NATIONAL POSTSECONDARY AG LEADERS MEET — Howard Sidney, representing New York's Agricultural & Technical College at Cobleskill is shown on the left with H. N. Hunsicker, Education Program Specialist from the U.S. Office of Education. Nearly 50 attended the National Seminar for Post-Secondary Leaders in Agriculture/Agribusiness/Natural Resources in Minnesota this fall. (Photo from Tom Votes, Supervisor, University Relations, University of Minnesota)

Stories in Pictures

by Richard Douglass

ADULT FARM MANAGEMENT — Luther Lalum, VP Pacific Region NVATA, goes over record books of Mr. and Mrs. Frank Gamma. Lalum, Vo-Ag Instructor at Flathead High School, has conducted a computerized farm management and records class of adult farmers for ten years. Looking on is American Farmer Doug Gamma, son of the Frank Gamma's (Photo from Max Amberson, Department of Agricultural Education, Montana State University)

Each vocational agriculture instructor should be planning hands-on experience for students on a daily basis. Ron Schroll is a First Year Teacher at North Bend, Nebraska. Mr. Schroll first demonstrates and then conducts various hands-on experiences for students. Our profession needs the enthusiasm and fresh ideas from new teachers. If you have a First Year Teacher as a neighbor — how about paying him a visit? (Photo by Richard Douglass)

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Agricultural Education

Volume 46 March, 1974 Number 9

Theme—LOOKING AHEAD

The
Agricultural Education
Magazine

EDPRESS Vol. 46 March, 1974 No. 9

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This publication is the monthly professional journal of agricultural education. The journal is published by THE AGRICULTURAL EDUCATION MAGAZINE, INC., and is printed at the Lawhead Press, Inc., 900 East State Street, Athens, Ohio 45701.

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Send articles and pictures to the Editor or to the appropriate Special Editor.

COVER PHOTO:

What curriculum changes are needed to meet off-farm agricultural industries needs? Mike Tucker of the Perry FFA Chapter, Perry, Georgia, received his supervised occupation work experience under the Placement and Processing Program. Here he is shown slicing meats to be packaged for the Howard Johnson chain of hotels and restaurants. (Photo from Curtis Corbin, Jr. Supervisor, Georgia Department of Education)

Editorials

From Your Editor . . .

THE OUTLOOK FOR VOCATIONAL AGRICULTURE

Martin B. McMillion

In the most unpredictable of times and when doomsday prophets abound in all quarters, this publication is committed to the theme, "Looking Ahead in Vocational Agriculture." Predictions concerning the future of Vocational Education are largely dependent upon the national economy which is threatened by scarce and expensive energy and the national government which may or may not be stabilizing. Dire predictions of the results of gasoline shortage on the supervised experience programs from the standpoint of both teacher and student travel are easily justified, and the finding of training stations for students during times of high unemployment is unquestionably difficult.

Although it is possible to paint a bleak picture of the future, there are several bright spots that should be noted. Finances for all Vocational Education seem brighter now after revenue sharing has been averted, at least for one year, and after impounded education funds have been released.

Congress and the public still look favorably upon occupational education whether it is vocational, technical, professional, or carries the "career education" label. The popular support for vocational education has endured over the entire, preceding ten-year period, and there are no signs of a reversal in the immediate future.

Our agriculture, the economic area in which we can best compete with other nations, is supported because of its role in improving the international balance of trade. Agriculture is respected if not supported by the public, in its consumer role, as a result of last year's boycott-withholding confrontations. When agriculture is supported, Vocational Agriculture worthy of the name will also be supported. Vocational Agriculture, now broadly based upon agribusiness and the management of natural resources, has a broad clientele, and therefore a broader direct support than the five percent of the population who are farmers.

Vocational Education in general and Agricultural Education in particular have weathered the accountability storm, as well as or better than the remainder of education. This particular bright spot could dim because scarce funds resulting from a slowed economy could renew and intensify the demand of the public for schools to do *more* with *less* resources.

The educational change that is drawing the most attention now and may be a fairly accurate prediction of what is to come on a larger scale is what could be termed as "deschooling of the schools." The teenager may have few if any academic courses but receive practical training in school or on-the-job under the auspices of the school. The teenager may actually quit school but maintain a probation officer type of relationship with a school representative who counsels and helps the student. The most recent and obvious

(Continued on next page)

Guest Editorial . . .

WHERE SHOULD VO-AG BE HEADING?

John F. Thompson

Dr. John F. Thompson
Teacher Education
University of Wisconsin-Madison

In answering the above question, there are three ideas that I would like to stress. It becomes more and more evident to me that we should be striving for a more clearly defined purpose for vocational education in agriculture. When our purpose was very tightly woven to the idea of preparing young men for farm entrepreneurship, we knew more clearly what we stood for. In the last decade we have retained the objective of farm ownership but have added other purposes in rather haphazard fashion. It is clear that we should have broadened our purpose, so the suggestion here is for us to more clearly define what we stand for, who our programs are intended for, what boys and girls can expect from them, and the contributions that our programs may make to their life style.

Our diffused objectives are leading many observers to conclude that vocational education in agriculture is all things to all people. I think vocational education in agriculture cannot be the doctor that cures all the ills of those wishing to identify with careers in the agribusiness complex. We can find examples of Vocational Agriculture attempting to rescue groups of students whose academic achievement in school has not kept pace with their maturity. I think we have an obligation to accept students whose vocational maturity can be genuinely advanced by the study of agribusiness. We cannot do the job alone, however. Nor can we tolerate the shifting of all such students in a local school to the vocational agriculture program on the weak rationale that all other programs of the school have failed the student.

(Continued on next page)

From the Editor . . .

evidence of this is the recommendation by the National Commission on the Reform of Secondary Education that compulsory attendance laws only apply to fourteen-year-olds and under, and that an alternative mode of training be provided under school supervision.

In the writings about these new developments, the terms "pupil," "student," and "scholar" have given way to "trainee." The term "training" appears frequently while "education" appears rarely. Indications are that education formerly thought to be for the masses perhaps may not be for the masses, especially after the eighth year.

Many youth do not want twelve years of formal schooling and rebel at being given it or having it forced upon them. *Training* in as unschool a place and in as unschool a way as possible is what they want. More and more that is what the schools are willing for them to have.

There is one big catch to this. We happen to be trying to make a democracy work and citizens must have more

When agriculture is supported, Vocational Agriculture worthy of the name will also be supported.

than training if a democracy is to function. Fortunately, the FFA is an excellent delivery system for the teaching of those competencies necessary to good citizenship. Let us use our imagination and effort to help vocational agriculture students reap the full benefit of FFA.

There is a need for vocational agriculture both in times of great economic activity and in times of reduced economic activity. Perhaps the need is greatest in the latter. Perhaps some ornamental horticulture teachers will need to switch to teaching survival gardening. Perhaps the number of vocational agriculture students we can serve will be reduced. Let us resolve to keep alert to developments and strengthen the vocational agriculture programs even if reductions in the program take place. Quantity is not everything. —MBW

Guest Editorial . . .

Philosophers have told us that educational programs generally choose between one of three orientations—knowledge for the sake of knowledge, social purpose, or self-improvement. Vocational education in agriculture and indeed all of vocational education is grounded in social purpose—preparing men and women for occupations and jobs for which society has a specific need. When vocational education in agriculture came into the comprehensive public school, it chose to operate almost exclusively from the social utility point of view. We operated programs on the assumption that all who enrolled in them had made up their mind that they wanted to become a farm owner. We had little time for and committed almost none of our resources to providing exploratory experiences for those who were in the process of making up their minds about careers in agriculture. As we strengthen our programs by examining the question of where we should be headed, a second idea that we should explore is that of people enrolling in agriculture classes for self-improvement. I believe we must work toward having the objective of self-improvement co-equal with the objective of social purpose. In practical terms this means that local vocational agriculture programs should be oriented towards providing experiences for such individuals as those boys and girls who want to find out about agribusiness careers or

We cannot tolerate the shifting of ALL such students [disadvantaged] in a local school to the Vo-Ag program on the weak rationale that all other programs of the school have failed the student.

those who want agriculture information to improve their life style.

A third direction we need to work towards is improving the ability of our students to cope with change, to be able to deal with our future oriented society. The methodology developed over the years to reach the philosophical underpinning of Vocational Education of preparing men and women for occupations and jobs found in the society has been to go to employers and workers to ask or to observe what they do. We then teach the skills used by present workers to our students who we expect to become employed in similar occupations. This method has done an outstanding job of preparing students to get immediate employment. It contains insufficient guarantees, however, that the student will be able to cope with the changes that occur in his occupation and job.

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Themes For Future Issues

April —	Production Agriculture — Still in Vogue	August —	Teacher Education
May —	Summer Accountability	September —	School Organization and Articulation
June —	Administration and Supervision — Local to National	October —	Instructional Technology
July —	Program Planning and Evaluation	November —	Improving the Profession — the Job and the Teacher
		December —	Better Teaching and Learning

LET'S MOVE AHEAD WITH PROGRAMS IN AGRICULTURAL EDUCATION

James E. Dougan, Director
Ohio Agricultural Education Service

James E. Dougan

Today there are many positive signs indicating that we are moving forward with our total Agricultural Education and FFA programs. We have identified our role in Career Education; and that is to train youth and adults for employment in the agriculture industry and to improve the performance abilities of those presently employed. The Awareness and Motivation to the World of Work, the Orientation, and the Exploration components of Career Education are the role of the elementary and secondary classroom teachers. However, we in agriculture must provide these teachers with materials and information for the Agribusiness and Natural Resources occupational cluster.

Great strides are being made in many states to identify the professional and technical competencies needed by teachers to plan and conduct quality programs in each of our major instructional areas. We see state vocational agriculture teachers' associations and state staffs identifying the major components of quality programs and establishing standards and criteria to give assurance to the public that quality programs will be conducted.

We see teacher education staffs revamping pre-service and in-service training programs to meet the needs of present-day teachers in performing their role in conducting quality programs. State supervisory staffs are changing from the "shadow across the door" concept of supervision to more of a leadership role, using management principles and techniques, and research as a basis for the administration of the Agricultural Education and FFA programs in their respective states.

There is the national curriculum development project that will be providing us with national curriculum guides in Career Education and eight of our major instructional areas which can be used as a basis for developing local programs of instruction.

The public is beginning to accept Agricultural Education and other Vocational Education programs as a vital part of the total educational system. No longer is the public saying that it is good for someone else's children. They want it for their own children.

We have had great issues facing us and we will continue to have many concerns and "strong signals" in the future, but we are moving forward. For us to continue to move forward, the following guidelines and suggestions are offered:

1. Every state supervisory and teacher education staff should develop a five-year program which includes goals, quantitative objectives, programs and activities that will give assurance that the goals and objectives will be met. The state staff should assist local teachers in developing their five-year programs.

If those who explore cannot or will not continue in our programs, we have general education.

