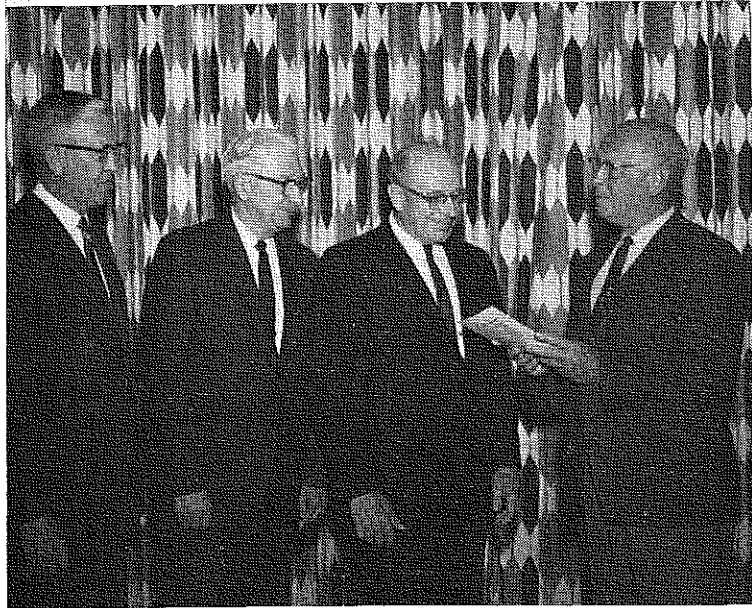


HERBERT BRUCE JR
 TEACHER TRAINER AG-ED
 COLLEGE OF ED U OF KY
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 2-68

Stories



Oliver Watkins, past president of Association of Agriculture Teachers of New York, at right, presents retirement awards to three ATANY members who are joining him in a well earned retirement. Left to right: V. O. Linderman, Howard Finley and J. O. Sanders

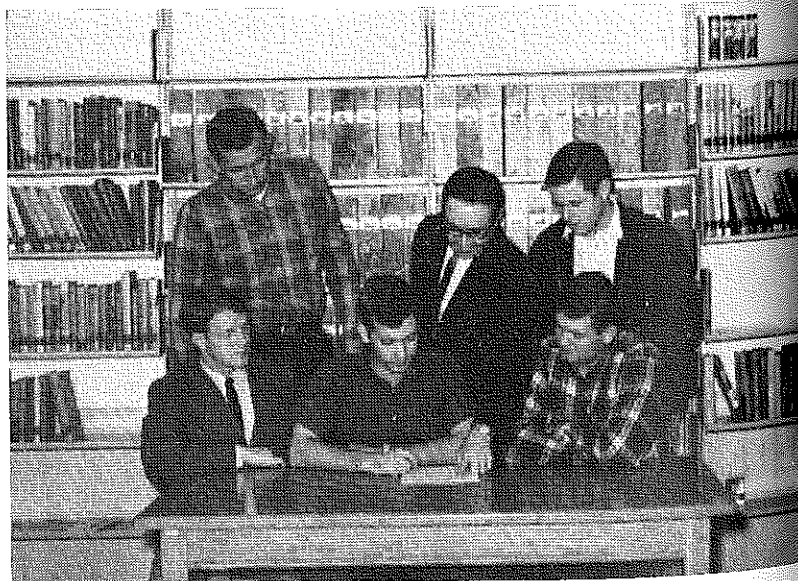
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GILBERT S. GUILER
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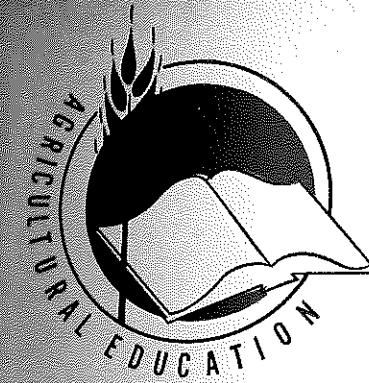


Summer School at Ohio State University allows for a period of professional relaxation by consumption of the *Citrullus vulgaris*.

in



Officers at the newly formed Agricultural Education Society at the University of Kentucky. Left to right (seated) Bruce Metzger, Secretary; Virgil Quisenberry, President; Jack McAllister, Vice President; (standing) Joseph Wyler, Treasurer; Dr. Herbert Bruce, Department of Agricultural Education; Jack W. Crowder, Historian. Photo by Luster.



