful project for every student or do not have the time to ensure that individual projects are providing relevant experiences (Wallace, 1984). Fortunately, there is one SOE option that meets the needs of students and teachers alike: development projects in the local community.

Advantages of Community Development SOE

Besides providing a sufficient number of projects for students to complete, community development SOE has several advantages. Perhaps most importantly, community development projects foster volunteerism and a sense of community among students, two concepts which are difficult to teach in the classroom (Sample, 1986). Service-learning during the high school years produces citizens who will improve the quality of the community's civic life after graduation.

A second advantage is that community development projects provide greater visibility than individual projects. This motivates students to perform well, provides students with a sense of cohesiveness and group pride (Almazan, 1977), and generates effective publicity for the high school agriculture program.

The publicity often results in the identification of appropriate projects by members of the community. Cooperation with booster clubs, schools, community organizations, and city planning groups also yields many potential projects (Perritt & Spell, 1984; Booth, 1977; Deeds & Stevens, 1987). Since the teaching of cooperation is essential to high school agriculture, identifying and implementing projects in conjunction with community organizations can be a laboratory for cooperation.

From the instructor's point-of-view, the ease with which community development SOEP's can be identified reduces the need to locate land and agriculture-related employment for production and placement projects. Although home improvement projects and school laboratory experiences can provide viable alternatives for some students, these projects sometimes lack long-term involvement (Osborne & Reed, 1984). Carrying the concept of the improvement project to the community level provides a learning environment which is readily available and which lasts for several years.

Finally, community projects benefit the entire community and not just the students involved. For example, the Prairie Heights vocational agriculture program in LaGrange, Indiana, annually plants up to 37,000 trees in addition to carrying out other activities such as building a self-guided fitness course and a community center (Stump, 1984). With most projects of this nature there is the possibility that city government or local civic organizations will pay for project costs, and some high school agriculture programs have even received grant money for their community projects (Fear, 1987).

The Future of SOE

Critics of non-traditional SOE argue that today's projects have gotten too far away from their agricultural foundations. While high school agriculture should never abandon its roots, a closer look tells us that community development has always had a strong relationship with American agriculture.

Land-Grant Universities have long recognized the importance of viable communities, and that is why many Colleges of Agriculture offer degree programs in community development. The Cooperative Extension Service also works extensively with community development issues.

There may be others who believe that community development SOE cannot provide students with the quality of experiences offered by traditional projects. Clearly, community development SOE will offer *different* experiences; but perhaps these experiences more closely match the career interests and personal characteristics of today's students and teachers. For community development SOE programs, especially where class time is used for their completion, teachers have the opportunity to observe each student. Because of this close supervision, teachers can ensure that students have relevant and challenging experiences.

Clearly, the aim of SOE is to provide experiences which mirror real-life. While traditional production, placement, and laboratory projects still have their place for many students, SOE must expand its mission in order to meet the needs of today's students. It is time to explore the contributions that community development SOE can provide.

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The Mission of Change

By Michael K. Swan

(Dr. Swan is Assistant Professor, Agricultural Education, School of Education, North Dakota State University.)

Change has become one of the foci of agricultural education in the recent past. The National Summit on Agricultural Education has addressed methods of handling these changes in and about agricultural education with the development of a Strategic Plan for Agricultural Education. A mission statement was developed to assist agricultural education instructors, teacher educators of agriculture, agricultural students, and others involved in agricultural education to facilitate changes and improvements in agricultural education.

As agricultural education moves into the 21st century, we will see amazing growth in breadth and diversity of agricultural offerings. The present perception of agriculture will change as agriculture expands into areas of diverse resources. Understanding the uses of BST in dairy animals, Fast Plants in horticulture, and computer control of irrigation equipment are examples. Agricultural educators must take advantage of those resources to meet the goals of agricultural education's expanded mission.

Since the passing of the Hatch Act in 1887, which established the Agricultural Experiment Station, research in agriculture has been at the leading edge. Recently, the trend has been away from agricultural careers and toward jobs not generally associated with agriculture. In fact, most jobs relate to agriculture in some way or another. According to "Understanding Agriculture — New Directions for Education," the profession needs people to become more agriculturally literate (1988). Agriculture is not limited or confined to farming, but includes a wide array of highly technological ideas, businesses, and sciences.

The Mission Statement

First, what is the mission statement? According to the Strategic Plan for Education, the mission statement is as follows:

1. **Mission:** Provide a total dynamic educational system.
2. **Aspire** to excellence when recruiting, preparing, and supporting individuals in agricultural careers.
3. **Serve** the people and inform them about agriculture, its needs, opportunities, and challenges.
4. **Value:** Providing instruction in and about agriculture
   Serving all populations
   Developing the whole person
   Responding to the needs of the marketplace
   Advocating free enterprise and entrepreneurship in education
   Functioning as a part of the total education system
   Utilizing a proven educational process which includes formal instruction, experiential learning, leadership, and personal development
   (The Strategic Plan for Education, 1989).

