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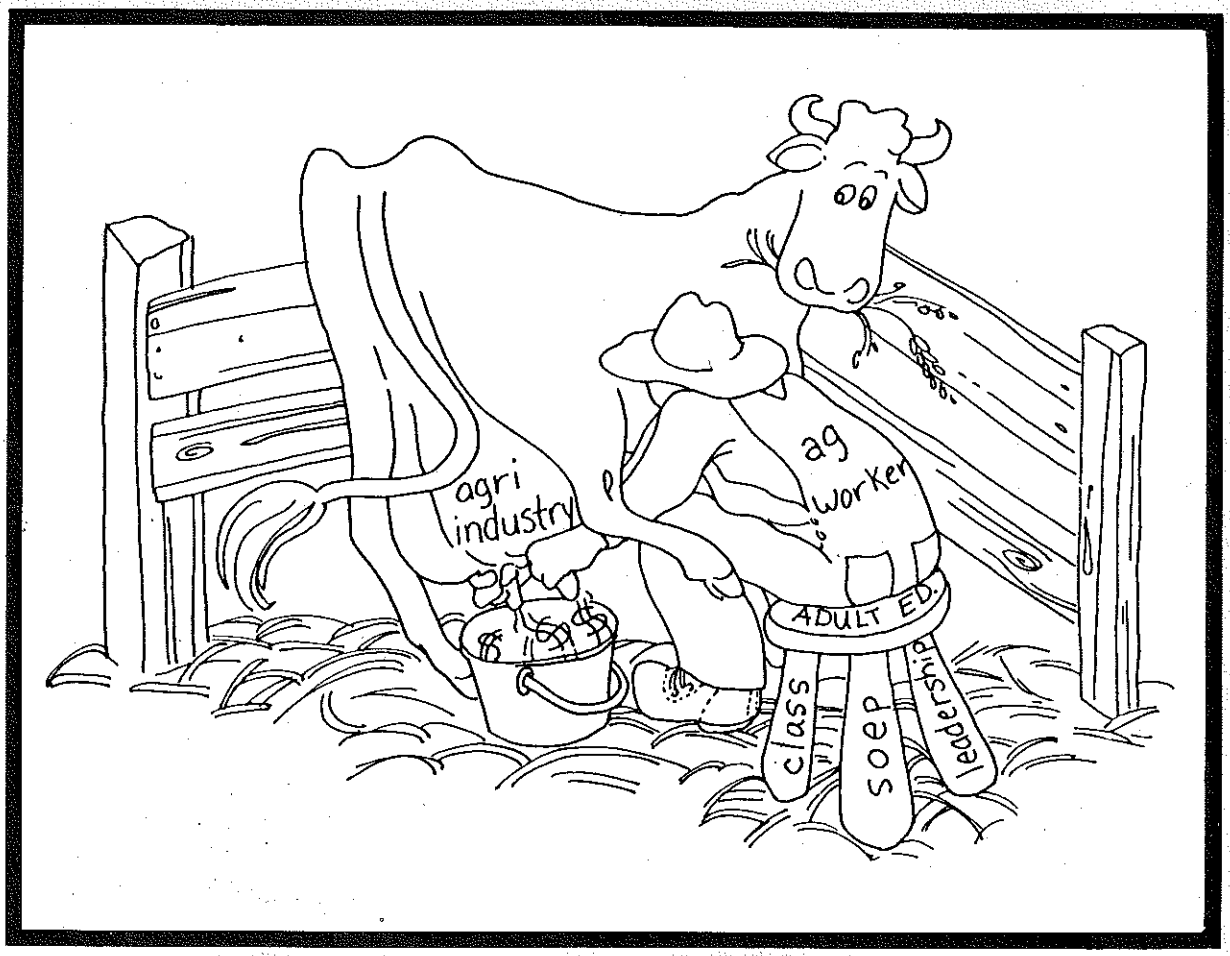

THEME
SOEP: ADULTS

THE
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MAGAZINE

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Table of Contents

ARTICLE SUBMISSION

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

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EDITOR'S PAGE

Adults Want You

BY LARRY E. MILLER, EDITOR

(Dr. Miller is a Professor in the Department of Agricultural Education at The Ohio State University.)

The supervision of occupational experience programs is not limited to students in secondary and post secondary programs. The vocational agriculture instructor who teaches adult students must also supervise them. The principles discussed throughout this volume also apply to adults.

Purposes

On-site supervision of adults may have several purposes. These may include visits to get acquainted, to survey and appraise the situation, to encourage and to teach. The latter purpose constitutes our primary charge as instructors of vocational agriculture. The categories are not mutually exclusive, however. On any one visit, several purposes may be met.

Some objectives of supervisory visits include helping the student overcome problems, helping the teacher evaluate the plans of the student, helping provide the opportunity for individualized instruction, helping identify learning needs, helping discover improvement opportunities, helping the teacher gain rapport with the student, helping the student use the problem solving process, helping apply new knowledge to personal situations, and helping to evaluate the adult program.

Establishing Rapport

To be highly effective, a satisfactory rapport must be established with the adult student. This is best achieved through one-to-one interaction, which can occur during supervisory visits. Sometimes this confidence is slow in developing; often taking several years. Perhaps this is why beginning or new teachers sometimes are uncomfortable in this role. Rapid teacher turnover does not encourage the development of the needed rapport.

The fact that successful adult programs are often staffed by experienced teachers may not be a function of their higher levels of knowledge as much as less experienced teachers may not have had the opportunity to build the needed rapport. The implication seems implicit that beginning and new teachers must diligently strive to increase the quantity and quality of supervisory visits in order that they may begin to establish the desired rapport.

Appraisal

To be of most help to the adult student, the teacher must have knowledge of the situation on the farm or in the agribusiness. We need to know of the practices now in use, which can best be gained through firsthand knowledge acquired through supervisory visits. What are the current resources? What are the goals of the agribusiness? What progress has been made? What improvements or adjustments are needed? What use is being made of the knowledge already taught? What are the interests in social, recreational, educational and civic affairs? Answers to each of these questions can improve the effectiveness of the vocational agriculture teacher.

This is also an excellent opportunity to familiarize those unacquainted with the purposes of vocational agriculture and the adult program.

Encouragement

Everyone needs strokes! Vocational agriculture teachers have used this fact to improve their effectiveness with many types of students. It cannot be ignored with adults. Supervisory visits provide an ideal forum for providing praise. Praising a single attainment as a correct step toward a goal, praising the application of a recommendation from previous instruction, or praising individual accomplishments each serves to instill pride in the individual.

Adults may be particularly apprehensive that a supervisory visit may result in criticisms. Providing positive reinforcement can successfully alleviate potential uneasiness.

Teaching

Teaching is the primary duty associated with our role; why we draw a paycheck. We may conduct supervisory visits to teach, one-to-one, some specific skill. Many skills are best taught in this manner. We may also be providing technical knowledge to our students through supervisory visits.

Some teachers may be apprehensive about conducting supervisory visits to adults because they are afraid they will be asked something about which they know nothing. Adults typically do not expect the teacher to be a walking encyclopedia that provides all the answers — in fact they may suspect a person with too many "pat" answers — but appreciate someone willing to help them find answers. Being willing to say "I don't know" may actually aid one's credibility.

The decision making process also presents a troublesome area for teachers. There is a distinction which should be made between providing information and making decisions. The teacher should help provide information for the decision making process and not make the decisions for students. The consequences of making an incorrect decision for a student can be rather severe. For example, one might readily provide information on recommended seed corn varieties, but not tell the student to plant variety XYZ. If variety XYZ produces well, little would result; but

(Continued on Page 4)

Adults Want You

(Continued from Page 3)

if it produced poorly or resulted in a crop failure, then the repercussions could be highly negative.

Student Commitment

Students, if adequately coached, can also greatly aid the teaching that occurs during a supervisory visit. They may need to make advance preparation for the visit by updating recordbooks, getting materials together for a demonstration, etc. Students should be alerted to the need to inform the teacher if the visit is inconvenient for any reason. They need to provide time for the visit and share any problems they want addressed during the visit. They should also be made aware of the schedule of the teacher.

Teacher Commitment

The success of supervisor visit depends upon the teacher's preparation as well as that of the student. Visitations require certain courtesy formalities as teachers are essentially guests of the student. The procedures are not unlike a SOEP visit to any other group but are worthy of considering once again.

Things to consider include: (1) making a firm appointment, (2) setting a time to arrive and depart, (3) dressing appropriately, (4) observing family practices (regarding use of tobacco, etc.), and (5) learning the names of family members, employees, etc. Additionally, more technical considerations must be given to (1) preparing to address the items to be discussed, (2) reviewing notes from previous visits, (3) determining if practices taught in class are being utilized, (4) listing post-visit information about things to do on the next visit, (5) listing items for commendation and encouragement, (6) delivering resources students may need, (7) planning instruction, (8) carrying necessary materials, and (9) evaluating the instruction and supervisory visit. Adequate preparation may take several hours and should not be done at the last minute.

Summary

Well planned supervisory visits to adults can produce effective results. The results accrue to the teacher as well as the student. Teachers learn from such experiences and can greatly enrich their storehouse of examples and illustrations to use in teaching. Adults like to be visited. They do not expect the teacher to have all the answers. Teachers will find it to be one of the most rewarding parts of their job.

THEME

THE COVER: It's Milking Time

The prospect of teaching adults through hands-on Supervised Occupational Experience is rather scary, isn't it? After all, a person could get kicked doing that and a well placed or even a haphazard kick could upset our stool. It is bad enough just to think about teaching adults let alone get out in their barn (SOEP) and deal with actual problems.

As teachers, maybe we are often so busy with more important things that we do not have time to teach adults. Really, it is much less threatening to think about fruit sales or expanding the teaching of agriculture into the elementary school. After all, to do either does not require much in the way of agricultural skills and knowledge. If we, as a total profession, do less and less to test those skills we would not look like sharp and live agriculturalists either.

For those to you wanting to prove that you do not have time for adult work, go back to sorting oranges and bagging popcorn at ballgames. For those of you wanting to get involved in the agricultural world where the worker must "grab a hold," take a good look at the theme articles in this issue. When we decide to get involved in adult vocational education in agriculture, we may recognize three components: SOEP, classroom/laboratory, and leadership. This issue concentrates on SOEP. We know one of the characteristics of adult education is that students bring

By Donald M. Claycomb,
Theme Editor

(Editor's Note: Dr. Claycomb is Executive Director of the Missouri Advisory Council on Vocational Education, P.O. Box 545, Jefferson City, Missouri 65102.)

their job-related experiences into the classroom.

The authors of the theme articles are each advocating that the vocational agriculture instructor also take instruction to the job.

