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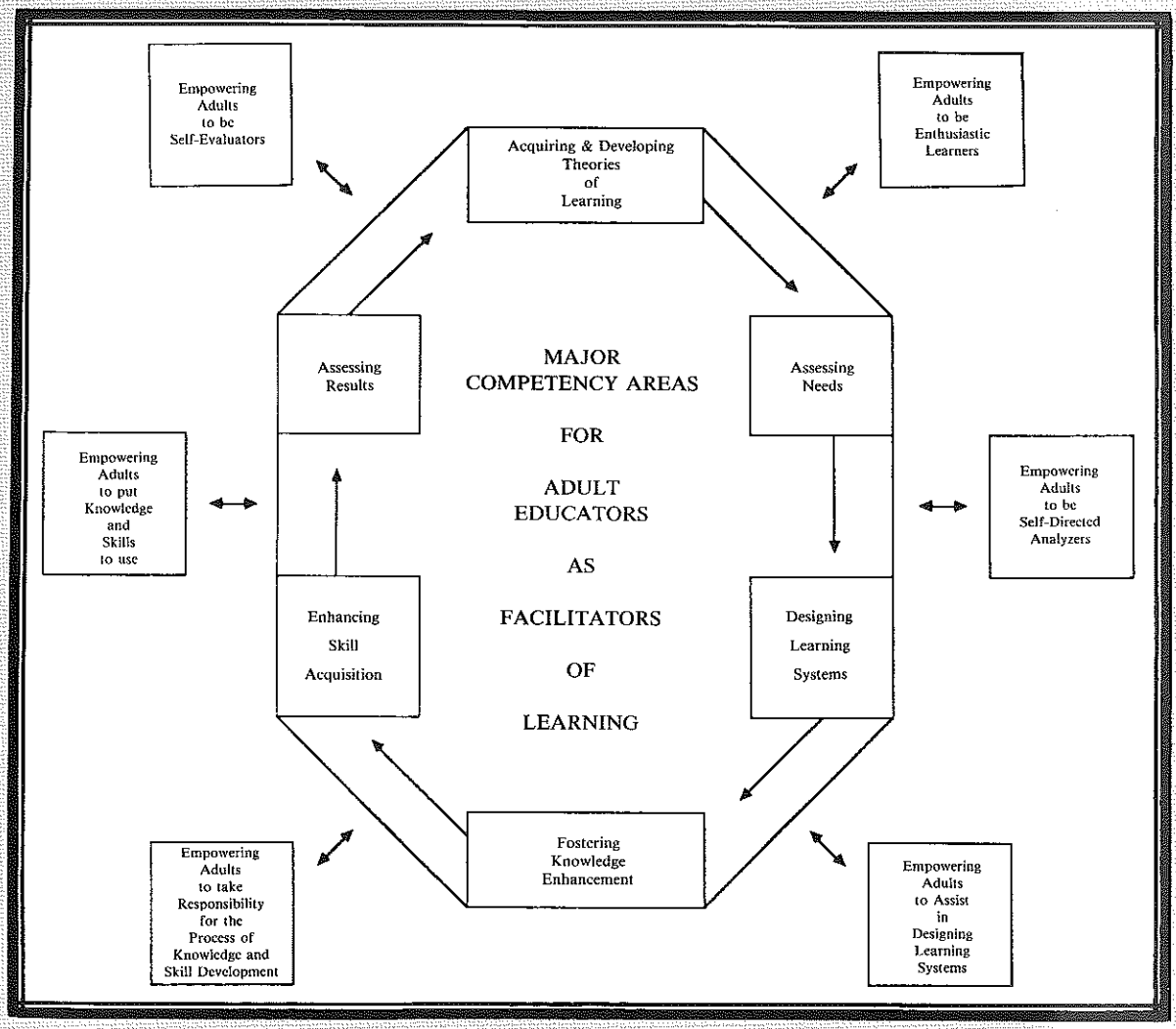

THEME: Adult Education

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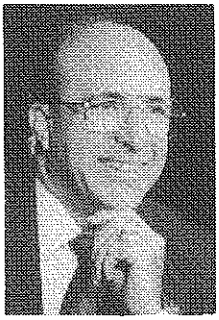
Comprehensive Agricultural Education



By Phillip R. Zurbrick, Editor

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

The term "comprehensive" has been widely used in education to describe programs or schools that were extensive and all inclusive in terms of programs or subject matter included in the curriculum. A "comprehensive high school" is thought of as one offering programs in the areas of: 1) college preparation, 2) occupational preparation as well as 3) general studies. A comprehensive education program in an academic area would include all the recognized subject matter content in that area. Thus, a comprehensive secondary school science program would include courses in all the so-called basic sciences including chemistry, biology, botany, earth science, and perhaps physics. Schools failing to offer all of the science courses would not be considered comprehensive in terms of their science program. Similarly, schools offering only a college preparatory program and vocational technical schools are not described as comprehensive high schools.

It is time for agricultural education to recognize the term "comprehensive" for schools offering a complete agriculture curriculum at the secondary school level. These would include those schools having both programs **in** and **about** agriculture available to high school students. A comprehensive agriculture program would be comprised of separate and distinct curricula taught to different ends and severing uniquely different clientele. Such a program would not include schools attempting to serve both clientele with one curricula nor those who combine students in one classroom desiring two different programs such as many smaller schools do with juniors and seniors enrolled for **in** agriculture programs. Just as comprehensive high schools offer various levels of English for students with different goals and abilities, agricultural education must be made available to students with different interests and abilities. College preparatory English is not taught the same nor offered to the same students as technical writing. Similarly, the **in** agriculture curriculum should not be taught the same or offered to the same students as the **about** agriculture curriculum.

It takes neither a genius nor a crystal ball to see the need for applied "high science" instruction in agricultural education. The **about** agriculture program could logically include the college preparatory curricula in agriculture. Such a curricula could include a number of courses. One or more courses could be directed towards meeting the needs of college bound agriculture students. Such an applied academic course would serve a different student than is currently served by most **in** agriculture programs. The teaching strategies employed in such a course would also be quite different. Experiential activities would be directed towards developing an appreciation or understanding rather than towards developing competencies for immediate occupational utilization. The concept of Supervised Agricultural Experience (SAE) could effectively be used in such a program where Supervised Occupation Experience (SOE) would likely be inappropriate. Other courses that might be included in a college preparatory curriculum include "applied physics" and "applied biotechnology."

The **about** agriculture program should include a variety of curricula in addition to the college preparatory agriculture curriculum. Curricula directed towards meeting the general education needs of students for an understanding and appreciation of: 1) the role of agriculture in their daily lives; 2) the significance of international agriculture to the world's economic stability; and 3) applied leadership in a democratic society could all be addressed through the **about** agriculture program.

The **in** agriculture program needs to continue to serve the needs of students desiring immediate occupational competencies in agriculture. A variety of curricula in the many occupational clusters encompassing agriculture are still needed. In many cases these curricula are in need of revision and updating to reflect the competencies required in the industries served. The rush to expand the mission of agricultural education cannot be allowed to divert attention from development and revision of curricula embracing the **in** agriculture program. Delivery of these curricula must continue to be characterized as competency based and utilize supervised experience directly related to the student's occupational goal.

While there is need for both comprehensive and specialized high schools, so there is a need for comprehensive and specialized (vocational) agricultural education programs. A need exists for a huge number of comprehensive agricultural programs to serve **all** students who need it, want it and can profit from instruction in agriculture. Serving only those students with immediate occupational needs is short sighted and will never make agricultural education more than another name for vocational agriculture.

About The Cover

Adult Educators as Facilitators of Learning is a new way of viewing the role of the educator of adults in agriculture. The key competency areas lead to empowerment of adult learners/clients who then take more responsibility for the learning process. Design by Robert A. Martin, Iowa State University.

THEME

Avoiding The Catastrophe of Human Obsolescence

By Robert A. Martin, Theme Editor
(Dr. Martin is Associate Professor, Department of Agricultural Education and Studies, Iowa State University.)

How many times have you said or heard it said that you can't teach an old dog new tricks? Probably more than you care to count or could remember. Unfortunately, people and perhaps dogs with that attitude get just what they deserve — old and obsolete.

What these people often miss is opportunity. Increasingly, these missed opportunities touch the bottom line of agribusinesses, educational institutions, personal finances and human growth and development. They influence the job opportunities and career paths of the young and old alike. It has become increasingly clear that "learning" is as much an attitude as it is a skill. Learning how to learn may very well be the educational theme of the 1990s.

Knowles (1990) says that "the single most important competence that people must posess to survive is the ability to learn. Although this ability should begin its development at an early age, it must be fostered over a lifetime."

If this statement is accepted by agricultural educators, then what role do adult educators have for fostering learning? What does a facilitator of learning do that is different from a teacher of adults? Is the role of the adult educator changing direction?

It has often been said that there are very few people in our ranks who are teachers of adults anymore. Some agricultural educators view this phenomenon as a real tragedy in light of the data that show more adults than ever seeking retraining, updating and developing new skills for an ever-changing marketplace. Some agricultural educators see what is happening to adult education in agriculture as inevitable since there are too many purveyors of information running after too few clients. They say why fight it? Just leave it alone. Agribusiness and Extension will serve the agricultural public's need to know. A few agricultural educators are attempting to deliver what they believe to be the services the "agricultural public" wants. Unfortunately, much of what is delivered is based on an information delivery model not on an activist learning model.

The main problem with all of these paradigms is that they are out-of-step with what is known about adult education and the direction it is now headed. The "new" paradigm for adult education in agriculture puts a focus on the learner, the learning process and the educator as facilitator. Old delivery systems placed emphasis on information and the educator or presenter as the almighty source of that information, underscoring a "I have it, you want it" attitude of top-down learning. The emphasis now and well into the future has to be placed on facilitating the learning process. It sounds easy. It is, however, anything but easy to convert to a "facililative paradigm." The day has passed when having some new information or technology to deliver was all one needed to be an educator. Passing along new information or technology is not enough anymore to satisfy the needs of adult learners. The adult educator must understand the learner/client and his or her needs and goals. But more than this, the adult educator must understand learning. The adult educator must be a student of learning.

Knowles (1990) suggests that there are two major tasks for a facilitator of learning:

1. Design and manage a **process** or set of procedures for enabling learners to acquire the content or skill required by the situation and/or their own self-diagnosed learning needs.
2. Provide the **content** resources necessary for learners to accomplish their objectives — directly from the facilitator or by linking learners with resources - human or otherwise.