The new mission was developed for many reasons, one of which was the need to reflect changes occurring in agricultural education today. The importance of working to use the changes in agriculture to benefit agricultural education is a priority if agricultural education is going to survive in the future (Zurbrick, 1990). Already, agricultural education has undergone many changes that are taken for granted. The profession has grown rapidly. Nine organizations have been developed to deal with specific areas in agricultural education. The National FFA Association, the National Association of Supervisors of Agricultural Education, and the FFA Alumni are three of the nine organizations created to further provide, improve, and promote education in agriculture. The profession, then, should continue these goals by acknowledging that change is taking place continually (Mannebach, 1990).

The mission statement brings bold, revolutionary thinking into the future of agricultural education. There are always risks with new ideas, but there are risks in fighting change, too. The expanded mission involves going beyond the ideas of production agriculture into areas of global agriculture, agricultural literacy, and biotechnology/science agriculture. If agricultural education does not follow the newly developed mission, there is the risk of losing the ideas, people, and goals developed by agricultural education (Zurbrick, 1990).

One possible benefit of this new mission is a national presence of the agricultural education profession. The mission statement, if followed and utilized, can be a powerful force in the recognition of agriculture as a top priority for the nation in the future (Mannebach, 1990). A national presence with agricultural education should:

1. Provide better communication for use of state and local programs addressing issues concerning them.
2. Influence policy for state and local programs' developmental processes and protection into the future.
3. Demonstrate by action confidence in problems or successes in agricultural education programs.

These are only a few of the benefits discussed by Mannebach (1990). Other benefits are the introduction of "Agriculture in the Classroom" and "Food for America" as specific new ideas targeted for pre-high school students in elementary grades (Birkenholtz, 1990). Another benefit is a new more aggressive and comprehensive curricular program that will be developed for year-round high school agricultural education programs (Swan, 1990).

(Continued on page 23)

The Expanded Mission:
Challenging Students to New Careers in Agriculture

By William Hicks and Thomas H. Bruening

(Mr. Hicks is Graduate Assistant and Dr. Bruening is Assistant Professor, Department of Agricultural and Extension Education, The Pennsylvania State University.)

Secondary agricultural education teachers are faced with the task of recruiting a "new type of student" to enroll in their agricultural classes. Instructors often use a variety of methods to motivate students to enroll in their programs. Some methods are more successful than others. For example, Mallory and Sommer (1986) recommended the use of different types of media to aid in recruiting students into agriculture programs. They also recommended that high school counselors should be educated about careers available in agriculture. However, in spite of an abundance of available recruitment tactics, many instructors fail to attract the desired quality or quantity of students to their courses. As a result, many agricultural programs have been closed simply because students have a misperception of what the agricultural curriculum can do for their future.

In a study by the Farm Foundation (1989), researchers found that over half of the students in their study perceived that agricultural related careers involved only farming or ranching. Love and Yoder (1989) found that three of four college students perceived agriculture as synonymous with farming. Mallory and Sommer (1986) found that students believed that careers in agriculture consisted of hard work, low income, and boring tasks.

When the "new type of student" is made aware that a career in agriculture is not limited to farming, he/she often explores the possibilities. A challenging question that arises from these prospective students is, "What can I do with an education in agriculture if I do not plan to farm?"

Most agricultural education teachers respond by providing information regarding off-farm occupational fields such as veterinary medicine, meat inspection, soil science, or landscape architecture. The idea of pursuing a career in one of these areas may be one factor that causes the student to enroll in the agricultural program. The number of students who enroll will determine the life or death of most programs. Therefore, the numbers game must be won.

After the classes are filled to the expected level, teaching can begin as usual — or can it? "Wait a minute, I have been in this class for six weeks and we have not talked about any of those great careers," a student may say. Students are very pragmatic; they are interested in good jobs that provide a good income. What now? The type of student that most teachers want in their program will not accept empty promises. Students expect to learn about the modern fields in agriculture instead of the obsolete topics that have contributed to the drop in enrollment. The mission for agricultural education must change.

The Challenge

The purpose of high school agricultural education changed when we changed the name from vocational agriculture. The need for vocational skill training in high school has passed. Blannie Bowen, a Penn State University researcher, says that the number of people needed for a career "IN" agriculture is dwindling while the need for people informed "ABOUT" agriculture is growing. With this idea in mind, teachers must take a look at how they approach agricultural education. In the past, vocational agriculture meant skills training. Today, specific skills needed for many occupations are much too in-depth to be taught in a high school agricultural course. Students need to be exposed to the vast career options available in agriculture. As agricultural educators, the challenge is to make students aware of many new careers in agriculture.

A Solution

Keeping abreast of new careers in agriculture is a good way for teachers to solve the problem of student awareness of agriculture. A natural course of events would be to incorporate a lesson about the available careers in each unit of instruction. A better understanding of many occupations will assist students in making informed career decisions. Further, when students can apply information about career options, the possibility exists that they will remain interested in the subject. Moreover, interested students will assist in maintaining enrollment.

Making it Simple

Education regarding careers in agriculture should be a continuing process in curriculum offerings. This can be done by adding a careers lesson to every unit taught. Students can become tired of being told that there are thousands of jobs out there. It is important to be specific about the career opportunities that exist on the local level. Students can then be shown how these careers relate to other agricultural positions in the state and nation. Each teacher must deal with

his/her own unique situation. For example, if students have no intention of continuing their education beyond high school and if they plan to stay in the immediate area or close to it, then a career in citrus production is not realistic for a student who lives in the Midwest.