Theme Articles

Lee Cole issues a challenge to teacher education by stating that "preparation must take the form of both scientific knowledge and hands-on practical experience."

"It is time that all young/adult instructors go beyond the cookies and pop routine of instruction and move into the real world of on-farm-site instruction," says Laverne Barrett.

Freddie Waltz and Thomas Curry tell us how to use tours to provide on-site instruction. Norman Rohrbach and Bob Chapman talk about the role of records in on-site/on-farm visits. Gene Francis and Greg Nolting provide tips in working with adult students through SOEP.

Supporting Adults

In each of our communities, adults are employed in the field of agriculture. If they are to continue, either employed by someone else or self-employed, they must be able to earn a living from the industry. When thinking about agricultural workers we need to remind ourselves of the old story:

A passer-by asks a farmer, "How much milk does your cow give?"

"She doesn't give any," the farmer replied, "whatever I get I must take."

Dollars are not given to individuals in agriculture. Agricultural workers must know how to take them. Our adult programs can provide support to and assist workers in being more effective at earning or taking dollars in line with each respective worker's potential. Will we assist workers by providing support through adult education or will we let them sit back on their heels and do the best they can without our support?

It is milking time. Don't forget the stool!

Cover drawing courtesy of Crystal Dietiker, Graphic Artist, Instructional Materials Laboratory, University of Missouri, Columbia, Missouri 65211.

THEME

Preparing Teachers For On-Farm Adult Instruction

By Lee Cole

(Editor's Note: Dr. Cole is in the Department of Agricultural Education at Oregon State University, Corvallis, Oregon 97331.)

If on-farm adult supervision is to be done by a vocational agriculture teacher, the teacher must be well prepared in technical agriculture. This preparation must take the form of both scientific knowledge and hands-on practical experience. This statement is true whether a vocational agriculture teacher is working with adults or high school students.

Practical, hands-on experience, skill and expertise in agriculture are demonstrated during on-farm supervision to an extent that would be difficult to duplicate in the classroom. For example, while doing on-farm supervision, vocational agriculture production teachers are frequently confronted with such everyday, practical activities as dehorning, ear marking, castrating, worming, diagnosing sicknesses, sharpening tools, cutting with oxygen-acetylene equipment, repair welding, or helping with records.

A vocational agriculture teacher must function well in these cases of practical experience or they suffer loss of credibility in the community. Vocational agriculture teachers, therefore, need a unique blend of scientific knowledge and practical skill and experience in order to be successful.

Potential vocational agriculture teachers usually have some agricultural background. However, with specialization in agriculture came people who had a narrow scope of preparation. Therefore, agricultural education majors who have extensive agricultural background need preparation in the full breadth of agriculture. A second major group of agricultural education majors have had little experience in agriculture. These people need the full breadth of agricultural preparation plus work experience to gain additional expertise and confidence in production agriculture and agribusiness.

Given the previously identified starting place, how might a vocational agriculture teacher best be prepared so that both scientific knowledge and practical experiences are gained?

Most vocational agriculture teachers graduate from land-grant universities. These universities are very proficient at research in agriculture. However, many technical agriculture courses do not provide opportunities for students to gain personal hands-on practical skills. These practical skills must be provided for vocational agriculture teachers so that the potential for success, particularly in the on-farm supervision phase of the program, can be increased.

There has been much said recently regarding the decreased emphasis by many vocational agriculture teachers on the SOEP part of the total vocational agriculture program. Could it be that vocational agriculture teachers who do not possess hands-on practical skills avoid going places where the lack of confidence and skill may be discovered? On-farm supervision would be such a place. Again, vocational agriculture teachers must be provided these hands-on practical skills in order to enhance the potential for success.

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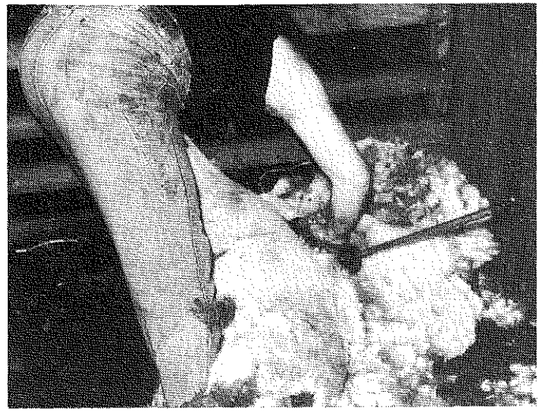


Students in the sheep practicum perform the skills of docking and shearing.

Preparing Teachers For On-Farm Adult Instruction

(Continued from Page 5)

How can an agricultural education department prepare vocational agriculture teachers for success?

First, the agricultural education department can encourage other departments in the college of agriculture to provide both scientific knowledge and practical skills and experiences in their courses. Not all departments will have the resources necessary to accomplish this task, so practicum courses could be taught within the agricultural education department. The Agricultural Education Department at Oregon State University is currently teaching Beef, Sheep, and Swine practicums which focus on castrating, marking, vaccinating, showing and fitting, animal handling, and all the little things that are frequently overlooked in other classes. These classes are hosted by local livestock producers. Agricultural education majors are involved with field trip planning and execution. Methods of teaching livestock skills are emphasized at the site as well as the learning of the actual, hands-on, technical skill.

In addition, the Agricultural Education Department is teaching an advanced livestock evaluation course which allows the students to prepare for, and participate on a university-level livestock judging team. This refines animal selection and oral reasons skills while adding confidence for those who participate.

These accomplishments are but a minor part of a comprehensive plan which includes an instructional farm under the direction of the Agricultural Education Department. The development of the instructional farm would not only allow for such activities, but would also allow for a comprehensive instructional package.

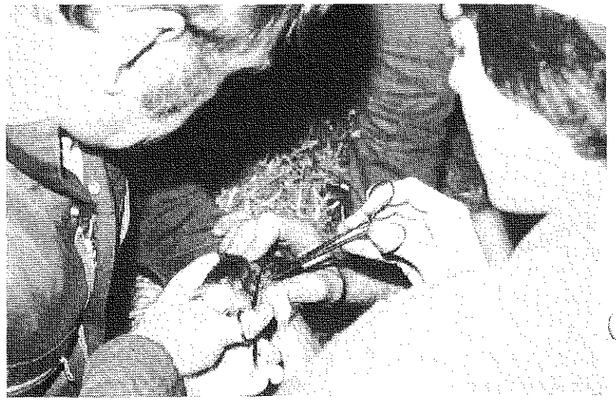
This comprehensive instructional package would have potential vocational agriculture teachers responsible for every major farm activity. They would prepare, plant, fertilize, cultivate, spray and harvest crops. They would be responsible for each major species of livestock (care of animals, transport, parturition, nutrition, breeding decisions, sanitation and health, etc.) There would be a show string of livestock and each student would be required to fit and show all species of livestock. If a student had never shown livestock in competition, they would take a show string to county and state fairs. All management decisions at the farm would be made by students. Micro-computers would contain all records and students would enter records and make decisions from computer output.

With a firm foundation in crops, soils, animal science, agricultural machinery, and production management; occupational internships could be established in agribusiness. Agribusiness is an extremely important area within which vocational agriculture teachers must have background. It is an area that has little meaning to people if they do not have a firm foundation in production agriculture. For example, it is difficult for pesticide salespeople to have success unless they understand the problems confronted by the producer.

Summary

Quality preparation for vocational agriculture teachers who are to do on-farm instruction for adults or for high school students depends upon identifying the skills and competencies needed by such teachers. A program must then be developed which addresses all aspects of the preparation of the potential teacher. A total package approach is needed to assure coverage of all needed competencies. Whatever the composition of the total package approach, the goal of equipping the teacher to do quality instructional work for both scientific knowledge and practical, hands-on skill must be the focal point.

In a time when the public is being made aware of, and openly concerned about, the lack of quality in public education; it is important to focus on quality teacher preparation as a starting point for improving the quality of vocational agriculture programs. It may be that a five-year teacher preparation program would be more appropriate than the current four-year program in order to meet this goal. If that is the case, effort should be made to move in that direction with appropriate compensation made to teachers for the additional time and expense involved in teacher preparation.



Preparing animals for show and pulling bleeding arteries when foot rot forces severe trimming are skills also taught.

THEME

Using The Farm Site In Teaching Adults

By Laverne A. Barrett

(Editor's Note: Dr. Barrett is in the Agricultural Education Department at the University of Nebraska, Lincoln, Nebraska 68583-0709.)

Teaching young adult farmers and ranchers can be one of the most rewarding aspects of the agricultural education profession. Few teachers have the opportunity to see what they have taught put to practical use as quickly as the young/adult farmer instructor. Because adult learning has an almost immediate pay back, adult students are highly motivated to learn more.

Beyond Cookies and Pop

Some young/adult farmer meetings are nothing more than a glorified social club, where neighbors and friends get together to exchange the latest gossip. Obviously, the social dimensions of young adult meetings are very important, but formal instruction and learning need to have the highest priority. How can a climate for learning be created?

Instructors are the professional leaders in the young adult farmer and rancher organization. It is their responsibility to establish the learning environment. This can be accomplished in several ways. One way is to plan as many

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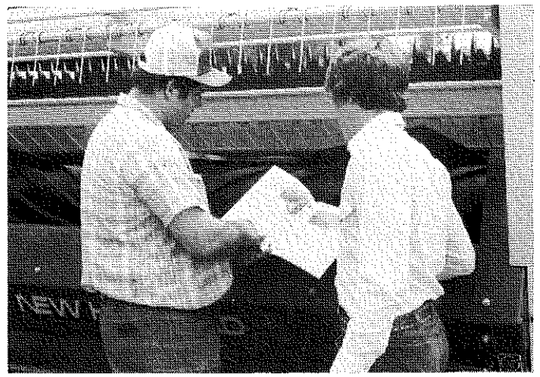
On-site instructional meetings offer unique learning opportunities for adult students. (Photographs courtesy of Nebraska Young Farmers and Dan Moskwa, Supervisor, New York.)



Going to the equipment is often more convenient than bringing the equipment to the laboratory. (Photographs courtesy of Billy Harrell, Sam Houston State University, Huntsville, Texas.)

Using The Farm Site In Teaching Adults

(Continued from Page 7)

instructional meetings as possible in the real world, on-the-farm or in an agribusiness. It is in this setting where the following adage comes true: "what I hear I forget, what I read I remember, but what I do I understand." It is time that all young/adult instructors go beyond the cookies and pop routine of instruction and move into the real world of on-farm site instruction.