Facilitators of learning assist learners in diagnosing their own needs for learning, formulating their own learning objectives, identifying effective human and material resources for accomplishing their objectives, choosing and implementing effective strategies for using resources, and acquiring skills and evaluating the extent to which objectives were accomplished (Knowles, 1990).

Teachers of agriculture who believe that they are agricultural leaders in their communities should be aware of the fact that adults, not just teenagers and other children are also learners in the community, and the Agricultural Education profession has a responsibility to serve these adult learner/clients. In this regard, it is best that agricultural educators not forget two key factors. First and foremost, the role of facilitator of learning places emphasis on a "learning system" tailored to the learner. Secondly, the agriculture teacher should be a catalyst for adult education if not the organizer of it. The key strategy of the 1990s is for agricultural educators to get involved in a linkage with the resources around them and work together to provide the services people need and want. We don't need duplication of services. What we do need is communication, coopera-

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Computer Technology Resources
Classroom Use of Copyrighted Software

By W. Wade Miller, Special Editor
(Dr. Miller is Associate Professor, Department of Agricultural Education and Studies, Iowa State University.)

New computer programs are normally packaged in a box and covered with clear plastic. Often a notice shows through this package. Have you ever read it? Warnings such as the following often appear:

— You should carefully read the following terms and conditions before opening this package.
— Opening this package constitutes acceptance of the following terms and conditions.
— This program is licensed, not sold.
— This software product is copyrighted and all rights are reserved.

These types of notices are referring to the copyright and terms of use of the software. When you purchase a software program, most publishers assert that you are actually purchasing a license to use the software rather than purchasing the software itself. The purpose of the copyright is to protect the rights of the producer of the software. There is no standard license agreement and the language used by publishers is often confusing. One of the best sources I have seen concerning this issue is a brochure from the American Library Association (ALA) entitled, **Library and Classroom Use of Copyrighted Videotapes and Computer Software.** It is the reference for this article. Your library may have a copy or you can order one from the ALA.

How do you know if you are observing the software license agreements and that you are not violating the copyrights? The aim of this article is to give you some guidelines to follow regarding the purchase and use of copyrighted computer software in your agriculture program.

Guidelines:

First, you should carefully read the software license notice on the software. If you do not understand what the publisher means, phone them. If you do not agree to the terms and conditions set forth by the notice, return the software unopened for a refund.

Second, do not make unauthorized copies of the software. The software agreement will normally address this issue. Generally, you may make one "back-up copy." This copy is known as an "archival copy." You should label this copy with a copyright notice. If you wish, the original copy may be kept for archival purposes and the archival copy may be used. In either case, one must be stored. If the one you are using is damaged, another archival copy may be made. If one copy is lost or stolen, the copyright owner (the publisher) must be consulted.

Third, you need one copy of the software for each computer in your agriculture program. Obviously, you should not buy the copy of a program and then make duplicates for the other computers. You will either need to purchase a copy for each machine or contact the publisher to determine if a site license is available. If your computers are networked, then you will need a network license. It may be possible for the school district to obtain a site license on very favorable terms for the whole school system. Some publishers offer their software to schools at very large discounts. You should contact the publisher directly to determine the possibilities.

Some Examples:

1. You or one of your students want to borrow a copyrighted computer program from the agriculture program, take it home to use over the weekend, and return it on Monday. Is this permitted? It would be permitted unless the software user agreement forbids it. Usually the software is not licensed to any particular machine, but you must read the agreement to be sure.
2. You load a computer program into six computers during a class period so that all the students may use the program at the same time. Is this permitted? Probably not. You normally should purchase a separate copy for each machine being used or obtain a site license.
3. You load a computer program onto the hard disk of your school's computer lab. This computer lab consists of 20 networked terminals. Is this permissible? Not unless you have a network software agreement or site license.
4. You have knowledge that one of your students is making copies of the agriculture program's copyrighted software. Do you have any responsibility regarding this issue? Yes. You have the duty to inform the student about the copyright and to take steps to prevent illegal copying. It is a good idea to post a notice about copyrights near the agriculture program's computers. Label all copyrighted software. Do not assume that students know about copyright laws or software agreements.

(Continued on page 10)

Going Collegiate

By Edgar Persons
(Dr. Persons is Professor and Head, Agricultural Education, University of Minnesota.)

After almost 40 years of growth and development, the Minnesota Farm Management Education public school program has gone collegiate. Starting in the fall of 1991, farm management instruction for farmers will be offered through credit bearing courses affiliated with the Minnesota Technical College System. Converting to a collegiate oriented system has been a major undertaking. It required countless hours of intense work by volunteer teacher groups, farmers, coordinators and professionals in the State Board for Technical Colleges and the University of Minnesota. This article outlines the process by which the change from programs to credits was made and reports on the important findings.

Motivation for Change

If one followed the admonition, "If it isn't broken, don't fix it!", little would have been done with the design of farm management education in Minnesota. During these 40 years of development, the farm management program has grown to serve over 5,000 clients annually, utilizing more than 130 full-time teachers and supported by over $8 million annually in state, local and student funds. While the program was not broken, there was some evidence it was in danger of getting out of step with its administrative institution — The Minnesota Technical College System. Developing the State Curriculum Guide for farm business management was considered preventive maintenance necessary to guard against isolation and obsolescence.

During 1986, the management of the technical college system had decided that it was necessary to restructure their program-oriented curriculum. To conform to other college systems in the state, a restructuring process was started to convert the technical college system curriculum base to courses and credits. Because the management-oriented programs for farmers, small business, specialty crop growers and sheep producers were perceived to be different, restructuring of those programs was delayed.

Weighing The Challenge

If would have been possible for the farm management programs to retain their program orientation. In general there was little enthusiasm for restructuring among teachers. The concept of courses and credit was not thought to be viable for most farm operators. Yet, there was a strong feeling that it would be both educationally and politically unwise to separate the management programs from the technical college system where they were administered.

After consultation with a select advisory group of teachers and others knowledgeable about the restructuring process, John Murray, Agricultural Occupations Manager with the State Board of Technical Colleges accepted the challenge. The long road to restructuring was embarked upon in 1988. Finally, in 1990, there is a tangible product to change the direction of adult education in farm management.

Developing A Plan

The restructuring process had a fairly well-defined protocol for making the course/credit conversion. It involved a strong reliance on user groups, in this case farmers, to help define the content of the instructional program. The content was based on the tasks persons in the occupation performed, the perceived difficulty of the tasks and how frequently the tasks were done.

After a sorting out process, tasks could be aggregated into logical groupings which would serve as the basis for courses. Checking back with farmers and with the advisory group of teachers to define and refine the courses would be part of the development plan.

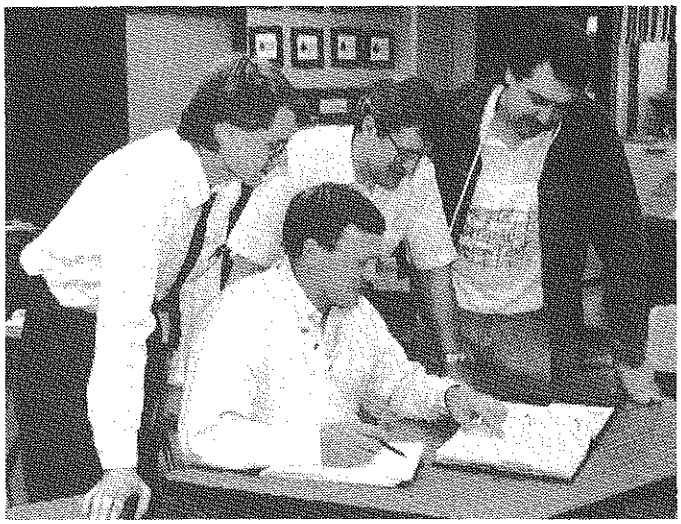
Enlisting Volunteer Aid

Volunteering in America is not dead. If it were, the farm management education restructuring project would never have proceeded. It involved a management industry committee consisting of 57 farmers, bankers, agribusiness managers, teachers and coordinators; a management education committee of 20 teachers, coordinators and other agricultural professionals; 155 farmers who completed a 370 item task analysis; and others who proferred advice during the restructuring process.

Much of the credit for soliciting the aid of farmers lies with management instructors who were able to convince very busy farmers to participate in the long and tedious job of completing the task analysis. Later the teachers engaged another select group of farm and business advisors to assist in consolidating and refining the list of tasks to be used in the management curriculum.

Analyzing The Management Tasks

The heart of the curriculum process was the identification of the tasks farmers performed. While there is some danger that this approach defines only "what is" instead of "what should be," it nevertheless provides a starting point from which even a future oriented task list can be developed. Through a process of sequential purposeful selection, a sample of 166 farmers was identified representing the various geographic regions of the state, the various types of farm businesses, age distributions and levels of experience in



Tim Rademacher, Adult Farm Management instructor, pointing out teaching units relevant to secondary instruction.

management education programs. All of the farmers were selected from the over 5,000 farmers enrolled in the farm management education program. The survey which farmers were asked to complete was about 15 pages long and contained 370 task items in addition to a page of personal data. Ninety-three percent of the farmers surveyed responded.

The task listing was divided into 30 duty areas. Farmers responded to each task within the duty area indicating if they performed the task, how important they considered it to be and the frequency of performance.

From the long list, those tasks thought to logically fit in a management-oriented program of instruction were selected for consideration in the management education guide. The task analysis for the enterprise/production mechanization duties that farmers perform remains as a guide for developing the non-management instruction offered through enterprise and mechanized agriculture instruction for adults. The task list in its entirety also guides the post-secondary programs related to production agriculture.

When tasks related to management were examined the twenty-five tasks rated as most important provided a skeleton framework from which the instructional plan could be built. These 25 tasks, ranked by 7 out of 8 farmers as being highly important are: Maintain expense records; maintain income records; develop record system; maintain checking accounts; manage stress; maintain livestock production records; exhibit self-motivation; prepare total farm plan; balance home/career relationship; prepare income tax records; exhibit positive attitudes; develop positive relationships; prepare total farm budgets; prepare cash flow statements; analyze farm enterprises; analyze expense records; apply basic emergency first aid techniques; prepare closing record entries; develop positive lender-client relationships; analyze income records; exhibit listening skills; monitor accounts payable; interpret farm business analysis; analyze profit/loss statements; and select crop enterprise.

Interesting inclusions in this list were tasks related to communications, attitude and motivation.

This skeleton list of 25 tasks, augmented by some tasks not included in the list but considered important for the future of farm management instruction formed the basis for constructing courses. Notable additions to the farmer generated list were tasks that addressed the global/international connections of agriculture, and the ties that production agriculture has to local and state communities.

