Reflections: Seeing Yourself As Others See You

THEME: The Teacher Of Vocational Agriculture
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The opening of a new school year has always been exciting to me. For school personnel, September marks the beginning of our "New Year." It is time for reflection, for new resolve, for new enthusiasm, and for renewed dedication to do the best possible job in the new school year. It is a most appropriate month to devote an issue of The Agricultural Education Magazine to "The Teacher of Vocational Agriculture."

Reflections

Mirrors serve an important purpose in our lives as we prepare to face each new day. We may not always like everything we see in them, but they certainly reveal who we are physically, and they provide a strong source of motivation to improve our appearance. However, we not only need to see ourselves from our perspective, but from time to time we need to see ourselves as others see us. Inspection is good, to a certain point, but it is also valuable to look to other sources for assessment. Evaluation experts have long recognized the value of including persons from the outside on evaluation teams. Not a single person currently teaching vocational agriculture is an author for this issue. This was deliberate. The entire focus is on those on the fringe view the contemporary teacher of vocational agriculture — a former student, a parent, a spouse, an agribusiness person, a college dean, a school superintendent, and a former teacher and his spouse. Additionally, two articles deal with a futuristic view of the teacher of vocational agriculture. One discusses how to prepare the teacher of the future and the other analyzes the role of the future teacher as a manager of technology.

Expected Reactions

Teachers who read this issue will likely have two reactions. First, they will feel proud, and rightfully so, that the writers perceived them in such a positive way. The overwhelming view presented is that vocational agriculture teachers are a wholesome, well-educated, dedicated group of professionals who serve as excellent role models for students.

Second, they will realize that there are tremendous challenges for the future that will not permit them to rest on the laurels of past achievements. The need to stay up-to-date technically and professionally comes through loud and clear. Teachers must embrace with enthusiasm the computer age in which we are all living. They must work hard to convey a better image of agriculture and agricultural education to the general public. They must help students understand the complex structure of agribusiness, and the tremendously important role that agriculture will play in our world.

They must cooperate more with the agribusiness community and find innovative ways to involve persons from agribusiness in the educational process. They must do a better job of individualizing instruction to meet the needs of a diversified student population. They must find the correct balance between classroom instruction and opportunities for hands-on learning experiences for students. And with all these professional challenges, they must also seek to have balanced lives with quality time reserved for spouse and family, and for spiritual, physical and social development.

The messages in this issue are not just for teachers. Those in teacher education, supervision, curriculum development, and administration must see the handwriting on the wall. How can we best prepare and assist teachers to meet the opportunities and challenges of the future?
Perspective Of A Former Student

Lu Arichilles Wall, former chairperson of the National FFA Foundation Sponsoring Committee, annually attends my home FFA chapter banquet. The first year she participated was my junior year in high school. After the program was completed, she commented that she was amazed that our advisor had no part in the program. Students made all the presentations and completed every detail with precision. Afterwards, when she questioned our instructor of his whereabouts during the banquet, he simply said, "We've got a lot of good kids." In every strong program, similar responses are common. Well prepared students allowed to gain leadership and work experiences on their own indicates the highest degree of professionalism in agricultural education.

Professional Development
Agriculture has many facets, and students in a single department will be interested in many different agricultural career areas. I have always wondered how vocational agriculture teachers could be knowledgeable, not to mention even interested, in such an array of scientific and high-tech fields. Keeping up-to-date in a rapidly changing industry is a dilemma of the vocational agriculture teacher. Perhaps it is the greatest challenge in agricultural education.

Obviously, a basic understanding of the industry is mandatory for anyone pursuing a career in agriculture. But, with fewer students returning to the farm, there is no longer a great need for generalists. Specific skills for specific jobs are in tremendous demand.

Students in a single class might have interests in beef cattle, dairy cattle, meat animals, cash sales, herdkeeping, or future markets. Rather than providing a general background in plant science, animal science, mechanics and other basic agricultural sciences, an instructor's expertise might be stretched to the limit. Where does a teacher find current, valuable curriculum materials and equipment? When the curriculum and equipment are found, can the program budget afford it?

Successful teachers recognize their limits and do not claim mastery of an ability not possessed. Continual education and utilization of community resources is key to providing students the best possible training.

Respect of Students
Even if an instructor was competent in every field of agriculture, it would not be enough. Some of the brightest people I know would be steamrolled by students. Respect is not quickly earned. It is a cultivated element, necessary and irreplaceable.

Student respect is earned by different individuals in different ways. I have witnessed strict disciplinarians who received less respect than Rodney Dangerfield. I have seen others with a softer tone granted admiration and attention. Respect is awarded to those who are just and sincere.

A Role Model
John Naisbitt, in Megatrends, tells us that high-tech environments are necessary to combat the coldness of high-tech. Successful instructors create such an atmosphere. The teacher's personality is reflected in every program. Therefore, the personal example set by the teacher becomes a guiding force in each student's personal character development.

The need for appropriate role models has never been greater. Is there any wonder that young people are confused about proper behavior and responses? Considering uncertainty of the future, peer pressure, minimal parental guidance, mass media violence and lack of respect for authority, conduct in most vocational agriculture departments is remarkably good.

Demanding discipline is a simple act. Living a disciplined life is not. On class trips or FFA outings, I shudder at the sight of advisors who stay out after curfew hours set for their students. My ears sting when proficiency is part of the routine vocabulary used with students. As minors, students should never have alcohol. I have been with too many students who were obviously aware their instructors were not playing by the same rules. Student expectations will never be greater than those of their instructors.

Perspective Of A Parent

Explaining the role of the vocational agriculture teacher from a parent's point of view is quite an assignment! Can there be a typical profile, pattern, or mold into which these agriculture teachers fit? In a state as diverse as Arizona, for example, are the vocational agriculture programs similar while allowing for community needs and adaptations?

Most consumers of food and fiber take agriculture for granted. In fact, few people who eat their three-square-a-day and enjoy the usage of fibers in linens and in clothing really consider that agriculture makes these necessities and amenities available. By the same token, it is safe to say that most of us take our educators for granted.