Places For Instruction

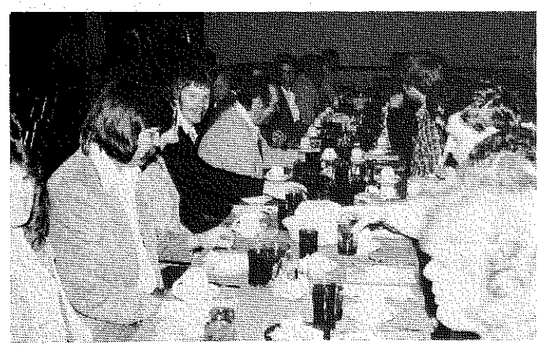
The community as a learning place is a viable alternative to the 2x4x6 (two covers of the book, four walls of a classroom and the six period day) and is being recognized as such by more and more educators. To the effective young/adult instructor, the real world is where most learning has always been perceived to occur. The communities may vary from the demonstration plot to an agribusiness visit. How does one make community sites more valuable for instruction?

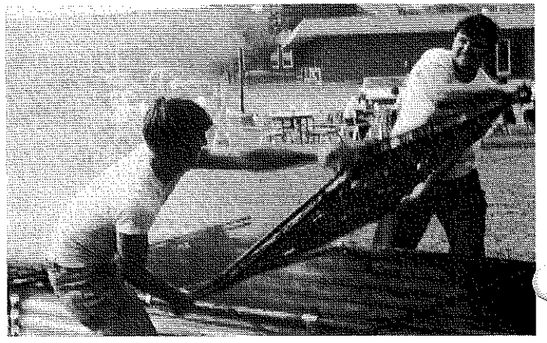
Site selection is an important step in making real world instruction a success. However, several questions need to be asked in planning activities. Does the site represent an ideal setting for the concept being taught? Sometimes on-farm sites are selected because they are on the home farm of a member, but they may not represent a good teaching model. Some sites have so many unattractive aspects that they detract from the lesson being taught. If the site is meant to depict a demonstration of an innovative idea, has it been correctly designed? Too often demonstrations have been conducted that did not have adequate control, and as a result farmers may draw erroneous conclusions from what they see. Instructors might be wise to consult their extension service representative to help them design their demonstrations to reduce costly mistakes.

Using Contests

Competition in the form of contests is another way the farm site may be used. Some farmers and ranchers can be encouraged to learn through the contest experience. The need for this form of learning can be witnessed by observing adults at county fairs competing through their children.

Contests in the area of crops and livestock can be a valuable educational tool but several precautions should be observed. First, anytime there is competition there will be both winners and losers. Make sure that the reasons for the contest is not just to determine winners, but to learn and share information among all participants. After a contest has concluded, conduct an educational follow-up meeting at the farm of the winning contestant and thoroughly discuss the results. The topic of the meeting can be chosen from a wide variety of subjects that has been illustrated through the contest. This method of concluding the contest experience can end in a real educational experience rather than just ending with a winner.





Opportunities for socializing also aid in the educational experience. (Photographs courtesy of Nebraska Young Farmers and Robert Gambino, Vocational Agriculture Instructor, Falls Village, Connecticut.)

Social Gatherings

Earlier, this article cautioned against over emphasizing the social aspect of young adult programs at the expense of instruction. However, meetings or classes held at the farm or ranch have a natural social benefit that should not be ignored. The need for time to meet and share information is vital to a rural population where social interaction is infrequent. Observing the interaction at the weekly livestock auction or farm sale, one can conclude that many people are there not to buy, but to socialize.

Even though meetings and classes held at the farm provide an ideal medium for social exchange, this time should be planned just as carefully as any class. This can be done by providing time for refreshments at the end of the program. Members will discuss ideas learned from the meeting, as well as many other bits of helpful information. This is an ideal time for the young/adult instructor to move about the group and assess the impact of the meeting, identifying possible needs among members for future follow-up or individual on-farm instructional visits. It is important for instructors to remember to encourage spouse participation. Some chapters miss a great community resource by excluding spouses.

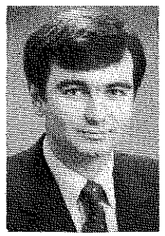
Conclusion

The experienced young/adult instructor knows very well the value of meetings held at farm sites. The higher attendance by farmers and ranchers at these meetings is testimony that this type of learning is preferred over sitting in the classroom and listening to lectures.

Instructors also know that ill conceived on-site meetings can lead to reduced interest. Spend as much time in planning on-site meetings as you do teaching an in-school class and good results will occur. Using community resources as a teaching laboratory will increase adult learning and participants will increase their appreciation for the young/adult farmer and rancher program in your school.

THEME

Strengthening Adult SOE Programs



By Norman Rohrbach and Bob Chapman

(Editor's Note: Dr. Rohrbach and Mr. Chapman are Supervisors with the Missouri Department of Education, Jefferson City, Missouri 65102.)

In Missouri, we have just gone through the process of developing minimum standards for adult vocational agriculture education programs. These minimum standards will provide the basis for evaluation, justification, and accountability of local programs. In the process of developing adult standards, we retained the three components which made vocational agricultural education strong in the past and will provide a solid base for the future.

We are all familiar with those components: SOE, classroom/laboratory, and leadership. The leadership component (Young Farmers/Young Farm Wives) is currently strong and with the support of national leadership, will continue to grow. We have always been known in agricultural education for being able to provide quality, up-to-date classroom and laboratory instruction. Our biggest challenge is, however, and will continue to be, staying current with the SOE component and establishing it as an integral part of our adult programs.

Secondary agricultural education has highlighted the importance of SOE programs by conducting two national workshops in the last three years emphasizing this component of our programs. Post secondary education has long been recognized for success with OJT (on-the-job training) and internships programs. After four years of study, research, development of materials and curriculum, visits to other states, and feedback from farmers and adult teachers; we in Missouri have placed emphasis on the SOE component of our adult programs by making Farm Business Management Analysis (FBMA) the core of the program.

"Moving Toward Excellence" was the theme for the national SOE workshop. In Missouri, we hope that Farm Business Management Analysis helps us move toward excellence in the SOE component of adult vocational agricultural education. Table 1 provides an overview for the FBMA program. Note that records and on-site instruction play a key role in making FBMA a success.

On-Site Introduction

As you can see from Table 1, records and on-site instruction are the hub of the FBMA program and the two are interdependent on each other for success of the program. There are a number of things that need to be accomplished in making on-site instructional visits with adult students. We might work on improving production practices, solving immediate problems, planning ahead by working at

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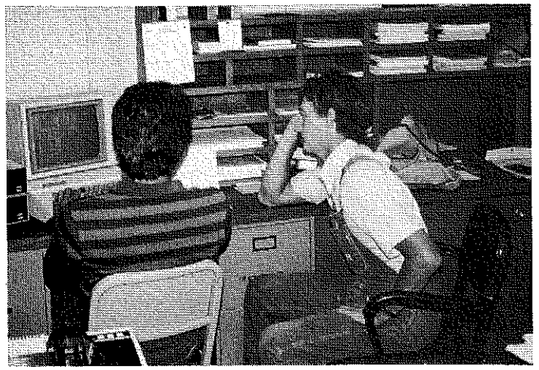
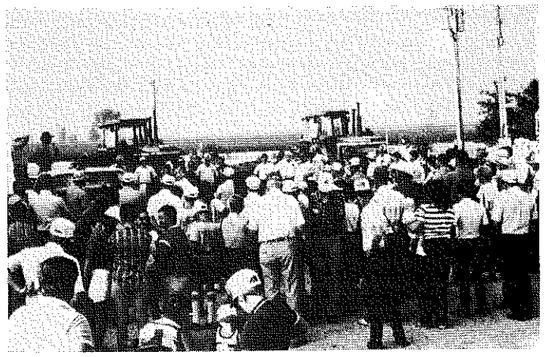


Updating a crop budget will necessitate the recalculation of the cash flow.



Tours, such as this one by the Missouri Young Farmers, provide on-site instruction.

Strengthening Adult SOE Programs

(Continued from Page 9)

production budgeting and financial budgeting, doing tax planning or tax preparation, completing production analysis or financial analysis, or making regular checks of records for accuracy and adequacy. The list could go on.

The important part, though, is that both financial and production records play a vital role in every one of these activities. Without records, the usefulness and importance of an on-site visit becomes nil rather quickly. Those who have worked with adults in core group (FBMA) instruction involving on-site visits have long recognized that fact. After all, how much tax planning can be done in November if the records are only up-to-date through July? How much enterprise analysis can be done if accurate production records have not been kept? The importance of good records in on-site instruction cannot be overstated. Records are the basis of our core group adult instructional programs and without them, we are handicapped in what we can accomplish.

Table 1

What Is The FBMA Program?

Classroom Management Instruction	On-Farm/On-Site Instruction	Records/Analysis
There are 10 classroom sessions held throughout the year for each of 3 years. The systematic units of instruction in each course build on each other throughout the three-year sequence.	Following each classroom session, the instructor makes a planned visit to the farm to assist on individual problems. The visits are designed to build on classroom instruction and address current needs of enrollees.	Records are maintained in the Missouri Farm Business Analysis Record Book. A financial and production records system is custom fitted to each enrollee's farm business. A computer analysis is run at the end of each year to provide averages and comparative data to help locate problems and chart progress.
YEAR 1 — Establishing a Accounting System	Goal Setting, Cash Flow, Accounting, Depreciation, Enterprise Records, Family Living, Investment Analysis.	First year focus is to get good records base established in the way of inventories, cash flow, financial statement, profit/loss statement, etc.
YEAR 2 — Analyzing the Farm Business	Income Tax Estimates, Summarizing the Year's Records, Analyzing Profit/Loss Statement, Financial Statement, Livestock & Crop Enterprises, Machinery, Equipment & Building Costs, and Utilizing Farm Credit.	Second year focus is on interpreting and using farm records and analysis. Also, using averages and comparative data in evaluating your own operation.
YEAR 3 — Adjusting the Farm Business to Increase Profit	Estate Planning, Income Tax Management, Evaluating Family Living Expenses, Planning Farm Marketing, Livestock, Cropping, Capital Investments, Labor Utilization, and Cost Control.	Third year focus is on "decision making." Using records and analysis to evaluate and upgrade various aspects of the farm business.

Instructional Visit Activities

There are three things which should be accomplished with records in an on-site visit. These include regular activities that take place on each visit, timely activities that are important because of the time of year, and activities that evolve or grow out of the classroom instructional process. Let us examine each of the three in more detail.

Regular Activities. On each visit, the records should be checked for accuracy and completeness. Financial records should be checked first and then production and enterprise analysis information should be updated. Many times, and especially with adults just getting started, help might be needed in checking monthly totals and in getting all information needed for later analysis. The job of the teacher is to be sure that the necessary records are being maintained so that when the end of the year comes, the record information is complete enough to meet the goals of the students.