Converting Tasks To Courses

Although the standard Technical College System computerized system for course building was not used in the redesign of the management program, the design followed the same basic process and resulted in a look-alike product. The final curriculum product consisted of 80 separate credit course syllabi. Each syllabi included a unique identifying number, a one-paragraph course description, a suggested short list of texts and references and 10 to 14 course goals.

How courses are to be delivered was not specified. The delivery is expected to be by some combination of group, individual and on-the-job training, but the mix of these three elements is left to the discretion of the instructor.

The final curriculum for management instruction presents courses in 13 different management or personal skills content areas, designed to be delivered throughout the year in segments roughly equivalent to a college quarter. The year is divided into Fall, Winter, Spring and Summer modules with topics relevant to management seasons.

Delivering The Goods

Having a curriculum guide is one thing — getting it disseminated and adopted is another! Since most of the 130+ full-time management instructors had no direct role in the development of the guide, except through their representatives, dissemination had to be carefully planned.

Of primary concern was how to devise a delivery system that would accommodate the 80 courses in management education within the delivery capability of the teaching cadre and without destroying the relationships that the over 5,000 farm cooperators had with the management education system.

State Curriculum Guide and Executive Summary for Farm Business Management.

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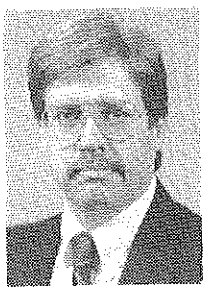
A Field Based Model for Adult Education in Agriculture



By Thomas H. Bruening and Robert A. Martin

(Dr. Bruening is Assistant Professor, Department of Agricultural and Extension Education, Pennsylvania State University; Dr. Martin is Associate Professor, Department of Agricultural Education and Studies, Iowa State University.)

The complex problems associated with development and planning of educational programs with diverse interests of all groups involved requires that a comprehensive approach to adult education be devised. If education is a key to solving problems, it appears that a model (Figure 1) for delivery of adult education should be developed. A planning committee should be developed to take into account all perspectives as a plan is being developed and implemented. The committee should have representation from all the groups to be impacted. The committee would assist with the revision and implementation of the educational system.

The foundation for the model is a three-stage approach to be used for implementation of a field-based adoption-diffusion strategy. The overall model is based upon the involvement of the farmer and education specialists working as a team striving to develop sensible solutions to agricultural problems.

In stage one, input from farm groups would be utilized through the use of a needs assessment survey to develop baseline information upon which the educational program would be formed. In this stage, it would be important to identify the innovators and encourage their participation. It is important to identify the specific felt and ascribed needs of the residents in the total community.

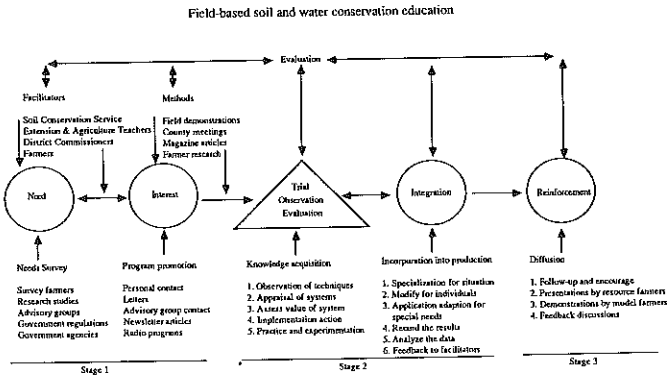


Figure 1. Soil and water conservation education model

For an educational program effort focused on soil conservation and environmental management, the following description gives an example of how the model could work. Formal and nonformal information-gathering techniques should be used. Through this process, information from farmers, research studies, government regulations and agencies, and an advisory group would be gathered.

Program facilitation would come from the following groups: educational professionals, Soil Conservation Service, county and state extension specialists, soil conservation commissioners, agricultural educators and farmers. Interest in proposed programs would be developed through the use of the media such as: personal contacts, letters, advisory group contact, newspaper articles and radio programs.

The program methodology would include field demonstrations where farmers could see agricultural systems in action. Specific demonstrations would include various tillage systems with various rates of chemicals. It would be necessary to repeat these demonstration plots in a number of randomly selected locations in order to be able to generalize the results for the county or township population.

County meetings would continue to be held with farmer input and sharing. Farmers could learn the latest techniques concerning water contamination and soil erosion from professionals and their peers. County level newsletters or magazine articles could bring awareness of the most recent research findings and the information gleaned from local research projects completed by farmers and conservation education specialists.

During stage two, farmers would change conservation behavior on a trial basis. Farmers would gain knowledge through the observation of techniques on small plots on their own farms. Through trial, observation and evaluation, farmers would be able to assess the value of new conservation systems on their own. Equipment, products, and information would be used as incentives to encourage participation. Participants would be able to experiment to determine the usefulness and economic benefit to them in their own setting. Economic advantages of reduced tillage systems would need to be stressed through educational programming.

Basic Principles for Adult Agricultural Education

The following items are key elements that must be considered if adult agricultural education is to be effective.

1. Knowledge and skills should be used in the "real world" soon after learning.
2. Learning process should be applied.
3. Instructors should be competent, enthusiastic and be able to communicate.
4. Instructional process should have a clear objective and a definite evaluation component.
5. Positive reinforcement is critical when application of knowledge and skill is correct.
6. There should be an interaction of participants.

From *Handbook on Young Farmer Programs in Iowa*, 1990.

Steigler (1987) indicated economics was a major obstacle to the adoption of conservation tillage practices. In the integration stage, agriculturalists would phase the conservation system into the total farming operation. The system would be modified to fit individual needs and management capabilities. It would be important to document the results through a detailed record keeping process in order to determine program benefits. Further, it would be critically important to have education professionals follow-up all three stages of development and facilitate the collection of the data. Collected data would be analyzed and evaluated to indicate the economic advantages of the system. In addition, feedback would be important to diffuse the system to the total population.

Farmers who were identified as early adopters would be encouraged to talk with and discuss plot research findings with other farmers. Participating farmers would be invited to share their findings with other farmers during local field demonstration days. Further refinement of the system could occur through feedback of the participants and interested farmers.

Ideally, this model would be adapted and used at the secondary and post-secondary education levels with students studying agriculture and environmental sciences. Students could play a major leadership role in the adoption of conservation plans by determining needs of farms within their school districts. Approved practices could be applied to model or school farms and the results could be analyzed and interpreted in laboratories with the aid of agriculture teachers, government personnel, and community industry support. These same students could become valuable assets as concerned citizens of the future, as they continue to cope with environmental issues.

Others have suggested a different educational approach. Korsching and Nowak (1983) indicated that the best education would be to take the farmer by the hand, walk over his fields, and provide him/her with a step-by-step description of erosion control and water quality implications and then describe the steps he/she should take to solve the problem. In some cases, this procedure has been tried. A more effective solution would be to involve farmers and farm groups in the process of field-based farm research efforts where the farmer is a valued member of the team. Obviously, the top down approach has not worked very well. Farm-based research could lead to the discovery of learning as a process. The importance of determining alternative solutions through a decision-making process should be stressed. Community welfare is also important. Farmers must understand the importance of water quality and soil conservation and their impact on the community environment in which they live. Ultimately, the changes that society would like to see come about must come through a corroborative educational effort of all involved groups.

Agricultural Education professionals must provide some leadership to foster adult education. Agricultural educators can help this process by joining forces with all the other agricultural entities in the community and work to conduct research, share innovations and technologies and be a catalyst for further learning, either group or self-directed.

Assessing The Adult Agricultural Education Program

1. Evaluation of the adult program should be made in terms of the objective of the adult program.
2. Evaluation should include an assessment and appraisal of both process and the product.
3. Evaluation of the adult program should occur throughout the program, not just occur at the end of the program.
4. Evaluation of the adult program should involve input from lay personnel as well as educators.
5. Evaluation of adult programs supporter by public funds should include economic factors and should be concerned with input-output relationships.
6. Evaluation and appraisal should be made on the basis of what has been accomplished and what has not been accomplished.
7. Major purpose of evaluation should be to assist in providing quality control and as a basis for intelligent change.

From *Handbook on Young Farmer Programs in Iowa*, 1990.

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Avoiding The Catastrophe of Human Obsolescence

(Continued from page 4)

tion and a sense of community to provide educational opportunities for adults.

There is no doubt that agricultural education is changing. Along with the changing process agricultural educators must realize that adult education in agriculture has a role to play in the revitalization of the agricultural education profession.

It is wise for all of us to remember that the best way to plan for obsolescence is to stop learning. Put learning on hold and one will surely see the world pass by. The same could be said regarding adult education programs in agriculture. If we allow adult education to slip out of our professional sphere of influence, we may well see the world of agricultural education fade into the horizon because we have failed to keep pace with the agriculture learner clients beyond the school room doors. As Knowles (1990) said so well . . . "In a world of accelerating change it is critical that learning be a lifelong process if we are to avoid the catastrophe of human obsolescence."

The articles in this issue attest to the fact that adult education in agriculture is entering a new phase. Educators are becoming facilitators of the learning process because they personify the process of learning.

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Going Collegiate

(Continued from page 7)

An adoption workshop was held in each of the six agriculture coordinator areas. All but two of the farm management instructors attended. During these workshops an implementation scheme was presented as a model from which local adaptations could be made. While the enthusiasm for making a marked change in a system that already worked was not high, the determination to make the new system of courses and credits equally viable was evident.

Waiting and Watching

There is no guarantee that the new curriculum guide for farm management education will be adopted by the Fall, 1991 target date. It is not mandatory. Yet the corporate determination of the teaching cadre to move toward uniform adoption leads even the casual observer to speculate that wholesale adoption will occur.

If adoption does occur, it can probably be traced back to the following:

1. The redesign of the management curriculum was done based on a carefully devised plan specific to the program, the teachers and the clientele.
2. Teachers were heavily involved in the redesign process from the very beginning through representative advisory groups.
3. The final printed product gives the appearance of quality both in design and in its presentation to users.
4. The adoption process involved virtually all of the potential users with opportunity to express concerns about a variety of issues ranging from use of teacher time to accountability.
5. Strong, persistent, non-abrasive leadership was provided throughout the process (in this instance by John Murray).

Those on the sidelines are simply watching and waiting. This redesign of the farm management program is the greatest change in direction experienced in the almost 40 years the program has been functioning. The jury is still out on the two basic questions for which time will provide the answer: Does the new system work? Is the new system better than the old? Those who have examined the process and the product carefully are betting that the answer will be "yes" to both questions, but they are watching and waiting.

