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What Is In A Name?

This issue is devoted to the theme "Vitalizing Summer Programs." Certainly the need for vitalization of summer programs in vocational education in agriculture is needed. The number of vocational agriculture teachers at the secondary school level with extended (summer) contracts is decreasing at an alarming rate in many states. Those who possess strong vocational philosophies and believe in the "total program concept" are greatly concerned over this decline in the vitality and quality of vocational agriculture programs.

An examination of the theme articles in this issue clearly indicates that the bases for summer activities in vocational agriculture are educational in nature. While the examples cited might be new or different from those discussed twenty years ago they still emphasize the educational value for students enrolled in the vocational agriculture program.

Nearly half of the articles submitted used the term "Supervised Agricultural Experiences" (SAE), while the remainder used the term "Supervised Occupational Experience" (SOE). Exercising the editor's prerogative, the SAE's were charged to SOE's where the terms implied occupational experience in agriculture. Thus, readers will find very few SAE's in this issue. Those who use the terms SOE and SAE interchangeably are doing the profession a great disservice.

Why has the term supervised agricultural experience (SAE) appeared so quickly on the scene? Is this another case of "slick" name changing? Is the profession again being led by the "tail" without adequate consideration or dialogue? Presumably, the reason for the FFA adopting the term "SAE" was based upon reported abuses of "SOE" by teachers who were accepting any experience of an occupational nature, not necessarily agricultural. Students who were using "baby sitting" as an occupational experience would be eliminated by adopting supervised agricultural experience (SAE).

It needs to be pointed out that the original use of SOE was "supervised occupational experience programs in agriculture." Over the years, and with the growing popularity of acronyms, the practice was to drop the "in agriculture" and use the letters S.O.E.P. and finally SOE. Apparently this has led to the abuse of the supervised occupational experience program by teachers who either did not understand the concept or who were simply looking for an easy way to meet requirements.

The coining of a new term to counter the abuses cited is likely to create a real malaise. The term agricultural experience seems to increase the scope of acceptable experiences rather than simply restricting the occupational experiences to those in agriculture. The elimination of the word "occupational" would seem to suggest that any agricultural experience is now acceptable and it need not be occupational in nature. Agricultural experiences could include any experiences which pertain to and/or deal with some aspect of agriculture. The degree of involvement can vary from casual observation all the way to actual participation. Many people have had an agricultural experience walking through a muddy barnyard. Is that now an acceptable experience in vocational agriculture?

The term "occupational experience" encompasses those experiences which are associated with and deemed desirable in the preparation of individuals for employment or self employment in a particular occupational area or cluster. Thus, occupational experiences in agriculture result in the development of competencies necessary for employment or self employment in the broad areas of agriculture. This is what has made educational programs in agriculture "vocational." When the profession loses sight of this primary goal, vocational agriculture will be no different than any other non-vocational class.

Obviously, the terms SAE and SOE are not synonyms. The terms embody different types of experiences with different levels of student involvement. Further, the intensity of the teachers participation in each experience program is much different. Many of the experiences associated with SAE such as writing reports and conducting experiments are normally incorporated as class assignments in most vocational agriculture programs. Are we now saying that such academic activities are sufficient to meet the requirements for supervised occupational experience? Are we simply lowering standards and providing an easy way out for students and teachers?

The concept of supervised agricultural experience seems very appropriate for students who desire an understanding and appreciation about agriculture for non-vocational interests and needs. The profession should recognize the term SAE and use it as an acceptable part of the agricultural literacy instruction at the secondary school level. On the other hand, the term SOE is used when referring to those occupational experiences needed in preparing individuals for employment or self employment in a particular occupation or occupational cluster. A vitalized summer program in vocational agriculture must be based upon SOE programs, not on SAE activities.
Vitalizing Summer Vocational Agriculture Programs

Educational reform has been a major topic on the nation's agenda during the decade of the eighties. Critics at the local, state, and national levels have challenged the quality of the country’s educational system and are demanding higher levels of accountability. Vocational agriculture programs will not escape these demands. The majority of the vocational agriculture teachers across the nation have enjoyed the benefit of having extended contracts which has enabled them to extend their instructional programs into the summer months. However, with increased pressure for greater accountability being placed on school administrators, many vocational agriculture teachers may find a greater need to justify their summer programs.

This issue of The Agricultural Education Magazine addresses several aspects of the summer vocational agriculture programs. The authors share proven activities and offer recommendations which can be used to strengthen summer instructional programs. Dr. L. DeVere Burton approaches the question of “Why Summer Programs for Agriculture?” philosophically. He suggests that the vocational agriculture profession should be more concerned about providing instructional opportunities for students than trying to defend their extended contracts. Dr. Burton offers several alternative instructions strategies for improving summer programs and challenges the profession to dream of new ways to vitalize local vocational agriculture programs.

In the article, “Increasing FFA Effectiveness in Summer Programs,” Kathy Day, newly elected NVATA Region IV Vice President, addresses the utilization of the FFA for making summer vocational agriculture programs more effective. She offers several recommendations for the members of the various standing FFA committees to conduct to help keep the FFA chapter viable during the summer months.

Dr. Larry Powers stresses the need to rethink ways of using Supervised Agricultural Experience Programs for today’s students. He indicates that if the profession is going to cite hands-on-experience and SAE programs to justify summer vo-ag programs, teachers need to help plan and supervise the conduction of SAEs that are viable for their students.

Dr. James Daniels and Mr. Joel Hoyle address the need for making summer work experiences a part of the instructional program for vocational agriculture students. The authors discuss the benefits to the student, teacher, and local vo-ag program of incorporating well planned and supervised student work experiences during the summer months.

In the article, “Summer Program Accountability — Communication is the Key,” Dr. Jacquelyn Deeds and Mr. William Fletcher address the importance of keeping school administrators, community decision makers, and the general public informed of activities conducted by the vocational agriculture teacher during the summer months.

About the Cover

Minnesota science teacher Ben Thoma points out the features of good wetland habitat to a small group of students. Educators play a key role in determining the future of soil and water conservation. From classrooms will come future members of a conservation team — researchers, teachers, county agents and soil conservationists working for state and federal agencies. Photo courtesy of U.S.D.A. - Soil Conservation Service.
Computer Technology Resources
Static, Surges, and Other Pests

Are your computer and other peripherals protected against pests? I am not talking about insects, spiders, or worms. I am referring to surges, spikes, line noise, static electricity, and heat. These are some of the things that can destroy your computer and software just as cutworms can get your corn and beans. You can't spray your computer with a pesticide, but you can use some "Integrated Pest Management" to protect your investment.

Have you ever walked across a carpet and felt a shock when you touched a door knob or another person? That's static electricity and it's a vicious pest. You can't feel a charge of static electricity until it reaches 2,500 volts. However, you can build up a charge of 12,000 volts while walking across a carpet. Don't think you're safe if you have a vinyl floor; you can build up 4,000 volts walking across it! It takes many less volts to scramble a disk or to damage electronic components.

Like many pests, static electricity cannot be completely eliminated — you can take steps to reduce it. First, keep the humidity in the room about 50%. A humidifier will help accomplish this. Next, remove rugs from the work area. Obviously, if you have carpet installed you may not be able to remove it. In this case put an anti-static mat under the area surrounding the computer. Make sure that your computer is grounded. Don't remove or defeat the three-pronged cord by using a two-pronged adapter. A proper ground will help reduce problems associated with static charges. Route cables and connectors out of reach of people. And discharge static from your body by touching the metal grounding plate on the back of your computer before opening the case or handling any of the peripheral cables. Commercially produced anti-static sprays are useful, but short-lived.

Another set of pernicious pests are related to each other. They can be grouped under the genus, "Power Supply Problems." They are known as surges, spikes, drops, and line noise. Some people call them by more common names such as "bugs" or "ghosts." Spikes, surges, and drops are variations in electrical power. You can think of noise as something like "static" in the power line. Most of these problems are caused when lightning strikes power lines or transformers; sometimes they happen when underground power lines are damaged. Small problems can occur when power tools are used (such as an air compressor or table saw) or appliances cycle (such as a refrigerator or air conditioner). Line noise can garble data and cause your computer to make mistakes. Surges, spikes, and drops can be more serious. Whenever these problems occur they may only wipe out the contents of a disk; however, they can mortally wound or maim your computer and its peripherals. Incidentally, surges and spikes can also claim the life of your VCR, your television monitor, and any other electronic device in your classroom.