2. We must develop and conduct quality programs. All of our pre-service and in-service training programs, curriculum development, instructional materials, and methods of administration and supervision must contribute to this effort. There are four major components of quality programs in Agricultural Education, namely: a) the students, b) the curriculum, c) the facilities and equipment, and most important d) the teacher.

The students who enroll in our programs must have an interest and an aptitude to become employed in the agriculture industry in which they are being trained, and to succeed in that industry. Otherwise, our programs will become exploratory and general, and will not be vocational in nature.

The **curriculum** must be developed on student performance abilities and skills based on a task analysis of the occupation, or cluster of occupations in which the training is being provided.

The school **laboratories** or shops must provide for student participating experiences which the student will be performing when he enters the occupation. If it is impossible for the school to provide the necessary facilities and equipment, then the student must receive the essential performance skills and abilities through a cooperative, on-the-job training program.

A **teacher** cannot perform effective instruction and direct the learning process without adequate facilities, equipment, and instructional materials.

3. Agricultural Education research must be directed toward essential program planning activities which will provide the data and information to develop the kind and type of program that the agriculture industry will need to adequately train individuals.

(Concluded on next page)

(Dougan from previous page)

4. Our positions are too demanding, and time is too limited for us in Agricultural Education to go alone. We must continue to be a strong leader and a part of the team in vocational and technical education. This is going to require leadership ability, leadership style, and leadership commitment on the part of all three of the national organizations within the agriculture section of the AVA.

5. Every state staff member and vocational agriculture teacher must develop a set of slides or develop other means of communication that will tell the Agricultural Education and FFA story at the state and local level. Many times we communicate only when we rise to the bait of emotionalism or discontent.

6. The state staff should give serious consideration to establishing standards for minimum and maximum classroom enrollment for each teacher. It would appear that in the 9th and 10th grade Production Agriculture and in the 11th and 12th grade Farm Management programs, a minimum of twelve students for each class and a maximum of sixty students for each teacher is desirable. It would also appear that the off-farm programs, such as Horticulture, Agricultural-Industrial Equipment and Mechanics, Agricultural Business, Supplies, and Service, etc., should have a minimum of 15 and a maximum of 25 students and these programs should consist of at least 22 hours of related classroom and laboratory instruction and/or cooperative, on-the-job training per week.

7. Local program advisory committees are a must. Local people must be involved in the priority process on program review, improvement, development, and expansion. We cannot expect support unless people are involved. Practical advice is the benefit of such a process.

8. Teacher supply and demand is a real concern in Agricultural Education. There have been agricultural programs planned, facilities and equipment made available, and students requesting these programs, and then local people find that a competent teacher or teachers are not available to conduct these programs. It will be necessary to develop pre-service and in-service training programs to prepare industry-based and two-year associate degree-trained individuals to man our classrooms and laboratories, particularly in the off-farm instructional areas.

It will be necessary to develop pre-service and in-service training programs to prepare industry-based and two-year associate degree trained individuals to man our classrooms and laboratories, particularly in the off-farm instructional areas.

9. Our 9th and 10th grade Production Agriculture programs must include the basic principles of plant and animal production, basic agricultural mechanics, the employment opportunities in the agriculture industry, leadership, citizenship, and personal development training. These programs must not become just orientation or exploration components of Career Education. If they do, then we cannot expect these programs to be funded in the future by the basic vocational education acts, the same as other vocational programs. This may call for the redesign of some of our 9th and 10th grade programs.

10. We are moving closer to making the FFA an integral part of the instructional program. When it does, the student will automatically participate in the local FFA program and activities, the same as an occupational experience program. This opportunity must be provided to every student.

In time of crisis, the people turn to the educational system for solutions. It is a safe assumption that the schools will be asked to teach more leadership, citizenship, trust, conservation of natural resources, and the building of our local communities. This has great implications in the development of future FFA programs.

We should be very enthusiastic and confident about our future. We are moving forward. We have the leadership, determination, and the knowhow. We must get tooled up to move at a faster pace. ◆◆◆

BOOK REVIEW

AN INTRODUCTION TO PPBS, by Joseph H. McGivney and Robert E. Hedges. Columbus, Ohio: Charles E. Merrill Publishing Company, 1972. Paper $3.95.

When I picked up this book and glanced through it, page five immediately attracted my attention and aroused my interest. Essentially, what is found there is a short scolding for turning to that page. Reading it (even if one is not supposed to do so) is a good introduction to the tone and method used by the authors.

Perhaps knowledgeable readers have already realized that this book is actually a programmed-learning device, directing those who study it to increased "correct" concepts by chiding them for making "wrong" choices and explaining why such choices are "wrong." It is the scolding and chiding which makes this work different from any ordinary programmed text.

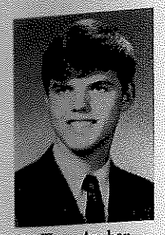
The book is obviously aimed at the educational administrator for whom the concept of a planning, programming, budgeting system has become a fact of life. However, other educators can find much of value by following the routine of "right" choices suggested by the authors. At the very least they will be made aware of a current trend of concern to their administrative supervisors. Perhaps the section on budgeting will be of little interest to those who do not actively deal with the expenditure of money. Nevertheless, the planning and programming aspects of the presentation could be useful to any educator. Particularly important is the clearly made distinction between goals and objectives. When objectives as seen as subordinate to goals, and when one learns to express objectives in quantitative and qualitative terms, planning of any kind should become easier and more efficient. Finally, the book would be a useful guide to any teacher interested in setting up a simulated program which could involve planning and budgeting (such as day-to-day farm operations) even though the author's emphasis is definitely directed toward educational administration.

Robert J. Myers, Head
Agriculture Library
Ohio State University, Columbus

A Good Place To Go

Tom Archer
Agriculture Instructor
Delaware, Ohio

Vocational Agriculture can be a part of a college prep program.



Tom Archer

In the fall of 1972, there was much optimism as a new curriculum was initiated in the Vocational Agriculture Department of Delaware Hayes High School, Delaware, Ohio. Thirty-three, nine-week term courses under the production taxonomy and nine under agribusiness were offered, of which twenty-seven had sufficient enrollment to be taught. The increased flexibility and relevancy of such a program seemed to be ideal for a city school system in which the traditional production agriculture interests had been surpassed by interest in agribusiness, forestry, natural resources, and horticulture.

As the year progressed, the optimism grew. Two teachers could offer a two year pre-Agribusiness program, a two-year Junior-Senior Agribusiness program, two years of Natural Resources, two years of Horticulture, plus a four-year program in Production Agriculture with specialities in Agri-mechanics, Animal Science, and Crop Science. Four new courses were added for the second year of the nine-week-term system, and enrollment increased sufficiently to add a third teacher.

But just as important as meeting the present needs in Vocational Agriculture in the Delaware community, this type of a program seems as though it will meet the needs of the future in the changing Vocational Education scene. Most of the nation is experiencing a transition to Area Vocational Centers which offer highly specialized vocational programs to high school students in a geographic area which includes several local high schools. One such Joint Vocational School was made possible by the voters of Delaware County in 1972, and is to be opened in the fall of 1975. The Vocational Agriculture Department in the proposed JVS is to include two units of agribusiness, two units of horticulture, and a unit of agri-mechanics.

When the JVS opens, there will be relatively little change in the program at Delaware Hayes. The Agribusiness unit will be transferred to the JVS, but the two units of production will not change. In fact, the local program will enhance the JVS as it will have had three years experience in preparing students for agribusiness, horticulture, and agri-mechanics.

Also, the local program at Delaware Hayes, with its ease in addition of desired courses, and deletion of courses for which there is no enrollment, can serve as a trial area for possible expansion of JVS programs. For instance, the original plans for the JVS do not call for a Natural Resources unit. Term courses in Wildlife Management, Forestry, and Conservation can be offered at the local level. If sufficient interest and success exists, then a Natural Resources unit could be added to the JVS curriculum.

In addition to providing appropriate educational routes for students who need and desire high school vocational training for employment immediately following graduation, the term system has proved valuable for college preparation. Students who would have otherwise not enrolled in Vocational Agriculture are attracted to such courses as Pollution Control, Agricultural Engineering, Surveying, and Leadership. Four-year programs in this style of Vocational Agriculture by such students will give an introduction to almost any college curriculum in agriculture. The term system has a better chance than the conventional year-type vocational agriculture program in proving to students, parents, and faculty members that Vocational Agriculture can be a part of a college prep program.

One of the best developments which the term-course system has afforded Delaware is the improvement of the FFA program. Since the initiation of the term-course curriculum, the member of the Delaware FFA have placed first in State FFA Milk Judging, first in State Horse Judging, fourth in Land Judging, and ninth in Meat Judging. The Chapter has also been recognized at the State level for outstanding BOAC programs, and of the 312 FFA chapters in Ohio, the Delaware FFA advanced to the number twelve position in 1973. The leadership courses plus the intensified study in the individual courses has helped make this possible.

Comparing the traditional Production Vocational Agriculture Department to the Term-system Curriculum for Vocational Agriculture, the following implications are suggested:

1. Regular high school programs of Vocational Agriculture must not compete with JVS programs, but enhance them. A term-system curriculum seems to be a logical means to provide harmony and flexibility in such a relationship.
2. A term-system curriculum is not only inviting, but compatible with the goals of college-bound high schoool students.
3. In a multiple-teacher department, maximum utilization of teacher skills, facilities, and time can be made by offering a broad range of agriculturally related courses. Such a curriculum with two teachers can offer Agribusiness, Horticulture, Natural Resources, Plant Science, Animal Science, and Agri-mechanics.
4. More in-depth study in particular areas plus special leadership courses help improve FFA programs. ◆◆

RELATIONSHIPS IN TROUBLED TIMES

J. C. Atherton
Teacher Education
Louisiana State University

J. C. Atherton

The world is in a period of extraordinary times. Social unrest is rampant. Customs and practices, held more or less sacred through the ages, are being recklessly abandoned, or at least seriously challenged. Mores are in a state of flux. Points of anchor or social certainties of the past are passe. Stress and strain seem the order of the day. New ideas and revolutionary changes in customs are a part of the current social scene.

The agricultural educator finds himself engulfed within this mass of radical change. In order to be effective or in some cases to even hold his position on the faculty, he must be able to cope with modern life in a satisfactory manner. This may take some **doing** on his part.

The faculty of the high school can exist as one viable unit in which there is happiness and worthy achievement if they will follow a few simple rules of appropriate community living. Probably the foremost of these rules can be classified as tact or diplomacy.

During the past two decades the public school has been subjected to a series of depreciating activities by various individuals and groups who had an "axe to grind" about some activity or shortcoming, either real or imagined. Many articles and several major publications have been written about these imperfections. It seems that most people are experts on how the school should operate.