Note: The Farm Business Management State Curriculum Guide was prepared by James Warner, Worldwide Training Associates; Farm Business Management Instructors; Area agriculture coordinators; the Agricultural Education Division, University of Minnesota; and Farm industry personnel, under the direction of John Murray, Agriculture Occupation Manager, State Board of Technical Colleges.

Computer Technology Resources Classroom Use of Copyrighted Software

(Continued from page 5)

As you can see, following a publisher's software agreement and observing copyright laws can be confusing, but it is worth the effort. The reasons for following the agreement extend beyond obeying the law. If everyone follows the agreements, then publishers' rights are protected and they are more likely to invest resources to improve existing software or to develop new software. Also, not following software agreements can have the same effect as shoplifting; just as department stores must raise their prices to recoup their investment, software publishers will charge more for their products. In the long run, everyone can benefit from following software agreements and observing copyrights.

REFERENCE

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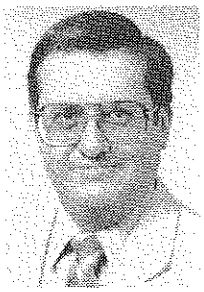
New Directions In Texas' Adult Education



By Kirk Edney

(Mr. Edney is Occupational Education Specialist, Texas Education Agency and Executive Secretary, State Association of Young Farmers of Texas.)

Texas is taking a new direction in adult education! Organized agricultural education programs for adults took a downturn for several years following the loss of the Adult Specialist Programs, but has experienced a resurgence since 1988. Much of the growth has taken place through the efforts of volunteers. Most adult education takes place through locally organized Young Farmer chapters.

Since 1988, membership in the State Association of Young Farmers of Texas has increased over 20%. A Farm and Ranch Management Contest has been added to our State Convention. Our members are taking a greater interest in the workings of the National Young Farmer Educational Association. Our magazine has been expanded to six issues per year.

Student teachers are being exposed to the Texas Young Farmer program on a more aggressive basis. We co-sponsor the Agriculture Mechanics Project Show at the Houston Livestock Show and Rodeo to give us greater exposure to FFA members.

We are increasing our involvement in the State FFA Convention and our State Professional Improvement Conference for Agricultural Science teachers. We are working for increased public visibility through booths at major livestock shows and the introduction of a new Community Service Award. We are "Breaking New Ground," getting involved in areas our members feel are important.

What has caused this resurgence? Two major factors are responsible: GOAL-ORIENTED PLANNING and ENTHUSIASTIC LEADERSHIP. These are the keys to dealing with any aspect of education, and they work especially well with adult agri-education.

Goal-Oriented Planning

In 1988, the officers of the State Association of Young Farmers of Texas called a planning meeting. A select group of industry leaders and Young Farmers met in Austin to take a long, hard look at the Association and set some short-, intermediate-, and long-term goals intended to revitalize the organization.

What emerged from this meeting was a Five-Year Long-Range Plan. Major aspects of the Long-Range Plan are: Financial Stability, Educational Opportunities, Membership Development, Communication, and Involvement. The goals are measurable, and definite accountability is indicated, along with a timeline for completion.

This Long-Range Plan has been easy to "mesh" with the Tactical Plan adopted by the National Young Farmer Educational Association; the amount of overlap is significant. Our newly revised State Officer Leadership Conference depends, in part, on ideas which are also identified in the action steps for Membership Development and Leadership. We are identifying resource personnel to assist with our educational efforts.

We are striving to broaden the scope of our organization and make it more appealing to a larger portion of the agribusiness population, in line with Goal #2 of the Tactical Plan. A seminar is planned to update our awards program and put it more in line with the groups we serve.

Enthusiastic Leadership

Long-range planning can succeed if the leadership structure is enthusiastic. Enthusiasm is not a problem with the Texas Young Farmers. People who worked on the Long-Range Plan in 1988 are seeing positive outcomes from some of their goals.

Each group of state officers has seen how the goals they accomplish enhance the Long-Range Plan. They actually SEE their plan working. They can SEE the light at the end of their Young Farmer tunnel. And ENTHUSIASM is contagious.

The incoming State officers use the Long-Range Plan as a blueprint for progress towards the Association goals. Incoming state and area officers are introduced to the Long-Range Plan and the NYFEA Tactical Plan as they begin their terms of office. Some of this introduction takes place at the annual State Young Farmers Leadership Conference, sponsored by the Houston Livestock Show & Rodeo. The officers then carry the enthusiasm back to their respective areas, and hold their own leadership conferences.

Bottom-up orientation is important to the Texas program. If our members can't drive the organization, then they see no need for an organization. Our diverse membership base provides input for goal-setting. If a goal can be achieved at the chapter level, it will usually work on a statewide level. Working for measurable goals can take place if the local members are enthusiastic.

What We're Here For

The sole purpose for the existence of the Texas Young Farmers is EDUCATION. On a state level, the number of educational activities presented at the State Convention has increased over the last two years. Statewide, we are moving into the area of Farm Financial Management Training, with involvement by Texas Rural Communities, Inc. and selected community colleges.

(Continued on page 22)

Adult Education in Agriculture: A Little Bit of Heaven

By Robert J. Birkenholz and Steven R. Harbstreit

Dr. Birkenholz is Associate Professor, Agricultural Education, University of Missouri-Columbia; Dr. Harbstreit is Assistant Professor, Agricultural Education, Kansas State University.)

At a recent agriculture teachers workshop, a teacher whose career has spanned over 25 years, related a story. As a panel member at the workshop he had been asked to address the topic of "things that work" by his district supervisor prior to the meeting. The teacher began by noting his experience included nearly 20 years as a full-time secondary agriculture teacher, six years as a half-time secondary/half-time adult teacher, and that he was beginning his second year as a full-time teacher of adults.

The teacher was describing the relative satisfaction he had experienced over the course of his career. First, he noted that he really enjoyed working with secondary students and helping them achieve success through FFA activities. Then for several years he enjoyed the benefits of dividing his professional responsibilities between a secondary program and serving the agricultural needs of adults in the local community. But now, he said, "I think I've died and gone to heaven" (Peeper, 1990) with regard to his full-time role in adult agricultural education. The experience of seeing a teacher with 26 years of experience exhibiting such enthusiasm for teaching was refreshing. Hopefully, other teachers will discover the benefits which can be realized from an effective adult education program in agriculture.

Although teachers undoubtedly have the greatest influence on the quality of adult education programs, administrators also have an impact on such programs (Jewell, 1980). The purpose of this article is to present and discuss factors relating to the need, benefits, operation, and funding of education programs in agriculture. Each of the factors will be discussed in relation to the perceptions of teachers and administrators.

Need for Adult Education in Agriculture

Research conducted in Nebraska (Adelaine and Foster, 1987) reported that administrators revealed a positive attitude toward adult programs in agriculture. Similar studies in Missouri and Kansas also revealed administrator support for adult education (Nur, 1988; Harbstreit, 1989). However, there appears to be some discrepancy in the recommended direction of future adult programs. In the past, many agriculture teachers focused adult education programs on the development of solutions to agricultural production and management problems. Superintendents have indicated there is also a need to target other audiences which are not currently being served. Administrators note there is a need to expand the focus of adult instruction beyond the boundaries of production agriculture, management, and marketing.

Erosion of the Agriculture Extension Service and resources in many areas will place local agriculture teachers in the position of resource persons, much like county agricultural extension agents of the past. Requests for information and assistance may encompasss a variety of issues including such topics as water quality, pest identification, chemical safety, horticulture, animal feeding, and conservation. The public relations potential created when an adult in the community requests information is tremendous. Teachers will need to make a conscious decision of whether to extend a helping hand or to encourage them to seek answers from other information sources. The need for adult education in agriculture continues to grow, as does the scope of the content and target audience.

Benefits of Adult Education in Agriculture

There are many benefits which result from an effective adult program in agriculture. Adults, themselves, are direct beneficiaries of adult instruction. Up-to-date information is needed to make appropriate and informed decisions in agriculture. Adults are also facing problems which can be addressed through the application of pertinent information and well-conceived solutions.

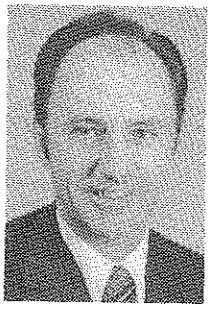
Agricultural education teachers and programs also reap benefits from adult education. Teachers may enjoy increased publicity and credibility as a by-product of the adult program. Interaction made possible through adult contacts enables teachers to relate secondary curriculum content and student activities local conditions. Many teachers have also been able to identify potential SAE placement centers through their contacts with adults in the community.

Schools also benefit from adult education programs. Adults who participate in such programs have exhibited greater interest and support for other school programs. Conducting adult programs in school facilities increases awareness of the adequacy of school facilities. Tax referendums may also receive greater support from voters in school districts which address the educational needs of the adult population.

(Continued on page 23)

THEME

Farm Management Is More Than An Accounting Service



By Lawrence F. Helt

(Dr. Helt is Chairman, Farm/Ranch Management Education, Fort Berthold Community College, New Town, ND.)

Many enrolled farmers/ranchers and some adult Farm Business Management instructors may have been guilty of indirectly conveying the message that we teach only record keeping! If this were the case, then we would most likely be suspects of providing an accounting service after about three years of repetitious instruction in business accounting procedures. The major thrust of the total adult education program in agriculture must be educational in nature and not service oriented.

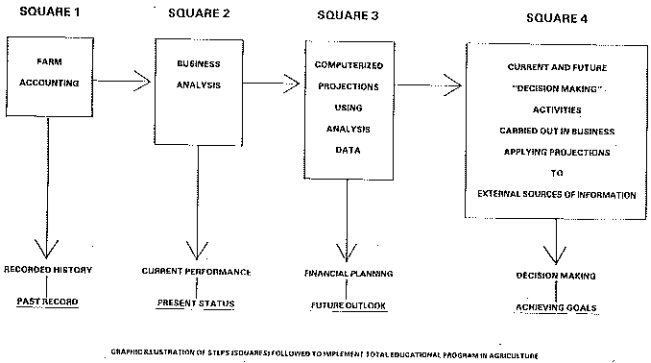
The main purpose of the farm management program is to assist farm and ranch families achieve their business and personal goals through improved management. Farm and ranch families enrolled in the adult Farm Business Management Education program must have an opportunity to learn much more about their business than an accounting service would provide them. Instructors need to retain the proper perspective of their professional (educational) role because performing redundant activities with tools of the trade may be easier than being challenged by the role of **change agent.**

The core of the farm management program revolves around farm accounting because this is the foundation upon which all future business trends depend. However, the total Farm Management program includes running a computerized business analysis, placing the analyzed data into computerized short and long term future projections and making sound decisions using these projections when applied to current sources of farm business information.