Fortunately, there are inexpensive devices you can buy to control spikes, surges, and line noise. Surge protectors and noise filters are available from computer supply stores and many other stores. They are installed by plugging in your computer to the device and then plugging the device into the wall outlet. Although they may be similar in appearance, surge/spike protectors are not the common multiple outlet boxes with a switch and a 15-amp circuit breaker you may be using to connect and switch your computer and its peripherals. Surge/spike protectors and noise filters come in many shapes and sizes. Prices can range from about $5 for a simple three-pronged surge protector to about $75 for a surge/spike protector, line conditioner (noise filter), multiple-outlet box, and cooling fan. Surge/spike protectors are not designed to be lightning arresters. They won't protect your computer from a direct lightning strike. The best protection against lightning is to unplug your computer.

The last pest I will identify can be just as serious and pervasive as static, surges, and drops; but its damage is less evident because it works slowly. All electronic devices have specified temperature ranges for which they are designed. When operated above the designed heat range over a period of time, your computer may begin to make errors and the life of its components may be shortened.

There are several ways to keep your computer from overheating. First, take care when selecting a location for your computer. Don't expose it to direct sunlight and keep it away from heating vents and radiators. Next, don't cover over all the cooling vents on your computer. Many people stack all the disk drives and the monitor on top of the computer. When they do this, they are concentrating the heat from all of the components. The ultimate solution to cooling problems is a fan. A fan will pull air across the insides of your computer, especially the power supply, effectively

(Continued on page 11)
Increasing FFA Effectiveness During the Summer

The FFA Motto states the primary objective of utilizing the FFA in summer agricultural education programs. The summer months away from classroom instruction provide an excellent opportunity to apply the theory covered during the school year with hands-on experience.

FFA activities are divided into standing committees to carry out a chapter’s program of activities. Since every chapter is unique, activities may be listed under a variety of committees and, in some cases, may overlap. The Supervised Agricultural Experience committee is likely the most important committee, not only in the summer but throughout the year. The activities in this committee area allow members to gain experience and practice in a specific area of interest.

FFA members with livestock projects can participate in many activities in the summer. Area livestock shows, county fairs and state fairs provide an opportunity for members to show and compete with the animal they have cared for and groomed for competition. Not only do members experience competition, they learn proper feeding, exercise, and grooming of their livestock as well. Cattle, swine, sheep, horses and small animals are some of the animal species that can be shown during the summer.

Judging teams offer another opportunity during the summer. State fairs, county fairs and field days include judging contests in livestock, floriculture, nursery, land judging, dairy judging, poultry, farm business management, agricultural mechanics, meats, welding, seed identification, breed identification, and forestry. These activities provide not only competition, but also practical agricultural experience to prepare members for careers in a specific area of agriculture. Summer months provide opportunity for study and practice before a particular contest.

The summer months allow for placement in agriculture job sites in the community. Members can obtain actual hands-on job experience with co-op training. Agriculture teachers also have additional time during the summer to make contacts for new training sites. Summer months are the perfect time for productive enterprise projects. Proficiency contests provide opportunities for members to set production goals, plan and carry out projects, make budgets and financial arrangements, and keep records. Since summer is the most critical time for most productive enterprise projects, students and teachers should stay in contact.

(Continued on page 19)
Strengthening Summer Programs Through Supervised Occupational Experiences

Are you employed during the summer? If so, do you wonder if your administrators will continue the summer program of vocational agriculture? If you are not employed during the summer — following are some ideas on how SOE may help you to develop and maintain a summer program.

A complete Vocational Agriculture Program consists of three components: (1) classroom instruction for day students, (2) youth organization or FFA and (3) supervised occupational experiences (SOE) (Phipps and Osborne, 1988). These are three traditionally accepted components of the program. Many professionals in agriculture believe vocational agriculture is a unique program in the public school system. This raises a question — what makes it unique? While visiting with a group of vocational agriculture teachers in 1984, they indicated that SOE was the unique feature of the program. This group was organized to develop strategies for the improvement of vocational agriculture in their state. A major concern for this group was SOE, especially during the summer. Many writers and professionals agree that SOE is the weakest component of the program. If SOE is the component that makes vocational agriculture unique and is the weakest part of the program — there may be a problem.

The decision to implement a summer program of vocational agriculture may be determined by the perceived quality of SOE by administrators and the community. Arrington and McCracken (1983) found that students in 12 month programs were: (1) more actively involved in SOE of higher quality, (2) received more personalized instruction and (3) had greater opportunity for developing SOE’s if they were from rural areas. These findings have implications for developing and implementing an effective summer program. Why develop and implement a summer program any way? Theoretically and practically summer programs in vocational agriculture should be established because they satisfy some predetermined need.

Justification For Summer Program

Before discussing how SOE may strengthen the summer program or how it may be used to help establish a summer program it is necessary to discuss the purposes, goals and objectives for implementing a summer program.

Often times educators discuss developing and implementing educational programs without really understanding the basic philosophical or theoretical context with which this program will operate. Schools are for students to learn, develop and grow such that they become creative, flexible and productive citizens. Any program or activity conducted under the auspices of the school should be consistent with the goals and objectives of schools.

Goodlad (1984) indicated that schools have four major goals: (1) academic, (2) vocational, (3) social, clinical and cultural and (4) personal. Hamlin (1962) indicated that “if agricultural education is to have a permanent place in public schools, it must contribute to the basic purpose for which public schools were created and for which they are maintained.” According to Hamlin, vocational agriculture is a part of a larger whole and its purposes, goals and objectives must be congruent with the whole. There is a concern as to whether the present perception, structure and philosophy of SOE are meeting the needs of students from a diverse population with a basic urban orientation. It is apparent that teacher educators, agriculture teachers and administrators need to consider a new and creative approach for SOE in agricultural education. While discussing curriculum content in 1986 Camp stated:

In spite of the rhetoric of the profession that we are not training primarily for farming occupations and that agriculture education has changed dramatically, the typical agriculture program remains much as it was when the Vocational Education Act of 1963 was passed. Production agriculture, taught by a single teacher, in a general high school, remains the norm (cited in National Academy of Sciences, 1988).

During the 60’s and early 70’s summer programs in vocational agriculture were very prevalent in many states. During the middle 70’s legislators and school administrators began to discuss the validity and cost effectiveness of summer programs — does the means justify the ends? About the same time small calculators became popular, cable TV subscriptions were increasing, the trend for high schools were to become comprehensive, and the students enrolling in vocational agriculture were becoming more urbanized. All of these changes have had serious implications for the vocational agriculture program. The changes mentioned above are in the areas of technology, communications, (Continued on page 10)
Do your students sometimes appear uninterested in the topics you are teaching? Does their interest quickly subside as you move into the “meat” of the lesson? Are your students eager to begin studying a new area? Let’s be honest, all students, regardless of age, possess widely varying levels of personal desire to learn new knowledge and develop/improve their skills.

Luckily, we know from past experience and research that teachers’ actions can exert a positive (or negative) influence on student motivational levels. Our best strategies for boosting student motivation are (1) keeping students mentally and/or physically active as learners, (2) using student inquiry approaches and techniques, such as problem solving, experiments, and case studies, and (3) using effective interest approaches that cause students to want to learn.

This teaching tip focuses on “the how” of presenting effective interest approaches. An interest approach is simply a conscious attempt by the teacher to increase students’ interest in studying a particular topic. Which of the following interest approaches do you most often use?

A. provocative situations
B. jokes or stories
C. review questions

All three of these interest approaches have their merits, but the lasting effects on student motivation vary greatly from one type of interest approach to another. Interest approaches can be thought of in a stair step order as shown in the following diagram, based upon the type of interest they create.

![Diagram showing the hierarchy of attention, mental focus, and desire to know more]

The first step of interest enhancement is easily achieved by telling jokes or funny stories, playing short contests or games, or using any other activity that is entertaining in nature. This type of interest approach is not usually related to the topic under study. As a result, the transition from the interest approach to the lesson is sometimes rough, and any interest generated tends to be quickly lost as students “switch tracks” to the actual lesson activities. However, this type of interest approach does get students’ attention.