It is important that teachers be realistic about opportunities available to our students. Why promise the moon if you know that it cannot be delivered? Make the instruction realistic. After each unit of instruction, conclude with a lesson on career opportunities. But don't stop there; have your students go an extra step and research careers. Before long, a list of available jobs will be compiled including a job description, a salary scale, requirements for employment, and the names of the people who must be contacted to arrange a job interview. This process involves problem solving skills. After students are familiar with the process, they can work independently to research careers.

The Plan

The following lesson plan concerns careers associated with any unit taught in agriculture. The lesson is intended to follow an extensive unit or course. The careers covered will vary depending on the subjects covered in the unit or course.

Careers

Lesson Plan

Objectives: the student will be able to

1. Identify two or more careers for each topic covered in the unit (use the objectives from the lessons in the unit)
2. Locate jobs that require this type of occupation in the county, state and nation.
3. Contact the employer and conduct a survey of the local community
4. Compile the information
5. Write a description for the job
6. Give an oral report to the class about career opportunities

Suggested Activities: for the teacher

1. Introduce the lesson by identifying several new careers in agriculture
2. Assign each career to a group or an individual
3. Provide students with an interview form to be used to conduct interviews with the employers in careers in which they are interested (See Form #1)

Form #1

CAREERS INFORMATION COLLECTION SURVEY

Name of Interviewer: Date:

Type of Career:

Name and Title of Person Being Interviewed:

Address: Telephone No.

City/State/Zip Code:

Hello, my name is _____. I am a student at _____ school. I am doing a survey for school concerning careers in _____. I would like to talk to someone who can give me information about agricultural jobs that make up your business. Thank you.

My agricultural education class is studying careers associated with _____. We are trying to gain a better understanding of the jobs available within this career. I would like to ask you a few questions concerning the jobs that your business offers.

1. What jobs does your company offers?

2. What educational requirements are there for each of these jobs?

3. What must a person do to get a job with your company)
   (who conducts the interviews)

4. Could you give me a brief description of each job your company offers?

5. What salary or wages do these jobs pay?

Thank you very much for your time. The information you have given me will help my class to better understand the jobs that make up a career in _____. Have a good day.

4. Give the students a form to complete concerning careers within their assigned career area (See Form #2)
5. Evaluate the written and oral reports
6. Repeat the assignment as necessary

Suggested Activities: for the student

1. Brainstorm with other class members to identify as many careers associated with each subject as possible
2. Research the careers in agriculture (RESOURCES: school library, employment services, Dept. of Agriculture, Dept. of Commerce, General Services Administration, etc.)
3. Compile the forms into a "Careers" notebook
4. Give an oral report on the researched career

Conclusion

Our mission is to change the way that students perceive careers in agriculture. Many teachers of high school agriculture are aware of new careers in the field, yet often their students are not. We have a responsibility to make our students aware of the possibilities available to them. Career education will help students who are interested in these careers to see the need for education about agriculture. This may very well be your solution to the enrollment dilemma as well as expanding the image of agricultural education.

Form #2

Career Information

Date:

Collected by:

Type of career:

Job Title:

Educational requirements:

Salary scale:

Employer: Name:

Address:

Phone No.:City/State/Zip:

Job Description

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What Really Happened to the Class of '79?

(Continued from page 11)

Tank — Tank was as tough as a nail, strong as an ox, and what my father calls "bull-headed". He came from a strict family and his social life revolved around helping on the family farm. Tank wasn't in Vo-Ag, he transferred out after the first week of Ag I. He heard you had to memorize the FFA Creed and he didn't want any part of that. He tried hard in school, but he was undisciplined and became frustrated easily. Tank's parents sent him to a bible college with the hopes that they could reform him. He now lives in the area, is a cement contractor and doing quite well. Tank and his crew poured a feedlot on a neighbor's farm last summer — Tank's career seems to involve agriculture.

I was mystified that many of my classmates who supposedly weren't interested in agriculture in high school ended up working in agriculture. As an agriculture teacher I was mortified that so many former students went into agriculturally related occupations but didn't have the experience of a Vocational Agriculture program. I wondered if an expanded agriculture education curriculum could have offered them something? I wondered if a local FFA chapter that was current in it's symbols, rituals, and program thrust might have appealed to my classmates. I wondered if a new approach to "projects" that emphasized practical application of classroom instruction could have helped these former students be better contractors, supervisors, managers and entrepenuers.

A course where you learned how to set up your own business would have helped Carl in his tree trimming business. If our Vo-Ag program taught horticulture maybe Carl would have seen some reason to come to school. If Dean had learned some basic leadership skills in Vo-Ag class,

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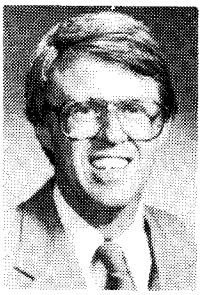
FEATURE COLUMN

Historical Review May 1941, 1966



By John Hillison, Special Editor

(Dr. Hillison is Professor and program area leader, Agricultural Education, Virginia Polytechnic Institute and State University.)