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area provides great diversity. The Peoria Schools are rapidly changing from rural, small-town environs to an urban, high-density-population region. Consequently, the schools must adapt their programs to meet the changing needs of all students. Vocational agriculture must stress production agriculture as well as the related agribusiness curriculum, knowing that production agriculture will soon be history around Peoria.

Buckeye, Arizona, is a town surrounded by cotton, alfalfa, and dairy farms. Its outstanding agriculture program is filled with many students. The basic crop production course taught at Buckeye is cotton, with applications varying over other crop programs. Because Buckeye is less than an hour from Phoenix, this proximity to a metropolis does influence the students’ outlook. Students see that for many in the city, an eight-hour job constitutes a normal day’s work; whereas, farming often requires a 14- to 16-hour day, even around the clock when irrigation is the order of the day.

Westwood and Dobson High Schools are strictly urban schools in the middle of Mesa, Arizona. These schools’ highly successful vocational agriculture programs revolve around agriculture and the nurturing of diverse students. Several stated that their first preference upon high school graduation had been farming. Because that was not an economically feasible opportunity, they had chosen as the best alternative agricultural education. All expressed immense satisfaction in teaching the broader background of knowledge available to them and in the delight of working with young people, knowing they are helping mold young people into well-adjusted, productive citizens with realistic future outlooks.

Mr. James Brown of Cactus High School, Peoria, Arizona, stated, “My experience as a teacher is a neat thing. Most teachers see a young person one hour a day for a semester or two, and often forget the name when the student is gone. I develop a strong relationship. The kids like me. They know that I’m not there just to grill them. This ongoing relationship is a rewarding payoff for teaching.”

Mr. Richard Turner of Buckeye, Arizona, expressed, “I like agriculture, I like kids. Working with these kids is fun. It is exciting to see them mature from freshman into what they become. When they take office, particularly a state office, dramatic changes are seen in one year.”

Mr. Nathan Moore of Westwood High School, Mesa, Arizona, reported trend to recruit kids interested in vocational agriculture classes. He replied, “There’s the old adage about leading a horse to water and not getting him to drink. Here which you can see the oats. We do feel we give an appetite for the product of learning agriculture skills and competencies. We feel like we are contributing to the next generation for the past several years as having the highest retention of students going into ag-related careers. About 60 to 70% of the vocational agriculture students enter employment in agricultural programs. This is quite a tribute to successful agriculture teachers!”

Sometimes “city slickers” tend to drape farmers with a disparaging aura of crude clodhoppers or clever-kickers. When asked if farmers ever come to the agriculture teachers, Mr. Turner replied that they are glad to help in this capacity. One observed that farmers are not uneducated bumpkins. Most are well-educated and are already involved in the product here, and we offer employment in ag-related fields after completion of our program, or upon further training.” Westwood teachers educate the school counselors and try to keep them abreast of the agriculture programs. Their administration is highly supportive. Westwood has surveys showing that this urban school has raised ag-related fields for the past several years to having the highest retention of students going into ag-related careers. About 60 to 70% of the vocational agriculture students enter employment in agricultural programs. This is quite a tribute to successful agriculture teachers!”

Are the academic overlooked or minimized in vocational agriculture programs? The teachers interviewed were specific in noting that all education is vocational education. The skills learned in language arts, math, science, are vocational since they are needed for individuals to function in their chosen occupation. Raising that each student has academic abilities and skills, the teachers cater to and reinforce the skills through vocational application.

John Mee of Peoria High School, Peoria, Arizona, remarked, “I feel there is an artificial distinction between academic and vocational training. In vocational agriculture, the students do math skills in order to teach irrigation, mechanics, etc. We also do remediation in English and grammar skills as students prepare reports and work with livestock. We probably do more to enforce basic skills than is done in any other area of electives.”

As far as coping with the learning abilities of the students, teachers deal with both ends of the IQ continuum, from low to high. There is a consensus that the vocational agriculture programs enhance the students’ capabilities in all subject matter. The success students find in problem solving, working with their hands, and dealing with live plants and animals tends to what their desire to improve in academia. Students suddenly find that math is not as boring, abstract a subject matter has different application, and it, in fact, essential to solving their own occupational goals. Often times, it is underestimating the importance of voc-
manager of a cotton gin. They exerted a great influence on me."

What About The Future

Futuristic glimpses cannot be divorced from current programs. Mr. Turner said, "I want the students to come out with a balanced education. I want them to have a community attitude. I believe they need a religious connection in the community. They need a neighborly attitude where they want their neighbor to be as successful as they want to be for themselves."

Mr. Moose sees vocational agriculture increasing in scope and usage. He would like to see the message of efficiency in vocational agriculture hammered home. This does not imply heading toward huge conglomerates which he sees as a false economy.

Mr. Mulcahy mentioned the image of vocational agriculture should not be one of plows and cows. He would like the focus to be of a large image from production agriculture to the many facets of agricultural business. He would like to see more students developing entrepreneurships.

All the teachers see high technology exerting great influences. At the same time, they realize that schools will need funding for the technological advances to take place. All this technology is going to bring about phenomenal changes. Some are trying to gear their programs for four years down the road when the freshmen will be graduating and seeking employment.

My Impressions

This short survey has shown me that I have not even scratched the surface of the role of the vocational agriculture teachers. These wonderful programs need broader exposure. Recently, Westwood's department had a short spot on the evening TV news. Frequent exposure of this nature would be even more beneficial if aired regularly on all local channels. Peoria School District has sent a school board member to the National FFA Convention for several years. That input has helped gain support for vocational agriculture. The teachers appreciate the assistance of alumni groups that are available when needed.

Although there was not a complaint about the long hours instructors must put in beyond normal school hours, one educator expressed a desire to spend one, undisturbed hour a day reading in the school library. He wants to keep abreast of the legislative happenings, of the views of agriculture from outside the industry, and to learn how the field relates to other areas of learning. Others wished for a four-day instructional week so that the fifth day could be scheduled with one-on-one contacts with each student.