The second level of interest is generally achieved by raising questions that pertain to the topic of study. As the name suggests, students mentally focus on the lesson topic. This type of interest can be created by using review questions, visuals, situational stories, analogies, short student exercises, or any other idea that causes students to zero in on the topic. When compared to “attention getters”, interest approaches that create mental focus do more to develop genuine interest in the area of study.

The third type of interest approach causes students to want to know more about the topic. As indicated by the stair step diagram, this type of interest approach requires more planning and careful delivery to be effective. Consider the general strategy in the following example.

Problem Area: Selling Procedures in Agribusiness
Problem: How do I handle customer complaints?

Interest approach:

- Ask a student (Steve) to help you conduct a role play, where you are the customer and Steve is the salesperson.
- Introduce the role play setting and characters to the class. In this case, the customer is very upset with the product purchased.
- Tell the class to observe Steve’s techniques during the role play. How would they handle this situation?
- Conduct the role play. As the customer, be very aggressive and critical of the product and the business.
- Conclude the role play. Ask students to analyze Steve’s attempts to handle the complaint and tell how they would have responded.
- Have some students role play their strategies for specific pieces of the role play.

This sample interest approach will cause most, if not every student in the class to have a personal “felt needed” to have more knowledge and skill in selling, especially in the area of customer relations. In essence, this interest approach will

(Continued on page 15)
Alternative Summer Strategies For Secondary Agriculture Programs

Among teachers of secondary agriculture programs a frequent topic of discussion is the length of extended summer contracts. Certainly the topic is a timely one and concern by teachers is justified. A national study of secondary agriculture teachers during the 1986-87 school year revealed that most of the teachers (88.9%) reported extended contracts for employment beyond the normal academic school year, and that the contracts averaged 40.32 days in length (1). Agriculture programs which offer 12 month teacher contracts are few these days, and teachers are expected to account for their time on the public payroll during the summer months.

Among school administrators, a similar form of accountability exists. A frequent topic of conversation in administrative circles is “why summer programs for agriculture?” This is a reasonable question and it deserves a reasonable response. Many school administrators have become strong advocates for summertime agriculture activities when they have seen good programs in action. Others have questioned the value of extended summer employment when they have observed or perceived abuse of the program by their teachers. Failure by teachers to spend a full day on the job is most frequently cited as a problem by administrators. Other negative perceptions deal with the amount of time the teacher spends in activities (fairs and shows) as compared with structured learning time with students.

School administrators tend to equate the value of summer programs with time spent in organized learning situations with students, and their perceptions about what constitutes learning frequently differ from those of teachers. Of course curriculum planning and many other summer activities are good, but why does the agriculture teacher get paid to develop curriculum while the science teacher does not. Hence the question . . . “Why summer programs for agriculture?”

Philosophical Base for Summer Programs
1. Summer programs in agricultural education were designed to provide learning experiences for students. They were not designed as a way to provide full employment to teachers. Extended summer contracts for teachers are incidental to the purpose of summer agriculture programs. We need to spend more time promoting student benefits which are derived from summer activities, and less time justifying teacher needs.
2. The summer growing season is the ideal time to study growing things. The whole world can become an agricultural science laboratory in the summer months. There is no better time to “learn by doing.”
3. The opportunity exists for both teachers and students to participate in concentrated one-on-one or small group instruction. No stronger teaching/learning opportunity exists than can be provided during the flexible hours of summer.
4. Nature provides ideal “teaching moments.” Curiosity is the precursor of learning, and the student who observes a phenomenon and asks “why?” is taking the first step toward scientific discovery. The best time to cook is while the kettle is hot!

Alternate Summer Strategies
A proactive approach to summer-time instruction requires imagination on the part of the teacher, but it can focus the attention of the community on students instead of teachers. The following teaching activities may be appropriate learning activities in your community:

1. Directed Study Projects — We can learn something from colleges and universities about individualized instruction. This kind of activity has been practiced in higher education for years. Why not tie a directed study project to the new FFA awards in computers and agriscience and find a way to grant credit to those students who complete the projects? The project is goal oriented and requires accountability by students.

2. Internships within the agricultural industry — This is another tool of higher education which has worked well. Why not provide in depth learning experiences for students by allowing them to work briefly in their field of interest? Such an experience would serve students well in making career choices and in reinforcement of the need for strong academic and industry specific skills.

3. On-Site Career Exploration — This could be developed as a fascinating experience for students who can arrange concentrated blocks of time. Many communities could provide a cadre of agricultural experts who would be willing to share their experience with students at their places of business.

4. Organized Teen Work Experience Clinics — This project is designed to provide paid work experience for teen (Continued on page 22)
Strengthening Summer Programs Through Supervised Occupational Experiences

(Continued from page 7)

school curriculum revision and student population in the schools. Society is constantly changing and the educational needs of students are changing also. The overall vocational agriculture program is basically the same as it was in the 60's and 70's.

With only 2.5% of the total population involved in production agriculture it seems unrealistic to expect students to enroll in vocational agriculture and develop a production SOE. The focus of SOE should change and adapt to the needs of current students and become flexible enough to provide effective programs for future students. According to John Naisbitt (1984) we are in an information and technologically advanced society. Educational programs, i.e. SOE, should reflect the changes that have taken place in society. Lionberger and Gwen (1982) indicate that people generally resist change. Sometimes people resist change when they have emotional ties to well established traditions, institutions and practices and do not want to see them discarded.

While addressing a group in Kansas City at the National Collegiate Agricultural Education Meeting in 1987, Dr. Gary Moore indicated that agricultural education has a rich heritage and should not be discarded but should be used to build upon.

Strategies For Strengthening Summer SOE

Strategies for strengthening the summer program via developing effective SOE, should start with a positive attitude on behalf of the teacher and a plan for development and implementation.

If the teacher can recognize and accept that student needs, school curriculum, and society are changing and endeavor to develop SOE consistent with these changes, this is the first step toward developing that positive attitude. Many writers have indicated that there is a strong correlation between the attitude of the teacher and the quality of the program he/she is directing.

The plan for developing effective summer SOE should involve the teacher, parents, local administrators, and prominent leaders in the community. The local teacher of agriculture should provide the leadership for organizing and developing the plans for summer SOE. The goal for summer SOE should be made clear to all those involved at the outset. What is the goal or what should the goal be? The goal should not be to abandon the present program structure but to strengthen it through developing alternative SOEs for students during the summer.

Phipps and Osborne (1988) recognize three types of SOEs for vocational agriculture students — placement, ownership, and directed laboratory experience.

<table>
<thead>
<tr>
<th>Placement</th>
<th>Ownership</th>
<th>Directed Laboratory Experience</th>
</tr>
</thead>
<tbody>
<tr>
<td>* agribusiness * farms * horticultural businesses * other agricultural businesses</td>
<td>* productive enterprises * agricultural business ownership</td>
<td>* school-owned facilities * community-owned facilities</td>
</tr>
</tbody>
</table>

Fig. 19.2 Types of SOE programs and settings where students may gain supervised experience.
Source: Phipps and Osborne (1988, p. 317)

An agricultural research laboratory provides an excellent opportunity for students to learn technical agriculture skills. (Photo courtesy of Harden Richards, Graduate Student North Carolina A&T)

The teacher should seek to develop more summer SOE in the areas of placement and directed laboratory experience. Alternative SOE can be developed through utilizing school laboratories/facilities, local business and industries and student resources when available. Profit should not be the only
measure of quality but the amount of actual learning that takes place. Summer SOE should provide students with experiences in biotechnology in agriculture, communications, computers, agricultural finance, agribusiness, animal sciences and other areas congruent with academic needs of students and employment demands. The following are excerpts taken from a report prepared by the National Academy of Sciences on Agricultural Education in Secondary Schools:

1. A broader range of SOEs should be encouraged. SOEs should include time in research laboratories, banks, and food retailing and marketing and with commodity markets.

2. Special summer SOE programs should be explored as an alternative in school districts where students cannot locate high quality SOE projects. Summer programs might even involve travel to locations where desirable SOEs are available. Some locations might include agricultural experiment stations, a food processing factory, or an industrial laboratory (1988: p. 42).