The cash flow budget should be compared with the actual monthly and year-to-date totals to help determine financial position and make mid-year adjustments as necessary. The teacher might want to copy the year-to-date totals to a cash flow to keep in the student's folder for use in preparation for future visits.

Timely Activities. After completing the regular records check, there are other activities occurring nearly every month that need to be completed because of the time of year. The most obvious of these are tax planning and preparation. In addition, other activities occur at or around the first of the year because of lender deadlines for financial statements and cash flow plans, etc. These timely activities will vary from teacher to teacher or program to program, but the following monthly schedule of timely activities is a general guideline that has been used by teachers in the past.

Jan.-Feb. — Cash Flow Planning
Financial Statements

February — Gathering tax information for preparation

March-July — Work on Marketing Plan, Enterprise Analysis, etc.

August — Mid-year Cash Flow Check
Project the rest of the year

Oct.-Nov. — Tax Management/Planning

December — Summarize and complete records for analysis

Again, this is only a guideline, but these timely activities are an important part, and many times become the core, of an on-site visit.

Activities Growing Out of Instruction. Adult students involved in a total Farm Business Management Analysis Program are involved in regular classroom instruction in a variety of topics. Each classroom session should contain information and activities that relate to the enrollee's farms and, thus, the classroom activity should be expanded and individualized in the on-site visit. For example, if the class topic this month was marketing, the on-site visit should include discussion and development of a marketing plan for the student's farm business. To be successful, these activities are going to rely heavily on a good set of records. Without records, the activities become superficial and less worthwhile.

As we can see, in order to meet the objectives and goals of Farm Business Management Analysis, records are necessary to provide information which an individual can use in applying information learned in the classroom. Adequate records are a necessary ingredient for making on-site visits worthwhile. In addition, they serve as the catalyst that brings the classroom to the farm and ties together the SOE and classroom components of the program.

THEME

On-Farm Instruction For Farm Families

By Gene V. Francis

(Editor's Note: Mr. Francis is Instructor of Vocational Agriculture Farm Management Education at Blooming Prairie High School, Blooming Prairie, Minnesota 55917.)

The Vocational Agriculture Farm Business Management Educational Program is a proven, effective way of providing instruction in the principles of farm and ranch management to rural families. Through the use of a standardized accounting procedure, a farm family is able to record data relating to their farm business, personal living, and non-farm activities. These recorded data can be analyzed and summarized to provide them with a complete appraisal of their business and other activities.

The Business Management Program has been implemented in at least fifteen states. Minnesota has been conducting such a program for over 30 years and currently has approximately 100 instructors. Farm families enroll in the program of classroom and on-farm instruction. A definite sequence of classes is conducted in most programs. In addition, farm families receive individual instruction either at their farm site or in the vocational agriculture office. With the increased use of computers and computer services, families will spend more of their consultation time at the teacher's office.

Individual farm accounting systems will take many different forms over the next few years. For many families, the familiar record book may remain the best procedure for collecting information on their farm operation. Computers and computer-based records are and will be common on many farms. A very concentrated effort must be made by instructors and farm families to maintain uniformity in the accounting systems used to insure the ability to collect and analyze information in a meaningful way and provide a common data base for comparison purposes.

Family Emphasis

A systemized approach to farm management instruction with the individual farm family is necessary in any farm business management program. A regularly scheduled consultation visit, with a planned purpose, to each member family is necessary to insure continuity and maximum accomplishments.

A program of farm management built solely on the keeping of good records, without moving into the analysis and interpretation of what these records indicate, is of minor value to a family. Records are only a tool for computing basic facts about the farm business. These facts must be interpreted in view of the family's goals, abilities, attitudes and the capabilities of the farm and other related factors. This is the primary goal of on-farm site instruction.

Instructor's Duties

The successful farm management instructor must create an awareness, in the families with which s/he works, of new ideas and concepts in each phase of farming. Successful operators must evaluate and utilize the more worthwhile concepts as soon as possible. They must be innovators or early adopters if the greatest profits are to be made. Early knowledge of new developments allows adequate time for study and evaluation before adopting a new practice or idea.

The farm management instructor must also serve as a sounding board or resource person as new concepts are

(Continued on Page 12)

On-Farm Instruction For Farm Families

(Continued from Page 11)

gathered and contemplated by the family. All new ideas and practices will not prove successful on every farm. The farm management instructor must assist the family to evaluate the usefulness and adaptability of any practice in light of their own particular situation.

Successful farm management instructors must be aware of many resource materials. Much of their task, when working with families, will be to provide sources of management information that can be used to formulate the most profitable plans. This may range all the way from determining the best seed to plant, to deciding on the most satisfactory method of ventilating the dairy barn. Organized research results, information, and data are among the basic tools of the experienced farm management specialist.

Another area of concern for the farm management instructor is in developing the ability of the farm family to view their business as a whole. To be extremely concerned with crop yields, yet to feed these good yields through inefficient livestock does not provide the soundest approach to top earnings. Each phase of the farm business must be viewed in relationship to maximizing returns for the total operation if greatest returns are to be experienced.

A fundamental requirement of any farm management instructor is sincerity. His or her relationship with a farm family must be built on mutual confidence if it is to succeed and endure. A strong advance buildup of a farm management program without adequate individual follow-through in practice can only result in failure on the entire program over a period of time.

While individual on-site consultation visits must be well planned, scheduled and correlated to classroom instruction; they must also be extremely flexible. Each family business presents its own set of problems, unique only to that particular business and family. While many of these problems are basically the same for many families, they must be evaluated and adapted to each particular situation.

A very large share of the visits made to member families should be scheduled ahead of time. This may be done by sending a calendarized schedule to each family at regular intervals. The date and time for each individual appointment should be indicated. Some form of a newsletter or tip sheet could accompany the monthly visit schedule. Current tips and information items, plus a calendar of upcoming meetings, could be a part of this mailing.

The practice of dropping in on a family when in the neighborhood should be kept to a minimum. If a major portion of the farm visits are of this type, this is what the family comes to expect. Very little consultation of a serious and helpful nature can take place talking out of a car window or leaning against the barn door.

A few such drop-in visits to each family are valuable and necessary. A brief stop to check on weed or insect control or to see how construction is progressing on the new livestock unit, grain storage structure or home can be very helpful. This is especially true if on a previous scheduled visit the instructor has helped to formulate the plans for such activities. Such visits show interest and can be helpful in catching an on-the-spot error or adjustment.

A scheduled visit allows the family some time for preparation. They have an opportunity to up-date their record system (many get behind during busy seasons) and to assemble questions and facts on areas where they desire assistance. They also have an opportunity to arrange their work schedule in order to give their full attention to the problems at hand.

A calendar of visits also suggests the arrangement of the instructor's schedule to each family. If they find the schedule filled for the next three weeks, they may be hesitant to ask for a postponement that will transfer them to the bottom of the list.

A visit calendar can also prove valuable as an aid in explaining the program to administrators, business people, civic leaders and other individuals. They become aware of the continuity and scope of the program.

Instructional Content

The following is a brief outline of a planned program of on-the-farm consultation for families enrolled in a vocational agriculture farm business management program. Most consultation visits involve two facets. Although a portion of each visit may deal with the farm records and their analysis, other management aspects should also be included. Many of the topics in Farm Management II, III and Advanced will require more than one visit. Many of these consultations will require the use of a microcomputer, agricultural software and/or well organized worksheets to complete the suggested activities.

Farm Management I

I. Contact the farm family.
II. Explain the farm business management program; Discuss soil & feed sampling procedures.
III. Setting up good farm records, Planning a fertility program; Projecting livestock rations.
IV. Beginning accurate, complete farm records; Projecting cash flow.
V. Cropping plans and projections; Assistance in record keeping.
VI. Up-dating feed records, Projecting possible returns; Discuss useful computer software programs.
VII. The mid-year feed check, Observing crop progress; Comparison of cash flow. (Projected vs. Actual).
VIII. Recording crop data, Soil analysis; Feed analysis.
IX. Completing crop data; Planning livestock rations.
X. Making an income tax estimate; Checking the completeness of the Farm Record System.

Farm Management II

XI. Completing the farm records for analysis; Organizing the records for tax filing.
XII. Projecting cash flow; Planning fertilizer, weed and insect control program; Evaluating credit structure.
XIII. Beginning the interpretation of the annual analysis report. (Efficiency & effectiveness of production, size, earnings, financial structure.)
XIV. Using the analysis to evaluate crop costs and returns, Plotting farm experimental trials, Projecting current crop costs; Marketing Alternatives.
XV. Using the analysis to evaluate livestock enterprises; Observing growing crops.
XVI. Analyzing overhead costs, Determining progress on the yearly cash flow; Checking completeness of the record system.
XVII. Income tax estimate, Planning the livestock program; Planning machinery purchases.
XVIII. Completing the farm accounts; Income tax management.

Farm Management III

XIX. Projecting cash flow, Evaluating the net worth structure, Planning a credit program; Planning most effective use of labor.
XX. Long-range crop and fertilizer plan; Development of a program of land drainage or irrigation.
XXI. Evaluating the farm business; Developing a marketing plan.
XXII. Studying trends, Determining strengths and weaknesses; Planning facility needs.
XXIII. Analyzing crop costs and returns, Feed values; New crop practices.
XXIV. Evaluating the livestock program; Planning improvement programs.
XXV. Closing the farm records for analysis; Income tax management.

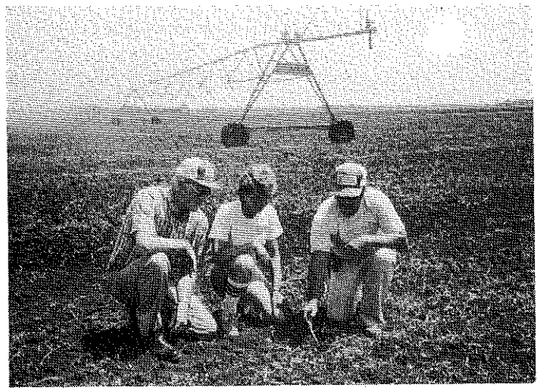
Advanced Farm Management

XXVI. Developing plans for making the wisest investments in resources.
XXVII. Further refinement of the family decision-making process.
XXVIII. Developing alternative plans to maximize income.

Many of the topics indicated in Farm Management I, II, III would be further developed in Advanced Farm Management. The brief outline above was refined from a more comprehensive guide to on-farm instruction developed by the author several years ago.

Joint family learning activities are common in the Blooming Prairie School District in Southeastern Minnesota.