Volume 40

Agricultural Education

September, 1967

Number 3



ALABAMA TEACHERS FIND TEACHING IN THE GREENHOUSE VERY EFFECTIVE.

FEATURING TEACHING EFFECTIVELY

1917 50th ANNIVERSARY 1967
 1st National Vocational Education Act

THE AGRICULTURAL EDUCATION MAGAZINE

Vol. 40 September, 1967 No. 3

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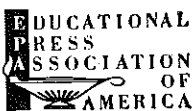


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THE AGRICULTURAL EDUCATION MAGAZINE

Editorials

Teaching Effectively—

What Is It?—

Some of our more thoughtful writers in the area of teaching and learning point out that everyone agrees in general but disagrees in specifics when talking about good teaching! Perhaps much of the lack of agreement is due to seeing only bits and pieces rather than trying to see the big picture. Some look at what a teacher does, for example, while others want to know what the students learn. The hope of this editorial is not to seek agreement on what is teaching effectively, but to get each of us to keep this question before us as we go about our own teaching jobs.

The first step, I believe, toward becoming a more effective teacher is to forget the idea of *The Ideal Teacher*. Neither should anyone try to teach like someone else. A young ag teacher makes a mistake if he tries to teach like his ag teacher. The problem is to center on me and my situation; identify my strengths and weaknesses, building on the former and reducing the latter.

The second step, really mixed in with the first because I can't identify my weaknesses except based upon some norm or criterion, is to *clarify my objectives* in teaching. Oh yes, this is old stuff, but many of us don't do this key job very well. Not only do we need to be able to clearly state these objectives in behavioral terms that mean something, but to identify the behavior of the student that will clearly indicate that my teaching objective has been reached in that student. "To know—" is not a very helpful way to state an objective. "To understand—" is not much better, because we still must have agreement on what it is to understand! See how good you are at stating objectives for a class by asking the students to explain to you what the objectives mean to them.

The point is that there is a *dynamic quality* to effective teaching. That is it is action and reaction by students and teacher in a particular teaching situation. From a summary of major findings in more than 40 years of research in teaching effectiveness, the *Journal of Experimental Education*, September 1961, were the following four major considerations:

1. Teacher acts are not good or bad in general but only in context of purposes, persons, and situations. They may be employed in operational definitions of important constituents of effectiveness and as data for making inferences about personal fitness and professional competencies, but *not* as means of distinguishing good teaching from poor teaching in and of themselves.
2. The constituents of effectiveness are not found in teachers or in pupils, or in situations, but in the relationships that exist among those at any given time and place. The learning-teaching situation is a dynamic situation and must be so viewed.
3. Current attempts to evaluate teacher effectiveness deal with certain types of realities that must be given consideration, such, for example, as the perceptions of teachers, pupils, parents, and administrators of what goes on and under what conditions. It is not enough to know merely what *is*, but it is equally important that we know what people *think is*.
4. Many people have expectancies relative to teaching: other teachers, supervisors, administrators, pupils, parents, board members, etc., and these expectancies must be given careful consideration in each particular learning and teaching situation.

It would appear that these four points might be worthy of our consideration. Certainly the traditional problem-solving approach with the student at the center of the process will keep the alert teacher of vocational agriculture working at the dynamic situation mentioned above. Whether teacher educators, supervisors and other teachers can keep their teaching dynamic in the existing situation is not so certain.

Cayce Scarborough

SEPTEMBER, 1967



Cayce Scarborough

Theory and Practice

THEORY AND PRACTICE

In a speech a few years ago, Sid Sutherland questioned whether the teacher of vocational agriculture was *still* the best teacher in the school. By implication Sid was suggesting that he was in earlier years but not now. Maybe this is a sure sign that Sid is finally getting older and dreaming of "the good old days". On the other hand, he may be right; at least his view is worth considering. Anyway, in looking at the theme of "Teaching Effectively" maybe we can stop long enough to take needed action to improve our own teaching, regardless of how we might compare with teachers at some other time. The question is, how well am I teaching *now*?