The present student population is becoming more urbanized and increasingly more students are coming from families with very limited resources. This amplifies the need for types of projects that do not require the student to have access to land or financial resources. This will require the teacher to make extensive use of available community and school resources. The traditional production/ownership type projects require the students to have access to land or money to invest in entrepreneurship. It should be noted that production and/or ownership type projects should be encouraged and vigorously pursued for those who have the resources or desire.

Summary

SOE is an important part of the vocational agriculture program, it should be effective and developed around the needs of students and flexible enough to change and adapt to needs of students in the future. The development of substantive SOE can play a significant role in the revitalization of summer programs in agricultural education. Theoretically educational programs are developed around the needs of students. There is definitely a need for appropriate summer SOE. The teacher will have to be innovative and creative to develop summer programs that are attractive, interesting, and provide students with appropriate learning experiences.

If we attempt to give summer SOE a cosmetic face lift and present a revised version of the same thing it is unlikely that it will get the support of decision makers nor students. Once the summer SOE plan is operational, parents, students, local school administrators, business and community leaders should be informed and kept informed on progress and accomplishments. Powers (1985) found that many agriculture teachers conduct excellent programs and work diligently but failed to inform the public about their activities. Hence, public relations for the summer program in the school community cannot be overemphasized.

(Continued on page 23)

Computer Technology Resources
Static, Surges, and Other Pests

(Continued from page 5)

reducing the temperature inside your computer. If your computer did not come with a fan and if you have added one or more cards to the computer's slots, you may want to invest in a cooling fan. Several manufacturers make custom fans for many different models of computers. Fans range from about $25 to $75. The more expensive models may also contain surge/spike protectors, noise filter, and multiple outlets.

I have listed some of the more common pests which can threaten the health and shorten the life of your computer and its peripherals. Even though these pests are difficult to see, the damage they cause isn't. Fortunately, there are some economical and effective measures that can be taken to eliminate many of these pests. The money you spend for control is well-spent. Not only will you be extending the life of your computer and its peripherals, you will be protecting your software and the data you have stored. Take the necessary steps to make sure that your computer has a long and productive life — use a little "Integrated Pest Management."
Grassroots Information for Planning in Agricultural Education

Traditionally, summer has been the time for agricultural educators to plan for the upcoming year. An often overlooked component of the planning process is understanding how local demographic and economic trends influence agriculture, the school system, and the attitudes and beliefs of community leaders, residents and students.

Why Plan?
Every community — whether rural, suburban or urban — is continually changing, which may be only the aging of its people. Even this modest change affects agricultural education programs because research shows that older farmers are less likely to be innovative (Brooks and Bachtel, 1983) and older residents are less supportive of school bond referendums (Bates et al., 1986).

Agricultural education has been, from its inception, a community based program (Iverson 1981; Camp, 1988). Although Federal and state guidelines provide policies, procedures and varying levels of funding for operation, program effectiveness is not guaranteed. The most successful programs are those which are set up to meet the needs of the local community (Committee on Agricultural Education in Secondary Schools, 1988). The very nature of agriculture, with its wide diversity of products — often within the boundaries of a state — requires planning a curriculum that takes into account local soil types, weather patterns, cultural practices and market conditions.

State and national support for agricultural education programs has declined in many areas, yet educational decision makers who are in tune with local needs have been able to achieve higher levels of funding, thus gaining more effective control of their total program (Committee on Agricultural Education in Secondary Schools, 1988).

Understanding local conditions and incorporating them into the planning process reflects the principles of learning established by John Dewey, the educational pioneer whose research fostered such innovations as the project method, individualized instruction, economic education, and competency based instruction (Barlow, 1967). Dewey’s ideas have, at various times, been rediscovered, modified and brought back into practice as “innovations” in education. The key to success of these “innovative” practices, however, remains the local focus.

Planning agricultural education programs around community needs may be even more important now than in Dewey’s day, because the traditional clientele base for agricultural education is experiencing fundamental changes. Far more people now walk on concrete than tread the soil, and in the 1990’s this trend is likely to continue (U.S. Bureau of the Census, 1988). The growing trend toward urbanization is reflected in the fact that only three percent of the U.S. population now live on farms (U.S. Bureau of the Census, 1988).

Agricultural educators must recognize and understand the changing nature of rural areas (Frick, 1988). A duality of conditions currently exists in rural areas across the nation which makes it difficult, if not impossible, to generalize about rural communities. For example, the current problems in the agricultural sector have contributed to the out-migration of working-age people, resulting in large numbers of rural elderly residents being left behind (Hite, 1987). Some counties in the Mid-West currently have more than 20 percent of their population aged 65 years and over (Committee on Organization and Policy, 1986).

A shrinking tax base is but one of the serious problems in many of these declining communities. Decision makers in these areas must face the harsh reality that older residents living on a fixed income are extremely reluctant to vote for tax increases for a school system when their children are grown and, in many cases, no longer living in the community. Conversely, some rural areas across the nation have experienced an increase in population (Doekson, 1987). These communities may be divided into two categories: (a) areas that have attracted retirees and (b) areas that have grown due to their proximity to expanding urban centers. Both have experienced problems in funding education. People who retire to growing rural areas, like their counterparts in declining areas, also tend to oppose educational tax increases (Southern Education Foundation, Inc., 1987).

In growing rural communities, new, younger residents may support general education initiatives; however, they
may oppose agricultural education programs because they were raised in an urban environment and have neither an appreciation for, nor an understanding of, the importance of agriculture. Thus, teacher knowledge of the dynamics of community growth and change is critical to planning effective agricultural education programs, regardless of the nature of the area.

**How To Plan**

Teachers of agriculture rely on different methods to analyze community needs. Many, however, depend on "gut level" intuition to plan their programs. This approach may be adequate to deal with information from the immediate past, but its major drawback lies with its ineffectiveness for planning future programs. Many rural counties are no longer dominated by agricultural influences. Instead, they are affected by a combination of agricultural, industrial and commercial forces (Morgan, 1989). In order to keep abreast of these changes, educators must have access to current information so they will not become outdated in their thinking and planning. In short, intuition is generally a poor means for planning effective programs.

Complex studies of local areas — often conducted as part of graduate programs and involving survey research techniques, statistical analysis and detailed reports — make up another method. In addition to the problems of time, money and other resources necessary for this method, many teachers lack the expertise to plan, conduct and interpret such studies. Graduate courses, guidance from university personnel, and access to methods books can help, but they do not change the amateur nature of many of these investigations. A better method is needed.

**How to Conduct a Community Study**

Effective studies of local communities can be conducted using secondary data sources. A vast amount of information is regularly collected by numerous federal, state and private agencies such as the Census Bureau, Vital Statistics Department, Department of Agriculture, Department of Education, Chamber of Commerce, utility companies, banks and others. These sources, covering a multitude of subjects, are available for all 3,138 of the nation’s counties (U.S. Bureau of the Census, 1988). They are presented in a variety of different printed and computerized formats. With a modest amount of effort, teachers can access and utilize literally reams of useful facts and figures. These data sources are often available free or at low cost. Local or regional libraries frequently have the sources of information needed. The key to this method, however, is to put the information into a useful format so that it can be interpreted and used in a constructive manner.

The information in Figure 1 reveals the major variables necessary to conduct a community study. The list, however, is not exhaustive and many other categories are available. The sources listed are basically the same for all states.

Several difficulties exist with using local data. Because much of the information is available on a county level, it may present some problems in communities that are at the edge of a county, where several communities make up a county, or where people live in one county but work in another. When this occurs, the scope of the study should be expanded to include pertinent facts from the surrounding area.

The number of farms is just one component of the community study. A number of other aspects must be explored. Is the population growing or declining? Is the growth from natural increase or due to new residents? How has the age structure changed? What is the per capita income level and how does it compare to state, regional and national averages?

The final report on the community study may take many forms. Students at The University of Georgia utilize computers to generate both text and graphics for their community studies. Advanced graduate students have even submitted videotapes to supplement printed materials.

Regardless of the format, a critical element is the summary section. Unless the facts and figures are summarized and implications made, the report is of little use. The study must be more than a list; it must be an analysis of important trends which helps the reader to make sense of all the facts and figures. Practical application should be the guideline in preparing the report.