That the schools and their programs are not perfect, few would even attempt to deny. However some of the charges laid at the feet of the system are unwarranted and at times seemingly far fetched. Regardless of the validity of the accusation, the function of the school is impaired to the degree that the public feels adversely towards it. The problem is one of developing attitudes and beliefs that are wholesome and that elicit cooperation and support from the community, both within the school *per se* and also throughout the area served by the school. It seems doubtful that these two can be separated as one thinks of school relationships. In fact, each has an influence upon the other.

Consideration and reason are major instruments for building some relationships. The development of a viable program is predicated on the harmonious associations by all school personnel. This includes administration, teachers, non-certificated employees, and the entire student body. The behavior of individuals within the system toward one another is the key to mutual respect and esteem. Harmonious living is an end to be sought and cherished.

Each member of the school faculty as well as the non-certificated personnel have differing tasks and assignments. All are required for the effective functioning of the system. These persons with diverse backgrounds and various tasks should operate in an atmosphere of equality and personal consideration. Surely, there will be periods when frictions arise, but thoughtfulness and toleration provide the oil which lubricates the free flow of association and reduces the wear and tear of frustration and poor relationships. It is not practical to have a clear line of demarcation between the various members who comprise the school personnel. Someone once said that when the house is on fire, all members carry water. The same principle should apply to the schools. All extend their energies for the welfare of the whole. Of course, there should be sharing also whenever one has skills, information or materials useful to others in the educative processes.

In its daily operations, the school staff emphasizes the individuality of its members and provides a climate in which this uniqueness can be manifested and utilized to the benefit of the overall educational program. A spirit of understanding should be maintained among all concerned. Most complications result from a lack of understanding.

The development of a viable program is predicated on the harmonious associations by all school personnel, including the students.

There will be stress and strain upon the faculty, some which results from the variance of duties, interests, responsibilities and priorities of the different members. Inter-faculty relationships are quite sensitive and fragile or delicate. However the uniqueness of each must be recognized and preserved. It must be cherished by all, so that the delicate balance of give and take remains on a stable plane and the equilibrium of the school system is maintained. Contributions that each member of the staff and the non-certificated personnel make should be appreciated by each teacher and administrator.

This does not mean that each individual should go around constantly tooting his own horn, as this practice may be obnoxious to many. Commendable activity has a way of making itself felt and known. There is a saying however, that if one toots not his own horn it shall not be tooted. In other words a little honest reporting of progress in one's field is not only good but desirable. One should be cognizant that undue publicity will frequently have adverse effects and the opposite of what one would prefer.

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FARMERS AND BANKERS ARE INTERESTED IN F.B.P.A.

John L. Borton, Instructor
Farm Business Planning and Analysis
Upper Sandusky, Ohio

John L. Borton

The possibility of a farm business planning and analysis program as a part of the total program of the Upper Sandusky Vocational Agriculture Department was introduced to me after twenty-eight years of teaching vocational agriculture.

I decided to use the program as a part of my adult education classes and enrolled six farm couples, starting them on farm records. I continued in F.B.P.A. for eight years with last year's work in that area only. I feel the program definitely has a place in the community either on a part-time or a full-time basis.

There are many farmers who need some help for better record systems for their farm businesses. I would judge that 80 percent have had poor record systems in the past. Most farmers do not really know what their income was for the year, and most of them are making out their income tax reports on a cash basis instead of the accrual method. I wish to emphasize that this is not a program just for income tax use but for better planning and reference when needed.

F.B.P.A. is not strictly a record book program although the first part is developing a record system. The second part is summarizing and analyzing the system and the third is planning the farm business for future years as a result of the record analysis. Instructional sessions are held in each of the three areas as well as for smaller groups whose operators are working in similar areas.

I have been able to do more for my students by devoting my time to this program rather than handling it as a part of my adult education classes and high school work.

Adult education for bankers at Upper Sandusky. The class and instructors are pictured here.

RESULTS FROM NINE UPPER SANDUSKY FARMS*

	First Analysis	Last Analysis	Difference
Gross Income	$24,393.37	$33,893.22	$9.499.85
Net Farm Income	11,294.38	14,146.66	2,852.28
Family Labor and Management Income	9,058.49	10,242.66	1,184.17
Gross Income per $1,000 Invested	523.07	376.66	-146.41
Net Margin	36.29%	33.46%	-1.83%

*Operators with at least five year's instruction in F.B.P.A.

The teacher should not overlook contact with the lending agents in the area which include bankers, production credit associations, savings and loan associations, or any group that lends money to agricultural people. I have had the opportunity to work with two different lending groups in Marion and Wyandot Counties and have found the lenders very interested in the F.B.P.A. program. It is my observation that the classes have been very helpful to them, and in the long run should prove helpful to their customers. Indirectly it can prove helpful to the instructor because the lenders sometimes recommend the F.B.P.A. program to their customers.

(Concluded on page 203)

OLDER AMERICANS: A New Challenge

N. A. Sheppard
Vocational and Technical Education
Virginia Polytechnic Institute and
State University
Blacksburg, Virginia


N. A. Sheppard

It is my belief that one of the most serious educationally, socially, and economically handicapped groups to which vocational education has not made a viable contribution is that group often referred to as "the aged," "the elderly," or "the geriatric set." One fact which may account for this lack of aggressiveness on the part of vocational education personnel throughout the country is uncertainty as to what the role of vocational education should be. Does vocational education have a role to fulfill in serving the needs of elderly people? If so, in what way, form or fashion? Can vocational education indeed make a unique contribution to the elderly? The Vocational Acts would seem to imply that vocational education does have an obligation to serve the aged since many need to upgrade their work skills or learn new ones and many persons 60 years of age or older have special educational handicaps.

The question may be asked, "Why education for the aging?" Presently there are some 20 million people in this country who are 65 or older. Nevertheless, the life expectancy of today influences our need to pay closer attention to education for retirement, as well as for the working period of life.

An overwhelmingly number of older persons are confronted with pressing problems such as termination of employment, reduced income, and a decreased standard of living; social isolation brought about by the death of members of the family, friends and peers; increased periods of unoccupied time and a lack of meaningful activities, loss of physical and mental vigor; and the feelings, attitudes and emotions which attend old age in American society. Aside from health, money is the most pervasive worry of the aged; income maintenance is a major need.

Many are glad to end their working days. For people with money, good health, careful plans and lively interests, retirement can be a welcome time to do the things they always dreamed of doing. But for too many others, the harvest of "the golden years" is neglect, isolation, anomies and despair. One of every four Americans 65 or over lives at or below "the poverty line."[1] Some of these 5,000,000 old people were poor to begin with, but most are bewildered and bitter; their savings and fixed incomes are devoured by spiraling property taxes and other forms of inflation. More than 2,000,000 subsist on Social Security alone.[2]

One of our greatest national reservoirs of human resources are the aged. This reservoir of human resources can be usefully employed in a society as varied as the United States. There are rewarding vocations in which the aged can engage if given direction and training.

A study is underway at VPI & SU to assess the attitudes and perceptions held, financial and staff resources available, and current efforts being extended toward the education of the aged by vocational education personnel in Virginia. The study will also focus on the following concern: "What must be done immediately to meet the vocational, affective and cognitive needs of this elderly group via vocational education programs?"

Vocational Educators in general and Agricultural Educators in particular must realize that the earlier efforts in the education of the aged during the 1940's and 50's were upon avocational activities. More recently, greater attention is being directed toward occupational education, training and retraining for older adults. Unfortunately most existing Vocational-Technical programs (including Agricultural Education) lack realistic educational-vocational opportunities for older people who want to work and need to work in order to survive.

Older Adults Should Be Trained and Re-Trained

Care must be taken in the choice of training techniques and in modifying conditions to help those older adults who are unaccustomed to such training, adjust to its emotional-psychological climate and pace. Paper-and-pencil techniques are inadequate for the selection of older workers for re-training. Again, certain psychological difficulties such as pacing, short-term memory and interference factors, and unlearning must be understood before one can effectively teach an older person.

The job-type for which older adults are being trained or re-trained helps define methods and procedure. Success in training plumbers, pipefitters, and employees in the construction industry has shown the need for short, practical courses, visual aids, competent instructors, and immediate application of skills. Specific requirements of aged learners include long and uninterrupted learning sessions, greater consolidation of learning before new skills are attempted, accurate response and rapid feedback during learning, self-structured learning programs and avoidance of competition, and active mental participation during learning.

Effective specially-designed programs can provide a "pay-off" in the training of older workers, including the so-called "hard core or disadvantaged adult." The Norfolk State College (Virginia) Program for the Hardcore provided evidence that it is sound public policy to invest in training of older persons.

(Concluded on next page)

(Sheppard from page 202)

Contributions Vocational Education Can Make

What can we do to help the elderly in Vocational Education? Much depends, of course, on which of the elderly we are talking about. Some older persons find their own solutions, even to embarking on new careers following mandatory retirement. Others use their knowledge and experience in the role of consultants ("Operation Greenthumb") and advisers within their own field of work. The aged do not constitute a homogeneous group. The older population is very diverse. Included are men and women; the married, the widowed, and the single; the educated and uneducated; the economically well-off and the poor; the well and the ill; white and black; brown, yellow and red; the "turned on" and the "turned off"; the self actualizing and the struggler for survival at the bottom of "Maslow's Need Hierarchy." Thus different responses and different programs are needed for these diverse millions. A program designed to foster creative appreciation for the fine arts is probably meaningless for the deprived, the hungry, the isolated and the lonely.

The point being made is that there are obviously some elderly people who do not necessarily need our help — not really. Those older persons who do, we can assist them in some of the following ways by:

—Offering vocational training or re-training for middle-aged and aged men and women who are re-entering the labor force and to older persons whose skills have become obsolete.
—Pushing for more legislation that permit employed or unemployed older persons to be trained or re-trained for employment to provide maximum economic security for the individual and greater productivity for the Nation.
—Offering short term training programs to prepare elderly people in some specialized skill to earn additional income.
—Utilizing the experience and expertise of older persons to work with young adults and youth. For example, retired farmers working with young farmers.
—Giving older persons the information that will allow them to make their own choices and help themselves within their own individual limitations.
—Using vocational and technical education classes as a means of providing opportunities for socializing and companionship as well as additional interests or hobbies to help older persons avoid boredom.
—Developing programs to adjust the skills of the labor force to changing needs of the economy by putting a greater emphasis on re-training unemployed older persons.
—Developing training programs or centers in rural and urban areas where vocational programs have not been accessible.
—Treating the elderly with dignity and respect. After all, doesn't this mean just about everything to any human being?

I strongly believe that vocational educators can contribute significantly to improving the quality of life for older people. Vocational educators possess the "sensitivity," the resources, and the skills that are important assets in working with the segment of our population that now comprise the so-called "new minority." These are the people that have been pushed out of the mainstream of society into the subcultures of poverty and social uselessness. Their needs are great, and vocational educators can help meet them. ◆◆◆

1. "The Old in the Country of the Young," *Time Magazine*, (August, 1970), p. 49.
2. *Ibid*, p. 49.