The best way to illustrate the sequence of instructional stages is shown in Chart 1 which shows the steps from square 1 through square 4. It should be noted here that a continuing adult education system in agriculture permits feedback toward improvement between each square or stage of the Farm Management program.

CHART 1

SEQUENTIAL BREAKDOWN OF STAGES
APPLIED TO
CONTINUING ADULT EDUCATON SYSTEM IN AGRICULTURE



GRAPHIC ILLUSTRATION OF STEPS (SQUARES) FOLLOWED TO IMPLEMENT TOTAL EDUCATIONAL PROGRAM IN AGRICULTURE

Square 1 which emphasizes teaching basic farm accounting provides the historical (past) record of business transactions upon which every future decision is based no matter how incomplete or inaccurate. If a farm manager does not put these records to any further use, then his efforts to improve the business through comparative study are limited.

The business analysis as depicted by square 2 provides the farm family with a timely picture of the current performance or current (present) financial status of the farm or ranch. Once the farm family learns how to interpret the business analysis of their operation it usually motivates them to improve their farm accounting as well as provide some basis for making sound decisions.

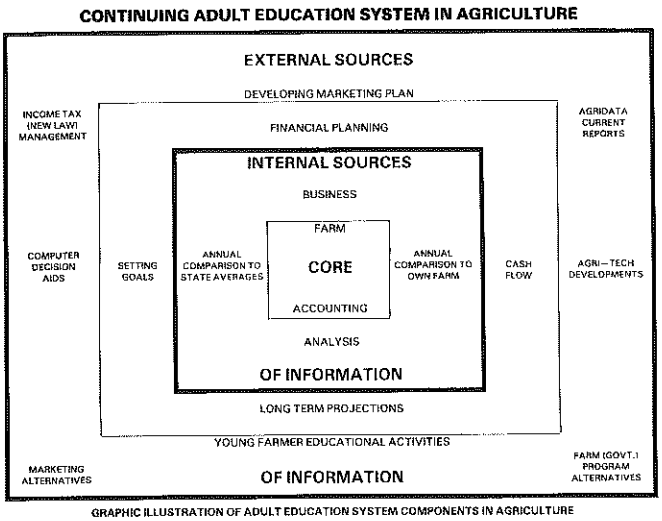
Probably the least publicized educational principle is the need for farm families to continue to have computerized analysis completed of their farm business over a sustained period of years in order to study both positive and negative trends. Initially they may be able to compare their crop and livestock enterprise analysis to other farms which are summarized in the regional or state averages report.

Eventually their own comparisons from one year to the next on their own farm is of greatest value. The financial analysis of their business does provide a Balance Sheet (financial statement), Profit and Loss Statement, Efficiency Measures of Farm Organization and several measurable financial ratios that can help determine economic progress.

Square 3 illustrates how farm families can put the internal information (as further highlighted graphically in chart 2) consisting of their business analysis data for financial planning and running computerized projections for future operations. Both short term (annual cash flow) and long term (future 5-10 year projections) can be run with relative ease once the business analysis data are available. Farm Management instructors have computerized software programs with which these future projections can be run, results studied, data changed, projections rerun and put into operation if accepted by all parties involved.

The greatest challenge to Farm Management instructors is to assist farm families utilize the many external sources of information to best advantage as cited in square 4. It is incumbent that these professional educators walk the thin line to providing their farm family clients with alternative solutions pertaining to their problems, but not offering a specific managerial decision. The farm family members must make the final choice themselves based upon the evidence found in their business analysis and the potential solutions offered to them.

CHART 2



GRAPHIC ILLUSTRATION OF ADULT EDUCATION SYSTEM COMPONENTS IN AGRICULTURE

Whether one follows the sequential breakdown of stages (squares 1-2-3-4) in Chart 1, or the expanded squares graphically illustrated in Chart 2, the cyclical relationship from year to year overlaps as one moves in either direction. For example, the farm family may need to alter their accounting system in order to adopt the latest income tax regulations. They may change their cropping plan due to the impact of the current government farm program. Even their family goals may have to be altered if the cash flow budget indicates a decrease or increase in expected revenue.

The fourth stage, square 4, of the Farm Management program provides farm families with unlimited opportunities to capitalize on applying their own internal information to the best advantage in the external information area.

Farm Management instructors are prepared to teach farm family members how to develop marketing plans, evaluate farm program alternatives, plan income tax management, apply agri-tech developments, utilize AgriData reports and implement computer decision aids. Through the group and individualized instruction, the enrolled farm/ranch families are better able to identify strengths and limitations in their business. All business information dealt with does remain confidential.

Farming and ranching is a very complex business which requires sound management in order to be profitable. Farm/ranch families need to use all available information so they can make wise decisions. The Farm Management program helps farmers/ranchers gather that information and provides them with the skills needed to make decisions which will make the farming/ranching operations a profitable business.

It is the intention of this presentation that Farm Management instructors will be able to use these graphic charts to help explain the total adult educational system to their constituents. Instructors who conduct the most effective educational programs do articulate the total instructional message to their farm/ranch families. Instructors need to emphasize to their client members and public alike that the entire scope of the farm management program encompasses much more than just teaching how to keep farm accounts.

ARTICLE

The Beat Goes On

By Ed Finley

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

Coronary artery disease ranks first among the leading causes of death in the United States, Canada, and Western Europe. In fact, it has reached epidemic proportions in the United States to the point where the public should be aware and deeply concerned about the implications of a personal diagnosis of coronary artery disease.

To reduce the awesome mortality from coronary artery disease, every effort must be made to identify and treat the individual with a high risk for sudden death. It is essential that we, as educators, become aware of the risk factors associated with the disease and learn to recognize the early manifestations of this life-threatening illness.

Of course, most people believe, as I did, that coronary artery disease is reserved for the elderly or the historically unhealthy person. No doubt I was wrong in my beliefs — almost "dead wrong!" Permit me to share with you why I changed my beliefs and why you, regardless of your age, should be concerned about your heart's level of functioning.

August 30, 1989. No, it was not a particularly significant date. It was not a holiday, nor was it the date of my wedding anniversary and, too, neither of my two children were born on that date. For me, every August 30th has always been just another August 30th — until then.

That year, August 30 occurred on a Wednesday and that particular week was the second week of Fall semester classes here at Oklahoma State University. For most 39 year-old-teachers, like myself, it was business as usual that day. A typical day of interacting with students, making preparations to each class, and so forth.

And for the most part, especially for me, it was another day which included my usual exhibition of high energy, enthusiasm, and for all practical purposes — feeling invincible. After all, I am 6'4" tall, weighed 220 pounds (that day), and had just had a complete physical two weeks prior to the start of the Fall Semester (and was informed that I was in generally good health with exception of a moderately elevated blood pressure and a moderately elevated cholesterol count — certainly nothing to be alarmed about).

So on that rather insignificant day, I walked into class, feeling great and anxious to get started teaching the day's topic. It was a two-hour class (3:30 to 5:30 p.m.). I had taught the class every semester for the last seven years, and I had no feeling of apprehension about teaching that day. In general, I felt absolutely great until 4:40 p.m. Yes, in class while lecturing, I had a heart attack. Quite frankly, I feel very fortunate to be alive today, and my being alive certainly prompted this article.

To begin, the heart is a strong muscle that generates the power to move blood through the body's blood vessels. This strong heart muscle pumps gallons of blood each day. For this job, the heart requires its own supply of blood as nourishment to remain alive and functioning. We think of the heart as a pump to feed blood to the body, but what feeds the heart itself?

The coronary arteries feed the heart, and they are located on the outside surface of the heart. They carry blood and oxygen to nourish the heart muscle. Every area of the heart depends on the blood that flows through the coronary arteries and these arteries must be relatively open for blood to flow through them; however, when a coronary artery becomes severely blocked and blood is restricted to an area of the heart muscle, damage will occur. This damage is known as a heart attack or myocardial infarction (M.I.).

Because of my most recent experience and because of the concern I have for my colleagues' health, I believe it is important that you understand how your lifestyle may contribute to your risk of having a heart attack. Actually, there are many RISK FACTORS (or habits or characteristics) that may make a person prone to coronary artery disease and heart attacks. Any one of the risk factors increases your chance of a heart attack, and a combination of two or more factors multiplies the risk.

Which of the factors apply to you? Some may be beyond your ability to control; others you can change. The RISK FACTORS of concern include:

1. Obesity;
2. High levels of cholesterol and saturated fats in the blood;
3. Stress;
4. The Type-A Person;
5. Heredity;
6. Diabetes;
7. Hypertension;
8. Smoking;
9. Sedentary Lifestyle.

OBESITY means excessive body fat. Persons are generally considered obese if they are 20 percent or more over their ideal weight. Your risk increases with your weight. If you are overweight, your heart must pump harder to supply blood to a larger area than it would if you were slim.

CHOLESTEROL is a fatty substance manufactured naturally within our bodies and it is also added to our bodies by certain foods we eat that contain SATURATED FATS (i.e., meat, butter, cheese, cream, and whole milk). According to the Department of Education at St. Francis Hospital

(1982), an average cholesterol level in blood is between 150 and 300 milligrams per hundred cubic centimeters of blood. (As a point of information, my personal cholesterol level at the time of my physical examination was 250 — after all, I am an ol' country boy who consumed meat three times a day and had eggs for breakfast every morning).

Frieman (1989) stated:

> *The risk of having a heart attack is directly related to the level of cholesterol in the blood and if you have a high level of cholesterol, excess fatty material may be deposited within the walls of the arteries. This narrows the vessel, preventing adequate blood from getting through and most certainly causes some people to develop coronary artery disease and the reduced blood supply to the heart may result in a heart attack.*

STRESS is any kind of a stimulus that creates a response from your cardiovascular system. Stress can either be physical or emotional. Everyone experiences a certain amount of stress in everyday living; it is inescapable. Friedman stated:

> *If a person has coronary artery disease, stress may contribute to a heart attack. Stress raises the heart rate and blood pressure, increasing the heart's workload and persons with coronary artery disease may not be able to supply the blood that is needed during stress.*

The TYPE-A PERSON is a person who exhibits behavior patterns of aggressiveness and hastiness, someone who is hard driving and always in a hurry, or on the go (a typical characterization of Agricultural Education professionals?). The Type-A person lives at a faster and less relaxed pace than normal and this may increase the heart rate and blood pressure, placing even greater work on the heart.

HEREDITY. The tendency for heart disease is inherited and the greater the number of your family who have or have had heart problems, the greater your chances are of developing similar problems.