Speaking of Professor Sutherland, did you read his prediction of things to come in Vo Ag by 1975? If you haven't, see his feature article in the March *AVA Journal*. It is easy enough to disagree with some of his ideas, but have you tried writing *your* predictions? I must warn you that Sid has a pretty good record as a prognosticator as well as an innovator. Way back when the term was a dirty word not to be used in *official* AgEd Conferences, he was predicting that Ag Occupations other than farming would be an important part of vocational agriculture. Now the Band Wagon is getting real crowded.

Have you received a copy of *Vocational and Technical Education*? The attractive booklet contains several speeches from the AIC Summer Conference last year on employment in co-operatives including work experience. NVATA Leaders Jim Durkee and Jim Wall have statements in there too. If you don't have a copy write Walter Jacoby, Director, Youth Education, AIC, 1200 17th St., NW, Washington, D.C. 20036.

(Continued on next page)

Gerald Wagner, Pres-Elect, North Dakota Vo Ag Assoc, sent me a copy of their state newsletter, "The Ag and I". With that clever name you want to see what is in it. Interesting and newsy. One bit of advice that I had not seen, and if I'm gonna use it I gotta hurry. "Time to become a self-made man is before you're too old to finish the job".

How many states have an active Young Farmer Association? I appreciate being on the mailing list of *The Virginia Young Farmer*. This is a printed newsletter, always interesting. Must be an important means of communication among the Virginia Young Farmers. I find myself wondering why some states give much emphasis to this phase of vocational agriculture when others give none. Also, the YF Program must take much of the local vo ag teacher's time, yet the majority of teachers (a guess) have no YF program. Will someone clarify this situation?

Now the figures tell us that less than 6% of our population are farmers. Yet, the agricultural output climbs steadily upward. One of the surprising aspects of these most recent figures, to me, is that farming is still a family occupation. Farming is the only major industry in which the operator and his family make up the major portion of the work force. This condition continues, in spite of the fact that thousands of small farms have been lost in the shift to mechanization and larger farms.

It seems to me that a major factor in the shortage of teachers has been overlooked in our efforts to step up recruitment. That is, the *exodus* of teachers to other educational positions, especially the post-secondary institutions. This is more appropriately the *cause* of the shortage. In turn, the openings highlight the shortage of recent graduates. Agree?

Speaking of recruitment, does any state have a Student Trainee program financed for AgEd students? As you know, SCS, FHA and others have very attractive Student Trainee programs

Dear Cayce:

I appreciated seeing my name mentioned in the *Agricultural Education Magazine* for April, 1967. Your editorial on "Asking the Right Questions" was certainly to the point, but I would certainly never go as far as Lester Kellogg did in the quotation which you used from his talk at Ohio State. I have never had any doubt that researchers in vocational education could ask the right questions. We need help from each other and from people outside the field in asking the right questions but there is no doubt in my mind that we will eventually ask the right questions and will do this better than people who don't know enough about our work to even find the right ballpark, let alone the right spot in the ballpark.

Naturally, I was also pleased to see such good representation of University of Illinois staff members and graduates in the list of names in your Table of Contents. We are proud of our people here and are glad to see that they are so well recognized by the leaders in agricultural education.

Best personal regards.

Sincerely,
Rupert N. Evans, Dean
College of Education
University of Illinois

Good point, well made, Dean. It does help if all concerned are at least in the same ballpark! THANKS! CCS

for the summer that are deliberately for recruiting while at the same time offering valuable work experience and a chance to earn some needed \$\$ for those continually rising fees back at the University. An article explaining the program will be used in the *AgEd Magazine* if there is such a program.

The summer months have a pleasant but frustrating way of slipping by don't they? Mine were most enjoyable, especially the summer session at University of Minnesota where I got acquainted with a wonderful group of teachers of vocational agriculture. Hope that your summer was a good one too and that this school year will be the best yet. See you next month.
Cayce Scarborough

LETTERS TO THE EDITOR

Dear Mr. Scarborough:

While Professor Cardozier's article "Research: What Is It?" from the April issue of the *Agricultural Education Magazine* is as a whole excellent, he does raise one point that I feel especially moved to question. He says:

"The recent fountain of funds for research has brought rushing to educational and other social science research large numbers of individuals who are perhaps better trained in terms of technical competence but who have not been indoctrinated with the same professional standards and ethics of those of the past."