(Borton from page 201)

My approach to the Wyandot County lender's program was to make personal contacts with the lender's associations and briefly explain the program to them; then I arranged a group meeting of lenders at which I explained in more detail how the program could be beneficial. We held fifteen meetings — a meeting each week. Some might prefer having a more intensive course with two or three meetings a week for a shorter period of time. The number of meetings could be reduced since the lending personnel are proficient in arithmetic and understand posting entries and checking totals which is more mechanical than teaching the principles necessary in a good farm record system.

The lenders are offered a type of program which is basically the same as the one offered the vocational agriculture teachers. They are given a farm problem to work under the same type of agenda as the teachers. I used this approach because I have found that the lenders do not necessarily have a good background in farm accounting principles which lead to good farm management which is the real purpose for a good set of farm records.

To show that the farm business planning and analysis program has been beneficial to the farm operators, a table is included that shows the difference between the first analysis and one five years later in increased gross income and family labor income. This shows an increase of over $2000 per operator. This was true also for other instructors who are operating on a full-time basis with farmers on the program.

The real benefit from this program is that the lending people gain a better understanding of the farm producer's problems and can render better service to them. With a good set of farm records the farmer and the lender can make better farm plans for the future.

(Guest Editorial from page 196)

We are in a period where the general growth rate of secondary school population has stablized. Any increase in student enrollment in one program of the school is likely to result in lower enrollment in another program. As the agriculture courses expand in enrollment there is likely to be a decrease in such courses as English, biology and mathematics. This fact coupled with the trend of fewer high school requirements provides for a very competitive environment among many secondary school elective programs. As a local vocational agriculture program seeks to maintain and expand in this environment, it must insure that it knows what it stands for, it has a clear idea of what the vocational agriculture experience is expected to do for the student and it can prepare women and men to cope with change. If we can do these and similar things we will be able to offer quality programs. ◆◆◆

Nepal: Vocational Educator's Role in Elementary Education

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The author teaching one of a series of lessons to demonstrate to District Education Officers (seen in background) how the revised Practical Arts Curriculum could be taught to third graders. The subject is seed germination testing using local materials.

As a result of an evaluation of the elementary education curriculum in Nepal, the segment of the program which has been entitled Vocational Education in the past has been changed. The new term or title which the committee has selected is "Practical Arts."

Although the term "Practical Arts" is not new, the struggle for a definition which will meet the demands of current society is a constant and continuing one. Each new era modifies the definition and alters the perimeters to meet the changing technical advances in the society in which it is taught. Practical Arts has currently been defined as "the identification and development of students capabilities for learning and applying knowledge and skill to some useful end, with special emphasis on adapting the natural resources and environment to the usefulness of themselves and the society in which they live."[1]

This working definition is influenced by the society in which it was developed and the technological changes therein. The definition has even a greater impact in that it represents an expansion in basic concepts taught. Originally the program in the elementary school system was called Vocational Education, with the emphasis on developing vocational skills. This has proved unsuccessful in grades one to three. In a highly agrarian society which is striving for emphasis on industrial development, courses entitled General Agriculture and Industrial Arts were considered. They are found to be even more restrictive in perimeters than Vocational Education. "Self-Help" often used synonymously with Practical Arts is defined to mean "an act of aiding or providing for ones self within their daily lives without depending on the aid of others."[2] The characteristic of Self-Help is a necessary and desirable trait in elementary students. The major limiting factor is that Self-Help provides no direct link to knowledge or skill. Self-Help is the application of what has already been learned through either the structured or unstructured educational experience, (i.e., Practical Arts).

Chart number one illustrates the structure that the committee perceived as Practical Arts. The chart must be considered in a three dimensional context with each succeeding layer or grade becoming more comprehensive, expansive, and building on the knowledge and skill developed the previous year. The "Practical Arts" curriculum will consist of a central core of knowledge and skill steps which will be within the students' ability level, teachers' competencies, and local resource limitations. This central core will draw from the basic Trade and Industrial, Agricultural and Home Science fields. The core constitutes the basic building blocks of knowledge and skill which will enable the student to meet the objectives of the practical arts curriculum. The objectives of the practical arts curriculum for elementary education have been stated as follows:

"1. To extend the perimeters of the existing subject matter areas to the application stage in the students daily lives.

2. To provide the student with an opportunity for occupational exploration by providing general and specific orientation to the potential employment areas. (i.e., agricultural, industrial, and home complex and their related occupations).

3. Integrate into the existing curric-

(Stitt in Nepal continued)

ulum those fundamental manipulative skills which constitute the foundation upon which more advanced job oriented skills may be developed."[3]

In the second ring or step outward from the required core, more emphasis is placed on the subject from which the material is drawn. The emphasis on community needs and teachers' ability will exert a greater influence with the outward movement from the central core.

As the program moves to grade two, a higher degree of knowledge and skill will be included in the central core. A survey of the elementary curriculum will reflect a strong influence of John Dewey's instrumentalism. A continual effort has been made to integrate the practical arts curriculum into the language arts, social studies, math, etc., program. The program is designed so that the first grade curriculum is virtually a cross-reference to the concept of Practical Arts. The names of animals and foods are added to both the spoken and written vocabularies, social studies considers the impact of the animal and food stuff on society and culture, while the math problem may pertain to the number of cows or oranges in a picture. This structure is an attempt to enrich the elementary curriculum while answering Dewey's question, "What can we do in the way of introducing subject matter in the history and science and art that shall have a positive value and real significance in the child's own life?"[4] The drawing from vocational education subject matter areas for the core of the Practical Arts curriculum is an attempt to resolve the question set forth by Dewey when he asked, "What can be done . . . to bring the school into closer relationship with the home" . . . "To break down the barriers which have unfortunately come to separate the school life from the rest of the every day life of the child?".[5]

There is no one in better positions to act as resource persons than the Agriculture, Home Science and Trade and Industrial Teachers. The vocational teachers can:

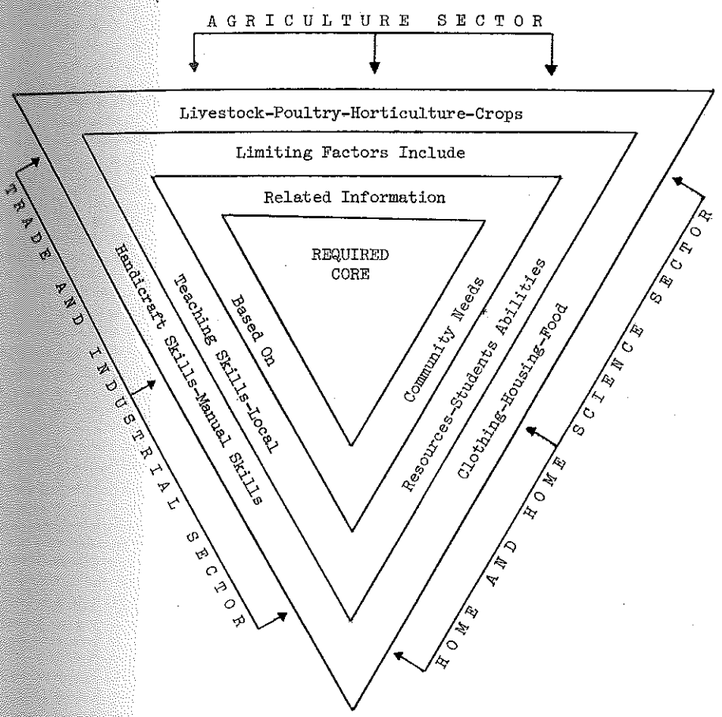
(1) Serve as resource persons for the elementary teacher.
(2) Guide the teacher to other persons who may act as resource persons.
(3) Assist the teachers of Practical Arts in setting up the desired field trips.
(4) Share material and/or recommend sources from which material can be secured.
(5) Provide specimens, mock-ups, visual aids or plants for use in the elementary schools.

This is an added burden for the already very busy vocational teacher, but consideration must be given to the fact that "Practical Arts" has access to all of the potential students during a very critical segment of the attitudinal developmental period. Practical Arts provides an excellent opportunity for the vocational specialist to assist with the elementary program. This will provide elementary education students with an early and clear understanding of the need for trained people in Vocational Education as well as insuring a continued supply of well-informed students selecting vocational occupations as a field of study.

(Concluded on next page)

CHART NUMBER ONE

PRACTICAL ARTS



All Activities and Skills Will be Based on Material and Tools Which are Readily Available in the Local Situation

(Stitt from page 205)

We can import sound vocational educational concepts from developing countries.

The concepts which are presented in this article are parallel to career awareness, occupational exploration, orientation and training for elementary and secondary education which are the current vogue in agriculture and vocational education today in the U.S. Programs which incorporate these concepts in the elementary education system are considered to be innovative and progressive. It is significant to know that Nepal, which is considered to be (from an educational standpoint) merely a developing country, adopted and implemented the concept in 1968; and the pictures show the author conducting in-service workshops for elementary teachers, at that time. Perhaps there is hope for the expeditious implementation of sound vocational educational concepts. We can import them from developing countries. ◆◆

1. Working definition of "Practical Arts" presently being used by the Practical Arts Curriculum Development Committee of Elementary Education of Nepal.
2. Webster's Collegiate Dictionary Definition.
3. Working Objectives of Practical Arts, developed by the Practical Arts Curriculum Development Committee for Elementary Education of Nepal.
4. Elby, Frederick, *The Development of Modern Education in Theory, Organization and Practice*, p. 611 Prentice-Hall of India Pvt. Ltd., New Delhi. 1964.
5. *Ibid.*

(Atherton from page 200)

One of the certainties of modern life is change. The school is an integral part of society which is in a constant and accelerated state of change. The foundation and stability of the past was based upon a high degree of permanance. This "rock" is no longer with us, so it is a necessity that one adjusts to the norms of the day. Dress, ideals, attitudes, behavior patterns, and social values have all gone through a degree of evolvement. To fit with the times, the teacher is forced to make adjustments.

Current crises, material and political, are signs of the times and require adjustments of thought and action. There is a tendency to underestimate the impact these are having upon the lives of those in the community, including life within the school. Hence, often one tends to be conservative and to reject that which is seemingly inevitable. This can lead to friction within the faculty, the student body, and the broad school community. The teacher must be sensitive to the fact that the actions of others often are the result of the situation in which they are involved. This may be far different from the personal environment of the individual teacher. Under such circumstances the teacher may be reacting to the wrong set of assumptions and conclusions based upon external evidence only.

In a quest for independence both physical and economic, the student often reacts in ways far different from those of former generations. This is at least partially because he sees things from a far different perspective than did his predecessors. As guardians of youth for a period of time, the teacher has the privilege and corresponding responsibility of encouraging pupil development and growth toward responsible adulthood. However, in assisting youth toward independence the school personnel must not relax the reins entirely and abdicate all responsibility for guidance and discipline.