It is evident that teachers are a special breed of hard workers, well-prepared academically, concerned with students' success and psychological fulfillment, and willing to spend many extra hours with little or no additional remuneration. The teachers all say it is done alone without the help and support of their family. Our daughter and I like to share in the activities. We used to take the FFA students to the lake every summer for recreation and to develop the FFA program of work. The students were very considerate of our daughter and she admired them. In the summertime, she would go on farm visits with her dad. She was only eleven months old the first time she went to the state fair to register an FFA member's pigs.

We live in a very small, rural community where we were both born and reared. My husband is teaching in the same school that we attended for thirteen years. Over the years, he has had his sister, my brothers, and our daughter in the same classes.

I am a school board secretary in the same school where my husband teaches. So I am close to his work and get to do many things for him. I keep my telephone calls, serve on the advisory council, transport students to contests and conventions, bake the cookies for the adult farmers' classes, bake pies for FFA Advisor's Pie Day during National FFA Week, and help run the FFA concession stand at football games.

If I did not enjoy the profession and believe in the young people that it involves, I would not be so excited about helping. For the twelve year, I have helped with the scoring at the state agricultural mechanics contest. Young people, as well as instructors, have enjoyed cookies that I have furnished for many meetings and activities.

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THE AGRICULTURAL EDUCATION MAGAZINE

September, 1965

Perspective Of A Spouse

By Barbara Leonard

Editor's Note: Ms. Leonard resides at Rural Route, Box 47, Mingo, Iowa 52354.

The Curriculum

Vocational agriculture is different from the other classes in the school's curriculum. There is not one single textbook for each class to use daily. Many outside publications, magazines, visual aids and media resources are used. The instructors learn about their students from home visits with the students and their parents.

The vocational agriculture class is a well-rounded part of the education of a student and an important part of the curriculum. Students are exposed to science in studying about animals, to soil conservation, to electricity, and to motors and computers. Math and reading are used every day in all classes and on laboratory projects. Vocational agriculture should be included as part of the science units required for graduation.

There are many opportunities for FFA members in leadership, public speaking, the fellowship of sharing with others and the competition of contests. The knowledge gained from parliamentary procedure will be with them forever as they participate in adult organizations.

For the future, computers will be a part of the program. The software for agriculture is endless. They will be used by agriculture students and for recordkeeping. The instructor can use them in individualized instruction as well as for the entire class.
Perspective Of A Spouse
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Departmental Management

Reports and applications are numerous but very important in keeping the program up-to-date. A good filing system helps to keep information handy. The computer should be a great help in this area in the future.

My husband is NEAT. There is a place for everything and everything has a place. His classroom and shop are very organized. If students take a book off the shelf, a hammer from the tool cabinet, or goggle out of the cupboard, they learn to put them back at the end of class.

That is a part of learning to take care of equipment and property that one day may be their own or belong to an employer. He stresses pride in their work and a sense of accomplishment in a job well done. If a student comes to class without a pen or pencil, he loans them one but they must put up collateral which is given back to them when the pencil is returned at the end of the class period.

What an assortment of items he gets — keys (one boy didn’t think his car was worth a pencil), pocket knives, billfolds, and dollar bill! This helps many students develop some responsibility, enables class work to proceed, and preserves the teacher’s supply of pencils.

Community/Professional Involvement

Religion is a big part of our lives. My husband has taught the adult Sunday school class in our church for twenty-one years, has been chairman of the church board, and we served as directors of the youth group for three years. We attend church weekly and feel a void in our lives when we can not be in attendance. Some years FFA members have worn their jackets as they participated in church services during National FFA Week.

My husband receives a lot of satisfaction from his adult farmer classes. Many interesting meetings are held on topics such as soil conservation, minimum tillage, estate planning, livestock diseases and health benefits, setting up a farm office, financial outlook, and tax advantages. Many former students are in attendance.

Almost everyone looks forward to being out of school in the spring. To a vocational agriculture teacher, summer is especially busy — county fair, state fair, judging contests, state conference and regional agricultural education conference. Held days, professional workshops, summer school, SOE visits and equipment maintenance. These are exciting events and rewarding experiences that contribute to a better program for the students.

I believe that teachers need to be active in professional organizations. The fellowship and sharing with other instructors gives teachers new ideas for their classes. The teacher should look to the state consultants and faculty at universities for help and advice. By being active in professional organizations, we have become acquainted with the state consultants, the regional officers, and the national personnel. My husband even had the opportunity to visit with Dr. Norman Borlaug, Nobel peace prize winner.

Rewards from Teaching

When teachers are feeling down, the students often come up with surprises. The last four years my husband has served as Secretary-Treasurer, President-Elect, President, and Past President of the Iowa Vocational Agriculture Teachers’ Association. The local FFA chapter surprised him at a recent FFA meeting with an award presentation. This was added to the collection of plaques from the states and national associations.

Concomitantly 25 years of teaching, the FFA officers and I planned a surprise at the Annual Parent-Member Banquet. At the banquet, our consultant and his wife, who had taught us in a nearby school for several years, brought greetings from the State Department of Public Instruction. The wife of another vocational agriculture teacher bailed and decorated a cake with the FFA emblem. The local chapter presented him a pen desk set. I went back through boxes of slides and presented a “Look Back Over The Years” of former students and their activities.

The smile of a freshman when a heifer is picked as champion of her breed, the members of the freshman quiz team who did not qualify for the sub-district competition, the soil judging team that goes to district, a chapter farmer who is picked to be a delegate at state convention, and a member who has just received the Iowa State Farmer Degree — these are rewards to a vocational agriculture teacher.

We recall a former student who joined the Peace Corps. He wrote back to tell of a project that he had implemented with the people of Mali, Africa. He established demonstration plots for new seed, fertilizers, and fungicides. The farmers wanted to adopt the new methods, and it was organized to sell the fertilizer, chemicals, and seed to the native farmers. His ideas came from the plots he had completed as SOE projects in high school.