May 1941

H.M. Hamlin (University of Illinois) wrote about three fundamental questions in planning and evaluating in agricultural education. His three questions were (1) What are we trying to do? (2) How do we know whether we are accomplishing our purposes? and (3) How could we better plan and organize to accomplish our purposes? He noted enrollments were increasing and that some states have an average of over 100 students per department. "We must plan the use of our time more carefully." He was concerned that we would either kill ourselves off or do a superficial job. He concluded by writing that program planning and evaluation represent the most basic issues in agricultural education. "We need immediately to try out promising proposals for program planning and evaluation which are in harmony with the theories we believe to be sound rather than to spend our efforts on a program which has already been handed us but which does not square with our basic principles."

Carsie Hammonds (University of Kentucky) expressed concern over philosophy of method or determining what learnings to secure. One basic question he asked was, "Shall school administrators set up the learning objectives, or shall teachers, or shall pupils, or shall teachers and pupils together, or shall somebody else? Who possesses the philosophy?" Hammonds further noted that one's philosophy determines educational objectives. It is the teacher who must see to it that learner's have worthwhile objectives. He advocated using group teaching in such a way as to accomplish group objectives and yet recognize individual objectives and freedom at the same time.

W.T. Spanton was appointed chief of the agricultural education service. It was reported that Eugene Davenport, Dean Emeritus of the College of Agriculture at the University of Illinois, died March 31. He was a strong supporter of agricultural education at the secondary level. Nelson M. Cook (teacher at Bourbon, Indiana) defined a good teacher as someone who is ". . . employed as a teacher, and as such it is his duty to help bring about those changes in habits and attitudes that will mold boys and girls into good citizens for our democratic society of tomorrow."

May 1966

With a theme on planning summer programs, editor Cayce Scarborough credited the pioneers who saw the need for summer programs. He noted that the summer program may be the major difference between vocational agriculture and other public school programs. Summer supervisory visits to the homes of students and adults have been a major means of teaching and further developing the local program. Scarborough cautioned that a September-May school year would be the end of vocational agriculture as an effective force in the local community.

Continuing with the summer program theme, Alvin Halcomb (teacher, Citronelle, Alabama) listed the activities he attempted to accomplish during the summer. They were: maintain regular office hours at least one hour per day; visit both all-day students and adults; write course calendars, lesson plans, and teaching aids; order reference materials and visual aids; recruit students; conduct FFA officer training and hold chapter meetings; improve professionally with workshops and graduate study; and take a few days of vacation. Other authors advocated attending summer school and providing tours during the summer.

Harold Anderson (assistant state supervisor, Colorado) recognized the importance of moving to off-farm cooperative work experience. He conducted a study with agricultural education, distributive education, and trade and industrial teachers to determine important guidelines for cooperative experience. Included in his findings were the guidelines that a local policy statement should be written, efforts should be made to promote the program, definite standards and criteria should be established for training stations, a definite plan should be established for screening students, and adequate facilities should be provided at the school for training in the program.

Concern was expressed that the regional agricultural education conferences might be lost. In 1965 nine regional across-the-board conferences were held in vocational technical education. Editor Scarborough described the situation "As professional improvement conferences, they failed." Similar hastily planned conferences were to be held in 1966. It was suggested that the U.S. Office of Education should not block plans to let agricultural educators return to their successful regional conferences.

Changing the Curriculum: Will It Ever End?

By Don R. King

(Mr. King is Research Associate, Department of Agricultural Education and Studies, Iowa State University.)

"If it ain't broke, then don't fix it," is the cry frequently heard from instructors of secondary agriculture when discussing agricultural curriculum. Secondary agriculture teachers often claim that teacher educators and others are regularly promoting specific changes or additions that should be made to existing secondary curriculums; that emphasis should be placed on different instructional areas; and that teachers should make these changes. In view of these concerns, it should be noted that secondary agriculture teachers should not abandon one set of instructional materials for another, nor should they concentrate on any one area of educational emphasis. In retrospect, it is easy to understand how secondary instructors can feel this way, and in some cases, there may even be some validity to these allegations. However, to put these claims into perspective, it is necessary to examine some recent curriculum trends that have occurred in secondary agricultural education.

Traditionally, the secondary agricultural curriculum has been oriented towards production agriculture. For years, however, studies have shown that fewer career opportunities are available in the production agricultural sector, while the areas of agricultural sales, marketing, finance, and management continue to employ greater numbers of individuals. As a result of this trend, secondary instructors have been encouraged to incorporate these areas into their educational programs. As this occurred, another educational innovation was forming on the horizon — biotechnology.

Biotechnology is the science and process of developing products from living tissue or organisms. Biotechnology is nothing new, and has been around since human beings first inhabited the earth. Ten thousand years ago people used the fermentation processes to preserve food and to make wine, beer, and bread. People soon learned that using seeds from the best plants or breeding the best animals tended to produce plant and animal offspring with desirable characteristics. Building on this knowledge, recent discoveries have enabled scientists to manipulate genetic material to produce new products which improve the health and increase production of agricultural crops and livestock. The practical applications of biotechnology for secondary agriculture teachers and students require an increased understanding of genetics, biochemistry, metabolic processes, and plant and animal development. Again, instructors find themselves modifying their curriculums to meet these needs.