School personnel also are living and working in a framework of differing situations. This gives rise to a variety of interests and activities. For instance, it is highly unlikely that other faculty members will have the same basic interests or work setting as does the teacher of agriculture. Each teacher may be attempting to reach similar goals, but the routes taken will naturally differ.

Regardless of the peculiarities within a particular school community, it seems that some of the old revered personal qualities will still be useful in one's day-by-day living. Applications may vary but the following seem to have merit in any educational program. They include: integrity, diplomacy, concern, understanding, kindness, sympathy, and a love for one's fellow man.

As we look ahead we should be aware of our own personal feelings, biases, and prejudices. Then we should remember that others are privileged to have ideals, attitudes, and behavior patterns all of their own. Recognizing this, we are in a position to try to deal with them in a constructive way so they do not get out of hand and result in chaos. The years ahead are ours. How vocational agriculture will fare depends in large measure to us within the profession. ◆◆◆

BOOK REVIEW

AN INTRODUCTION TO AGRI-BUSINESS MANAGEMENT. Wills, Walter J., Danville, Illinois: The Interstate Printers and Publishers, Inc., 1973. 124 pp., $6.95.

The current excitement in our profession regarding the expansion of the traditional vocational agriculture curriculum to include preparation for off-farm careers in agriculture has prompted the wide spread utilization of the term agri-business. This introductory text includes a discussion and exploration of the processes and procedures involved in the agricultural business which sell products and/or services to farmers, as well as those commercial firms involved in marketing, processing and distribution of agricultural products.

Professor Wills presents us with the type of narration which only a person who has contributed 36 professional years to agri-business activities in government and education can offer. One can find little basis for anything but praise for the concepts of agri-business presented by Dr. Wills, either in scope or depth, however, the neophyte to agri-business may find difficulty with the vocabulary utilized throughout the book. Although the vocabulary and word usage of this text is appropriate and adequate, the beginning student will be challenged to maintain the thought sequences developed by the author while simultaneously defining what may be a list of considerable length of new words and terms.

Certainly the author is to be commended for his emphasis upon the management functions of planning, organizing, directing, coordinating and controlling functions which serve as the core of the text. The local instructor should be able to utilize the questions and proposed projects presented at the end of each chapter, to localize these functions and move them from theory into practice. The student who is involved with a supervised occupational experience program may well find this text a valuable reference for explaining and describing the principles behind the daily operations of his work environment. The adult and/or community college student may likewise find this book of considerable value as it relates to the daily operation of his business or cooperative work station.

Although the title may lead one to conclude that it is a broad, general text about agri-business, this writer believes it will be treasured more highly by those who are actively engaged in a real way with some agri-business concern as opposed to the student of agriculture who is seeking only a general knowledge about agri-business activities.

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CONVERSION TO THE METRIC SYSTEM

John Crunkilton

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Looking ahead in agricultural education brings into focus the need for developing strategies for converting to the metric system. Agriculture has continuously undergone changes in the past and the future should be no different. Conversion to a new system of weights and measures may prove to be one of the most significant changes for agriculture in the history of the United States.

Agricultural Education must assume a significant role in making the conversion to the metric system (metrication) with a minimum of confusion. The purpose of this article is to briefly discuss background information about the metric system and to explore possible leadership roles and approaches that agricultural education might take in converting to the metric system.

Importance of Uniform Standards for Weights and Measures

Uniform standards for weights and measures are imperative, especially in the commercial exchange of commodities. This applies to agriculture, industry, and various aspects of everyday living. The United States has been using a customary system of measures, such as feet, pounds, acres, and miles. These measures have come into common use and were handed down as a part of the cultural heritage from colonial times.

In recent years, more and more countries have been turning to an international system of weights and measures. Various conferences have been held by these countries to assure uniformity of weights and measures among all nations. The *Systeme International d-Unites* (SI) is the name given to the international metric system.

The importance of uniformity of measures was recognized early in this country. Congress was granted power by the Constitution to establish standards for weights and measures. On a number of occasions Congress has recognized this power, but to this date radical changes in standards of measurement have not been mandated. The National Bureau of Standards (NBS) conducted a three-year study beginning in 1968 to determine the advantages and disadvantages of using the metric system in the United States. In August of 1972, the Senate passed a resolution authorizing the Federal Government to switch to the metric system in the next ten years. Conversion by industry was to be on a voluntary basis. Some industries are currently in the process of making the conversion and, of these, few are primarily concerned with agricultural commodities. It is interesting to note that reports of agricultural research and matters appearing in technical agricultural journals have been using the metric system for some time. International conferences on agricultural subjects rely on metric measurements. Actually, the extent of conversion which will occur in agriculture is somewhat unclear at this point.

Standards for weights and measures in the United States are set by the NBS in Washington, D.C. The NBS compiles and publishes materials which contain the exact standards of weights and measures, including conversions from the customary to the metric system and vice versa.

Characteristics of the Metric System

The metric system is considered to be a simple system of measurement. The meter is the standard unit of measure for determining all other units and was originally selected because it was defined as a specific fraction of the circumference of the earth. This is to be contrasted with an inch which was said to be the equivalent of the length of three barleycorns laid end to end. The meter, as a faction of the earth's circumference, is much more accurate and consistent than the length of barleycorns.

Several basic terms are important in the metric system. These include base units, symbols, decimals, and multipliers. "Base units" refers to the basic measures for length, weight (mass), temperature, time, electric current, intensity of light, and amount of a substance. The major departure of SI from the customary system in the United States is in units for length, weight, volume, and temperature.

There are no fractions in the metric system since it is a decimal system. Various multipliers are used to indicate the value of a metric measure. For example, the multiple 10^3 is equivalent to 1,000 times the base unit and is indicated by the prefix "kilo" on a base unit. Stated another way, the multiple 10^3 in grams is equal to 1,000 grams or 1 kilogram. Some of the most important prefixes (in addition to kilo) are: hecto (h) meaning 100, deka (da) meaning 10, deci (d) meaning 0.1, centi (c) meaning 0.01, and milli (m) meaning 0.001.

Effect of Metrication of Agriculture

In some respects, the effect that converting to the metric system will have on agriculture is almost impossible to comprehend. Some agricultural measurements can be easily and readily converted to the metric system. Others are not as readily converted. Also, the extent of conversion

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MAKING SHOP SAFETY RELEVANT TO OCCUPATIONAL SAFETY

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How often have you heard it said, "School didn't teach me what I really needed to know?" Students of vocational agriculture are facing more diverse types of agricultural occupations than ever before. They are asking if the training they receive is relevant to their job. Employers are willing to teach technical know-how to new employees, but skills such as safe workmanship is expected. Is the Vo-Ag safety program relative to the needs of students?

To be more relative to student needs, parts of the Vo-Ag curriculum are changed periodically while some subjects such as safety must be taught each year. Students easily understand the safety concept but encounter difficulty practicing it on the farm, in agri-industry, or in a factory. This is evidenced by statistics of preventable work-related accidents. How well have we related our safety lessons to the actual job situation? Here is the method used at the McGuffey High School Vo-Ag Department, Claysville, Pennsylvania to relate safety to the real world of work.

The method is a shop safety demerit system such as used in many industries, and which has been prompted by the Occupational Safety and Health Act of 1970. Many industries are now using a demerit system to emphasize safe work habits. Accidents cost money in compensation, increased insurance, and fines in the case of negligence. Employees must be safety conscious or face penalties imposed by management. These penalties, usually agreed upon in union contracts, may be fines paid by the employee, or loss of work, or loss of pay for a given time period. The shop safety demerit system then relates to the actual working situation, and graduates of vocational agriculture will be familiar with policies of employers as to safe work conduct.

Here is the context of the shop safety demerit system:

SHOP SAFETY DEMERIT SYSTEM

Shop Practice	Demerits
Any Unsafe Practice	
With power equipment	1
With hand equipment	1
Horseplay in shop area	5
Good Housekeeping	
Unsafe bench areas while at work	1
Unsafe, unclean floors, not cleaned while at work	1
Unsafe project or material storage	3
Eye Protection	
Failure to wear goggles at all times	2
Failure to wear No. 5 dark lens in oxyacetylene welding work	2
Failure to wear No. 10 dark lens in electric welding work	2
Head Protection	
A protective hat will be provided for designated areas, and will be required in those areas.	
Failure to wear protective hat in overhead storage and lumber storage areas	2
Failure to wear protective hat when assisting in overhead and lumber storage areas	2
Respiratory Protection	
Failure to wear protective device when applying pesticides	1
Failure to use exhaust system in gas welding work area	1
Failure to use exhaust system in arc welding work area	1
Failure to properly ventilate work area when using solvents, such as, lacquers, thinners, gasoline, etc.	1
Moving Heavy Objects	
Failure to store heavy objects properly	1
Failure to lift heavy objects properly	1
Secure assistance with heavy or long objects. Lift only with leg muscles.	
Fire Safety	
Failure to report any fire	1
Failure to remove combustible material from work area	1
Improper storage of petroleum products	1
Creating any fire hazard	1
Improper fire drill participation	1
Talking during fire drill. Creating confusion during fire drill.	
Electrical Safety	
Creating electrical shock hazard	1
Failure to disconnect power equipment when not in use	1
Failure to identify live circuits, thus creating shock hazard	1
Air Under Pressure Safety — Compressor Use	
Pointing air hose under pressure at anyone	3
Use of air hose near newly painted or finished objects	1
Cleaning with air hose in shop, except as directed	1
Reporting Accidents	
Failure to report accident	1
Failure to write accident report	1
Failure to report unsafe conduct or actions	1
Tactors and Equipment	
Operating a tractor without a valid drivers license when transporting to Vo-Ag shop	5
Failure to park tractor in neutral with brake set and/or coil wire removed	3
Failure to block wheels when jacking	1
Failure to close cap on fuel tank while tractor is in shop	1
Tampering with a tractor or equipment project so as to make it unfit for operation	5

Demerits are evaluated and penalties assigned. Those violations of one demerit are minor infractions which are penalized by loss of three shop days upon the third demerit. A second three demerit violation involves the loss of five consecutive shop days. Major violations are the demerits of

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SPECIALIZED AND GENERALIZED VO-TECH TEACHER EDUCATION

Dr. George W. Wiegers, Jr.
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G. Wiegers, Jr.

Large departments of vocational-technical teacher education should be organized to insure a wise division of labor and a team effort in reaching goals.

Since the passage of the Vocational Education Amendments of 1968, there has developed some controversy over which of the two types of educational programs, specialized or generalized, should be recognized as the growing edge of vocational-technical teacher education. Between the enactment of the Smith-Hughes Act of 1917 and the VEA of 1968, many specialized programs were designed and operated to meet the occupational needs of individuals preparing to enter the labor market or who were already members of the labor force. These programs made significant contributions in developing the technical expertise that has made this country the greatest agricultural, business, and industrial country in the world. There have never been adequate funds; enough competent administrators, teachers, and specialists; enough facilities and other resources to meet all the eduational challenges on the farm, in suburbia, and in the inner city. Tremendous gains were made, however, in spite of the many limitations and restraints.