There was a graduate student that came back to thank his teacher for teaching him how to weld in high school because it helped him get a better job. There is a young woman, who is a former FFA member now teaching music, but helping a new vocational agriculture teacher in her school with ideas from her experiences. There is the friendship a group of girls gave us after we had put up with them for four years. There was the telephone call from a farm boy in the middle of the night to look out our motel window to see the railroad bridge turn over the Mississippi River while we were attending a State FFA Leadership Conference. And we must not forget the FFA members who came “Trick or Treating” at Halloween.

The success of former students in their adult lives makes vocational agriculture all worth while. We feel good when they know they had a hand in helping them. Three of the present members of the Board of Education were vocational agriculture students who are serving or have served on the Advisory Council. Two students are veterinarians, one is serving in the Iowa Legislature, and others are college professors, school teachers, nurses, homemakers and farmers.

Over the years my husband has had the support of good administrators. They have been very supportive of him and the program. Many of them have received the Honorary Chapter Farmer Degree. A couple of them were former FFA members. One wore his FFA jacket to school during National FFA Week; quite snug, but he was still proud to wear the blue and gold.

Perhaps the following, written by our daughter, Brenda, and Damita Woodard, daughter of the Hartley, Iowa vocational agriculture teacher, who up the vocational agriculture teacher. The girls are born friends at Iowa State University and have grown up with fathers who are vocational agriculture teachers.

YOU KNOW You'RE AN AG TEACHER WHEN . . .

- you try to dress like a cowboy
- a student calls about his/her SOE project
- you have to dress your students at convention time (tie)
- you carry around a collection of blue ties at convention
- you have a collection of free pens, paper, key chains, hats, etc., from various agricultural programs
- every December smells like grapefruit and oranges
- every box in the house is a fruit in season
- you take pictures of all FFA activities
- the only reason you have a daughter is so she can carry the camera bag
- you get more mail than the other teachers, all farm magazines
- you tell your family not to plan a vacation during the month of August because of the FFA fair, and then school starts
- you realize that every mouth is busy
- you always have a piece of candy in your pocket
- you are always the last to leave agriculture functions; wives and daughters have to wait on you
- you can read this through because vocational agriculture teachers have a sense of humor

THEME

Perspective Of An Agribusinessman

By John A. Corrigan

(Full Name: Mr. Corrigan is Manager of Reliability with John Deere Tractor Works, P.O. Box 1500, Waterloo, Iowa 52704.)

Farming as we know it today is the result of several centuries of trial and error, science and experiment, good and bad luck, success and failure and all the lessons that have been learned and applied. Farming has moved from highly labor intensive drudgery to sophisticated agriculture in only about 50 years, a truly noteworthy achievement. The lack of productivity that has characterized American smokestack industries since the late sixties is not a problem with agriculture in fact, productivity is at an all time high. Much of the productivity on American farms is the result of large scale operations that are tightly managed and that make maximum use of mechanization and automation.

Agriculture has become big business. Yet, each agribusinessperson runs his or her own operation. It is truly an effective land and labor organization whose success depends on a well organized and reliable infrastructure. It is this infrastructure of machinery, supply and service, of chemical and fertilizer distributor organizations, of fuel and oil suppliers, of packaging, shipping and preserving, and of numerous other agriculturally related services that must function and be available when needed.

The Challenge

The main challenge is not how to provide more systems and/ or how much more computerization has to take place.

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These are part of the challenge, but the greatest single challenge is to educate and train young men and women in order to develop the skills to work with, and maintain, today's complex systems, and then reach out to develop tomorrow's systems. Agribusiness requires that a high skill level be developed and applied to enhance productivity in a very competitive marketplace.

To send more youngsters to college does not seem to be the answer. College graduates already exceed the demand. Also, many college graduates find work in agribusiness to be below their expectations. After all, it is not necessarily glamorous in all segments of agribusiness. A vast number of highly educated professionals to succeed, it has an even greater need for individuals who have received intensive training in vocational agriculture. This training can be obtained at the high school level, but should be further enhanced at the junior college or post secondary level.

Importance of the Teacher

Much has been said and written about the problem with education in America. Whatever the faults of the system may be, there is still a real return on the investment that dedicated teachers make in their students. In fact, the teacher often has a more profound effect on students than parents. I believe, therefore, that the future of vocational education depends to a large degree on the teacher, and my observation of vocational agriculture teachers is that they are hardworking, resourceful and dedicated breed, have confidence in their ability to train young men and women in the vital professions that benefit agriculture.

Strong role models are important for the direction of young people. The dedicated teacher will serve such a function and live up to the expectation of students, parents and businessmen, even to the point of becoming a bit of a hero figure. Such characteristics as punctuality, honesty, industry, perseverance, dependability, loyalty, dedication, respect and gratitude are best taught by example. Teachers cannot fake their true identity. It is important, therefore, for teachers (and everybody else) to check personal standards and behavior. Young people have an uncanny ability to emulate poor habits and traits. The truly great teacher will be a cut above the rest. In the business world, it becomes more and more evident that character is more important than formal learning because high skills rarely compensate for personality flaws. Agriculture needs strong character traits to survive and build a sure future. Teachers can lay the foundation for a sound agriculture community.

Some Concerns

There are some areas that need specific attention to provide an effective learning experience for students. Up-to-date instructional methods on up-to-date equipment are essential to prepare the student for the world environment. Due to lack of funds or lack of vision, many teaching aids are seriously out-of-date. Instruction centered around such outdated material will leave a student largely unprepared for the real world. The rapid advancements in science and technology dictate that the vocational agriculture teacher be prepared and equipped to teach current and even advanced systems. Teachers must keep themselves abreast of new developments and take additional training to be able to pass new knowledge on to the students. Also, the teacher has to demand that training aids and other teaching supplies are tailored to today's state of the art. A teacher who's behind cannot lead students ahead.

The most successful learning experiences are generally the result of a good deal of hands-on training. Extensive emphasis on hands-on training is essential to make the transition from classroom to the work environment a smooth one. Work-study programs are also excellent ways of bridging the gap between the school and the place of employment. The teacher who finds the right balance between academic and hands-on experience will provide a great service to the student and the prospective employer.