**Making Practical Applications**

Community studies developed by pre-service students at The University of Georgia have been used in a number of ways. They have helped students to prepare for apprentice teaching (student teaching) assignments, to develop high school lesson plans and to promote adult programs. The community study also forms an important document in the dossier of soon-to-graduate students. Principals, vocational supervisors and superintendents have been favorably impressed with the job knowledge and reporting ability of the applicants, based on their community studies. In addition to the successful placement of the participating students, requests for copies have been a frequent result.

For the employed teacher, the community study has both internal and external uses. Internally, besides its use for long-term planning, the report provides the basis for curriculum development. It also gives background and justification for requisitioning supplies, equipment and facilities. Furthermore, the graphics component can be used as a teaching tool for introducing units of instruction. Overall, the study provides localized teaching materials that can help spark student interest in a variety of topics.

External uses include such activities as orientation of advisory groups, participation in civic organizations and involvement of teachers of agriculture in community development activities. In addition, teachers can use the results to assist with chamber of commerce functions such as the promotion of local products. The report is also useful as evidence of professional improvement.

The recently released national study, *Understanding Agriculture: New Directions for Education* (Committee on Agricultural Education in Secondary Schools, 1988), emphasized the need for change in vocational agriculture education in order to better meet the needs of American communities. The report recommended that instruction be provided both in developing agricultural skills and in promoting general knowledge about agriculture. To meet this new demand on the program, agricultural educators must gain

*(Continued on page 14)*
Grassroots Information for Planning in Agricultural Education

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Figure 1. Categories and sources of data for a community study.
Making Summer Work Experience Part of the Instructional Program

(Continued from page 19)

in helping to achieve this goal can be through productive and realistic summer work experience.

REFERENCES

Teaching Tips: Getting Students Interested AND Motivated

(Continued from page 8)

motivate students to learn more in this area, and this motivation will extend much further into the area of study than interest generated through the first two types of interest approaches. Other examples of "felt need" interest approaches include having students (1) attempt a grafting exercise, (2) calculate fertilizer recommendations, (3) select a seed variety for a given situation, (4) attempt a specific weld, (5) make computer entries, and so on. Every felt need interest approach must contain all of the following elements in this order:

1. A provocative, realistic situation is presented to the class (like the examples listed above).
2. Students are forced to take some action or make some decision in response to the provocative situation.
3. Students' actions or decisions are challenged/questioned by the teacher.

In order for the students to be motivated to learn more, teachers must (1) have a logical sequence in the interest approach, (2) ask specific questions to challenge students' knowledge, and (3) avoid acknowledging answers as right or wrong. A good way to analyze your interest approaches and verify your use of these strategies is to make audio or video recordings of your classes.

Interest is a feeling of concern or curiosity about something. Motivation is a desire to act. We need to present motivational interest approaches as we begin new problem areas or topics of study, and use all types of interest approaches to maintain interest throughout the problem area. We know from research that teachers can influence student levels of motivation over a period of time. So, let's get those students both interested and motivated!
Making Summer Work Experience Part of the Instructional Program

Many secondary level agriculture teachers today view the entire community as the classroom. The potential value of these commonly available resources within the typical community is virtually unlimited. Utilizing some of these resources in the form of structured work experiences for agriculture students during summer can add a very productive dimension to programs.

Preparing Students for Summer Jobs

Most of the learning activities in vo-ag programs can have a direct benefit to the students in terms of being successful on the job. Numerous studies have consistently identified the following general desired characteristics for entry level employees: dependability, completing assigned tasks, following directions, having a proper attitude and being a good team member (Crain, 1984; Malizio & Whitney, 1984; National Academy of Sciences, 1984). Whether or not these general skills can be taught as competencies in the traditional sense is debatable; however, it is easy to recognize that a typical vo-ag program provides an excellent opportunity for these skills to develop. The value of these skills in obtaining and keeping summer jobs is just as important for permanent jobs. In preparing students for summer jobs, the instructor must be cognizant of these characteristics, and should always stress their importance to students as a part of the regular instructional activities.

Helping Students Identify their Career Interests

The concept of vo-ag teachers as career counselors is certainly not new. In fact, this has traditionally been a positive element of the program. Because of the opportunity for extended contact between teacher and student through FFA, SOE, etc. the vocational agriculture instructor is in an ideal position to provide valuable and realistic career counseling assistance to students. Obviously, cooperation between the agriculture teachers and the school's guidance personnel is imperative. Both can share information and can work together for the benefit of the students.

Kapes (1985) identifies four traditional areas of vocational (career) guidance:

1. Inventory (assessment). Many reliable instruments are commonly used by high school guidance personnel. Vocational agriculture teachers should take advantage of the information provided by these standardized instruments.

2. Information. Relates to the student's knowledge about occupational and educational requirements and conditions. This concept can be and is a natural part of the regular instructional program. It should be taught both directly and indirectly.

3. Counseling (decision-making). Teachers should make resources available to the student that will help them better match their interests with the job opportunities that are available.

4. Placement and Follow Up. Whitfield (1988) observes that the crucial issue in placement is the need of the student to acquire and use knowledge, attitudes, and skills necessary to make the transition from school to work. The vocational agriculture teacher can play a key role in helping to encourage this process.

For years, teaching the value of the work ethic and employment expectations has been the major focus of all vocational programs. Admittedly, there are many valuable "life skill" components of vocational agriculture programs that are not directly connected to employment; however, the fact remains that employability as a societal expectation remains the major justification of all vocational programs. Information related to summer jobs can come from a number of sources including advisory committee members, advertisements, other school personnel, employment security offices, etc. Established teachers are frequently contacted directly by employers. Summer positions can be shared with students through bulletin boards, posters, FFA meetings, class announcements, etc.

Follow-up of students while they are on the job can be structured as part of the SOE, a cooperative arrangement, or on an informal basis depending on the individual student and the circumstances. Regardless of the arrangement, the importance of the follow up activity must not be overlooked.

(Continued on page 19)
This month's book review will focus upon two books published by The Interstate Printers and Publishers and cover two widely divergent topics. Specifically, the topics are rabbit production and beginning teachers. Perhaps their one common characteristic is that they both grow and change rapidly.

The rabbit production book is reviewed by Dennis W. Eaton who is currently a lecturer of Agricultural Science at Esikhwini College of Education in Zululand, South Africa. He recently completed his master's degree with the Department of Vocational-Technical and Adult Education at the University of New Hampshire. Much of his teaching experience in South Africa over the past seven years has included instruction in rabbit production. A great deal of animal production and management can be taught with rabbits with limited input. This review will be of value to those interested in introducing rabbit production into the curriculum.

The review on supervision of beginning teachers is in the capable hands of Dr. Alfred J. Mannebach. Dr. Mannebach is a Professor of Education at the University of Connecticut and currently serving as President-Elect of the American Association of Teacher Educators in Agriculture (AATEA). He has worked as a teacher educator and researcher in agricultural education for 20 years. Much of his experience has been in the area of supervising students and beginning teachers. Any teacher assisting a new teacher in getting started may be interested in his review of this book.


This sixth edition of _Rabbit Production_ is a very handy book to have for anyone involved in the raising of rabbits. It is written for the average reader who needs to find information that is not too technical and scientific. It is simple enough for the beginner to read, understand and begin an operation, yet also suited to the needs of the experienced rabbit raiser.

The book covers all aspects of the rabbit raising enterprise including a brief history, how rabbits are used, and a geographical lesson on world rabbit production. Chapters 3 through 6 describe the breeds, equipment needed and management of an operation. Chapters 7 through 10 cover the nutrition, feeding and diseases of rabbits. Reproduction and genetics is well covered in chapters 11 through 15 with more scientific look into the breeding of rabbits.

The next seven chapters deal with a variety of topics including rabbit shows and judging, the three main production enterprises, i.e., fur, wool and meat, and tropical rabbit production with emphasis on international development. The preparation for and marketing of rabbits and their products is very well covered in the final two chapters.