Taken at its literal meaning, I will agree that the more recently prepared educational researcher is not indoctrinated with the same "standards and ethics of those of the past." I would submit that, contrary to what Professor Cardozier seems to imply, it is probable that the standards and ethics of the more highly technically trained researcher, regardless of vintage, are more demanding than "those of the past." As he later says in the same article, the researcher who is most knowledgeable of validity checks, reliability checks, possible fallacies in statistical models, researcher bias, and other sources of experimental error places greater burden of proof of significance of results upon himself and his research. The increased level of technical research preparation of recent products of research training institutions tend to produce researchers who are more demanding of quality in their own research. If the level of technical preparation of this group is indeed higher, then their criticality of the fruits of their labors is apt to be such that they tend to report possible sources of error and limitations to the study that "those of the past" would never have suspected.

In summary, I am suggesting that training in technical research competencies is also education in professional standards and ethics, but minimum requirements for ethical acceptability are developed and learned coolly, methodically, with scientifically determinable and verifiable standards and without tears.

Sincerely,
Daniel S. Arnold, Director
Educational Resources Studies
Kentucky Research Coordinating Unit
Thanks, Dan, for this interesting response. Maybe Ray will respond to your response. CCS

Dear Cayce:

You do a remarkable job with the magazine in writing in a way that should stir more persons (1) to read and (2) to think. Let us hope that your July editorial will result in many small group discussions all over the country.

In repeating our use of the term "as a guide" you encourage local planning. Surely there are neither funds nor students for more than two or three specialized programs in most schools, and at least one must serve the broad total field of agricultural technology. Each should include pre-professional courses, experiences, and counseling.

Sincerely yours,
Glenn Z. Stevens
Professor
Penn State Univ.

Glenn, you make an excellent suggestion. Keep making it! CCS

Dear Cayce:

I am glad to see someone attempting to stir up some concern over the instructional areas in agriculture. No thesaurus of agricultural terminology or compilation of definitions will satisfy everyone. Overlap between categories will always be with us, terminology or certain words may mean one

thing in Georgia and another in Oregon, and pressures and politics will tend to influence any "official document." Therefore, we need to generate some discussion of the current efforts in this direction before the tentative lists become permanently cast in bronze.

Each time the list of instructional areas is reviewed by a different group, we find changes being offered and up to a point this is good. However, at some point in time we need to "get on with the show" remembering that it is much easier to pick someone else's list apart than it is to come up with a better one. Further, it is one thing to devise terminology which agricultural educators can agree upon and another to gain consent from all other vocational services and the many vested interests prior to publication and dissemination.

I would strongly suggest that we meet the problem head on by including a discussion of the tentative instructional areas in agriculture during future agricultural conferences. Perhaps we even need to consider changing some laws since they may constitute a major deterrent in establishing high school vocational agriculture programs which are specifically oriented toward preparation for college.

I share your concern and as a member of three committees which struggled with the problem, I sincerely hope we can come up with a universal agreement concerning the format for instructional and occupational areas in agriculture.

James W. Hensel, Specialist
Agricultural Education
Center for Research & Leadership
Development in Vocational & Tech Ed
Ohio State University

Thanks, Jim, let's try to keep the discussion going. I suggest that Vo Ag has been a wonderful starting place for many in agricultural professions, you and me, for example! CCS

Dear Mr. Scarborough:

"What Would Happen If," a welcomed addition to the *Agricultural Education Magazine*, focuses upon an important phase of agricultural education. First, may I say I do not think we are rigidly insisting that ninth grade students state very narrow occupational goals unless we believe agriculture and farming are synonymous. In addition, even though state and national administrative requirements may require a definite occupational designation by the student, learning activities do not always coincide with administrative requirements.

The central issue of the article... present practices do not permit adequate exploration of agricultural occupations... is based on Dr. Thompson's observations but I wonder what type of observations. My conclusions during the past years, based upon observations at 11 different summer conferences, three major universities, and research, leads me to believe otherwise. A few selected observations to support my conclusion are:

1. Texas's successful efforts to develop a program of agricultural occupation exploration with supportive instruction resources.
2. The tremendous sales of texts, reference books, and other instructional materials about agricultural occupations and guidance.
3. Missouri's long-standing emphasis upon the integration of agricultural occupation guidance in the high school program.
4. A national study indicating 17 percent of the teachers are using filmstrips and/or 2x2 slides in teaching ag. occupations, 78 percent indicating they would use overhead transparencies if available and only two percent indicating agricultural occupations are not a part of their course of study.