The relatively high drop-out rate of graduates at their first job could largely be avoided by following a balanced program. Since no teacher likes to see graduates fail in their job experience, it seems only natural that teachers would strive for programs that assure satisfying employability. After all, training and education is a process of preparing students for the world of productive work.

The successful vocational agriculture teacher must function well in the role of an ambassador. The teacher can be an ambassador of the business world to the students as well as an ambassador from the student body to the business world. The teacher who takes this role seriously can be effective in creating a high level of understanding and cooperation between the educational institution and the business community. This cooperative spirit will serve to target educational emphasis on the needs in the business world and to gain support from the business community for school needs.

The rapid increases in technological development demand that our teaching and learning processes are geared to the future. Teachers must demonstrate that they build for tomorrow. This fosters an attitude of searching for better answers, for being somewhat dissatisfied with the status quo, and for reaching out and discovering new and better ways of doing things. The competitive nature of agriculture dictates that improvements in production and marketing are essential for remaining a worldwide competitor. That competitiveness can only be achieved through greater scientific and technological advances. I believe there are many breakthroughs in agriculture that are reserved for the future. Teachers must stay at the forefront of inquisitiveness, and challenge students to that same level of alertness and drive.

Last, but not least, teachers should be business minded. There is a danger that academicians become introspective, and promote learning for the sake of learning. I believe that successful teachers will always find their role as that of preparing students for the world of work. This is particularly important in agriculture because it is such a highly competitive, risk prone and dynamic industry that is run by so many individuals. During the sixties, it was proper to criticize business, even to malign it. Fortunately, this trend has turned, but much remains to be done. Business is an integral part of our society. We need business, even in agriculture, or maybe particularly in agriculture. Actually, agriculture is the nation's largest business. It is well to get that point across to students. The benefits of a free enterprise system are worthy of repeating again and again. Nobody can do that better than a well informed and dedicated teacher who sees business in its proper role. Students want and need to know what agriculture, or any other business, is all about. Business is not only making a living as motherhood and apple pie and apologies are not needed, ever.

Summary

Agribusiness is a complex structure that needs the best human resources available. The vocational agriculture teacher plays a very key role in the development of latent talent in students. The job is not easy. It often takes all the skill and perseverance that a teacher can muster. But the results can be rewarding. It is important that the teacher look at the results, not at the problems. The teacher is building human beings to become productive and well adjusted members of the agribusiness community. This conceptual thinking has to prevail if the teacher wants to maintain a high level of enthusiasm and a respected leader ship image. Young men and women are looking for dedicated leaders in today's era of shifting value systems. It is the Amencanism of imparting both knowledge and character that is so very important in the building up of our young people. That is what we need.

I salute the many dedicated vocational agriculture teachers for their efforts and loyalty. They are truly the cornerstones of successful agribusiness.

Coming Themes . . .

November: Teaching Tips
December: Future Programs in Agricultural Education

September, 1985

Emphasizing skills plus safety equals good instruction in agricultural mechanics.

Using specialists from industry with adult programs also helps keep the teacher up-to-date.

All effective teaching, whether with youth or adults, require one-on-one instruction.

Getting students deeply involved in learning by doing is one hallmark of good training.
Perspective Of A College Dean

Vocational agriculture has differed from other aspects of vocational education in that significant numbers of its graduates have been bound. For those whose college majors are in the agricultural sciences or pre-veterinary medicine, the experience gained in the vocational agricultural program is regarded as an asset. But, beyond that, vocational programs can teach skills; and a skill learned, be it an ability to repair a motor or a capacity for leadership, is likely to contribute to the self-confidence and self-image of the student.

The value of leadership skills gained in vocational agriculture and in FFA activities has been highly visible at Texas A&M University. Four student body presidents at Texas A&M over the past decade have come out of the student ranks in vocational agriculture. We have a large body of former leadership positions on campus and beyond. Obviously, colleges of agriculture have a vested interest in the success of the programs and leaders of vocational agriculture.

Criticality

Vocational agriculture is and ought to be an important component of the broad range of education needed for agriculture and agribusiness. It can provide skills and understanding that will be critical to working with the biological systems that are agriculture. It can generate an interest in agriculture and its people that encourages the student to build a career related to the United States food chain. It can help build the sense of responsibility and compassion, of self-confidence, of ambition and of professionalism needed to make the profit the food industry in this new era. Whether any or all of these are accomplished, depends, of course, on the teacher as well as the student. And, in large measure, the success of vocational agriculture has been highly successful.

Success in school depends on a faith that education will be usefuluch change since vocational agriculture have instilled that faith in many students.

The Teacher Of The Future

Teachers of vocational agriculture in the future are likely to see an array of demands on them that reflect substantial changes both in agriculture and in the educational scene.

The food and agriculture system of the United States is now undergoing its most significant and, perhaps, its most difficult change in 40 years. This is a time of severe stress on many of those in production agriculture. The market structure of food and agriculture is a global, no longer local or even just national. The production system must significantly lower its input costs. Science and technology are at the heart of a world more fluid today than it was even 10 years ago. The ability to manage the growth of the human race, to provide the needed food, and to deal with the health and welfare of people and nation. That understanding should include the awareness that food can never be free.

The Curriculum Of The Future

What should the curriculum in food and agriculture provide the student under the circumstances described above?

Most important seem to be these components:

1. First and foremost, a factual understanding of the ultimate necessity of agriculture to the health and welfare of people and nation. That understanding should include the awareness that food can never be free.

2. The fundamental understandings of the biological bases of the food chain, of how plants and animals feed people. And of how plants and animals feed people. The simple complex food chain is the basis of all the basics of foods. The feeding of plants, animals, and foods is a major importance.

3. The basic skills for physical and business management of the farm, nursery, ranch, feedlot, or fishery. Computers will increasingly be a principal tool in these aspects.

4. A student understanding of the technology that will continue to change the food chain. The scientific bases of agriculture ought to be taught. These may include a basic understanding of molecular and genetic skills in plant genetics and of the mechanics and culture of plants and animals. Welding and woodworking are useful skills to learn but they are not likely be the skills needed for vocations in food and agriculture.