More recently, there has been another push for changes in the curriculum. The area of environmental and resource conservation has simply exploded onto the educational scene, locally and internationally. Issues such as surface and groundwater contamination, soil erosion, ozone depletion, ocean pollution, acid rain, wildlife and rainforest destruction, and food safety come to the forefront of thought. Feelings are so strong that the public has rallied together in an effort to correct these concerns. Again, the call was heard for educators of secondary agriculture to begin addressing these issues in their curriculum, and justifiably so, since many of these problems are directly linked to agricultural practices. Agricultural policy and practices will need to reflect society's sentiments regarding agriculture's environmental affects.

Internationalization of the curriculum represents the most recent push for secondary agriculture curricular modification. The infusion of international knowledge, skills and attitudes should take place at all levels and within all courses in the curriculum. International concepts and ideas should be integrated directly into the subject matter. Internationalization of the curriculum should be viewed as an opportunity for secondary instructors of agriculture to incorporate all of the above discussed curriculum areas into one neat package. This might be accomplished by using 'internationalization' as the overarching umbrella for classroom discussions. For example, when teaching soils, horticulture, plant or livestock production, it is now necessary (in today's global community/marketplace) for students to understand the implications and/or consequences that their actions may have on an international level. And furthermore, what are the consequences of that action from a marketing standpoint?; from an environmental standpoint?; from a biotech standpoint?

Today, students of agriculture need to be aware that agriculture is rapidly changing. As an agriculture instructor it is necessary to get that point across to students. If a need to teach livestock production exists, then we should provide instruction in livestock production, but enhance the lesson with a marketing component, a biotech component, and an environmental component. Then, strengthen the lesson by discussing an international component.

Explain, for example, how the number of acres of soybeans planted and harvested in Brazil will have a direct effect on the price of soybeans in the United States. Explain

that, through biotechnology, scientists have developed varieties of soybeans that are adaptable to the climate, disease and insect types found in Brazil. These varieties of soybeans are proving to be very competitive with those in the U.S. Students can then brainstorm about the possible effects this will have on U.S. agriculture.

The effects include: competitive global markets (thus the need to learn about other cultures, their desires, and needs); increased market areas and profits to seed and chemical companies (thus the need to learn better sales and marketing skills); and the need for a better quality product.

From an environmental perspective, Brazilian soybeans are indirectly causing Brazilian cattle numbers to rise because of the increased soybeans for livestock feeds. The increase in cattle numbers has led to a need for more crop and range land, thus the deforestation of thousands of acres of rainforest vegetation and habitat (loss of plant and animal species) has occurred. This situation in turn, has a direct effect on the depletion of the ozone layer, which some hold responsible for global climatic weather changes. It is easy to see how one topic can lead to the discussion of others, either directly or indirectly related to what we do in the United States.

So, back to the original question at hand, "Does curriculum modification ever end?" No, probably not, and hopefully it will never end for the teacher who recognizes that the agriculture industry is continually evolving and that it will be necessary to change and adapt one's curriculum to meet the needs of students and to meet the demands of industry and society.

As a discipline, agricultural education must also continue to evolve in order to keep abreast of continued developments occurring within agriculture and education. It is the job of agricultural educators at the collegiate level to research issues pertaining to agricultural education, and to develop means for improving the instructional quality of agricultural programs, be it through teaching methodology, learner needs, or curriculum development. It is also the responsibility of those in the profession to diffuse and disseminate these findings to our students at the secondary and post-secondary levels. This is the big picture; to provide agricultural instructors with an up-to-date set of instructional tools.

Collegiate agricultural educators are aware of the fact that secondary agricultural programs are feeling the squeeze from a variety of sources: decreasing enrollment numbers, college entrance requirements competing with electives, rural to urban population shifts, etc. Hopefully, these tools will be effective in helping to relieve some of these pressures.

All agricultural educators and state leaders should be challenged to develop new and innovative approaches to infuse current 'focus areas' and societal issues into their programs. As a result, agricultural education will better meet the educational needs of youth, industry, and society. Modification of the curriculum, will it ever end? . . . Hopefully not!

What Really Happened to the Class of '79?

(Continued from page 16)

I think he would be a better supervisor today. If the Vo-Ag I class Mike was in was more than production agriculture, maybe he would have stayed in Vo-Ag and gone on to take a course in Agricultural Marketing. If Tammy's Vo-Ag program had a rural development component, she might have a better understanding of the housing and land market. And if Ag Mechanics had been more than arc welding I think Jack may have seen a career that would interest him. Ten years ago was the class of '79 ready for an expanded mission for Agricultural Education? I think they were.

As I think of expanding our mission which includes expanding our student base and expanding our curriculum, I think about the students that we missed. I think of all the potential students we've turned off over the years because our programs have been one dimensional or "agriculturally narrow". What about all the students who didn't take Vo-Ag who ended up in agriculturally related careers anyway? What about all those who could have ended up in agriculturally related careers, but didn't because they didn't take Vo-Ag? What about adults who wish that their school taught them something about landscaping a yard or how food is processed or basic economics, or a positive self-concept?