Good forage quality and its use in the ration for high producing dairy cows is stressed.



Checking corn fields for corn borer will allow application of control measures before the crop is damaged.

Farm management consultation does not end around the kitchen table or in the classrooms.

THEME

On-The-Job Instruction With Adults

By Greg Nolting

(Editor's Note: Dr. Nolting is Manager of Training for the Farm Management Products Division of A.O. Smith Corporation, Waukesha, Wisconsin 53186.)

One day during my tenure as a vocational agricultural instructor several years ago, I was approached by a farmer — an adult student — who said he wanted to make a rather sizable capital purchase. He knew what he wanted and why he wanted it; however, he did not know whether he could justify the purchase.

Thinking I would be working with an almost routine textbook situation, I cheerfully said I would help him reach a decision. It was obvious to me that he was highly motivated to succeed in farming and he saw this purchase as a valuable tool to increase his income.

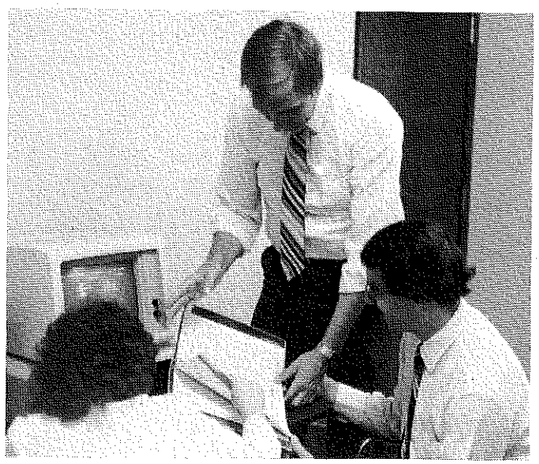
Inadequate Records

The reason he could not reach a decision, it became all too clear, was that he had almost no records of his operations, and he had only a rudimentary idea of his income and expenses for various farm enterprises. We eventually reached our decision by using state averages and some educated "Guesstimates", but I learned some valuable pointers from that and other similar encounters.

First, most adults who take part in vocational agriculture courses are highly motivated to succeed because they have specific goals and they understand that knowledge is a valuable tool.

Second, although recordkeeping is as much a part of farming as is working the soil or tending livestock, it is seldom handled efficiently or effectively because most farmers dislike paperwork.

As my teaching career advanced and I came in contact with more farmers and young people with farming as a career objective. I grew progressively concerned with the quality of recordkeeping by farmers. There was no doubt that farmers understood the importance of recordkeeping and were very good data collectors. But after a hard day in the field; shuffling papers, file folders and notebooks to get all their data into one usable location was not the favorite choice of most farmers. As a result, recordkeeping suffered and, consequently, the only certain way to make sound management decisions suffered.



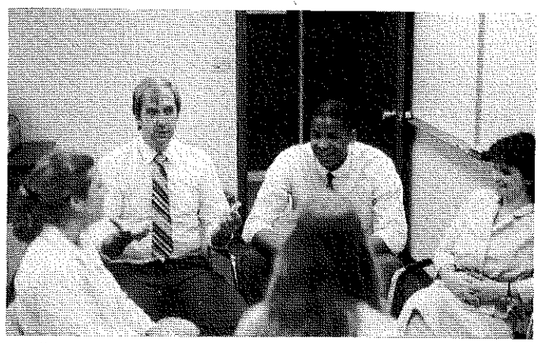
Adult instruction is often individualized to meet unique needs.

When I decided to direct my career toward helping farmers understand the importance of recordkeeping, I realized that computers were the obvious answer to the farmer's need for quick, concise information that could be maintained easily. It is in the context of my work today as training director of a company that produces a computer management system designed specifically for farm applications that I address the topic of working with adults in on-the-job instruction.

Planning Instruction

For the purpose of my job, I divide the adult students I work with into two distinct groups: farmers and salespersons, and it is my task to provide sufficient information to each group about a product we call the Agri-Key™ Dairy Herd Management System — to show my students that a computerized management system is effective, economical, and enjoyable.

A teacher in another company once told me he preferred not to teach salespeople. He felt they were simply out to take the farmer's dollar. I believe that this type of individual is in the minority, and such knowledge does not stop me from giving special attention to salespersons. Here's why.



Small group instruction can increase learning through the dynamics of the discussion.

When we teach farmers to use computers as a business tool, we reach not just individuals but total families as they make decisions that will affect their lives more dramatically than possibly any other piece of equipment they now use.

On the other hand, when we instruct salespersons, we are passing on our knowledge to individuals who subsequently will expand our influence in geometric proportions because of all the lives that they will touch — most of which we would never have a chance to reach through our own classroom teaching. These are the people who begin the information and educational process on many farms by motivating others to learn more about new technology, new concepts, and new techniques.

Thus, I find that while it is both satisfying and important to directly instruct farmers, it is equally satisfying, and equally important, to work with salespersons. These are the men and women who will be going out to farms to identify individual problems, to present farmers with record maintenance opportunities, and to bring about acceptance of new technology.

Regardless of the motivation each student brings to a classroom, a number of basic instructional guidelines apply to all adults. Constraints of space allow me to present what I consider the four most important guidelines to be considered when working with adults in on-the-job training: a.) Determine the motivation of your students and react to their needs rather than follow a rigid curriculum, b.) Develop a rapport with each class as soon as possible, preferably during the first session, c.) Inspire confidence in the ability of your students to achieve their career goals, and d.) Present the material in such a manner that students will exert themselves but will not feel awkwardly pressured.

What Motivates Adults?

Both farmers and salespeople are motivated by a desire to succeed. Since success is a subjective function of the mind, we as teachers must sort out which of our adult students consider success to be achievement of knowledge for the sake of knowledge, which believe that success means only the ability to improve one's financial or social standing, and which students have other, more narrow definitions of success.

Farmers and their families are motivated by practical, cost-saving, efficient, and effective products and services. They are cautious in what they accept, but when they are convinced, they become staunch defenders of the person, product, service or concept they have accepted.

Teaching these students in a classroom setting is less desirable than taking material to their farms. Working with adult students on a farm as often as possible to give them hands-on training in your subject area can be a motivating factor in their problem solving activities. We have found, for instance, that we are better off taking the Agri-Key system to a farm than attempting to put on a demonstration away from the site where the system ultimately will be used.

In the security and comfort of their home, farmers have the ability to experiment with the computer to suit their particular circumstances, and they may see, firsthand, how the system will help make decisions such as culling cows, tracking milk production, preparing herd health reports, and reducing calving intervals.

Developing Rapport

Developing rapport usually presents few problems with adult students because everyone is on an adult level. Rapport comes naturally if the students perceive that you know your field and your objective is to help them become successful. As we all know, students do not need a buddy for a teacher; they need professional assistance and training from a teacher they respect.

Teaching may be accomplished through lecturing or what I call problem solving. Consider a meeting between you and a farmer in regard to a cow that has developed mastitis. If you lecture the farmer, you will stand on one side of the cow; the farmer will stand on the other side. You will describe the problem and the solution. The farmer will accept or reject your instruction without comment, and you may never know if your teaching made an impact. If you problem-solve with the farmer, you will stand together on the same side of the cow. Together you look at the problem (the mastitis), and together you will review solutions, with a good deal of discussion. You and your

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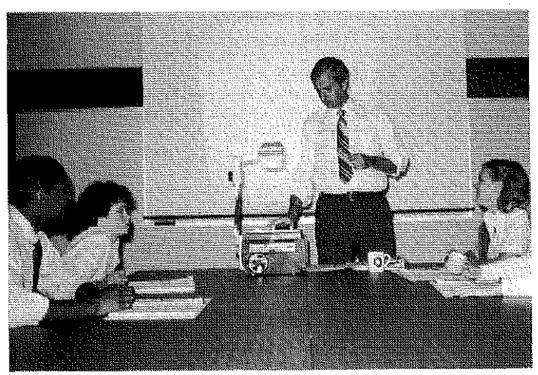
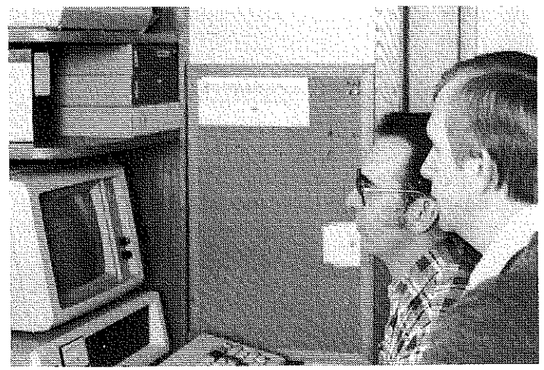


Formal instruction best suits some learning styles.



Individual problems are best solved through one-on-one instruction.

On-The-Job Instruction With Adults

(Continued from Page 15)

student will have a mutual concern and your student probably will react more favorably because the solution was reached through mutual interest and involvement.

Rapport comes with perception by our students that we are on the same side; that we are counseling because of genuine concern rather than lecturing because that is our paid profession.

Complete understanding between us as the teachers and our salespersons also is necessary to develop rapport. They must perceive that we are aware of their professional objectives, that we accept those objectives, and that we will help them reach their goals.

Inspiring Confidence

Confidence is as much a state of mind as it is a result of learning. There is no better way to teach adult students practical applications of subject material than by using hands-on training on-the-farm where that knowledge eventually will be employed.

Generally, farmers have a great deal of confidence in their ability to succeed. But give them a new tool or operating concept and they will approach its use cautiously and with apprehension that they may not be able to use it correctly, During early stages of learning, they often prefer to work without being observed by others who might tend to judge their ability to grasp new concepts and techniques.

But once they have gained confidence in applying a new tool or concept, they will not hesitate to share knowledge, experience and problems. This is one more reason for conducting as many field exercises as possible, particularly in the beginning of a class, until your students are more relaxed and self-confident.

In a classroom setting, confidence building is more difficult unless the students believe they are not judged. Psychologically, they need peer acceptance while they are in the learning mode. With carefully directed questions, this can be achieved easily.

Sales-oriented students generally are more gregarious and outgoing. Whatever fears they have either are minimal or well masked from view. They often will generate their own confidence and they need only a word of praise from time to time. They know their objectives, they are determined to produce sales, and they are not shy about admitting they are having learning problems because they recognize such problems as stumbling blocks to career advancement.

Presenting Material

I have noted that individual motivation is a fundamental difference between adults and secondary students in the classroom setting. It is helpful to those of us in on-the-job training to recognize other major differences. Because adults generally are more psychologically mature, they are able to accept the rigors of studying and the necessity for ingesting information more easily than will secondary students.