DIABETES is a disorder characterized by inadequate secretion or utilization of insulin. Diabetes seems to speed the atherosclerotic (hardening of the arteries) process in vessels of the cardiovascular system and other vessels, notably in the eyes and kidneys. This, in turn, increases the incidence among diabetics of heart attack, stroke, kidney disease, etc.

HYPERTENSION means high blood pressure. The American Heart Association has defined high blood pressure in relation to age. Persons under 40 with an average blood pressure of 140/90 or greater may have hypertension and persons older than 40 with an average blood pressure of 160/95 or greater may have hypertension. High blood pressure causes the heart to work harder, increasing the chances of a heart attack and is considered one of the most prominent risk factors for heart attacks.

SMOKING is also one of the most prominent risk factors of heart disease in that tobacco smoke contains nicotine which speeds the heart rate, increases blood pressure, and constricts arteries in the body. Together, these actions increase the heart's work.

A person's SEDENTARY LIFESTYLE also may contribute to heart attack. A sedentary person is one who is accustomed to sitting too much or too long. This person's job, home and recreational activities tend to be done in a sitting position. The American way of living is full of conveniences and leisure time, and the result is inadequate physical exercise. A sedentary person's heart is less able to handle the physical and emotional work and stress of everyday living. The "out-of-shape" heart is basically inefficient and is subject to heart attack.

Certainly if you have a concern about your heart's level of functioning or possible coronary artery disease, you should consult your physician. There are several tests which can be administered to answer any concern you or your physician may have. Some of the tests available include: (1) Cardiac Catherization; (2) Treadmill Stress Test; (3) Echocardiography; and (4) Radioactive Isotope Tests. Quite frankly, if I had included one of these as a part of my physical examination, my particular problem could have been diagnosed and treated, and I possibly would not have had to suffer a heart attack.

Granted, after my heart attack, my heart will heal, but the disease that caused my heart attack remains in my arteries. The disease will not reverse itself, nor will it leave, and there is no medication or surgery to remove it. However, it may be retarded through modification of the aforementioned risk factors. As for me, personally, I intend to follow my cardiac physician's advice — "implement a proper exercise program and maintain good health practices."

Now you ask, "What can I do?" Well, permit me to make the following recommendations: (1) Take time to have a complete physical examination, which should include a Treadmill Stress Test or equivalent; (2) Calculate your ideal weight; (3) Maintain a low cholesterol, low-saturated fat, low salt diet; (4) Find regular time for fun and relaxation; (5) Think about your outlook on life and your behavior; (6) Teach your children at an early age about the risk factors; (7) Quit smoking, (8) Plan time for proper exercise; and (9) Eat a well-balanced diet every day.

In closing, maintaining cardiovascular fitness is not all that demanding (even for someone like myself who is now enjoying the experience of cardiac rehabilitation). Surprisingly, twenty-minute sessions of exercise at least three times per week are necessary to gain cardiovascular fitness. The exercise should be Aerobic in nature (i.e., walking, jogging, swimming, or bicycling) and should be continuous, nonstop exercise. You can be assured that this ol' country boy will be finding time to exercise. Now that I've had a second chance to live, to enjoy my family, and to teach, I'm going to do my part to ensure "the beat goes on!"

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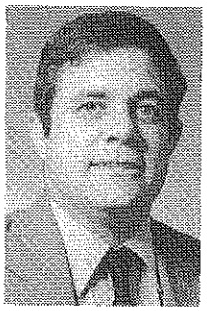
Teaching Tips
A Fun Approach to Leadership Skills



By David E. Hall

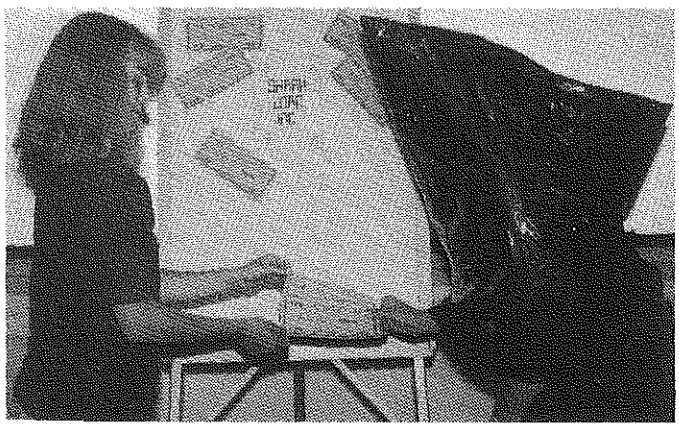
(Dr. Hall is Assistant Professor, Department of Agricultural and Extension Education, Pennsylvania State University.)

Step right up, ring the vote, win a hundred clams! This might not be a recognizable carnie cry from the state fair or the boardwalk in Atlantic City, but it was from the first Annual Parli-Pro Fun Night held for The Pennsylvania State University agricultural education undergraduates. The event was sponsored by the Recreation Committee of the Penn State Collegiate FFA Chapter. The activity had a dual function. One aspect was fun and social interaction, an important part of any organization. The second aspect was reviewing, and for some, learning details of parliamentary procedure.

Students registered as they entered the parli-pro carnival site. One thousand clams of script were issued in 100 clam denominations. This event occurred at the beginning of Spring semester. Since there were many new students, name tags were worn by all. Students were served popcorn and soft drinks as they wandered by the collection of prizes to be auctioned off for script as the final event of the evening's activities. The entire event was free to participants, with the Collegiate FFA covering 100% of the costs.

This was a very exciting approach to teaching the leadership skills involved in the sometimes boring subject of parliamentary procedure. Basic educational psychology indicates that a student's readiness and motivation are prerequisites to effective learning. This casino type atmosphere provided motivational and readiness factors. It has also been established over the years, that effective learning takes place more consistently when successful behavior is reinforced with an immediate reward. The script loan provided that kind of gratification.

Eight carnival type booths, as well as all of the other areas, were operated by faculty and graduate students of the Agricultural and Extension Education Department. There was even a loan shark, complete with shark suit and theme music from "Jaws," for those students running low on clams.



The loan shark made sure no students were eliminated from participation. This also added comedy for the evening.

All of the gaming booths were designed to incorporate a physical skill, or luck, with technical parliamentary knowledge. Students had to pay with clams to participate, then won various amounts of clams for their success. No students were eliminated because of lack of script; the loan shark was always available. The booths were simple, inexpensive and dealt with a variety of parliamentary procedures. The following is an overview of the rules and booth regulations.

Registration and General Rules

1. 1,000 clams were issued to each participant.
2. Name tags were issued and worn at all times.
3. A participant could not play the same game twice in row.
4. The cost to play each event was 100 clams.
5. A script auction was held at the end of the evening. All loans had to be paid before students participated in the auction. Clams used in the auction had to be owned by the student doing the bidding.

Loan Shark

1. 1,000 clam loans were made upon request.
2. A 10% rate of interest was charged.
3. There was no limit to the number of loans a student could receive. Students had to be broke to get a loan.

EVENT BOOTHS
Pop A Question

1. A participant gets to throw 3 darts at balloons on the bulletin board.
2. For each balloon popped, the participant gets a chance to respond to the next parliamentary question card.
3. 100 clams were paid for each correct response.

Ring A Vote

1. A participant gets to throw 3 rings at the empty soft drink bottles labeled as parliamentary motions.

(Continued on page 20)

ARTICLE

Urban Agricultural Education

By Margaret Corbellini

(Ms. Corbellini is Assistant Principal, Agriculture Department, John Bowne High School, Flushing, New York.)

Would you believe that the second largest FFA chapter in an agricultural state thrives in the heart of Queens, one of the five boroughs of New York City? John Bowne High School, a large comprehensive school, hosts an agricultural program of more than four hundred students. The program is open to all students interested in the care, breeding and welfare of animals and veterinary technology, as well as the plant sciences such as landscaping, forestry, greenhouse management, nature and conservation.

The program began in 1917. During World War I the United States was the "bread basket" of the world. With so many men leaving the farm to fight in the war, severe labor shortages developed and city youth were recruited to help with the harvest. This gave them an opportunity for a wholesome work experience. A group of parents in 1917, petitioned the New York City Board of Education to establish an agriculture program. One teacher was hired and thirty students were enrolled. A large plot of vacant land (about sixty acres) was used as a "Land Laboratory."

In the early 1930's, fifty-four acres of land were acquired in northern Queens which included the land presently used by Queens College, John Bowne High School and P.S. 119. The students' home base was Newtown High School and they were bussed to the new site for their land laboratory experiences. We had a barn, poultry house, a "Storm King" tractor and even a pair of Belgian geldings.

Students are bussed to a site for a land laboratory experience. (Photo courtesy of Margaret Corbellini, John Bowne High School.)

The program continued to grow in popularity and numbers so that an annex was built with ten classrooms, a lunchroom, and even showers to be used by students after their work on land laboratory. Unfortunately the baby boomers of post World War II were now ready for schooling. Tremendous pressure was brought upon us to give up our annex and most of our fifty-four acres. We eventually became part of John Bowne High School with our four acres of prime real estate as a land laboratory.

At present our program is a "magnet" program for all city youngsters interested in any of the multitude of agriculturally related careers. Youngsters apply in their eighth or ninth grade from junior high school. Admission is based primarily on interest in the program. Each student carries a full academic load in addition to their agriculture class.

In ninth grade the curriculum is an exploratory one. In tenth grade the various careers are introduced along with modules "working citizen" and personal resource management." Prior to eleventh grade the students pick a major in either Plant or Animal Science. Once this is decided they get to study some "agribusiness" units as well as mechanics. The Animal Science seniors have a three month module on "Equine Management" as horse racing is one of the top ten industries of New York State. One of our local riding schools is used as a "hands-on" experience for these youngsters.

Not only do students spend two periods per day in Agriculture class, they must also give up two of three summers. The summer between ninth and tenth year is on our Land Laboratory. The program is a full two months from 7:30 a.m. to 2:30 p.m. Half of the day is spent inside the classroom and the other half is spent on outdoor activities. The students gain practical skills such as driving one of our five tractors, using power equipment or working with our small animals and poultry flock.

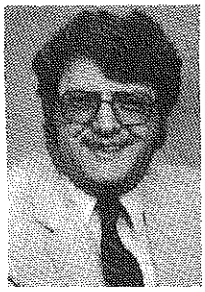
During the second summer students work in the field of their career choice. Those who wish to become veterinarians work on dairy and horse farms throughout the area. They leave home the day after their last exam and return on August 31. It is truly a full summer working from dawn to evening six days a week. This compensates for being a city youngster in an agricultural field. Students develop a work ethic, skills and a strong sense of accomplishment.