5. A basic understanding of the people in agriculture, not only the farmers and ranchers, but also bankers, truckers, lawyers, laborers, suppliers and distributors of products to producers, cooks (restaurant, fast-food and home cooks), and those involved in the preservation and storage of foods. Cooperation with the teacher of home economics may be a useful innovation.

6. Professionalism must be an increasing attribute of those in agriculture and the teacher of vocational agriculture can be the most influential role model. Recognition that there are not only economic but ethical consequences of what we do will become equally important in vocational agriculture programs.

The Challenge

The challenge to all of us in vocational agriculture, in vocational agriculture as well as in higher education, will be to put up-to-date realities of agriculture, high technology if you please, into the hands of young people so that they will learn that agriculture is more than dirt farming. Physical objects - vials of plants regenerated from embryos, micropropagation for trickler irrigation, glass tubes containing DNA, whatever might be available - ought to be used by teachers of vocational agriculture as well as others. Regrettably, many symbols of agriculture that we used in the past - the cute and fluffy (chick, calf or baby lamb), the grotesque (cow or goat), the beautiful (flowers, ornamental, ornamental, or wheat) - to attract the young to the marvels of living things, tell little of the real meaning of agriculture. The challenge that is in higher education will be how agriculture, in its broadest aspects, affects the life of every person on earth on the one hand, and how understanding the agricultural sciences can be intellectually satisfying on the other.

Thus, it seems imperative that teachers of vocational agriculture teach in terms of its broadest terms. This is not only for the sake of content but also for the vision of the student. Though production agriculture is at the heart of what we teach and what agriculture is at the heart of, production agriculture operates in a complex environment. In addition to production agriculture, there are suppliers, distributors, manufacturers, government, and social forces that are part of the entire domestic processing, wholesaling and retailing system through which agricultural products pass. There are the science, engineering, economics and business components in modern agriculture. There is need for skilled and professional expertise. Teachers of vocational agriculture must teach in terms of all of these parameters even though they themselves may have had only a traditional education in the agricultural sciences.

The initiative to accomplish what has been suggested must come from the teacher. But, obviously, the teacher will not accomplish this without the help of his or her higher education. Many teachers of vocational agriculture took their degrees in programs that were graduates of the old higher education and the current revolution in food and agriculture. These teachers are generally not employed near research institutions which could provide new thinking on a timely basis.

Summer courses, in-service training, newsletters, and media coverage will certainly help the teacher to maintain currency. But it is likely that the textbooks and teaching materials will be the means by which higher education can best assist the teacher of vocational agriculture in presenting up-to-date realities of agriculture. It seems to me that institutions of higher education ought to take a special responsibility for preparation of materials for vocational agriculture. It seems to me that teachers of vocational agriculture ought to demand that of their Land-Grant universities.

Changing Our Image

Finally, for all it has going for it, vocational agriculture and its teachers are vulnerable to the popular perceptions of vocationalism. Vocational education is a subject of legislative and public debate. It is difficult to determine if it is the appropriate education for many students and thus an essential part of the educational fabric. But many legislators and others question the cost of the program. They question its methods and rigor. It has a problem of image. Few view vocational education as a valid component of the general secondary education preparatory to a college education and a professional career.

The issue is also compounded by the current public perception that education is divided between the two types of educational institutions - high school and college. To be sure, agricultural production today is under severe economic stress. Many people believe that the agricultural community for employment in a stressed economy, at any level. And as it is widely believed that vocational agriculture and colleges of agriculture and vocational education in agricultural production agriculture, a large segment of our population believes that vacant opportunity will come of enrollment in vocational agriculture and college agriculture. But these are not the realities of the future.

Teachers of vocational agriculture and university deans and faculties of agriculture should join forces together with all others who have a stake in human need for food and agriculture to counter the common image. I think each of our two groups must examine continually the relevancy of our programs to the student and to each other. Dialogue among us, insistence upon professionalism, and joint efforts are some of the ways that we can come to have a more effective and comprehensive vocational agriculture and higher education. Let us start talking together - now.
The School Day

Teachers of vocational agriculture, unlike many of their peers in other academic positions, will generally be arriving on the school site early and more often than not be the last professional person in the building. The position will not be attractive to a person who assumes the job begins at 8:00 a.m. and concludes at 3:15 p.m. daily, 185 days per year.

Meeting with adults will sometimes be arranged for 6:30 or 7:00 a.m., prior to a typical work day at school. Being courteous and willing to assist adults will be necessary in fulfilling the community relations role of the teacher. Many adults will arrange appointments to begin immediately when school classes are dismissed and most teachers prepare for a period of relaxation.

Non-Related Services

Vocational agriculture teachers are requested to be available and visible throughout the school day and year by other teachers and school personnel. It is not uncommon for the agriculture teacher to be welding a desk, chair, or other school equipment, or assisting in making a project for a fellow teacher who is uncomfortable in a mechanical environment.

As the day ends for agriculture teachers, they are also assigned the role of building and maintaining the school building by other teachers and school personnel. It is not uncommon for the agriculture teacher to be welding a desk, chair, or other school equipment, or assisting in making a project for a fellow teacher who is uncomfortable in a mechanical environment.

Preparation of The Teacher of Vocational Agriculture for the Future

Public school agriculture is experiencing renewal and adjustment. The current programs have been effective in serving the varied needs of students. Students who enroll are aided in occupational orientation and exploration, career planning and decision making, preparing for advanced study, and developing general employment skills as well as specialized occupational skills. Instruction has been offered in classrooms, laboratories, the homes and home farms of students, and the workplaces of the agriculture industry. Agricultural education in public schools has given unique emphasis to the use of supervised occupational experience programs, the intracurricular nature of the FFA, the teacher as a community agricultural leader, problem solving as an approach to teaching and learning, and continuing education for adults.