_Having been involved with teaching rabbit production in developing countries, I find this book a very good resource for the teacher as well as the student. It would make an excellent textbook for covering this topic in class. The language is suitable to the commercial producer and the amateur alike. It is a topic well worth pursuing for present and future agricultural needs for both the domestic and international production needs._

_Dennis W. Eaton Lecturer - Agricultural Science Esikhwini College of Education Zululand, South Africa_

_Rabbit Production_ is a practical and useful guide for the vocational supervisor who must maximize on-site visitation time in the beginning teacher's classroom. The techniques explained and illustrated deal with the formative role of supervision and evaluation. They help teachers improve their performance by providing assistance in determining how to teach and how to direct the learning process.

The objectives of the book are presented explicitly in the foreword and preface. The author provides a brief overview of supervision and evaluation before presenting supervision styles and methods in more detail. He then guides the reader in choosing a style of supervision, emphasizing an affirming approach which is effective in helping to meet the esteem needs of teachers. Practical information from scheduling a visit to holding the feedback conference is presented. A format for systematic observation, notetaking, and analysis is outlined and effective supervisory principles are summarized. Appendix material adapted from actual observation narratives by the author is an extremely valuable part of the book. A relevant bibliography is also presented.

_The book covers all aspects of rabbit raising including a brief history, how rabbits are used, and a geographical lesson on world rabbit production. It is written for the average reader who needs to find information that is not too technical and scientific. It is simple enough for the beginner to read, understand and begin an operation, yet also suited to the needs of the experienced rabbit raiser._

_The next seven chapters deal with a variety of topics including rabbit shows and judging, the three main production enterprises, i.e., fur, wool and meat, and tropical rabbit production with emphasis on international development. The preparation for and marketing of rabbits and their products is very well covered in the final two chapters._

_Although the focus of the book is on the beginning teacher, supervisory principles and procedures presented can be helpful when supervising student teachers as well. Any teacher educator or supervisor will be able to profit from the information presented in this useful book._

_Dr. Alfred J. Mannebach Professor of Education University of Connecticut Storrs, Connecticut_
Summer Program Accountability

Use It or Lose It! We have all heard that saying before. The Law of Use and Disuse (Osborn, 1975) can be paraphrased in describing agricultural education programs — in every program the frequent and sustained use of each component, little by little strengthens the component, develops it, and increases it in size, and gives it power in proportion to its use. Whereas the lack of use of the same component weakens it, deteriorates it, diminishes its powers, and ends by causing it to disappear. Does this sound like the agricultural education summer program component?

Having a summer contract is not enough, the program must be used appropriately and the community must be made aware of activities and accomplishments. To reach this goal the summer program must be planned, executed, and reported in a manner that is acceptable to the administration and the community.

Education at all levels is being called to accountability. Each program component is in question. For agricultural education summer programs the key to accountability is communication.

Planning and Sharing the Plan

The vocational agriculture teacher or teachers in a multiple instructor department must set the local priorities. They must decide on the number of days required for supervised occupational experience (SOE) visits, determining SOE sites, agricultural skills practices, group and individualized instruction, facility maintenance, the multitude of activities that are appropriate for the local program. Teachers must allocate the days available based upon program objectives and community needs. New students who register for vocational agriculture courses should be visited during the summer prior to enrolling in the course. For example, of 25 freshmen registered for vo-ag courses and five can be visited per day, five days need to be scheduled for the activity.

Teaching short courses and classes with credit toward graduation deserves serious consideration as a summer program activity. Timing, as a principle of learning, has often been used as a justification of the summer program. Many agricultural activities take place in the summer. Therefore, students have a great need for information and summer instructional activities provide the best opportunity for application. A course in integrated pest management, when pests are a concern, or combine maintenance and calibration just before harvest would provide an excellent opportunity to practice and apply new knowledge. Credit courses during the summer months could help alleviate problems in schools' graduation requirements which make participation in vocational agriculture courses difficult.

Summer program planning should take into consideration all summer activities already on the local, area, and state calendars. Activities such as State FFA Conventions, FFA camping programs, vocational agriculture teachers' conferences, professional development workshops, and fairs must be given priority. Activities with local agencies, extension field days, judging clinics, and agriculture expositions also have a place in the summer vo-ag program. These can be combined and translated into a summer program calendar for approval by the advisory committee and administration.

Seeking approval for the summer program is the first phase in the communication process. Making supporters and decision makers aware of summer plans is vital. Copies of the approved summer program should be given to the principal, other appropriate administrators, and advisory committee chair.

Weekly Planning and Communication

Each week of the summer program should be planned to make the best use of the teacher's time. The weekly program should include a mix of time spent in the community and at school. Time spent in the community with students, young farmers, and employers provides good program visibility as well as meeting program objectives. Too much time spent at the school is often viewed negatively by community members unfamiliar with all the components of the vocational agriculture program.

The weekly program should be submitted to the administrator supervising the summer program. If secretaries are 12 month employees they should also receive copies of the weekly program to answer questions that may arise or assist students in reaching the teacher. Copies of the weekly program could be posted at school for informational purposes. File copies for use in developing future summer programs.

Reporting is a Part of Public Relations

When reporting, materials need to be submitted to the state level for funding, and to individuals at the local level for accountability and for public relations purposes.

(Continued on page 23)
Increasing FFA Effectiveness During the Summer

(Continued from page 6)

Activities in the Cooperation committee area may overlap with other committees, but are also important for instilling in members their responsibility to others. Members can cooperate with the local county fairs, civic groups, farm tours, and other agricultural meetings and activities held in the community during the summer.

Community service activities will vary from one community to another. Members acquire leadership abilities they need for the future and at the same time, render a valuable service. Activities through local farm bureaus, local charities, county fairs and shows, city parks, day camps for children, and local civic groups will benefit the community and members. Members can provide educational programs in agriculture for children or maintain a county park or playground.

Leadership activities in the summer may include FFA camp, convention, and other state and regional meetings. FFA camp provides leadership experience and skills for FFA officers and committee chairpersons. There is no better time to get the leadership of the chapter together with advisors to plan activities, work together, and become a team for the upcoming year. A week, or even a few days in the summer can provide time for members to develop the skills needed to become good officers, practice speaking and communication skills, and share FFA activities and experiences with other FFA members from their area. Since most states have FFA Leadership Training Centers or camps, this activity should be a priority when planning summer programs.

The Earnings and Savings committee can encourage members to earn money themselves or through projects to benefit the chapter. Many chapters have income producing livestock, crop, greenhouse, and nursery projects that require summer member participation in order to insure success. Home projects or Supervised Agricultural Experience programs can also provide an income for members and give them a chance to become familiar with expenses, income, loans, interest rates and inventory. Since most of these projects are carried out primarily in the summer, this becomes a very important activity.

The Conduct of Meetings committee may assure regular chapter meetings during the summer. Chapters should get together at least one time to plan and conduct activities. Summer provides time for a special meeting at night or on the weekend that includes a recreational event. Since new officers have recently been installed, this allows them to become more acquainted and comfortable with their responsibilities and speaking parts for FFA ceremonies before the school year begins.

Scholarship committees can provide summer opportunities for older members to tour local colleges and universities so they can make plans for after graduation. Displays at the county fair, state fair, and other functions are excellent opportunities to show people agricultural career opportunities.

In the summer, the Recreation committee can go into full swing while members are out of school and possibly have more free time. At a summer meeting, a cook out with another group, or a sports activity allows members to socialize and get acquainted before the school year begins.

Public Relations should not let up during the summer. The FFA is still going strong, and the community should be made aware of the activities. With better weather, people can get out more and see the FFA members working and learning. A display at the county fair, pictures and articles in the local paper and news on the radio and TV help spread the word about the active chapter.

Alumni Relations can allow members to associate with alumni members through recreational activities, summer FFA meetings, or through job placement for the summer months. Alumni members can also be of benefit to members involved in judging teams, showing livestock, and leadership activities. Alumni members are very important to summer programs.

Not all FFA chapters are alike, but they have similarities. Goals and objectives are the same but all chapters have unique ways of carrying out their goals in summer programs. FFA should not be dormant in the summer, and chapter officers and advisors owe it to themselves and their members to keep their programs strong and vital.

Making Summer Work Experience Part of the Instructional Program

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Summer Experiences in the Instructional Program

Allowing students to share their related non-school experiences has always been viewed as a sound educational activity. The value in terms of creating interest and motivating is extremely high. The realism of working conditions on a real job can provide a new source of feedback in shaping both the content and methodology of the instructional program. Students with direct work experience will have a new basis for understanding the importance of those generally desired employee characteristics and how they can be developed. This can enable students to view the school experience from an entirely new perspective.