Adults have current occupations or specific occupational intentions. They are not groping for something to do with their lives. They are seeking to achieve a better understanding of a subject to further a career that they have already selected. Thus, their attention is pre-focused for you.

Adults usually constitute a voluntary audience. They come to listen because they have a desire to learn. No state law compels them to be your student; only their wish to learn from your experience and academic background.

Adults have different study habits. Because they often must combine full-time jobs with their studies, they must study at irregular times and in unusual places. Most of them also must re-learn old study habits or acquire new ones. Therefore, it is helpful if we are able to accommodate adult students according to their abilities to study and their abilities to grasp particular subjects. Given that motivation to achieve success is not a problem, if we press too hard on an adult student's time and learning capabilities, we are in danger of breaking down the natural motivation as stress builds.

The challenge is to learn the capabilities of your adult students and press them to achieve more rapidly than they believed possible but without turning off their creative lamps due to stress.

Instructors will allow students to prepare themselves based on their native intelligence and ability to grasp whatever is taught to them. Outstanding instructors will cherish their students like seeds from different crops. They will recognize that each has a growing cycle which is unique to itself, and each will flourish best when nurtured and encouraged to develop at a rapid but individual pace.

RESOURCES

Cooperative or "co-op" education has proven to be one of the most beneficial delivery systems for occupational education at the secondary or postsecondary level. COOPERATIVE EDUCATION, by Jack T. Humbert, Western Michigan University, and Carl A. Woloszyk, Michigan State University, takes a close look at the pivotal roles, activities, and legislation involved in cooperative education. Special attention is given to the role of the program coordinator, whose tasks involve administration, coordination, guidance, professional development, and public relations. A framework for step-by-step program planning and implementation is also included. The monograph looks at the many benefits that accrue both to students and employers participating in co-op programs, and makes recommendations for improving cooperative education in the future.

You may order COOPERATIVE EDUCATION (IN 253 - $5.75), 66 pages from The National Center for Research in Vocational Education, The Ohio State University, Publications Office, Box N, 1960 Kenny Road, Columbus, Ohio 43210; 614/486-3655 or toll-free outside Ohio at 800/848-4815.

THEME

Using Tours To Teach Adults

BY FREDDIE C. WALTZ AND THOMAS L. CURRY
(Editor's Note: Dr. Waltz is a Visiting Assistant Professor and Dr. Curry is an Adjuct Assistant in the Department of Agricultural & Extension Education at the University of Florida, Gainesville, Florida 32611.)

Tours are a popular, time tested method of providing learning experiences. The nature of these events and the purpose to which they are directed are varied, but they have proved to be a valuable instructional method. The future utilization of tours in teaching adult and young farmers seems assured. This prediction is based partially on a common characteristic of people; their shyness about satisfying their interest or curiosity by exploring for themselves. Although some people are aggressive enough to do their own investigation, many people will go to places only when they are invited. The inherent tendency of people to go where they are welcomed is affirmed by the well advertised tourist attractions. Therefore, what is happening at a specific place, locally or elsewhere, may be of great interest to many people, but most of them will not visit it unless asked and encouraged to do so.

Definition

For clarity and consistency, we will use the term "tour" to refer to activities that involve participants in on-site observations, demonstrations and/or evaluations of particular techniques, products, or processes. While there is some dispute as to the difference between field trips, field days, and tours, we will make no differentiation.

Tour Procedures

A successful tour for adults is dependent on careful and complete planning, organizing, conducting, and evaluating processes. We will present some ideas and thoughts about these processes.

The objectives for any tour should be clear. If no clear objectives for the tour can be determined, then the value of the tour is questionable. The needs of the audience should be the main consideration in determining the objectives.

For example, a group of farmers recognized that the efficiency of producing corn, soybeans, and small grains could be improved by increasing the soil moisture supply during critical growing periods. This particular need provided the basis for a tour devoted to irrigation systems.

A common mistake made by vocational agriculture teachers and other agricultural tour planners is to determine the objectives for a tour based on perceptions of the farmers' needs. These perceptions are often biased or poorly substantiated. If the farmers did not believe they could increase their crop yields by providing adequate moisture conditions during critical growing periods, any educational effort relative to irrigation would have a great probability of failure. Once specific objectives are developed, the planner has the basis for determining activities for a tour.

In planning the tour to meet the objectives, all resources should be considered. A committee can help determine and even contact possible persons, agencies, or businesses to help with the tour. A committee comprised of individuals who represent a broad spectrum of agricultural interests in a community might be able to identify a number of dif-

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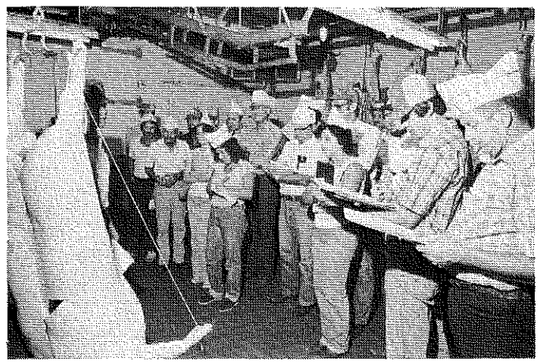
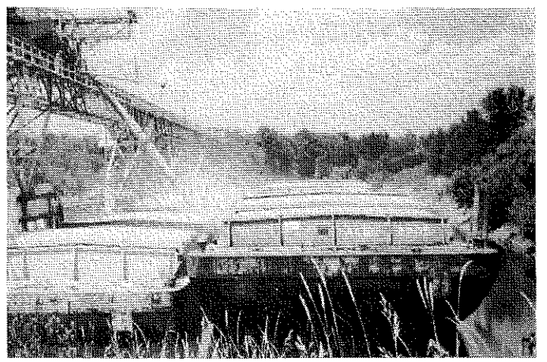




Tours provide learning opportunities in an environment conducive to the concept being taught. (Photographs courtesy of University of Florida and Van Shelhamer, Montana State University.)

Using Tours To Teach Adults

(Continued from Page 17)

ferent and valuable sites, resource people, and techniques to include in a tour.

For example, a committee to assist the vocational agriculture teacher might consist of: the county extension agent who has contacts with irrigation specialists at the state's land grant university; an agribusinessperson who deals with irrigation equipment and supply companies who promote new equipment and techniques, a soil and water conservation service representative who is familiar with water and soil characteristics in the area, a local farm credit representative who can help identify economic consideration of irrigation systems, and a local farmer who is considered an opinion leader by the other farmers may know of innovative irrigation systems being used at other farms. A common mistake in developing agricultural tours is in utilizing just one source for activities and resource personnel. A tour that combines activities or observations at a university, state agencies, and private industry or business gives the participant a much more complete perspective of a particular activity than just touring one type of site. The tour planning committee may be pleasantly surprised at how willing a particular organization, agency, or business is to help.

After the objectives and a clear need for the tour are determined, then action can begin. Since the planned activity is educational and being planned as part of the adult instructional program, the local school administration should be informed of impending plans. The teacher should clearly outline the objectives of the tour to the administrator and present the idea in a positive, organized, and enthusiastic manner. Also, the administrator should be given an opportunity to have input in planning the tour and to advise on procedural matters that relate to school board policies. Solicit administrators support for the activity.

Proper planning helps assure the success of a tour. (Photograph courtesy of Van Shelhamer, Montana State University.)

Once the tour planning committee has identified a number of possible sites and activities for a tour, some specific criteria need to be used to determine which one would be most valuable to the target audience.

An on-site instructional activity for teaching adults should:

1. allow the participant to observe something which he/she has the potential and resources to apply in his/her own situation.
2. emphasize the "what should be done" rather than the "what not to do" aspects of a technique.
3. be conducted in an informal and relaxed atmosphere in which participants feel free to ask questions of the resource person, socialize, and visit with other participants.
4. be arranged to allow for family participation, if appropriate (as is often the case with tours beyond the local level).
5. be located within reasonable distance of other sites.
6. be free of major safety and health hazards.
7. have knowledgeable persons at the site willing and able to explain and/or demonstrate techniques, equipment, and practices to be observed.

Once the committee has prioritized the potential sites and/or activities, a tentative agenda may be drawn up. Geographic locations of and facilities at the sites need to be a prime consideration in determining when they are included in the agenda. Sites should be arranged so that there is minimal traveling time between them. The locations relative to eating accomodations is another essential consideration for a successful tour. Identification of good eating establishments can lead to a more satisfied tour participant.

The teacher and/or committee members are then ready to make the initial contact with the person/persons who would host at each site. Certain procedures should be followed. The teacher should:

1. determine whether or not a prospective host would want to be included as part of the tour.
2. explain the objectives of the tour to the prospective host.
3. discuss the dates and time for the tour.
4. obtain a tentative commitment from the prospective host if he/she is amenable.

The tour coordinator (teacher) should next make preliminary arrangements for: transportation, meals, rest rooms, lodging (if necessary), reservation of meeting rooms, and necessary liability coverage.

The teacher is then ready to advertise the tour to the appropriate audience and seek pre-registration. It may be necessary to publicize the activity through various media sources such as the local radio, newspapers, and agency or industry newsletters. If possible, the prospective participants should be sent a letter of invitation, registration information, and a tentative agenda along with a pre-addressed, postage paid envelope for return.

If a registration fee is necessary to cover refreshments, printing costs, or other expenses; it may be helpful to require a portion of that fee during pre-registration. When a person makes an investment (monetary or otherwise) in something, they are more likely to participate in and feel a part of it. This strategy will help reduce no-shows which can virtually destroy an otherwise well-planned tour. The committee members should be contacted as to the number pre-registered for the tour before the teacher finalizes the arrangements. By doing this, the committee members are kept involved and also have the opportunity to make any last suggestions.

After transportation, equipment, and resource persons are secured for the tour, a letter should be sent to those registered explaining the final details and should include any necessary maps, parking permits, etc. While the planning and organization of the tour may seem to be an arduous and time consuming process, it is the primary key to a successful tour.

The hosts at each site should be informed as to the numbers and type of participants they might expect as well as any other important details. Well organized and prepared tour hosts and well informed participants make for a valuable educational activity. Give the participants printed itineraries of the tour. Follow the itinerary and allow deviations only under extreme circumstances. The teacher should be the tour leader or designate a member of the planning committee to be the leader. Someone must give the appearance of being in charge.

As soon as the group departs from the different tour site or sites, lead a discussion reinforcing the positive aspects of the innovation, technique, or practice observed. It is important that the opinions of the participants be shared for maximum benefit to be gained from the tour. If participants are reluctant to share opinions, have some specific questions to prompt their interaction. For example, can you use this idea, innovation, practice in your operation? How could the observed idea, innovation or practice benefit you? What feature of this idea, innovation or practice interested you the most? Try to involve as many of the participants in the discussion as possible and try not to let one person dominate the flow of opinions. After adequate discussion, the tour leader should summarize the opinions of the group and prepare the group for the next stop or make departing comments as the tour reaches its end.