(Continued on Page 20)
Preparing the Teacher of Vocational Agriculture for the Future  
(Continued from Page 19)

The future teachers of agriculture will need to be prepared to meet the changes that are anticipated in the vocations. The programs will change because of the changes that are occurring in agriculture and in education.

Assumptions About Changes

The business and industry of agriculture, both on and off the farm will increasingly become more specialized, more technical, and more efficient. More part-time farmers will "live on a little land." The consuming public will have little knowledge of agriculture.

Resources for schools will be scarce. The declining student enrollment will require more flexibility by schools in serving the needs of students with differing interests, abilities, and aptitudes.

Agricultural education in public schools will need to serve students who enroll for occupational orientated agriculture and exploration, career planning and decision making, specialized occupational skill development, preparation for college entrance, employment, and other uses. The emphasis on student interests, needs, and time commitments to the program. Teachers will have to prepare students to integrate existing and emerging learning resources, from standard off-the-shelf learning resource materials to interactive video disk and computer assisted instruction formats.

Developing Curricula For Multiple Purposes

Teachers will also need to develop curricula for multiple purposes. They will have to be able to plan curricula that will meet the needs of students who have an avocational interest in agriculture as well as students who intend to pursue the Ph.D. in college and students in between, from those with more of a traditional vocational interest to those who wish to study agriculture as a science. In essence, the curriculum will have to be parallel to the formation of an IEP (individualized educational program). In this sense, it will need to be an individualized curriculum, tailored made for students or certain groups of students. The computer will be the major tool for keeping track of the multiplicity of variables associated with students and topics that are taught through such a curriculum.

Laboratory Management

Agricultural instruction in the public schools must continue to insist upon application of concepts and principles. It is this application that sets agriculture instruction apart from most of the rest of the educational community. It is this application that makes principles come alive, gives relevance, provides clarity, allows for mastery, and promotes more permanent learning.

As teachers have more students who do not have the opportunity to practice or apply learning at home or at a business establishment away from the school. This application will have to be provided in variable time blocks. The computer can be used to sequence and manage records associated with learning the students are provided with appropriate application experiences.

Land laboratories as well as in-building laboratories such as greenhouses with a large growth space, small animal care wards will be essential. Schools will need to provide teachers aids to assist with laboratory set-up and routine maintenance and operation of the laboratories. The laboratory instruction may have to be funded by state departments of education to allow agricultural education programs at the local level to be what they need to be.

Managing Leadership Development Activities

If the local program changes as has been suggested by the authors, increasingly students will be drawn out of the agriculture classroom (i.e., in one term or one year and not another) rather than being in constant contact with the teacher(s) for four years. Thus, the population is more transient in nature. The leadership and personal development activities that vocational agriculture has offered have been crucial to the success of the programs and must continue. Teachers will have to be taught to use class and laboratory time to more fully integrate the application of leadership and personal development activities.

The university setting can, in fact, be the prototype for training prospective teachers to handle their students in this manner. Currently at the university, students are a more transient population who are not with professors of agricultural education daily. Through strong agricultural education societies and/or collegiate FFA chapters at the university, a model can be developed that has a high degree of transfer for future teachers of agriculture at the local level.

In order to accomplish what will be necessary in managing leadership development activities, more structure will have to be put into leadership development content. Leadership and personal development competency, will have to be provided via more classroom instruction and far more closely guided application of learning in the school setting. Given the changing clientele, it will be of paramount importance that the profession revise the incentive awards system such that it speaks to the needs of the new breed of student.

Cooperatively Preparing Teachers of Agriculture

A key strategy for the future preparation of teachers of agriculture is the cooperative, interprofessional, education. This is a university program whereby students go to college some quarters and spend some quarters in industry. The authors would envision prospective teachers spending some of those co-op quarters working in agricultural industries to further develop their agricultural skills and understanding, and some of those co-op quarters in local school systems assisting in the delivery of agricultural instruction.

Hence, by following a program of cooperative education, students can earn as they learn, can further develop technical skills and can, over a period of time, bridge the gap between theory and practice as it relates to delivering instruction at the local level. The authors believe that this will indeed make for a stronger and more competent teacher of agriculture.

The outcomes of such a program will include a more mature student who will probably take five years to graduate but will have the incentive of earning dollars for schooling along the way. This program will provide for more screening as it relates to the development of personal, pedagogical, and technical agriculture skills.

Perhaps the most intriguing aspect of this proposal is that it would provide more application of pedagogy and a longer period of time with more structure, in more settings, and with more kinds of clientele. The sum of all of this, we believe, will be that we will have teachers of agriculture who are better prepared for a more diverse job description and who will continue to carry on the excellent tradition of agricultural instruction in the public secondary schools. The use of school laboratories for the application of learning will have to be expanded (Photograph courtesy of Glen Shin, Mississippi State University.)

WANTED: Book Reviewers

One of the reviews that THE AGRICULTURAL EDUCATION MAGAZINE provides for its readers is the review of publications that address agriculture and agricultural education. The Book Review Editor requests current article bibliographies from over 50 publishers in the United States and from some foreign countries. Books that are interesting in reviewing publications should write for a copy of the books available for review. Upon receiving the list, the reviewer should choose 2-3 titles and send their request to the Book Review Editor. The use of school laboratories for the application of learning will have to be expanded (Photograph courtesy of Glen Shin, Mississippi State University.)

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Computer can help manage and deliver information for those knowledgeable in their utilization.

SEPTEMBER, 1985

WANTED: Book Reviewers

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The Teacher of the Future: Manager of Technology

BY DEAN SUTPHIN

Teaching about agriculture and the agricultural industry is the primary concern of agricultural education. Technology will not change the fundamental mission of agricultural education, but it is likely to affect both the agricultural industry and agricultural education.

Technology is a method of putting the principles of science to work to help people (Williams, Badrkhian, and Daggett, 1984), hence, the interface between agricultural industry and education is a natural one. Technology is not limited to computers but includes applications in the agricultural industry in the areas of physical technology, biotechnology, and information technology.

Agricultural teachers should teach about technology used in agriculture and use technology as a tool for teaching. To fail to include and use new technologies in the agricultural curriculum may jeopardize the credibility of the local agriculture program and/or place teachers of agriculture at a major disadvantage in their teaching effectiveness.