Employers as Evaluators

After employers have had an opportunity to observe the quality of a program's product, they are in a good position to make objective judgments concerning both, the general characteristics as well as the specific competencies. Evaluative comments and suggestions from employers can be utilized in a variety of ways to help monitor and shape instructional programs. In addition to gaining the resource support of employers who have had a positive experience with students, the likelihood of future placements as well as permanent employment is greatly enhanced. In those cases where concerns or possible weaknesses are identified, the employer's advice may be beneficial in making instructional or program improvements.

The major goal of vocational instruction has always and continues to be entry level employment. A key element

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Let's Not Philosophize Ourselves Out of Business

All of us have had experience with a good idea. With high expectations, we have taken the idea out into the real world and were shocked to see it fizzle and die. There may be a number of factors contributing to the failure. Often high on the list of reasons for failure is the gap between philosophy and reality.

As a teacher educator working with teachers in the field, I have experienced this philosophy-reality gap on a number of occasions. At times, implementation of my carefully studied philosophy would have meant the closing of a valuable program. In my "exacting analysis", I simply hadn't visualized some of the factors that caused the program to be effective and well respected in the school and community.

Just such a gap is my greatest concern with the National Study. While I agree with much of the philosophy expressed in the study, I am still struggling with some of the conclusions. Something just doesn't seem right. I think much of my concern is because the philosophy developed in the study has ignored some extremely important factors which have made vocational agriculture/agricultural education successful in the past. There is a philosophy-reality gap that must be resolved before we can start to implement changes which are needed in agricultural education.

The Philosophy

Let's look first at the philosophy (as I see it) that is a result of the National Study. Major points that I see coming from the study are:

1. Vocational agriculture needs to adapt to changing times.
2. People in this country need to know more about agriculture.
3. The FFA needs to change to meet changing times. A vocational agriculture program is needed, not an FFA program.
4. We need to look at some changes in SOE in order that more students might gain from an entrepreneurial experience which has been the cornerstone of vocational agriculture programs in the past.
5. We must accept the fact that many of the students who enroll in vocational agriculture do not plan to stop their education at the high school level.
6. The definition of vocational education (agriculture) needs to be expanded or changed to reflect that it is more than just training people for a specific field.

I agree with all of the above. However, I think before we begin to look at implementing any of this philosophy, we need to pause for a moment and look at what has been taking place in the profession, that is, the reality.

By Paul Vaughn
(Dr. Vaughn is a Professor in the Department of Agricultural and Extension Education, Mississippi State University.)

The Reality

The following represent my observations of the "real-world" happenings in agricultural education.

1. Though it has not changed as much as perhaps it could, I believe vocational agriculture/agricultural education has changed more than the National Study Panel gives it credit. I think the National Study is pessimistic in its view of what is currently taking place in agricultural education. While it is true that a large number of vocational agriculture teachers classify themselves as production agriculture teachers, my experience indicates that these individuals teach a tremendous amount of non-production agriculture. Just one example: a young man is doing an outstanding job of teaching food processing. Every single student who completes his vocational program could start to work today at any food processing facility, wholesale or retail, in this country and never miss a beat. Yet, he calls himself a production agriculture teacher. I could name dozens of other teachers with similar situations, and it is likely there are hundreds. I think a more valid criticism of agricultural education might be not what is taught, but what instruction is called and how well that instruction is publicized.

Failing to recognize that production agriculture teachers teach a considerable amount of non-production agriculture is unfair criticism of current programs and unwise in insisting that programs be completely revamped.

2. The FFA is the best thing going today in vocational agriculture. Despite the fact that we often criticize the FFA and insist that it should not drive the program, the reality is that without the FFA, there likely would be no program to drive. Elimination of the FFA would mean a large number of students would not enroll in the program, many administrators would not be as supportive as they are, and community support would dwindle.

We all know that agricultural education started without the FFA, but sometimes we forget how beneficial the FFA has been to the program. I recall a conversation a number of years ago with Dr. Walter Newman, President Emeritus
of Virginia Tech. Dr. Newman was state supervisor of agricultural education in 1926 when the Future Farmers of Virginia was founded and was one of four educators who conceived the idea for the organization. Several of us in agricultural education were visiting with him to talk about the beginning of the FFA. Dr. Newman told us something that day that I never forgot. He said, “FFA saved agricultural education.” He noted that vocational agriculture was faltering and needed something to keep it going. That “something”, he said, was the FFA.

I firmly believe the FFA is essential for agricultural education to survive today. FFA is what usually attracts a student to the agricultural education program — rarely is the reverse true. The FFA is the best recruiting device going.

3. The FFA does not deserve much of the criticism that it has received lately. I used to be amused by, but am now getting tired of, hearing the FFA being blamed for many of the ills of agricultural education. Those complaints almost always come from inside the profession, rarely from outside. I suppose self-flagellation is sometimes useful, but it can certainly be overdone. In the past 20 years that I have been associated with agricultural education, I have heard only praise from legislators, school administrators, parents, students, state board members, community leaders and others for the FFA. Changes certainly need to continue to be made in FFA to keep it up to date and to enable students from all aspects of agriculture to participate. But let’s be careful as changes are made. We have a good thing. It is extremely popular and well respected. Let’s never forget that — even as we work to make it better.

4. Competitiveness in FFA is one of the things that has made it such a great organization. Competition in the FFA has been one of the great motivating factors in agricultural education. It has been a means of driving students to excel, to cause them to do their best. Thousands of young people can point to participation in FFA contests (myself included) as a motivating factor that allowed them to excel, often for the first time in their lives. If we push to eliminate competition within the FFA, I fear we will develop many of the problems that other youth organizations have suffered in the past. For the most part, my impression has been that those youth organizations that dropped competitive activities have been struggling.

For that reason, I am shocked by the statement in the National Study which said, “Based on evidence . . . the committee finds that some vocational agriculture teachers are unduly driven by a desire to help students excel in traditional production-oriented FFA contests and award programs.” I can’t help but ask “what evidence?” I have never seen a study which indicates that participating in a production agriculture contest has been harmful to individuals or their future careers. Or that there is something wrong with causing students to excel. Nor have I seen an objective research study which has shown that teachers who work hard at judging contests do a poor job in the classroom or laboratory. My experiences have been just the opposite, that is, those teachers who train students to excel in production-oriented contests are some of the most dynamic in the profession and do an outstanding job of teaching in both the classroom and laboratory. It also has been my observation that these teachers also train students to excel in non-production contests and award programs.

I find the remark to be an undocumented, biased statement which diminishes the integrity of the entire report. It would have been better stated (and certainly could be better defended) if it had said that production agriculture contests should continue to be changed to reflect current trends in agriculture/agribusiness.

5. A lack of interest in agriculture is not the major reason for a drop in enrollment in agricultural education. One of the major reasons for a drop in enrollment in agricultural education is not because of a lack of interest in agriculture, but because of the difficulty students have in enrolling in an agricultural education class. The so-called educational reform that has taken place in many states has made it difficult for the young person today to enroll in agricultural education and meet other requirements for graduation. I am astounded that the National Study did not address this issue, as I think it is the number one concern in agricultural education today.

6. Despite the specialized nature of agriculture/agribusiness, there is still a need to teach aspects of production agriculture. While it is true that we need to expand the curriculum more in agricultural education, we must recognize that production agriculture is the basis around which all agriculturally related occupations revolve. No matter how specialized agricultural education programs become, instruction in agricultural education should include some aspects of production agriculture. The National Study makes this point, though inadvertently, when it lists examples of agricultural illiteracy. Virtually every example that is given is about production or agriculture. How foolish it would be to teach people outside of agriculture about production agriculture while ignoring it as part of the curriculum for those who study agriculture.

We should also recognize that many students are attracted to agriculture by various aspects of production agriculture. The thrill of working with animals and plants has always been an attraction to young people. We can capitalize on that interest only if we include a portion of it in the agricultural education curriculum. Production agriculture does not have to be (nor probably should it be) the major component of agricultural education, but failure to include it in the curriculum will be a big mistake.