Conduct follow-up activities after the tour. Obtain evaluation information from participants, write thank you letters to tour hosts and sponsors, write a news article reporting the successes and highlights of the tour, and send an evaluative summary of the activity to the school administration, planning committee and advisory council.

BOOK REVIEW

TEACHING AGRICULTURE THROUGH PROBLEM SOLVING, by John R. Crunkilton and Alfred H. Krebs, Danville, Illinois: The Interstate Printers and Publishers Inc. 3rd ed., 1982, 329 pp.

This comprehensive text addresses the problem solving approach to teaching agriculture at both the youth and adult levels. Fourteen chapters are systematically ordered to lead the reader from theoretical aspects and implications of problem solving to specific applications in various educational settings and agricultural subject areas. Drawings accompanied by narrative are used throughout the book to illustrate content. In addition, figures within the text and material in the appendix help the reader visualize details and descriptions given in the manuscript.

The focus of the book contents is on how to use the problem solving teaching method in teaching agriculture, but includes a brief introduction to the range of teaching techniques. A comprehensive discussion is given to writing a teaching plan using the problem solving approach; using the plan in the classroom and adapting problem solving to various situations. The authors offer specific recommendations for motivating students and controlling discipline by using problem solving. Chapters are also devoted to conducting effective laboratory programs, teaching adults and evaluate teaching and learning activities. The concluding chapter highlights the teacher as the key to successful teaching.

A major strength of this book is the practical examples provided. The problem solving teaching plans can be readily adapted/transferred to any agricultural subject area. Step-by-step instructions are given for building a course of study. Helpful hints for teaching agriculture provide ideas for improving the curriculum. The blend of a practical and theoretical treatment of the problem solving approach to teaching make this book an excellent choice for reference or a class text.

The text is useful to teachers, teacher educators, supervisors and administrators who have responsibilities for instructional programs. Beginning and experienced teachers will find the book useful as a reference, particularly to those who lack experience with the problem solving approach or need a change-of-pace in their teaching. The text is appropriate as a required or supplemental text for agriculture teacher education methods and/or adult education courses. Teacher educators in related vocational disciplines may also find the book useful. Supervisors and administrators can make use of the text to assist teachers in improving their instructional program.

H. Dean Sutphin
Ag and Occupational Educ.
Cornell University

ARTICLE

On-Site Instruction For Adults

By R. Kirby Barrick

(Editor's Note: Dr. Barrick is an Associate Professor in the Department of Agricultural Education at The Ohio State University, Columbus, Ohio 43210-1099.)

Enjoyable. Scary. A real learning experience. Frustrating. A waste of time. My best teaching — addressing real problems. Nerve-wracking. Depressing. Enlightening.

What is it? On-site instruction in agriculture for adults. Whether it is the first instructional visit or the thousandth, those descriptors have been voiced by many vocational agriculture instructors. Think back. How would you describe that first visit to a farmer or agribusiness person? Chances are, you, too, were frustrated and down-right scared.

Well, if you are like most vocational agriculture instructors I have known over the years, you spent most of your time becoming a teacher by learning to teach high school students and to be technically competent to teach them. Sure, you heard about adult education — holding meetings, advising the Young Farmers, sponsoring tours. Someone may have even mentioned visits. But, like most, you felt you could not do it all, and adult education took a distant second place. After all, who needs to feel frustrated, scared; like you are wasting time?

But now that you look back, you see where adult education has been an important part of the total agricultural education program in your school. In fact, making those on-site visits to agribusinesses and farmers in the school district are not so bad after all. We could even go so far as to say that one of the reasons we have stayed in the profession is our contact with the real world of agriculture, the adults in the community.

Guidelines

Why did we think adult education was so terrible? Probably because of the fear of the unknown. "Had I known what a help adult farmers could be. . ." is the preamble to the advice many seasoned veterans have passed along to the younger members of the profession. Here are some tips that may help a teacher overcome the fear of the unknown in conducting on-site instructional visits to adults.

First, there are a lot of similarities between high school students and adults when it comes to on-site instruction. Every visit has to have a purpose. If you cannot write down one reason for going, go somewhere else. No agribusiness or farmer wants to be bothered by idle chatter. Know your purpose; have a goal. Perhaps you want to follow-up on a recent adult education session. Or you may have been invited out to see something new or help with a problem. Or maybe you are recruiting participants for the educational program or special recordkeeping seminar.

Secondly, be prepared. Just as you would for students, have basic materials with you. Those may be boots and coveralls for farms, hard hats and goggles for agribusinesses. Have your visitation records with you. And don't forget special materials, booklets, references that may be needed for that teachable moment.

Next, make an appointment. Sure, there are times when you will just stop by, but that should be the exception, not the rule. No one enjoys being caught off-guard. Everyone will be more at ease if you call ahead, even if it is not too far in advance. That call is a good time to share your purpose with the people you are to meet, to let them get their thoughts and materials in order. Advanced preparation leads to efficiency in the use of time.

Now that you have committed yourself, the job is half over. After all, if you never plan to do something, you will probably never do it.

Arrive at the site on time. On-site instruction is the most important part of vocational education. Being on time shows that you think the visit and the adult are both vital to agricultural education and agriculture.

Now you are ready for the visit. What do you do? Well, everybody has a certain style. Some folks are more "laid back" and are good at breaking the ice. Others are more direct. Whichever type you are, it is important to make the farmer or agribusiness person feel at ease. The best way is to know your adult students as well as you know your high school students. Conversations are best started on some topic of interest to the person you are visiting.

Here is where a major difference exists between instructional visits to adults and to high school students. You, the teacher, are not evaluating the adult. Care must be taken that you talk with the adult, not to him or her. You may want the adult to lead the direction of the visit for the first part, giving a chance to air issues and concerns.

Remember, you have a reason for making the visit. Move to that point in discussion as soon as both of you seem ready. Share materials and ideas on the topic after bringing clarity to the real concerns. Do not be afraid to ask questions. You will seem genuinely interested (which you should be) and may learn something. Do not be afraid to say "I do not know". But be willing to help find the answer!

Recordkeeping is probably the touchiest subject when working with adults. No one wants to have everyone else know his or her financial status. You must earn the confidence of the adults you serve. The best way to do that is to keep you mouth closed. Never divulge any part of a person's financial status to someone else. In addition, few people are proud of the way they keep their records. Most of us know that we could do a better job. Be considerate when making suggestions for improved recordkeeping.

Providing Instruction

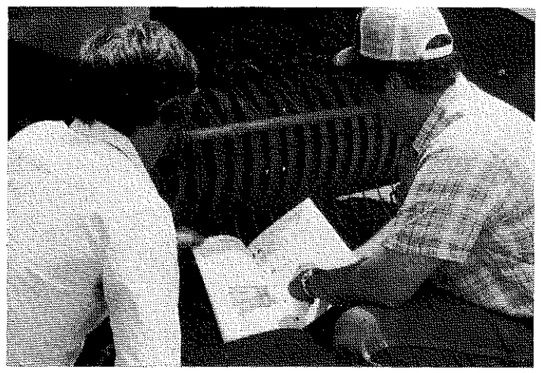
On-site instructional visits should be just that — instructional. One of the best ways to tie instruction into the visit is to refer to or follow up on a recent adult education program. Discuss ways to implement ideas presented. Help the agribusiness person or farmer identify the application phase of the problem solving process.

While you are there, you may want to solicit ideas for future educational programs. Also, individual visits are an appropriate time to discuss Young Farmer activities and award applications, to gather ideas for the vocational agriculture program, and to recruit potential high school students. Finally, you will want to keep an eye open for problems and areas of need that the adult may have or be anticipating. Remember, it is an instructional visit.

Just like the high school program, on-site instruction for adults should be recorded in your notebook. After leaving the farm or business, jot down the key points of the visit, anticipating the needs for the next one. Then turn to your date book and write a note to remind yourself to follow through on discussions, materials and assistance offered.

It is over! You made it! And it really was not all that bad. Sure, it was a little scary at first. But you learned that adults appreciate your help and have respect for you, even if you are fresh out of college. They want to help you as much as you want to help them. Build on that relationship. You may even begin to enjoy it, and I know your high school program will be stronger.

Now, go call a farmer or agribusiness person!



Teachers should be prepared for on-site instruction. (Photograph courtesy of Billy Harrell.)

Adult students can be too busy for a conference if prior arrangements are not made. (Photograph courtesy of Lindsey Keene, Vocational Agriculture Instructor, Southeast Lauderdale Attendance Center, Meridian, Mississippi 39301.)

TEACHING TIPS

Tree and Shrub Contest (Hunt)

A tree and shrub identification unit many times is not the most interesting one for students. If you have had the problem of obtaining and maintaining student interest in this type of unit, you may want to try the interest approach suggested by Barbara Lemmer of Anamosa, Iowa. This activity is set up like a contest and can be adapted for your particular situation.

Directions for Use

A. Make arrangements to attend a nursery for the first two days of a tree and shrub identification unit.

B. Identify contest classes. Examples of classes may be as follows:

1. Prettiest leafed tree
2. Longest needled tree
3. Sharpest needled tree
4. Smallest leafed tree

C. On the first day of the unit go to the nursery where they have needled and broadleafed trees and shrubs and begin your tree and shrub "hunting contest." (Classes may be changed and expanded to fit your needs.)

D. Each student shall enter 4-6 classes in the contest. Students will be given the class period to "hunt" for trees and shrubs they feel will best fit the class they have entered.

E. Students cannot pick one tree to represent more than one class.

F. The second day of the field trip, walk through the nursery and have each student identify their tree or shrub they have chosen to represent each class they have entered.

G. The class will tally the examples entered in each class and a vote will be taken with highest percentage winning.

H. A pencil will be given to the winner or winners of each class. (One or more students may choose the same tree or shrub; therefore, if your class votes on the tree as the best entered, both students win a pencil.)

I. During the following days in class, more indepth discussion can take place.

THEME

Considering The Older Adult In Agriculture

By David C. Drueckhammer and James D. White

(Editor's Note: Mr. Drueckhammer is a graduate teaching assistant and Dr. White is an Assistant Professor in the Department of Agricultural Education at Oklahoma State University, Stillwater, Oklahoma 74078.)

The shift in age of the population in this country toward more adults is causing an increased need for vocational education among adults. As our population becomes older more adults will be asked to learn new technologies and skills to fill the ever increasing technological demands of industry and agriculture.