Eldon Witt (former National FFA Alumni President, Executive Secretary of the Illinois FFA Association) and Mr. FFA to most people in Illinois, often speaks about "keeping students." I remember a speech he gave to a group of beginning agriculture teachers, a talk he titled, "The customer who never came back". Mr. Witt related that when he went to a restaurant and got poor service, a raw potato, or the wrong order, he didn't go back. He didn't write the manager

(Continued on page 23)

Expanding The Mission: Supervised Experience in Community Development

(Continued from page 12)

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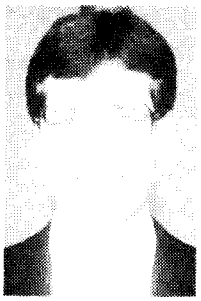
Teaching Tips

Hydroponics Using Styrofoam



By Ronald J. Biondo

(Mr. Biondo is Master Teacher-Agriculture, Chicago High School for Agricultural Science.)

Hydroponics has become a common topic when talking about trends in agriculture. I teach a hydroponics unit in my greenhouse management class. To provide hands-on experience for my students I considered purchasing kits available through supply companies, but found them quite expensive. Presented with this problem, I designed and built our own hydroponic systems. Listed below are the materials we used.

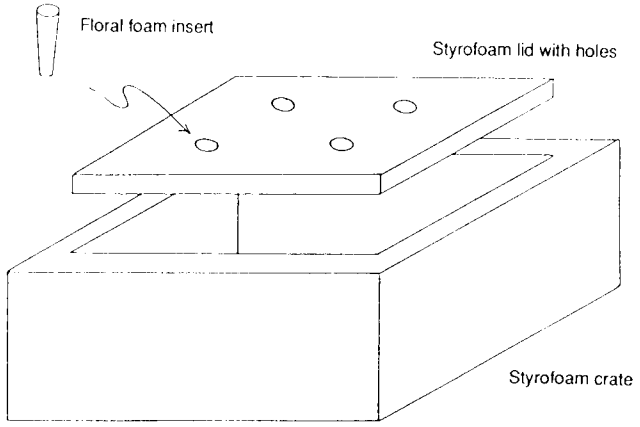
1. Styrofoam packing cases in which our Gloxinia superstarts had been shipped. Each of these has 1" thick walls and a three gallon capacity. (We have recently begun using inexpensive styrofoam coolers with good success.)
2. Soluble fertilizer with micronutrients and a blue indicator dye.
3. A block of floral foam.
4. A plastic tube to siphon off nutrient solution.
5. An aquarium pump, tubing, and aerating stone (optional).

We were able to set up four of these kits at virtually no cost. The fertilizer and floral foam are items used every day in class, the aquarium pump is optional, and the tubing is inexpensive.

We use the following procedure when teaching the unit:

1. Cut a sheet of styrofoam that will fit snugly into the styrofoam case. This serves as a lid and supports the plants over the nutrient solution.
2. Cut well spaced holes into the lid (approximately 6"-8"). These holes should be about 1½" in diameter at the top narrowing to about 1" diameter at the base.
3. Carve the floral foam into somewhat conical shapes to fit into the holes. The foam should be level with the lid and extend 2-3" below the styrofoam, into the nutrient solution.
4. Fill the container with water until the water touches the lid.
5. Sow the seeds directly on the floral foam.
6. After about three weeks (or when roots are visible through the floral foam) add two teaspoons of fertilizer. We used a 16-17-18 soluble peat-lite mix that has micronutrients.
7. Every two weeks siphon off the water and replace it with a fresh nutrient solution to ensure that all the elements are available for the plants.
8. Aerate the water if you feel it is necessary, however, we have had success without aerating the water.
9. Harvest your crop, dispose of the foam, clean the case with a 10% bleach solution, and start a new crop.

HYDROPONICS USING PACKING CRATES



The system is easy to use and is very versatile in teaching different skills. Suggested uses for this hydroponic system include:

1. Determining whether plants will perform better with aerated or non-aerated water.
2. Investigating the effects of different nutrient solutions on plant growth.
3. Observing growth rates of plants grown in a hydroponic system versus plants grown in a soil mix.
4. Investigating the effects of pH on leaf color and plant growth.
5. Comparing the taste quality of vegetables grown in a hydroponic system to those grown in a garden.
6. Determining which plant varieties grow best in a hydroponic system.

ARTICLE

Environmental Conservation Education Challenges

By Linda Whent, David Andrews, David Williams and Eldon Weber

(Dr. Whent is Post doctoral Associate, Mr. Andrews is Graduate Student, Dr. Willilams is Professor and Head, Department of Agricultural Education and Studies, Iowa State University.)

(Mr. Weber is Liaison, Iowa State University, U.S. Soil Conservation Service.)

Environmental issues are at the forefront of public concerns. Reports of degradation of the environment are highly visible in the media. Federal and state legislative action has been taken to address environmental problems and prescribe corrective measures. Barrick (1989) predicts that the 1990s will be the decade of the environment. These developments suggest that environmental conservation education should be included in educational systems. Because the agriculture industry is dependent upon natural resources, it is logical for agricultural education in the secondary schools to become a delivery system for environmental education. A recent National Academy of Science report suggests that sciences related to natural resources should be incorporated into new components of agricultural education in the secondary school (National Academy Press, 1988).