Through the years, specialized programs have operated to some degree as separate entities for various reasons, but in many cases where two or more specialized programs were in operation some type of coordinated administration was initiated to facilitate implementation of programs. The specialized or service area programs were created to meet the specialized vocational needs of persons who could profit from the instruction. When there were fewer people, fewer occupations, and fewer occupational training needs, the meshing of training programs with individual and manpower needs was less complex and difficult than today.

Professional vocational leaders have always been kept on their toes to some extent by critics representing the academic world. These critics were vocal in letting professional colleagues know that they did not want "second class" vocational training curricula to interfere with "first class" college preparatory curricula in high schools, or want post-high school vocational programs to compete for funds that provide a liberal college education for students. This situation is changing, as evidenced by expansion of vocational program offerings in high schools and by increased emphasis on area vocational, technical institute, and community college occupational training programs.

The population explosion and acceleration of technology have created new and different environments in the world of work. The common vocational categories or traditional service areas simply could not be stretched, modified, or patched enough to meet the newer challenges under existing legislative policy. Problems began to emerge at a rapid rate following World War II because of the lack of accurate knowledge of vocational training needs, lack of programs in operation or on the drawing board to meet known and emerging occupational needs, and lack of resources to implement programs. The Vocational Education Act of 1963 and subsequent Vocational Education Amendments of 1968 were attempts on a national scale to correct some of the existing restraints and to open doors to new approaches. The promoters and supporters of the new legislation had no intention of suffocating service areas or sub-service areas that were meeting justifiable specialized training needs of persons. In fact, the main thrust was to maintain, extend, and improve existing programs and to create new programs to meet the emerging needs of persons and employing agencies. It was anticipated that some changes would call for upgrading existing programs, creating new programs, merging some existing programs, merging some existing programs with new programs, and various other types of arrangements. Regardless of the administrative arrangement, the great number of training programs was designed and will continue to be designed to provide specialized training for persons who are either preparing to enter the labor market or have already become members of the labor force.

With the many new and expanding specialized programs more and new types of vocational leadership were needed. Leadership personnel programs have existed since 1917 to train persons in the specialized areas, but few had provided experiences beyond limited occupational categories or service areas. Training in specialized areas and limited on-the-job vocational experience did not produce the type of expertise needed by new leaders; consequently, with the passage of the VEA of 1968, programs were designed and subsidized to prepare leadership personnel for broad or across-the-board responsibilities. Comprehensive leadership personnel training programs were created to meet the general professional vocational-technical needs of persons needed for such responsibilities. These programs were not conceived to downgrade or override specialized training programs. Different types of persons should be served equally well in vocational-technical teacher education programs. Persons profiting most from the specialized teacher education programs are teachers and supervisors of agricultural

(Continued on page 213)

(Metric System from page 207)

of certain agricultural measures is likely to occur slowly.

The effect metrication could have on agriculture was first observed several years ago when tractors and equipment manufactured in other countries were imported. Farmers and agricultural teachers soon learned that a separate set of wrenches (in the metric system) was required to service this equipment. Likewise, some of this equipment required metric measures for calibration and adjustment. In agribusiness, the effects of metric-system equipment was also obvious.

Chemicals have been subjected to measurements in both the metric and customary system in the United States. Research laboratory chemical measurements have been made in the metric system for many years. The findings of research efforts in terms of recommendations for farmers have been converted to the customary system. A definite advantage of metrication is that agricultural scientists in nearly all countries can communicate with precision on research findings.

Equipment calibration may pose significant conversion problems, especially in the intervening years when both systems of measurement are used. Under the customary system we are accustomed to gallons, quarts, feet, and miles per hour. In the metric system these will be changed, perhaps to liters, meters, and kilometers per hour. Farmers who use equipment designed for the customary measures with recommendations in the metric measures must be able to convert from one system to another.

The marketing of agricultural products will ultimately be influenced by metric measurement. International trade already involves metric measurement. In domestic trade, acceptance of the metric system will probably occur more slowly. For example, a bushel of corn would not be 56 pounds, but 25.4 kilograms. Sounds strange, doesn't it? Of course, in terms of price establishment in international trade, many of the current problems would be overcome.

Providing Instruction in Agricultural Education to Meet the Challenge of Metrication

Agricultural education must deal with some of the problems in conversion to the metric system. These relate to: (1) the education of teachers, supervisors, and teacher educators in the metric system; (2) the preparation of instructional materials which will facilitate the conversion process; (3) the gradual replacement of tools and equipment with metric tools and equipment; and (4) the design of appropriate courses of study to meet the educational needs of in-school and adult students in agriculture.

The education of agricultural education personnel to the metric system will require commitment to metrication and necessitate the holding of in-service workshops. Most agricultural education personnel have had little exposure to metrication other than, perhaps, very elementary instruction in college courses in physics or chemistry. These situations related only to scientific and technical uses and usually did not have much relevance to practical applications in agricultural occupations. The education of leadership personnel to "think metric" is essential if agricultural education is going to assume its rightful role in converting to the metric system.

Instructional materials will play a big role in the speed of converting to the metric system. Eventually, all measurements and calculations in instructional materials will be in the metric system. However, during the transition to the metric system, it will be necessary for teachers to utilize specialized materials which emphasize how to convert from customary to metric measures. This is because the useful life of many materials using the customary system of measurement will extend beyond the period required for transition to the metric system.

Most students enrolled in high school agricultural classes today have very little background in the metric system. Agricultural teachers can help these students acquire the needed metric skills before they leave school. In the future, students will enter agricultural classes with a greater knowledge of the metric system because instruction will be initiated in the elementary and middle schools.

Tools and equipment in vocational agriculture laboratories will need to be gradually replaced with equipment in the metric system. This means that for a while tools in both the customary and metric systems will be needed. Some equipment can be converted for metric use by the replacement of appropriate gauges and guides.

Agricultural teachers must begin building appropriate instruction on the metric system into courses of study for agriculture. Such instruction must be for both in-school students and adults. In fact, the needs of adults may be more critical because of the limited opportunity for instruction and the requirements for immediate application of metric conversion practices. Most in-school youth will have other educational opportunities to develop competencies in the use of the metric system, provided the local curriculum includes such instruction.

In conclusion, agricultural education should assume an aggressive leadership role in converting to the metric system. This means that we must "think metric" and, in turn, teach students to do likewise. The transition to metric will be gradual but will require that agricultural educators begin now to plan the strategy to follow in making the necessary curriculum adaptations. ◆◆◆

(Harshman from page 208)

two or more points and involve loss of five shop days upon accumulation of five demerits. A second five demerit penalty results in two weeks lost shop time.

The system outlined has proven effective in creating safety awareness. Conscientious students who occasionally forget safe practices are reminded to be alert, while the student who is a potential hazard in the shop is penalized more heavily. With lost shop time and remedial safety work, these students have returned to the shop more aware, thus improving their work habits.

Safety instruction must be made relative to the student. Industries, including agriculture, are growing more aware of employee safety as a result of Federal legislation. Employees are expected to be safety conscious also. The job then is to relate safety instruction to the world of work. ◆

ADJUSTING A VO-AG PROGRAM TO STUDENT NEEDS

David L. Howell

David Lynn Howell
Teacher Educator
Purdue University

Has the enrollment in your high school vocational agriculture programs been falling over the years? Are students saying they won't sign up for a farmers' class? Are there changes taking place in the number and type of farming operations in your community? If you answered yes to these questions, it is time to re-evaluate your program in terms of what you should be offering your students and the community.

Romeo, Michigan, just thirty miles north of downtown Detroit, was once largely a farming community. Fruit and dairy were the major farm enterprises. Then, with the mobility of people increasing, people found the community and the surrounding rural areas a great place to raise a family, and was also close to many employment opportunities. Farmers began to sell out and real estate rose rapidly in price; it was not possible for a dairy farmer to have such expensive land in pasture. As a result of the poor farming outlook, enrollment in vocational agriculture had been dropping over a number of years. In 1968, the total enrollment was thirty-five students and the administration was questioning the need for continuing such a program.

What are the educational needs of such a community? Is there a need for an agriculture program in this type of community? Yes, very definitely, but one with a different emphasis. To determine what the emphasis of the agriculture program should be, the needs of the community must first be studied. The community concept cannot be limited to the local community, but must include the larger community to which your students are willing to go for employment.

In the town of Romeo, and the surrounding area, there are many agribusinesses. Examples of these agribusinesses include: golf courses, nurseries, farm equipment dealers, and agricultural supply stores. With the help of an advisory council, it was possible to identify the job opportunities in the area and to develop an agricultural curriculum to complement them.

Two introductory courses were offered for vocational agriculture students. For those students who were interested in a career in production agriculture, a course which gave primary emphasis to animal science was offered. For those students interested in an area of vocational agriculture, but one which did not deal with livestock, the animal science course was not required. Instead, an introductory plant and soil science course was all that was required. After completing the animal science and/or plant and soil science introductory courses, the students could enroll in the specialized courses. Production Agriculture I and II courses were offered on an alternating basis. Agriculture I included the areas of vegetable and crop production, conservation of soil, water, and wildlife, and agriculture in developing countries. In Production Agriculture II, the areas included production of commercial farm livestock and farm management. Students with special interests in related areas were encouraged to develop individualized projects to supplement their classroom instruction.

For the students with career interests in the horticulture area, courses in greenhouse production, landscaping, nursery production and turf maintenance were offered. Efforts were made to provide students with on-the-job experience during their senior year. With these curriculum changes, the enrollment jumped to over 100 students.

In some ways, the program was limited without an agricultural mechanics shop, but the facilities did include a large head-house connecting the greenhouse to the classroom making space available to work with small engines and equipment. This area was also used to house five feeder pigs for a three week period by the animal science class. By keeping the facilities as flexible as possible, the educational needs of many more students can be accommodated. Use your facilities for all they are worth and then some.

The changes made in the program at Romeo, Michigan, can and should, happen to many other Vocational Agriculture programs across the United States. Superintendents and school boards are questioning the need of vocational agriculture programs because they know the number of farms in their communities are decreasing each year. We, as vocational agriculture teachers, must learn of the occupational opportunities in agribusiness for our students and develop programs to serve this area also. This means new work on your part to prepare yourself for teaching courses in agribusiness. Teacher educators should be developing in-service education courses to assist the vocational agriculture teachers in making this transition. Ohio is currently training teachers in specialty areas, which is good for multiple teacher departments, but what about single teacher programs? Hopefully, we will have teachers who are trained in more than one area, or are willing to seek further training and, therefore, can serve well in single teacher departments, also.