"By 1985, one out of every five Americans will be age 55 or older" (Kolde, 1984 p. 36). Due to improved health and medical care, life expectancy has increased substantially. "The average life span for people in the United States was less than fifty at the turn of the Century but has increased to more than seventy today" (Knox, 1977 p. 248). The median age of the population today is 30, but by the year 2000, half of the population will be 35 or older (Kolde, 1984).

The results of foreign competition in manufacturing, technology and agriculture has influenced the need for updating of skills of American workers. If we as a country will not become more competitive, many of today's world markets and American jobs will be lost. American workers must become better trained in the methods and abilities to use new technologies. The shift in the population age along with increased technology brought about by foreign competition is resulting in one of the greatest challenges to education in the century.

Education in Agriculture

Since the Smith-Hughes Act of 1917, federal legislation has included adult education in the vocational agriculture program. The major emphasis of early adult education in agriculture was directed toward the young farmer. Many of today's programs are directed at this group also, with the idea of getting young adults off to a good start in farming and/or agribusiness.

The emphasis on the young adult in agriculture is important, but a look at the older adult must be considered. Rapid changes in agricultural technology coupled with an increasingly older agricultural population make adult education in agriculture for older adults (adults above the median age) a must.

The farm population has an older age structure and thus a higher median age than the nonfarm population. In 1982, the median age of farm residents was about 35 years compared with 30 years for the nonfarm population (U.S. Bureau of Census, 1983). Over 90 percent of the farm operators in the country are 35 years old or older.

Much of today's agricultural employment is outside of farming and employs a younger group than does production agriculture, but the needs of the farmer and older adults must be considered when developing adult education programs in agriculture. A careful evaluation of the type of program developed and the age of the population to be served must be conducted. A recent study regarding wheat producers in a four county area of northern Oklahoma revealed that over 62 percent of the producers were 48 years old or older, with only .37 percent between the ages of 18 and 22 (Finley, 1982). Certainly adult educational programs in wheat production in these four counties should be directed toward the older population.

Teacher Role

Although agriculture teachers are very busy people with all of the responsibilities of teaching high school students, the responsibility of the adult education program is generally assigned to the vocational agriculture teacher. The local school must provide the teacher adequate time to develop a quality adult education program.

Likewise, it is the responsibility of the teacher to make wise use of his or her talents and find time for a quality program. A teacher that is committed to serving the educational needs of a community will conduct an adult education program that is of high quality and receptive to the needs of the community.

Older Adult Characteristics

As previously mentioned, the adults involved in agriculture tend to be older than the average population. This age difference should be carefully considered when planning educational programs and activities since older adults have unique characteristics that affect learning.

It has often been said that "you can't teach an old dog new tricks". This might be true for dogs, but it's not true for adult learners. Although older adults have more experience and may not jump at every new idea that comes along, they will make changes when incentives and benefits are provided. Studies conducted regarding early adopters of new ideas have generally resulted in small or no relationships being determined between age and innovativeness (Rogers, 1983 p. 251).

Several physical conditions occur as adults become older. Changes in physical strength, vision, hearing, reaction time, relating load and capacity, and other senses all occur during aging and affect the way adults learn. Between the ages of 35 and 80, there is about a 60 percent decrease in maximum work rate without becoming fatigued (Knox, 1977).

Eye fatigue in adults is generally associated with age and gradually reduces the amount and quality of visual information that can be presented to and received by adults. The eye becomes less efficient in visual acuity, adaption to changes in levels of light, ability to determine blue and green colors, depth perception, and sensitivity to glare.

The ability to hear very soft sounds and very high frequency sounds starts to decline by adolescence. People planning adult education programs should be aware of these physical changes and adapt their instructional methods, techniques and facilities to fit the adult learner.

The ability of the adult to learn declines only slightly with age. Fluid intelligence (the ability to do rote memory, common word analogies, and matrices) declines gradually during adulthood. Crystallized intelligence (the ability to perceive relations and to engage in formal reasoning and abstraction based on a familiarity with knowledge of the intellectual and cultural heritage of society) continues to increase throughout adulthood (Knox, 1977). The adult will tend to compensate for loss of fluid intelligence with greater use of crystallized intelligence. The total intellectual ability of the adult will remain relatively constant as long as the person continues to exercise mental abilities and continues to learn.

Adult educational programs for older adults should be directed toward learning activities that emphasize the use of crystallized intelligence. These educational programs provide training and technical information to adults and the opportunity to exercise their mental abilities.

The physical and intellectual characteristics of the older adult must be carefully considered when planning an educational program if a successful program is to be conducted.

Program Development

Preparation of the instructional methods and techniques are of great importance in conducting a successful adult education program. Adult learners and classes have unique characteristics that require understanding and planning. Most adult learners attend classes because they want to and do so on a part-time basis. If the program does not provide stimulating and worthwhile information, they will cease to participate. The instructor must understand the characteristics of adult learners and carefully plan the instructional program with these characteristics in mind.

Adult learners cannot be treated like children. They have had experience, developed opinions, and acquired knowledge that children do not possess. Adults want to be responsible for their own actions and activities and involved in directing their own educational program. Adults should be encouraged to exchange ideas and experiences through discussion and assist each other in learning.

Learning by adults is generally problem centered, and is most efficient if application of the learning can be put to use during the instructional period or in their day to day activities. (Donaldson and Sconnell, 1978).

Paper and pencil examinations and the memorization of facts and figures generally are not important to adults and should be avoided as much as possible when developing instructional programs.

Instructors in adult programs should realize that people learn at different rates, and by different methods, and recognize the characteristics of these learners. It is also important to assist slow learners as needed, however, care must be taken to guard against threatening their self-respect. Likewise, it is important that all learners in an adult program be challenged by the instructional activities.

Summary

Adult educational programs for the older adult in agriculture are important to many areas of agricultural production and agribusiness. Care should be taken to see that these areas of educational need are correctly identified and that educational programs are developed to fit the needs and the characteristics of the older adult. Selection of proper instructors and instructional methods are a must. Facilities and instructional materials should be selected with regard to the type of instruction and type of learner in the educational program.

The educational ability of people will vary but this is not generally connected with age. People of any age can be taught if the instructional program is designed properly.

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TEACHING TIPS

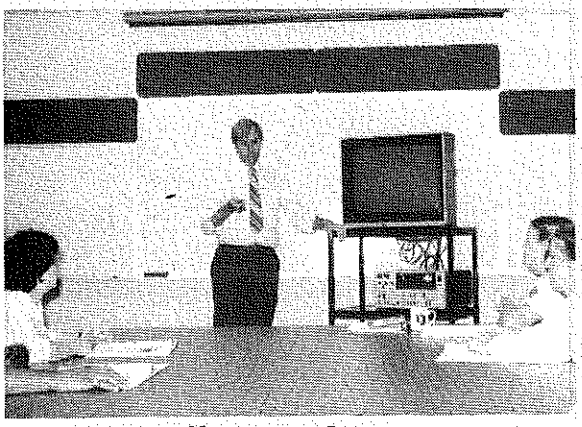
One decision vocational agricultural teachers need to make for each lesson is how best to obtain active student participation in a lesson. One vocational agriculture department found a unique way of physically involving each student in one lesson.

Melanie Parks, Ohio State University student teacher at Madison High School, provided the vocational agriculture students an opportunity to be actively involved when learning about the phenomena of seed germination. Students were asked to place a clean soybean seed in their mouths during a 40-minute class period. By the end of the class the seeds had begun to germinate. The emerging hypocotyl was clearly visible. The seeds began to germinate because the environment of the human mouth provided the correct moisture, temperature and oxygen levels needed for germination. The students then compared the germination development of their seeds with those soybeans which had been planted in the vocational agriculture department's field a week earlier.

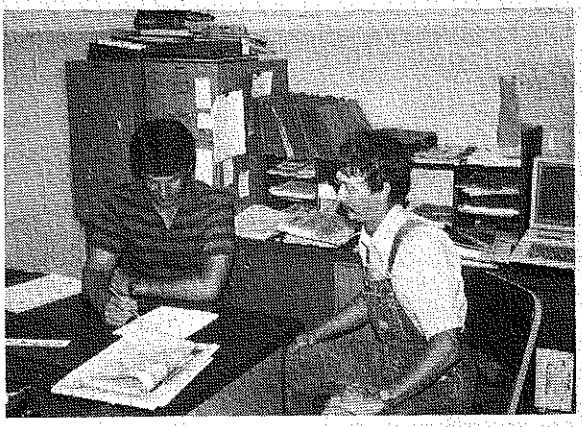
Straight from the horse's mouth? Not exactly, but here is an idea for some real honest-to-goodness student involvement in the teaching and learning of plant production principles.

Stories in Pictures

Adult Instruction Occurs in Many Places

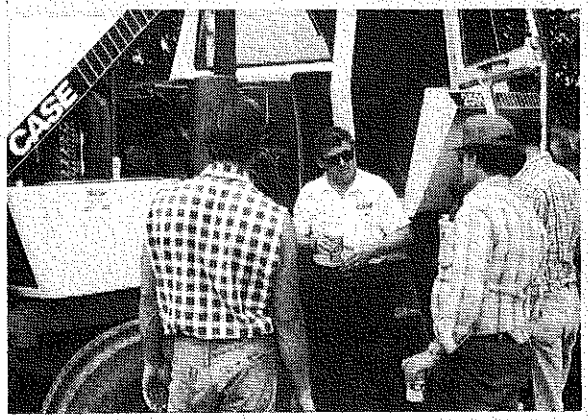


Classroom: Group



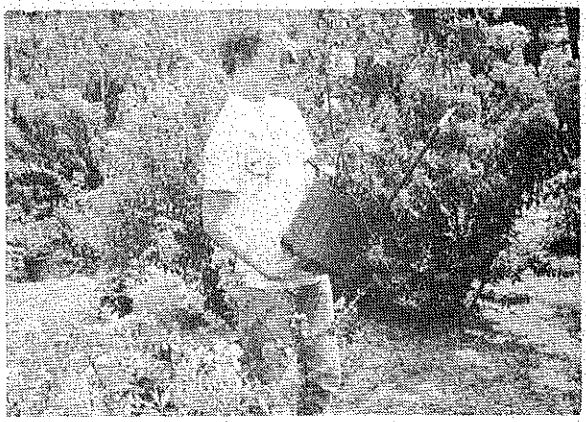
Office: Individualized

On-Site: Large Group



On-Site: Small Group

On-Site: Individualized at the Home



On-Site: Individualized at the Agribusiness

(Photographs courtesy of Greg Nolting; Bob Chapman; Stan Burke, Ohio State; Gene Francis; and Marvin Flatt, Westview High School, Martin, Tennessee.)