As a result of certain management practices, agriculture is contributing to the nation's environmental problems. Soil erosion remains a problem in some parts of the country. Nonpoint surface water pollution and contamination of groundwater by fertilizers and pesticides have produced water unsuitable for human consumption in some areas. Irrigation practices have depleted aquifers and placed agriculture in competition with urban water needs. Some agricultural practices have an adverse effect on wildlife. Greater use of feedlots, which concentrate manure production, has created environmental concerns. But many of these problems can be overcome with approved management practices (National Academy Press, 1989).

Table 1
Means for Environmental Issues by Response Group

Environmental Issue	Means		
	Farmers	Students	Teachers
Soil erosion is a problem	7.1	6.4	7.9
Nature replaces topsoil slowly	7.8	6.6	8.5
Soil conservation maintains the soil for future generations	8.5	7.5	8.8
Topsoil is being lost faster than it's being replaced	8.0	7.9	8.8
Wind erodes soil	7.9	7.9	8.7
Topsoil loss makes land less productive	8.5	7.8	8.6
Road ditches filled with soil are evidence of soil erosion	8.4	7.5	8.8
Soil erosion decreases the capacity of farm ponds and lakes	7.6	6.5	8.5
Soil erosion causes air pollution	5.7	4.3	6.4
Dust in the air is evidence of soil erosion	7.7	6.5	7.7
Soil erosion pollutes water	7.7	6.3	8.3
Maintaining water quality is a public concern	7.8	7.4	8.6
Agricultural chemicals pollute groundwater	7.5	7.3	7.7
Muddy river water is evidence of soil erosion	7.4	7.0	8.2
Farmers manage the application of agricultural chemicals to prevent water pollution	5.7	5.3	4.7
Soil erosion damages recreation areas	6.8	6.5	8.0
Soil erosion harms wildlife	6.2	6.0	7.9
Soil conservation improves wildlife	7.0	7.0	8.5
Laws are necessary to reduce soil erosion	5.5	5.4	7.0
Laws are necessary to maintain water quality	6.6	6.7	7.5
Strict soil conservation standards are necessary	5.5	6.1	7.6
Strict water quality standards are needed	7.0	6.3	7.5
Farmers use good conservation methods	6.3	6.0	5.6
More education on natural resources and conservation is needed	7.3	6.9	8.4
Conserving natural resources is important	8.4	7.8	8.8
People want to conserve the soil	7.3	6.9	7.0

An important step toward solving a problem is bringing the public to recognize it. Two Iowa studies demonstrate that Iowa high school agriculture students and teachers (Whent and Williams, 1987) and farmers (Andrews, 1989) recognize agriculturally related environmental problems. Using a nine-point scale ranging from "strongly disagree" = 1 to "strongly agree' = 9, representatives of these audiences were asked to share their attitudes about selected environmental issues facing agriculture. The means for the issues, by group, are shown in Table 1.

More similar attitudes were observed between farmers and students than between either farmers and teachers or students and teachers.

The issues focusing on soil erosion problems had means above 6.0, indicating the respondents believed the loss of soil was a problem warranting attention. When questioned about the possibility of enacting laws to legislate soil loss

limits, however, farmers and students were less enthusiastic. Teachers felt more strongly than farmers and students did about the need for laws and standards to reduce soil loss. All groups believed that people want to conserve the soil.

Items focusing on water quality ("soil erosion pollutes water" and "agricultural chemicals pollute groundwater") had means above 6.0. Thus, all groups agreed that soil erosion and agricultural chemicals were in part responsible for water contamination. All three groups also believed that laws and standards were needed to maintain water quality. The fact that water quality has direct implications for human health may explain why respondents were more supportive of standards for water quality than for soil conservation.

All groups recognized problems related to degradation of recreational areas and wildlife, and, all agreed that soil conservation practices can improve wildlife.

There was strong agreement among groups that conservation of natural resources is important and that more education is needed in this area.

Strong agreement was also observed among farmers, students, and teachers in their attitudes about environmental issues. All three groups recognized potential environmental problems related to agricultural practices. The next step, then, is to take action to solve or prevent the problems.

An understanding of the attitudes of farmers, students, and teachers about environmental issues can provide a benchmark for development of agricultural education programs. Glen Loomis (1986), a State Conservationist with the U.S. Soil Conservation Service, believes that agricultural education in the secondary school has a major role to play in providing education related to the mix of new technologies for the conservation of the environment.

Agricultural education in secondary schools can help solve environmental problems by infusing an environmental restoration focus into existing programs for adults and youth. At the high school level, environmental conservation components can be infused into courses, FFA activities, and supervised agricultural experience programs. Bruening and Martin (1989) concluded that education is the key to developing a better understanding of environmental issues and the adoption of sustainable agricultural practices.

Adult education is needed to help farmers consider environmental factors when making farming systems decisions. Farmers need help selecting farming systems that are both profitable and environmentally acceptable. Lasley, et. al (1990, p. 136) concluded, after studying the factors affecting farmers' use of sustainable agriculture practices, "that more efforts need to be devoted to gaining farmers' acceptance and use of existing recommended practices to reduce fertilizer and chemical use." Andrews (1989) advocated the development of farmer educational programs encompassing soil conservation, water quality, and wildlife preservation.