Our students have a very low dropout percent. Over 95% graduate. Eighty-eight percent go on to fully accredited two-year colleges or four-year colleges such as Cornell University, Rutgers, Cobleskill and Morrisville, specializing in many major fields of agriculture, including agriculture com-

(Continued on page 20)

ARTICLE

Relevance and The International Student



By David E. Cox and Timothy L. Johnson

(Dr. Cox is Associate Professor, Department of Agricultural Education, University of Arizona; Mr. Johnson is an International Consultant, Arizona Sonora Field School, Tucson, Arizona.)

As agricultural education changes and programs, curricula, and teachers reflect a more international tone, colleges and universities must, likewise, seek ways to "internationalize" their programs.

Substantial numbers of international students already are a part of the student body at most land grant universities in this country. As an example, international students accounted for 7.8 percent (2,599) of the enrollment at the University of Arizona in a recent report. The education of international students has implications not only for the universities, but for the United States as well. In addition, as secondary school agricultural education programs emphasize the international marketplace, domestic program completers will undoubtedly interact with international students who completed their higher education in this country. The international students' perceptions regarding the adequacy of their education will be important when they return to jobs in their home countries and interact with Americans.

Relevance in education at all levels has been debated in recent years. The relevance of programs developed to meet societal needs in the United States is being questioned with respect to the needs of people from other countries. According to Altbach (1985), the few studies which examined the issue of relevance in academic programs indicate, in general, United States curricula are not particularly suited to the needs of international students who come from Third World countries. When those international students return home, they find technical knowledge from practical experiences more useful than the theoretical knowledge obtained from their education. Woods (1986) said American universities must broaden their horizons beyond the campuses, states, and even the United States.

International students' needs have been the focus of many studies. Lee (1981) found that, in general, international students are older, are not from rural backgrounds, and have not had "hands-on" practical experiences which are provided in some American universities. Typically, international students often do not require the practical insights and knowledge into American agriculture in which their colleagues at home are interested.

Meeting Needs

A study which focused on the relevance of graduate programs to international students, was conducted with a group of international students studying in the College of Agriculture at the University of Arizona (Johnson, 1988).

Five categories including (1) faculty and staff; (2) advisors; (3) home country needs; (4) course work; and (5) overall perceptions of the graduate study program were analyzed to see if their needs were being met.

The faculty and staff are the most essential component of any university. What the student body thinks of the faculty and staff projects the academic image of the university. The helpfulness of the faculty and staff was rated very high by the students. Help and availability of the instructors and respect and interest of the staff towards them as international students were indicated as important to the international students.

Advisors are the academic mentors for their graduate students. What a graduate student thinks of his or her advisor often determines the success of an individual's graduate study program. Availability of advisors for consultation is important to most international students. Most of the students indicated a high degree of satisfaction with their advisors.

The appropriateness of the subject matter content of educational programs in the United States to the needs of Third World countries has been questioned. The relevance of their graduate study program to the developmental needs of their home country was rated high by 7 of 10 of the students who responded.

Other factors which were rated by international students as important to their graduate programs included the course work which made up the program. The students indicated satisfaction with the combination of required and elective courses. They also reported satisfaction with the blend of theory and practicality in the course work.

In-depth knowledge in their area of expertise, adequate application of course content, exposure to computer technology and interactions with peers in class, respectively, were all rated as highly important by more than 50 percent of the students.

Suggestions

The results indicated that while the international students had a high opinion of the faculty, staff, and their advisors, they wanted their academic advisors to encourage work on a research problem more closely related to the needs of their home countries.

(Continued on page 22)

A Fun Approach to Leadership Skills

(Continued from page 17)

2. For each motion ringed, participants tossed the ring at one of the three ballot boxes labeled as (1) majority vote, (2) no vote needed, or (3) 2/3 vote required.
3. 100 clams were paid for each correct response.

Second Safari

1. With a fishing rod, and using a small magnet for bait, the student cast for a cardboard motion fish catching it by the paper clip. Upon catching the fish, the student decided if that motion required a second.
2. The safari was completed by shooting the correct response (yes or no) with the rubber dart gun. 100 clams were paid per correct response.
3. Three attempts were allowed per turn.

Twenty-One For Fun

1. A game similar to "black jack" was played with a special deck of cards made up of various types of motions.
2. Main motion cards could count for 1 or 11. Face cards (motions with faces drawn on them) counted 10. All others counted face value.
3. Winning hands were paid 200 clams.

Toss In Order

1. Participants tossed a red ball at cups labeled as motions.
2. The participant tossed a white ball attempting to score a motion of higher precedence than the red ball.
3. The participant tossed a blue ball attempting to score a motion of higher precedence than the red and white balls.
4. Each participant was paid 100 clams if the red ball was a motion (some cups were not labeled). 100 more clams were paid if the white ball represented a motion of higher precedence than the red ball motion. 100 additional clams were paid if the blue ball represented a motion of higher precedence than the red and white ball motions.

Concentrate For A Match

1. A participant called out grid coordinates for two cards tacked face in on a bulletin board.
2. If a term and its matching definition were called, 100 clams were paid and the cards remained face out.
3. If the cards did not match, they were returned face in.
4. The process was repeated for a total of three chances.
5. Cards remained face out until all cards had been matched.

Dice and Discuss

1. Participants rolled a red die and a white die.
2. The score on the red die determined the column grid of the motion and the score on the white die determined the row grid of the motion.
3. The participant verbally declared if the established motion was or was not debatable.
4. 100 clams were paid for each correct response.
5. The process was repeated for a total of three chances.

Lag For Change

1. A participant tossed 3 chips at the motion board. For each chip that was totally inside a motion border, the participant tossed a chip at either the amendable or non-amendable boxes.
2. 100 clams were paid for each correct response scored.

The evening finished with a script auction of the prize items. These items had been purchased using Collegiate FFA Recreation Committee budgeted funds. Prizes mainly consisted of school insignia items such as shirts, caps, sweatshirts, etc. All booth materials were kept so that this event could be held in future years.

New students were able to meet other students, faculty, and graduate assistants. A good time was had by all and most importantly, the students experienced a fun approach to an important leadership skill, parliamentary procedure. This type of event could be duplicated for any group, whether it be a high school FFA chapter, a 4-H club, a young farmer organization, or as in the case of this article, a group of undergraduate college students.

Step right up! Have some fun with parli-pro!

Urban Agricultural Education

(Continued from page 18)

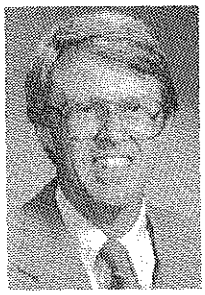
munications and agribusiness. Others go on to post-graduate work as research assistants, becoming botanists or veterinarians. Some students are licensed as laboratory animal scientists and certified pesticide applicators.

We have recently been working on making our program available to youngsters with many handicapping conditions. We have developed a parallel program for the learning disabled and are presently in our fourth year in this area. Our first graduates are working in plant shops and research facilities. In addition, we have six classes of Plant Science for youngsters who have limited English language skills. As New York City has a very large immigrant population, we have over seventy languages spoken here. Plant Science gives these youngsters the opportunity to build vocabulary through learning by doing.

Our goals for the future include greater utilization of our beautiful school courtyards. The school building occupies four city blocks and has a large center courtyard which has been developed into an international garden with many rare shrubs and plantings. We are presently adding a hydroponic greenhouse to this area with access to an exceptionally large classroom. This room will have a sliding wall divider. We have developed a transitional Special Education class which includes a Special Education class, a mainstream parallel class, two teachers and a paraprofessional. The teachers team teach, work together or separately with groups. So

FEATURE COLUMN

HISTORICAL REVIEW
April 1941 and 1966



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

April 1941

C.E. Wright (University of New Hampshire) wrote about supervised farming experience and briefly described its attributes. He also advocated the placement of students for experience on farms. Examples were used of boys from part-time farms, boys with poor opportunity for farming, an underprivileged boy, and a retarded boy who all benefitted from farm placement. Wright defined placement as"This means being placed on a good commercial farm where experience gained will be good. Practices observed and participated in will be not only man-sized but also practical."

Byram (Michigan State University) reported on research conducted evaluating agricultural education programs. One study reported on graduates near the Williamsport, Pennsylvania area. The subjects indicated that 70% had livestock projects while vocational agriculture students, but only 30% had such enterprises after graduation. Sixty percent of the graduates had been visited by their vo-ag teacher after graduation. Less than two percent had enrolled in adult classes.

J.A. Linke, Chief of the Federal Agricultural Education Service retired April 1. He had served in that capacity since 1934. The Farm Security Administration broadened its rehabilitation program to include vocational agriculture students whose parents were Farm Security borrower-families. U.S. Office of Education records indicated that in 1939-40, 8,126 teachers taught in 8,147 departments with over 560,000 students enrolled. The average salary for teachers was $2,000.

April 1966

The theme was on the NVATA and its accomplishments. At the 1929 AVA Convention a small group suggested that there be an organization for vo-ag teachers. By 1947 the group did not believe its interests were being represented at the AVA Convention and decided to form a new organization. While the decision was not unanimous, about three-fourths present supported it. By the 1948 AVA Convention NVATA was ready to go. Some were concerned that it would compete with AVA even though the constitution described NVATA as an affiliated organization.

Several people share perspectives on NVATA. Alton Ice, Director Professional Services AVA, described the two organizations as partners. Robert Day, Principal Carey (Idaho) High School, described NVATA as a means for agriculture teachers to stay up to date. R.S.C. Sutcliff, State Supervisor, New York, viewed NVATA as a valuable and helpful organization. Clarence Bundy, teacher educator Iowa State, described NVATA members as crucial recruiters for colleges of agriculture.

M.D. Gaar was assigned to the Atlanta Regional Office, Jesse Taft was assigned to the Boston regional office, and Home Edwards was assigned to the Chicago office. All three not only served in the U.S. Office of Education, but also as members of the National FFA Boards of Directors and Board of Trustees. William Stevenson (Oklahoma) reported a research study that agricultural businesses wanted employees with competencies in customer relations, writing, salesmanship, safety, public speech, and employee relations.

far the teachers and pupils are thoroughly enjoying working together. When the greenhouse is completed, it too will become an integral part of that learning complex.

We hope, in the near future, to link another class with the home economics department to start a "take home" section in our vegetable store and farm stand. As we raise eggs, vegetables and fruits, we would prepare quiches, pies, cakes and cookies. Students would get valuable agribusiness experience in marketing and good experience in food preparation and nutrition. This would provide another source of income for our program.