What is happening with your program? Are there new directions which you need to investigate? It is easier to keep things as they are, but who are we serving — ourselves or our students? It has been eleven years since the 1963 Education Act allowed us to train students for areas other than production agriculture. Are you keeping up with the times? Many teachers are, but there are, also, many who are not. ◆◆◆

Meeting a Challenge in Teacher Education

by
*David L. Armstrong**


D. L. Armstrong

Approximately one year ago a challenge was accepted by a group of Michigan State University faculty and a State Department of Education representative to develop a new program in agriculture and natural resources education. New, innovative, imaginative, and relevant are terms which best describe the program that was to be devised.

The committee met in individual sessions countless times, in retreat sessions with outside "experts," in individual buzz groups, and task force sessions. There has been no concern as to priorities or in the direction a new program should take from its point of inception. As a matter of fact, the only original agreement was that change should take place. A wide number of approaches and systems could be developed, but the following discussion we believe can work.

My purpose is to share with you our suggestion for Agriculture and Natural Resources Education for the future. We want a program that meets the challenge.

Agriculture and Natural Resources are concerns of every community. Food, population, land use, concern for our natural/physical environment are important to people in every community in the State. However, not all communities are identical and the educational needs of students are quite different. Michigan is probably one of the most diverse states of any in the North Central Region. Therefore, one would expect that we should not attempt to duplicate an educational system of other states in the Region. And since communities are different, an educational program in Detroit should be different from the educational program for the agricultural communities in the State.

Community needs change and corresponding change in subject matter should be reflected in the school curriculum. The "kaleiodoscope" of a community — its population characteristics, its economic state, its cultural characteristics and its natural environmental setting — determine its educational needs. The pattern of characteristics can be as vividly described in one community as it can in another if the educators recognize and respond to these differences. This seems so obvious that one must ask—have we responded to these communities?

It appears that agriculture education has considerably more to offer the State educational system than it is now offering. We have not responded to these challenges. If we can agree, however, that agriculture education must succeed in the State of Michigan, but not in the same form and not in the same style, then we can proceed in unfolding a new agriculture and natural resources education program for the future.

The Community Is First

If a community can communicate its needs and if responding communication can be received from these communities, it should be possible to arrive at an educational program unique to those needs.

There is a serious lack of research information to form a data base about Agriculture Education in the State of Michigan. Research studies have not looked at community needs or the differences of communities.

If we do not know what makes communities different and where these different communities are located, how can educational materials, uniquely trained teachers and unique curriculums be matched with these community needs. A research corps of people and projects must be initiated to provide the data so that feedback mechanisms can be developed.

Focusing on a particular community would help us to respond with prepared teachers, curriculum, and programs. Communities could be typed into perhaps as many as four to six distinctive types. The economic base ranging from non-farm to completely urban might be one of the criteria. Obviously, the resulting curriculum needs would be different.

Some communities may be a combination of many needs — from vocational farm education to education serving the rural non-farm student, or strictly urban interests. A recent study at the University of Michigan indicated that by 1985 education may be one of the chief forms of recreation and entertainment. If agriculture and natural resources subjects which are popular on the MSU campus could be available to each community, the ability to serve would be greatly enhanced. What *is* important is that the *right* material be presented in the *right* way in the *right* community at the *right* time.

Educational Form is Second

Agriculture education in the State of Michigan has been thought of as a vocational program. The new plan for Agriculture and Natural Resources Education in Michigan would be more varied than the current program. Food, fiber, and the environment are issues of interest to students in kindergarten through middle school. These topics should be integrated into present programs. Vocational programs would start perhaps in middle school and be available through the twelfth grade and possibly even a lifelong educational goal could be adopted. It is recognized that if you evaluate the needs of a particular community, vocational agriculture as we know it now may or may not be needed. However, a general agricultural orientation for students in these communities may be needed. Thus, vocational programs and the year in which agriculture and natural resources subjects would enter the curriculum would vary. Community and student needs determine the pattern.

For every community the instructional base will be unique and curriculum changes will need to be made. However, the adjustment is much more severe and complicated than may appear at first glance. The school types, the educational base, and the teacher types must somehow be coordinated into an operational plan.

It's a Cooperative Effort

The new plan for agricultural education in the schools of Michigan is of such magnitude that it cannot be a single college effort. The College of Education and the College of Agriculture and Natural Resources must join forces in providing a broad variety of instructional bases designed to satisfy the needs of the varied communities. Other colleges will also be asked to contribute to this overall educational plan. The concept of educational-community-types is one of the crucial factors in implementation. In order to make it happen, the State Department of Education and its accrediting procedures must also be integrated into this planning effort.

It is conceivable that every department at Michigan State could play a role in training this unique teacher. No longer would Agriculture and Natural Resources Education take on the role of an agricultural specialist with educational interests. We should be willing to combine any system of majors and minors from these varying departments in a unique manner to meet the needs.

If departmental cooperation does result, a virtually unlimited number of curriculums could be designed and the choice of the students greatly magnified. The graduates of this program will then become a potent force in augmenting changed, "with it" programs in community schools.

There are some who feel that potential teachers have looked at Agriculture Education as on a downhill slide. This proposed new program would offer a variety of exciting challenges not presently incorporated or integrated into the high school system. Young people want to teach and be relevant to the community needs. This program builds on interest and needs and not on rigidity or means of exclusion.

Agriculture Education has been a leader in education for the total community. In the past, things learned about agricultural production and marketing in the agriculture classroom were the things that the community and its leaders may not have known. The situation has changed. The community and its leaders are up-to-date and their knowledge and experience count. Subjects needed in the high school curriculum must move ahead of the community. If we are going to project with our curriculum, we must prepare teachers for teaching new topics in the classroom — Food Systems, Economics, Land Use, Environmental Law, Public Policy, etc.; the list is endless.

Training the Teachers

At the college level and for the preparation of teachers we propose an extremely flexible student centered curriculum — combining majors and minors in a plan to develop truly uniquely trained people. For example, should not it be possible for a student in the fine arts major to also minor in horticulture and receive training and certification in ornamental horticulture? It is also equally conceivable that a teacher could teach in the business and distributive education program as well as the business side of the agriculture program if he were properly trained. The traditional and unique are both included. However, it means that an agriculture and natural resources education program in a school would in many cases be staffed by several teachers and not just one or two.

In addition, courses could be developed to assist teachers in teaching the various subjects in different ways. Some communities would need vocational approaches, some communities would need non-vocational approaches, and other communities would need both vocational and non-vocational approaches. Some graduates would take this material to the K-6 program, others would be carrying it through the K-12 program. And, also, some communities would have extensive lifelong education work. This is the excitement and the core of this proposal.

Faculty members in various colleges and departments must be assigned responsibilities for teaching and administration. For example, someone in horticulture should be trained to deal with the teaching of the specialized area of ornamental horticulture. Perhaps someone from lifelong education should be working in a task force arrangement with this new program. Joint appointments of faculty in communications, adult education, instructional media and others may be appropriate.

Getting it Started

Unfortunately, we haven't the time to wait for all the research to be done. But we could develop pilot programs throughout the State based on different community types and different community needs. We could, with permission, certify unique graduates to place in those pilot programs. We must implement, observe, and adjust our sights now. The challenge is here. ◆◆◆

(Wiegers from page 209)

occupations, distributive occupations, health occupations, industrial occupations, office occupations, occupational home economics, and other occupations. Persons profiting most from graduate higher education in generalized programs are career counselors, orientation teachers, nonspecialized supervisors, curriculum specialists serving two or more specialized areas, administrators, heads or chairmen of various types of vocational-technical education programs, and others working in broad areas. Most of the persons pursuing leadership roles have, however, been trained in at least one specialized vocational area. Individuals pursuing specialized goals can and do profit from training programs providing general professional experiences that contribute to their goals and work situation. They need some experience in the broad field so that they can see their specialization in proper perspective.

It is obvious that both types of emphasis in a single or comprehensive vocational-technical education training program, namely, specialized and generalized, are needed to meet needs of

(Concluded on page 215)

*David L. Armstrong is Assistant Dean and Director of Academic and Student Affairs, College of Agriculture and Natural Resources, Michigan State University.

Ask Not...

When the NVATA was organized in 1948, many questioned the wisdom of a national organization devoted exclusively to the interests of the vocational agriculture teachers. Others predicted a faltering effort and anticipated failure within a short period of years. However, the NVATA *DID* survive and today is recognized as an outstanding professional organization.

The following information is indicative of the many changes instigated through the NVATA and attained since 1948.

Sam Stenzel

Sam Stenzel
Assistant to the
NVATA Executive Secretary
Lincoln, Nebraska

— 1948 —	— 1973 —
—No professional organization existed which represented the vocational agriculture teacher.	—The NVATA represents over 10,000 teachers, supervisors, teacher educators, and student trainees in vocational agriculture. —Only classroom vocational agriculture teachers are eligible for active membership in the NVATA. —The NVATA is recognized as THE professional organization for agricultural education and is highly respected by other vocational educators.
—The NVATA was organized to represent the interests of the vocational agriculture teachers.	—The NVATA is completing 25 years of professional service and leadership for agricultural educators. —The NVATA is a very much alive and purposeful organization, continually alert to serve the best interests for vocational agriculture.
—Speculation existed that the purpose of the NVATA was to supercede the AVA for agricultural educators.	—The NVATA stipulates that members must belong to the AVA. —Over 25% of the AVA membership is comprised of agricultural educator members of the NVATA. —The NVATA has not only served the interests of its members but has also supported AVA goals and objectives.
—The individual vocational agriculture teacher did not have representation at the National level.	—Every member has a voice in the NVATA through his State Association. —The NVATA has representation on both State and National levels of vocational education in agriculture. —The NVATA speaks for all agricultural educators to promote vocational education.
—Few lines of communications for vocational agriculture teachers existed within states, between states, or on the National level.	—Regional leadership conferences are conducted annually to orient State Association officers. —Regional meetings are held annually during the National NVATA Convention to give direction to the NVATA. —The NVATA prepares and mails Newsletters from the National Office; Vice Presidents prepare Regional Newsletters; and State Associations are encouraged to mail Newsletters.
—Vocational agriculture teachers did not have representation on committees concerned with agricultural education or FFA activity program planning.	—The NVATA has representatives on National committees responsible for planning agriculture education programs. —The NVATA has representation on National Committees responsible for planning National FFA activities and contests. —The NVATA leadership is sought and respected on Federal legislative matters. —Several NVATA members have been called to testify on a number of occasions. —The NVATA keeps members informed on Federal legislative matters and recommends a definite stand on bills affecting vocational education in agriculture. —The NVATA coordinates agribusiness sponsored award programs which recognize persons for conducting outstanding programs. —The NVATA sponsors award programs which recognize officers and individuals for professional leadership.
—Vocational agriculture teachers were either represented as individuals or by other groups on Federal legislation.	
—Vocational Agriculture Teachers were not given proper recognition for outstanding accomplishments.	
—Only a limited number of vocational agriculture teachers attended the AVA Convention.	—Approximately 10% of those attending the AVA Convention represent agricultural education; over 60% of the agricultural education personnel are vocational agriculture teachers. —The NVATA conducts its own National Convention which runs concurrently with the AVA Convention. —A large percent of the convention time is devoted to vocational agriculture teaching.
—The vocational agriculture teacher was not recognized by the AVA Executive Committee.	—The NVATA Executive Committee is in rapport with the AVA Executive Committee. —The NVATA maintains a cooperative attitude and a close working relationship with the AVA Staff members.
—Vocational Agriculture teachers did not serve on AVA committees or in leadership positions.	—The NVATA has representation on many of the AVA Standing Committees and Departmental Sections. —The NVATA has representation on the AVA Advisory Council. —Two NVATA Past Presidents have been elected Vice President of the AVA Agriculture Division; one past president has served as the AVA President. ◆◆◆