As managers of technology, agriculture teachers should continually analyze, evaluate, and determine the impact of new technologies in relation to their program philosophy, curriculum content, and as a tool to teach subject matter. Teacher inservice education on new technology will help ensure viable and up-to-date local programs. Teacher educators and state supervisory staff can assist teachers to develop competencies and to make decisions regarding the use of new technologies in teaching.

Program Philosophy

Technology integrated into the agriculture curriculum and used as a tool to teach will complement the mission, principles, and goals of vocational agriculture. Preparation for entry into an agricultural or agricultural-related occupation is the primary program focus in vocational agriculture. Along with this primary purpose, research indicates that a majority of leaders (experts) in agricultural education include preparation for advanced study at postsecondary schools and baccalaureate degree granting universities and other purposes as part of the program mission (Sutphin and Newcomb, 1983). The program thrust must be agriculture while integrating and using technology, rather than a total focus on technology. Maintaining a primary program focus for agricultural education, rather than being diverted by technology, is critical as teachers increase their role as managers of technology.

The agriculture program philosophy should provide for maintaining excellence, motivating students, interfacing with the total school curriculum and upgrading programs to meet current and future needs of students. The Unfinished Agenda, developed by The National Commission on Secondary Vocational Education (1984), stated: "...Schools are needed to help students achieve intellectual, social, vocational, and personal goals. Vocational education addresses all these goals. (p.7)" Technology has the potential to contribute to these goals.

An exciting, relevant curriculum which integrates technology will attract students and provide them with the knowledge, skills and positive attitudes needed to succeed in agricultural occupations. Agricultural programs must remain current to be valued by students, fellow teachers, and the school community.

Curriculum Content

The agricultural education profession has always taken pride in providing the knowledge and skills needed for employment in agriculture. Technological changes will continue to increase rapidly; hence, the local agricultural curriculum must meet these new instructional needs. The Unfinished Agenda purports that the most useful reforms are those emanating from the schools and classrooms which consider the home, school, community, and workplace of students.

Future agricultural curriculum should include technologies used in agriculture. Physical, biotechnology, and information technologies (Williams, et al., 1984) relate to agriculture. Physical technologies involve the use of tools and machines, power and power systems, energy and the use of energy, and structures. Biotechnologies include the various types of vital living systems of things (plants, animals, and humans); and the use of genetic techniques to control methods, maintenance, care, harvesting, and processing. Information technologies are information handing methods/systems and tools (primarily the computer).

The potential for growth of physical, biotechnology and information technologies in agriculture is vast. A report recently released by a subcommittee of the Board of Agriculture of the National Research Council compares modern genetic technology with the impact of the discovery of the laws of inheritance in the late 1800s. New developments in crops, animal breeding techniques, computerized record-keeping and marketing, disease control and insect control will need to be addressed in the secondary agriculture curriculum. Likewise, the social implications of technology related to change such as the displacement of people and changing work environments should be addressed by teachers. Vocational agriculture programs of the future will likely increase in scope and in the technical level of subject matter. A higher level of basic skills, obtained in academic subjects such as math and science, will be needed by agriculture students in the future; this may narrow the gap between the traditional perceptions of academic and vocational students. The effects of change in technology will certainly call for a change in the content of agricultural courses.

Teaching Subject Matter

Technology will provide the agriculture instructor with additional options to deliver (teach) subject matter. Computer-assisted instruction in the form of computer programs, frameworks and other development aid for spreadsheets such as Visicalc and Lotus can be used to teach agricultural sciences and business management. The computer can be used in the classroom to assist students with material preparation, recordkeeping, grade management and testing. The technology alone may not prove very useful unless the teacher identifies and assimilates all these technologies in the classroom, laboratory, and at the work site of students with supervised occupational experience programs.

Teacher management skills will need to be upgraded to use tools, equipment, and teaching materials reflective of state-of-the-art technology in agriculture. Greater cooperation with industry and members of the community may help solve problems associated with materials and methods needed to teach new technologies. These problems may include costly equipment, facilities too complex for construction in the school setting, and scope and size of materials and equipment. Cooperative use of community and resources may need to be explored.

Inservice education for teachers concerning new technologies is essential. It will be very difficult for local agriculture teachers to self-teach themselves new technologies and make educated decisions about how, if at all, such should be included in the curriculum. Of course, teachers can stay current to some extent by reading magazines, journals, and other educational materials.

Utilizing information technologies will be vital skills for the future. (Photograph courtesy of Sam Coster, Versailles, Ohio.)

References


In order to teach the new technology, teachers must understand it. Three West Virginia teachers are learning through a workshop. (Photograph courtesy of Dan Nelson, AgData.)

THE AGRICULTURAL EDUCATION MAGAZINE

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Teachers Fill Many Roles

Working with FFA Committees is an important role of the Vo-Ag teacher in developing leadership ability in students. (Photograph courtesy of Steve Hall, Vo-Ag Teacher, John Tyler High School, Tyler, Texas 75702)

Vo-Ag teachers will need to be flexible in working with a diverse student population, including handicapped students. (Photograph courtesy of Terri Hidy, Graduate Assistant, Department of Agricultural Education, Texas A&M University.)

Cooperative arrangements with the agribusiness community provide valuable learning experiences for students. (Photograph courtesy of Terri Hidy, Graduate Assistant, Department of Agricultural Education, Texas A&M University.)

Vo-Ag teachers must themselves be able to manage new technology before they can teach students. (Photograph courtesy of Terri Hidy, Graduate Assistant, Department of Agricultural Education, Texas A&M University.)

More and more females are finding rewarding careers as vo-ag teachers. (Photograph courtesy of Steve Fraze, Graduate Assistant, Department of Agricultural Education, Texas A&M University.)

Providing opportunities for hands-on learning will become increasingly important in vocational agriculture. (Photograph courtesy of Steve Hall, Vo-Ag Teacher, John Tyler High School, Tyler, Texas 75702)