7. Vocational agriculture teachers have, for a long time, realized that a large number of their students are going on to college. For years, vocational agriculture teachers (with the assistance of willing administrators) have adapted their curriculum, SOE requirements, and other activities to encourage college bound students to enroll in agricultural education. They know that keeping college bound students out of high school agriculture courses is a big mistake. We need to study how teachers have adapted their curriculum in the past and use ideas gained from this study as we plan for the future. One idea which I hope we approach with caution is giving science or math credit for agriculture courses. This seems an obvious solution, but we should be aware that this may lead someday to science or math programs dictating curriculum in agricultural education. The idea which has the greatest merit (to me) is the concurrent enrollment plan that is being utilized in Utah, and which was described in the February issue of the Agricultural Education Magazine. It appears to have the best potential of all

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for attracting the college bound student while still maintaining the identity of agricultural education.

8. The most important factor in the quality of an agricultural education program always has been and always will be the local teacher. This brings up two major points:

1. Educational reform has provided a number of obstacles for the prospective teacher. Regardless of what is taught, it will be of little value unless we continue to attract the outstanding individuals who have made our programs so successful in the past. I am disappointed that the committee did not address this issue. It must be addressed if agricultural education programs are to continue.

2. Teachers are the ones who are out on the firing line, and they must be listened to before changes are made in local programs. Many of the problems that currently exist within our local agricultural education programs will not be solved by changing curriculum, names or programs. Local teachers are aware of these problems and their advice is essential. They must be heavily involved in making changes.

Summary
Much of the philosophy that has come out of the National Study is sound. But as we begin to implement the philosophy, we need to temper it to match the real world. We must recognize there are many factors, important factors, affecting agricultural education that were not addressed in the National Study. These factors must be dealt with before we make any changes in agricultural education. Otherwise the changes will be useless, or worse, harmful.

We need to listen closely to those out in the trenches, especially when we begin to change the things that have made agricultural education strong in the past. These people are the ones that have to implement the changes, and they know the pulse of the local community. We cannot ignore what they have to say. We must encourage enrollment of both the college-bound and the non-college-bound student. Working closely with colleges of agriculture is essential.

Finally, let's not become so critical of our programs that we become our own worst enemy. Let's recognize and retain what has made us successful in the past. Most of all, let's not philosophize ourselves out of business.

REFERENCES & NOTATIONS

1. Others in attendance at the meeting which took place in Fall, 1976 were Jim Clouse, Jack Shinstock, and David Coffey.


Alternative Summer Strategies for Secondary Agriculture Programs

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workers. The teacher acts as a broker by advertising for odd jobs in the community and matching students to the jobs on a daily basis. The teacher also provides supervision and remedial training. Yes . . . it takes a lot of time and yes . . . there can be problems, but where else does a young person get experience. Next year you can furnish work references for these students or place them in cooperative work settings.

5. Summer Courses and Workshops — The most important thing a teacher can do is teach . . . so why not provide some summer classes, especially in areas where students have difficulty obtaining summer work? Many subjects are readily adaptable to workshop settings, but there is no reason that full summer classes could not be taught.

6. Shadow Management — This strategy should be reserved for your best students. It is short term in nature and requires the cooperation of local leaders in agricultural businesses. Students are allowed to be active observers at a place of business. They have a chance to look behind the counter and experience what goes on within the business structure. Students and agricultural managers must be carefully selected for this project to make it work well.

Perhaps by now you are thinking, "Hey, this guy is living in a dream." Let me simply suggest that most of the proven strategies which high school agriculture teachers follow today began as somebody’s dream . . . the whole program, in fact, was conceived in dreamland and has evolved over the years. Along the way other “dreamers” have added to the program structure.

Be A Calculated Risk Taker
In the world we live in today the old adage "Nothing ventured . . . nothing gained" holds true. While we cannot expect every project we cultivate to yield high returns, we can also be assured that we will reap no harvest unless we have carefully sown the seeds of success and nurtured the crop. I am not suggesting anything new . . . just some different varieties of proven teaching strategies which may be adaptable to the education climate in various local school settings. Imagine the impact in a community when the entire focus of the agriculture summer program is shifted to learning activities of students and away from teacher contract issues.

Summer agriculture programs exist to fulfill the learning needs of students. As those needs are satisfied, the needs of teachers and school administrators can also be filled. The key to successful agricultural summer programs lies in dreaming a little, planning a lot, implementing, adapting, and promoting student learning activities, and focusing on students daily.

REFERENCE


THE AGRICULTURAL EDUCATION MAGAZINE
Summer Program Accountability

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Vocational agriculture teachers can provide program accountability by staying current on travel reimbursements or other summer program forms required by local and state agencies. Paper work completed in good order is a sign of a professional and is a valid use of summer contract time.

Internal Public Relations

Public relations has been defined as doing good and getting credit for it (Reilly, 1981). Vocational agriculture teachers must address their public relations efforts to both internal and external audiences. Internal publics are those that are within the system. Internal public relations assures support from within and provides information on program importance and objectives.

The most effective media for communication with internal publics are memos and notes to key individuals about program accomplishments and highlights. Teachers should not underestimate the importance of face to face communications as a means for creating positive public relations for the summer program. Internal publics should receive copies of newsletters and press releases designed for the external publics. This prepares administrators and support staff to respond to questions that may arise.

External Public Relations

External publics are those individuals and organizations that are not directly a part of the school system. External public relations creates a positive image within the community for the summer program. The best types of communication media for external audiences are newsletters, newspaper articles, and summer program project tours.

Newsletters, for FFA members and parents, and press releases should include upcoming events, highlight outstanding or unusual supervised agricultural experience programs, and noteworthy accomplishments/participation by students and teachers. The more individuals know about a program or activity the more supportive they will become. The support can be later translated into donated time, money, and other resources.

Individuals who have a personal experience with a program are most likely to lend their support. Vocational agriculture teachers from other schools, advisory committee members, and other administrators can be invited to tour outstanding SOEP’s, both production and agribusiness. The added benefit is that, when students, parents, and/or employers are recognized with this type of activity, their program loyalty also increases.

Open the Door to a Successful Summer Program

Vocational agriculture teachers must use the summer program component wisely and be accountable for the way the time is spent. The most productive way to be accountable is through a good communications effort.

Communication by way of prior planning in a written form is the best place to start. Administrator and decision maker awareness of a worthwhile and well planned program is essential to gain their support. Incorporating both school and community visibility in the plan is necessary.

Weekly planning as the summer progresses is necessary not only for good time management, but to keep the lines of communication open with administrators and support staff. Placing copies of the weekly plan with key individuals and then following the plan demonstrates professionalism and program accountability.

Using the summer program for a public relations effort is a valid use of contract time, if it is part of the approved plan. Public relations is also the best means of gaining community support for the school and all components of the vocational agriculture program. The more individuals know about a program and the more involved they are with the program the greater their level of support. The goodwill established by a creative public relations effort will last longer than the summer.

In many educational and planning courses students are told to be accountable; "you must plan your work and work your plan." The additional part of accountability is keeping administrators and community decision makers informed.

"Use it or Lose it," is the key to keeping the summer program viable. Plan and use the summer program well, and then tell the world about it.

REFERENCES

Strengthening Summer Programs Through Supervised Occupational Experiences

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REFERENCES


Hamlin, Herbert. (1962) PUBLIC SCHOOL EDUCATION IN AGRICULTURE: A

GUIDE TO POLICY AND POLICY MAKING. Danville, Ill.: The Interstate Printers and Publishers.


JUNE, 1989
Stories in Pictures

AVA Agricultural Education Policy Committee Executive Members meeting with Dr. Guiton, Assistant Secretary for Vocational and Adult Education. Shown left to right: Dr. Kirby Barrick, Secretary; Dr. Dewey Stewart, Vice President, AVA; Dr. Bonnie Guiton; Dr. Phillip Zurbrick, President AATEA; Mr. Duane Watkins, President NVATA; Mr. Tommy Johnson, President NASAE. (Photo courtesy The National Council)

University of Georgia pre-service students utilize graphics software in community studies. State Agricultural Education Specialist Dennis Ashworth provides instruction. (Photo courtesy Maynard J. Iverson)

Nursery Judging Team with ribbons. (Photo courtesy Katherine Day)

Kentucky FFA Leadership Training Center. (Photo courtesy Katherine Day)