Agriculture depends upon a blend of natural resources and technology in the production of food and fiber. Williams and Weber (1990) advocated that instruction in natural resources should be expanded to help youth and adults understand the relation between agricultural systems and conservation of natural resources. The future workforce in agriculture must demonstrate its stewardship of natural resources and its dedication to protecting the environment. These future agriculturalists must be equipped with the knowledge and skills to help resolve the nation's environmental restoration challenges because high quality natural resources are essential to agriculture.

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About the Cover

The cover drawing was prepared by Dr. Eddy Finley, Theme Editor for the May, 1991 issue. (Drawing courtesy of Oklahoma State University).

The Mission of Change

(Continued from page 13)

In order to provide adequate literacy, many subjects need inclusion. We cannot cover only topics such as production agriculture and animal management. Teaching students the basics of agriculture as it relates to the present global economy is one way to develop agricultural knowledge and literacy. In all probability, these areas cannot be adequately covered during the secondary school years. We need to begin earlier and continue longer with agricultural education programs. I do believe that, with updated programs and proactive teaching methods, we can provide adequate agricultural knowledge and literacy at both the primary and secondary levels.

Agricultural education and literacy are too important to be offered to the relatively small number of students presently involved in agricultural education classes. With increasing concerns of pesticide contamination, conservation, animal rights, and other topics vital to planetary survival, we cannot afford tolerance toward limited access to the facts and importance of agriculture in our lives.

Conclusion

Through the new mission statement, the agricultural education profession must accept the challenge and move decisively in the direction of the agricultural industry or a broader range of skills including agricultural technology and such. The changes facing agricultural education should become more easily accommodated within this mission. Agriculture's presence in the nation and the world will increase, mainly because of agricultural education's success. Our perceptions of agricultural education have changed, as have the perceptions of others. Steps are or should be taken to develop new programs and to tap new resources. It behooves each of us to implement these ideas and keep American agricultural education on the cutting edge.

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What Really Happened to the Class of '79?

(Continued from page 19)

a letter, he didn't complain to the waitress, he didn't make a scene, he just never returned. He believed many students thought of their high school curriculum in much the same way. The student who looks at the course menu and sees nothing they like, will look elsewhere. The student who wasn't served the curriculum he ordered probably won't be back next year. And the student who walked by the agriculture room and equated "farmer" with every FFA activity probably didn't bother opening the classroom door. Over the years I think we've had a lot of quiet, unassuming, but certainly dissatisfied "customers" who never came back.

These are exciting times to be involved in agricultural education. Our expanded mission has included unprecedented changes in the FFA organization, a fresh approach to traditional "projects" which emphasizes the practical application of curriculum, and the curriculum itself in individual states is being looked at in a new light. What should our expanded mission be, how far do we reach out, and who should be served? I think we should look no further than a couple of old yearbooks and serve the customers who didn't come back.

Walking The Talk, Challenge!

(Continued from page 3)

needed. Workshops using "fast plant" and "bottle biology" seem to hold the promise for meeting the needs of many teachers. Businesses and industries on the "cutting edge" of technology can also provide teachers with the opportunities to attend training courses and participate in internship experiences.

Further, the challenge of "walking the talk" involves selling the product, namely the expanded mission and the "in" and "about" agriculture programs. Evidence suggests this will not be a hard sale! The need exists for applied science courses and those designed to develop agricultural literacy. However, when the consumer or decision makers are unaware of a product it is folly to expect that it will be snapped up and adopted. It is equally shortsighted to expect teachers to market the product on their own with all their other duties and responsibilities. This is another example of where the agricultural education "family" must work together. Presentations need to be made to school board associations and meetings of school administrators. Implementation teams need to be formed to provide advice and consultation with local educational agencies considering the implementation of agricultural education programs.

The Strategic Plan for Agricultural Education will not market a new agricultural education program in and by itself! We need articulate educators who have the vision, understand the product (possess product knowledge), and believe in it to make a few contacts. When these activities begin to occur in every state, we will be "walking the talk" and the expanded mission will be a reality!!

Stories in Pictures

Former Oklahoma FFA Association State Officer, Rhonda Chapman, co-anchor of news program in Joplin, MO. Rhonda majored in Ag Communications in college. (Photo courtesy of Kent Boggs, Executive Secretary, Oklahoma FFA Association).

Horticulture as a specialization area of study. Tulsa-McLain High School. (Photo courtesy of Kent Boggs, Executive Secretary, Oklahoma FFA Association).

Ernie Marten, AgEd teacher and student, Tulsa-McLain High School, Tulsa, Oklahoma. A new program in an urban setting. The program emphasizes horticulture, agriculture mechanics, and small animal care. (Photo courtesy of Kent Boggs, Executive Secretary, Oklahoma FFA Association).

Principles of Ag Technology, Agricultural Education specialization, (applied physics to agriculture), Norman High School. (Photo courtesy of Kent Boggs, Executive Secretary, Oklahoma FFA).