(Wiegers from page 213)

individuals and to meet manpower needs in agriculture, business and industry. *The overall program should be broad and flexible enough to permit a proper balance between providing training to meet specialized needs of some and to meet the generalized needs of others.* The ratio of need for training specialized vocational personnel to need for training generalized vocational personnel in a county, state, region or nation is far from being 1:1. There is little or no evidence to support the idea that funding or staffing patterns in teacher education should fit any particular ratio. Both types of training needs must be met if vocational-technical teacher education is to have any kind of growing edge. Large departments of vocational-technical teacher education should be organized to insure a wise division of labor and a team effort in reaching goals. Some staff members may direct most of their expertise toward generalized aspects; others to specialized aspects; and still others, joint efforts to meet departmental goals. It would be unrealistic and unsound for many reasons to have all staff members focus only on generalized activities or only on specialized activities.

Present and future vocational leaders must have strong commitments to use their expertise effectively to help individuals fulfill their vocational training needs rather than to use valuable resources defending either specialized programs or generalized programs. ◆

New Pacific Region Special Editor

Larry Rathbun

Larry Rathbun of California Polytechnic State University, San Luis Obispo, has been appointed as a Pacific Region Special Editor for the *Magazine.*

The new special editor is a graduate of California Polytechnic State University, San Luis Obispo, where he received his Bachelors and Masters degrees. He served as Director of Agriculture at Rio Vista High School and Director of Agriculture, Coordinator of Vocational Education, and MDTA Programs Coordinator at Los Banos High School prior to joining the staff of the Agricultural Education Department at Cal Poly in 1970. He recently returned from a one-year leave of absence as an EPDA Fellow at The Ohio State University where he completed most of the requirements for the Ph.D. degree in Vocational Education. He and his wife, Patricia, have six children.

In his role as a special editor, Rathbun will have the responsibility for soliciting and editing articles.

He replaces E. M. Juergenson of the University of California, at Davis, who recently retired.

BOOK REVIEWS

RHODE ISLAND INSECTS, A U.R.I. COLORING BOOK, Gary M. Zimmer, Editor Published by Cooperative Extension Service, University of Rhode Island, Kingston, Rhode Island; 1972; 29 pp. Price 25¢

This is a simple coloring book containing illustrations of 27 insects outlined and detailed in black printing on inexpensive paper of the type used in children's coloring books. The insects are shown in basic outline and detail, without showing the complex detailing of the individual insects. Each illustration is identified and accompanied by a short descriptive sentence.

The insects shown are all common to Rhode Island and are those the general public is most likely to see and encounter. There is a mixture of both beneficial and harmful insects, including some of the more common household insects.

This book is intended to show children as well as adults how to recognize the common insects around them and to better deal with their presence. When people know what the insect is, harmful or beneficial, they are in a better position to take the proper action, either to encourage its presence or use the proper pesticide to control it.

The editor of this book is the Extension Specialist in Plant Protection, Plant Pathology-Entomology and is therefore in a good position to know what insects to cover in a coloring book of this type. Extension people by the very nature of their work are in constant contact with the general public and their problems and concerns.

The Extension Service offers the book as a "fun way to learn about common insects." The audience it is directed toward is mainly children in kindergarten through fifth grade, but also to the general public for identification of common insects.

G. David Whitmore
University of Connecticut

OPERATION RHINO by John Gordon Davis of Hongkong. Published by Doubleday and Co. Inc., Garden City, New York. Copyright by John Gordon Davis, 1972. Illustrated, 233 pages. $6.95.

Adventurer-Novelist, John Gordon Davis, took part in every phase of "Operation Rhino," such as tracking, stalking, herding, loading, protecting, and transporting them over very difficult terrain. The author's knowledge and insight are very authentically described in the book.

Rhodesia forms the background for this book. The main characters are the big, black, prehistoric rhinoceros, who are in danger of extinction at the hands of the poachers. The rhino is hunted for its horn which is thought to be aphrodisiac.

A team of devoted wildlife conservationists goes into the bush to capture alive the dangerous rhino and to transport them to Gona-Re-Zhou, a game sanctuary 700 miles away. These people have the highest hunting and tracking skill, patience, courage, endurance, sweat, muscle, initiative, and dedication to the cause of wildlife conservationist.

It is fascinating to read how this team of people work to save these prehistoric animals that are as tall as an average man, up to 10 feet long, and weigh over 2,000 pounds. These massive herds can run at 25 miles an hour and turn about at that speed in 25 feet. They have an acute sense of smell and hearing and possess a devilish bad temper.

The rhino is, also, armed with a sharp visious horn over 2 feet long and with this they pull out the guts of their well-intentioned captors. Yet, toward her own young ones the rhino can be so protective and loving. In chapters 10 and 11 and elsewhere in the book the author's description of this relationship is very touching and genuine.

The book is descriptive and absorbing enough to hold the reader's interest throughout.

The book should be read by all hunters, especially the beginner and amateur, who often shoot for pleasure and do not always kill but wound the animals or birds. The resulting injury causes great suffering. Reading this book may very well just prevent many people from becoming merciless hunters or poachers.

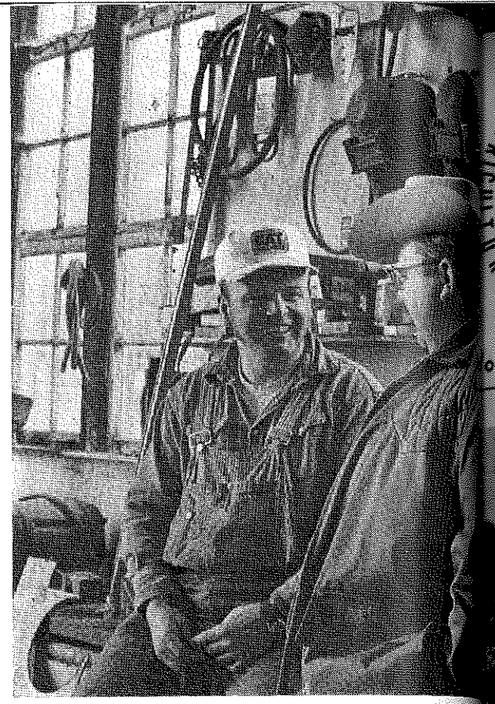
The book makes good reading for all age categories. It holds special interest for those who believe in perserving wildlife and want to know what is being done to perserve a part of it—the Black African Rhino!

Roger Engstrom, Coordinator
Farm Veterans Coop Program
Iowa Lakes Community College

CORRECTION

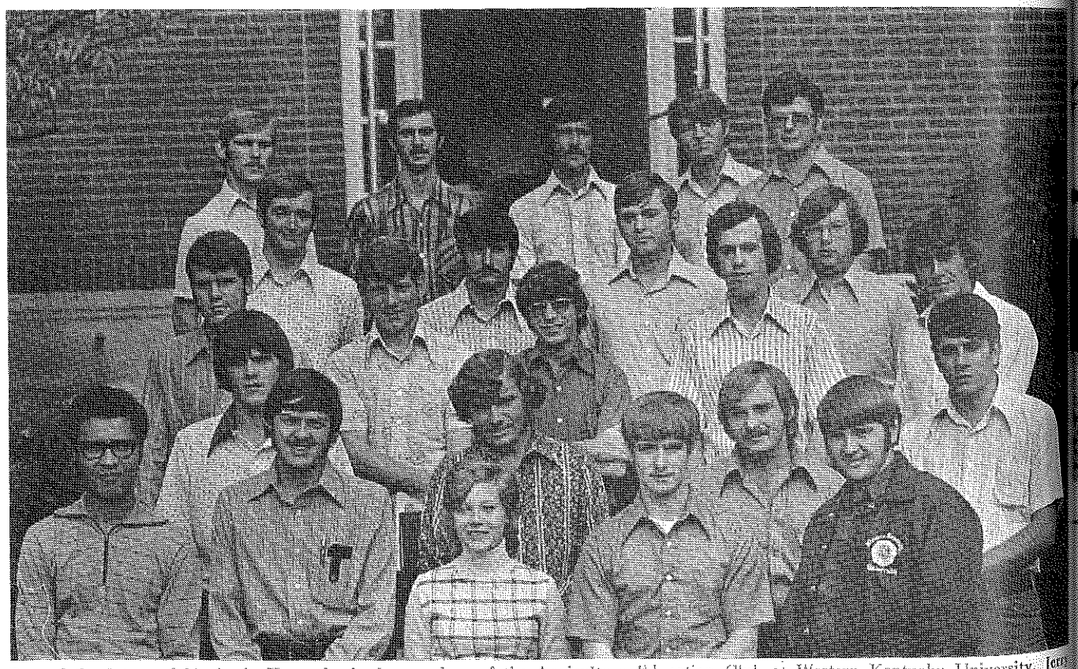
In the December 1973 issue of the MAGAZINE, Oscar Loreen was erroneously listed as author of the article on pioneer, Sid Sutherland. The author was E. M. Juergenson, University of California, Davis.

The future of vocational agriculture must include satisfied customers. The pace is set by many career vocational agriculture teachers. Marv Evers (foreground) instructor for 27 years at Dayton, Washington is an excellent example. Satisfied customer, (right) Jay Penner, class of '64, took first place in ag-mechanics in State competition. He now farms with his dad and brother. "We call on Marv all the time," says Jay, who takes care of all the machinery on the family wheat farm. (Photo from Alex Crewdson, Coordinating Council for Occupational Education, Olympia, Washington)



Stories in Pictures

by Richard Douglass



Part of the future of Vo-Ag in Kentucky is the members of the Agriculture Education Club at Western Kentucky University. Jerry McGill is President. This picture includes veterans, a brother of a Virginia teacher, son of an Ag teacher, the 1972 FFA Public Speaking winner and others. (Photo from James E. McGuire, Teacher Educator)

AGRICULTURAL EDUCATION

Agricultural Education

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Theme—PRODUCTION AGRICULTURE: Still In Vogue