Eventually it would be wonderful if we could add a two stall barn and house a Thoroughbred and Standardbred. Our goal would be able to give youngsters "hands-on" experience in handling and managing horses without being dependent on transporting them to a local stable. We could hope to race them at the local racetracks.

At present we have a complete comprehensive program which teaches the basic advanced and specialized agriculture skills in the plant and animal sciences as well as agriculture mechanics and agribusiness. We offer this program to youngsters of all abilities and to those that need added help in learning and language skills. We hope to enhance and expand to reach out to more youngsters and the community at large.

New Directions In Texas' Adult Education

(Continued from page 11)

Interest sessions and educational seminars have seen a marked increase at the State Convention. Goals set forth in our Long-Range Plan are carried over into our annual State Program of Work. Area conventions are incorporating more educational activities into their programs.

Local chapters are working harder to find timely educational programs. Lists of resource personnel are being updated, with an emphasis on pro-action, rather than reaction, to potential agricultural problem situations.

Importance of the Local Agricultural Science Teacher To The Success Of The Young Farmer Program

The entire Young Farmer program in Texas has its roots in the local chapter. The chapter is under the supervision of the local agricultural science teacher. If these people were not committed and ENTHUSIASTIC, the entire program would have folded long ago.

In addition to regular educational meetings, many advisors of Young Farmer chapters offer specialized educational activities. This practice has continued even though the Adult Specialist Program is no longer available. Community needs vary, and the agriscience/Young Farmer advisor can tailor educational activities to her or his locale. Varying time allocations for the activities, or "shortcourses," seem to be the rule, and three allocations are most prevalent:

A. Four nights of 4-5 hours of instruction per night, in areas such as Hunter Safety Instruction, Oxy-Acetylene Applications, and Computer Utilization;
B. One night of 4-5 hours, such as Specialized Farm Mechanics, Industry Innovations, etc.;
C. Field days and Educational tours, such as the annual Winters Young Farmers tour, and Area Field Days.

Texas agriscience teachers handle adult education on a VOLUNTARY basis. This aspect alone identifies the presence of enthusiastic leadership in the Texas Young Farmer program. Several methods under consideration for making Young Farmer programs more attractive to potential advisors are:

A. In-service credit for teachers involved in Young Farmer educational activities;
B. Extended contracts for involved teachers; and
C. A stipend to agriscience teachers for adult education work.

Summary

The success of adult education in Texas through the Young Farmer program is dependent on a bottom-up process when it comes to meeting our goals. ENTHUSIASTIC local chapter members create an ENTHUSIASTIC area association which generates an ENTHUSIASTIC state leadership. To continue on a course of GOAL SETTING and ENTHUSIASTIC LEADERSHIP, we have found we MUST offer a program that is:

A. Educationally oriented;
B. Varied to suit community needs;
C. Member-driven; and
D. Capable of evaluation and change.

Reference

"Report on Postsecondary and Adult Education in Agriculture and Natural Resources in the United States," a report commissioned by the National Council for Vocational and Technical Education in Agriculture, 1986.

National Young Farmer Educational Association Tactical Plan

Texas Young Farmers Long-Range Plan

Relevance and The International Student

(Continued from page 19)

The international students thought that their coursework in graduate study programs was relevant to the development needs of their home countries, but they wanted more off-campus educational activities such as field trips, and internships.

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Adult Education in Agriculture: A Little Bit of Heaven

(Continued from page 12)

Communities receive benefits from adult education in a more indirect manner than the groups identified above. Developing the leadership skills of participants tends to enhance those skills in the community. Participants develop a greater sense of pride in their own lives and in the community. Development of community pride may not be a measurable outcome, but it is evident in many communities with an effective adult program. Additional benefits of adult education include an increased standard of living and greater economic stability in the community. During times of change in rural communities, programs which enhance the economic stability of the local community are welcome. Many school administrators are keenly aware of the benefits of adult education for the school and community.

Operation of Adult Education Programs

Adult education programs in agriculture function quite differently than secondary programs. Many teachers have expressed the fear of being ill-prepared to teach adults. This fear, although a natural reaction, has been overcome by those teachers who have become involved in adult education. Many adult teachers have reported that after overcoming their initial apprehension, they enjoy teaching adults even more than secondary students.

Using resource persons has become a widely accepted practice in adult agriculture programs. Technical advances and the scope of topics addressed in adult programs frequently tax the expertise of teachers. The role of the agriculture teacher for each class meeting should be to facilitate the teaching/learning process. The teacher's role may change from introducing the topic and speaker to teaching the entire lesson. Experience has shown that the more direct involvement a teacher has with adult instruction, the greater the benefits. This is true not only for the instructor but also for the agriculture program, school, and community.

Funding Adult Education in Agriculture

Financial support for adult agriculture programs varies widely (Birkenholz and Maricle, 1990). Some states provide salary supplements for teachers involved in adult programs in addition to their secondary responsibilities. Other states have developed a cadre of full-time adult teachers to serve the needs of adults. Still other states have designated community/junior colleges as the sole providers of adult instruction to prevent duplication of effort and expenditures. Grants and contracts have also been used to target funding support to institutions which have indicated a willingness to conduct adult programs on a special "project" basis.

Regardless of the method of support utilized in a given state, the perspective of many superintendents is clear; adult education programs should be supported using resources other than local district funds. Agriculture teachers need to examine alternative sources of funding for adult programs. Some of the alternative sources might include (1) state reimbursement of expenses, (2) participants fees, and (3) business/industry sponsorship.

Summary

Adult education programs in agriculture have played a significant role in the economic development of many rural communities. Although much has been written about the decreasing number of agricultural producers, there remain sufficient numbers of farmers in many rural communities to justify instructional programs which address their specific needs.

Secondary agriculture teachers should examine the potential benefits which can be derived from adult programs. Although teaching secondary students can be a full-time job, the time expended in adult work is worth the effort in terms of direct and indirect benefits to participants, programs, teachers, schools, and communities.

Teachers who are contemplating work with adults should not only consider the agricultural producers in their communities, but other audiences as well. This may include homeowners, landlords, agribusiness employees, and consumers, as target audiences for instruction **in** and **about** agriculture. With the declining presence of agricultural extension in many communities, agriculture teachers may be asked to fill the void.

The challenge that we face is our mirror image. We must ask the question, "Are we prepared to serve the educational needs of adults in our communities?" Additional in-service opportunities and curriculum materials are needed to elevate teacher confidence with regard to adult work. Support mechanisms should be implemented to address those needs. Agriculture teachers possess the characteristics needed to be effective adult educators. Hopefully, more teachers will accept the challenge and become involved in adult work and experience the feeling of "having died and gone to heaven."

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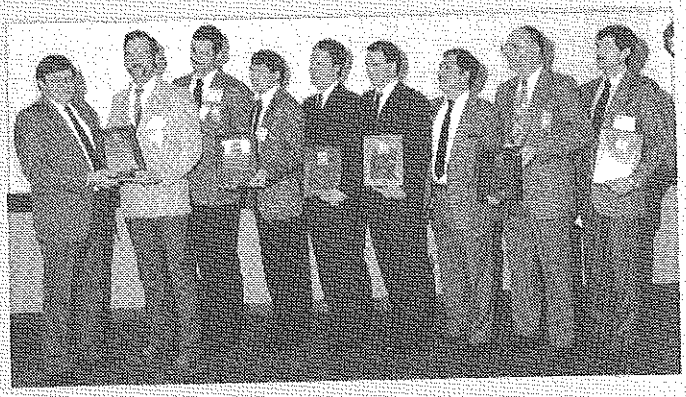
Stories in Pictures

Recognition NVATA 1990

OUTSTANDING AGRICULTURAL EDUCATION TEACHER AWARDS

Ford New Holland sponsors the "Outstanding Agricultural Education Teacher Award" for the NVATA. The award recognized NVATA members who are at the pinnacle of their profession — those conducting the highest quality vocational education program in agriculture. It recognizes leadership in civic, community, agriculture/agribusiness and professional activities. Ford New Holland provided each award winner transportation and lodging to attend the NVATA national convention in Cincinnati. Those recognized left to right: Larry W. Fisher, Branch Manager, Ford New Holland, Troy, MI; Joe Granio, Gilbert, AZ; Douglas K. Ward, Jonesboro, AR; Daniel J. Leinen, Harlan, IA; Al Dietz, Sycamore, IL; Odon Russell, DeFuniak Springs, FL; Earl D. Reeves, Mt. Solon, VA. *(Photo courtesy of NVATA)*



OUTSTANDING AGRICULTURAL EDUCATION PROGRAM AWARDS

Case IH sponsors the "Outstanding Agricultural Education Program Award" for the NVATA. Primary objectives of the program are to incorporate the basics of education, implement parts of the Vocational Education Act applicable to the national agriculture education program and to conduct effective public relations/publicity programs. Case IH provided submitters of the region winning applications with transportation, lodging and a cash stipend to defray expenses while attending the NVATA National Convention in Cincinnati. The schools recognized were left to right: Arnie Oelkers, Manager, Service Training, Case IH, Racine, WI; Roger Hendrickson, Belgrade High School, Belgrade, MT; Jerry Renshaw and Vince McGolden, Elgin Public Schools, Elgin, OK; John Rist, Bowdle High School, Bowdle, SD; Howard Heavner, Valmeyer High School, Valmeyer, IL; Damon Morgan and Phil Wright, Morristown West High School, Morristown, TN; Frank McElwain, Limestone High School, Limestone, ME. *(Photo courtesy of NVATA)*

OUTSTANDING YOUNG MEMBER AWARDS

John Deere sponsors the "outstanding Young Member Award" for the NVATA. The program is designed to recognize a member's participation in the professional activities of the NVATA. John Deere provided each award winner and spouse transportation, lodging and a cash stipend to defray expenses while attending the NVATA national convention. Award recipients were left to right: D.R. Margenthaler, Manager, Corporate Support Programs, John Deere, Moline, IL; Howard Carlson, Sunnyside, WA; Carey D. Kalupson, Jr., New Providence, PA; Duane L. Huge, Cloverdale, IN; Harmon F. Bliss, Jetmore, KS; John Whaley, Jacksonville, AL; David Rocker, Franklin, NE. *(Photo courtesy of NVATA)*

OUTSTANDING SERVICE AND COOPERATION AWARD

Douglas B. Spike, (left) NVATA President, Bloomfield Hills, Michigan, presented the prestigious award to Hugh D. Cotcamp, (right) Vice President North American Sales, Ford New Holland during the annual NVATA Recognition Breakfast at the national convention in Cincinnati. *(Photo courtesy of NVATA)*