The key word is adequate and since neither Dr. Thompson nor I define adequate, this leaves an opportunity for someone to define adequate.

Sincerely,
Jim Hannemann
Assistant Instructor
Michigan State University

Good point on that term "adequate," Jim, it's a slippery term subject to individual interpretation. Thanks, CCS

How Good Is My Teaching?



Mr. Wiggins

CHARLES S. WIGGINS, Supervision, New York

Time To Teach

As agriculture becomes more complicated and complex, and teachers and students are involved in more and more contests, programs and activities, it becomes increasingly difficult to find time to teach what is believed to be important, rather than the problem of not having sufficient material to teach. It becomes a continual problem to fit into a course of study all material that a student should learn. This problem can be solved by (1) teaching a very little about many topics, and hoping that pupils will later in life complete their learning as they have need for additional knowledge; or (2) being more selective about what is taught, going into greater detail, and covering a topic completely with the hope that pupils will later learn materials that have not been studied in class; or (3) some combination of the two.

Common Problems

For many students, vocational agriculture is purely vocational. For many others, it is also exploratory, since they are not sure they wish to make agriculture their life work, or if they do, which phase of agriculture to follow. All students, however, need to develop efficient study habits, a desire for learning and problem solving ability. Since we are teaching students, and not subject matter, methods appropriate to the class need to be selected for the subject being studied. By taking enough time to thoroughly explore one topic before proceeding to the next, it is more easily possible for a teacher to develop in students the common abilities of learning. It is more important to learn how to find out how to fertilize a crop, than to learn the most recent recommendation since technical subject matter continues to change. The "why" is usually more important than the "how".

An Example

An example will illustrate the point. If the unit being taught is concerned with gasoline engines, and the day's lesson is spark plug selection and maintenance, two different methods of instruction might be followed; (1) assign reading on the subject and follow with discussion or (2) have students operate engines with correct and incorrect types of spark plugs and correct and incorrect terminal spacing, study the results, and determine why certain spark plugs and terminal gaps work the best. This second method will lead students to detailed study of operator's manuals and guides. The second method requires more class time than the first, but greater learning will result because of the student's opportunity to practice the problem solving method and become involved. All good teachers are concerned regarding the progress of their students, but being concerned and telling pupils what to do and how to do it is usually not enough. Most parents are interested in having their children learn to swim, and in an attempt to teach them, give much advice, but the child has to do it for himself. He has to become involved, make an effort, and by trial and error with guidance from his parents, do it for himself. So it is with our pupils. They must, in order to be successful, become involved. A teacher can teach, but the learning is up to the student.

Learning is the Key

How much is studied in class is not nearly as important as how much is learned. Giving slow learners an opportunity to master the fundamentals, average learners greater competence and fast learners opportunity for enrichment is more easily possible when a subject is completely investigated rather than delved into only superficially.

DON'T BE SO SLOW — GET AN SMV CAMPAIGN GOING

JOHN SCOTT, Vo Ag Teacher, Sumner, Iowa

The tie clip I wear seemingly is very appropriate. By nature, I am a slow moving person. So, when members of the F.F.A. Chapter presented me with a miniature Slow Moving Vehicle emblem, as a tie clasp, I knew our Chapter Safety Program was accomplishing its purpose. Members had learned to recognize a slow moving vehicle and were mounting the SMV emblem on that vehicle!

The Need

The campaign for the use of SMV emblems in this community had its start almost two years ago. The decision to conduct the program came following a survey made by the safety committee. This survey indicated that, of the 217 vehicles on member's farms that were used on public roads, only 27 were equipped with an SMV emblem. Less than 13%. By comparison, only 5% of vehicles on 22 neighboring farms were equipped.

The Program

The Safety Committee recognized the need for a fresh approach to the annual farm safety program and recommended a drive to place at least 100 SMV emblems. Few local implement dealers and farm supply stores kept the SMV emblem in stock. Therefore, it would be necessary to purchase a supply of emblems. Very little promotional material or publicity had been released in this community. It seemed like a natural to supplement the Chapter's safety program.

Promotional material was obtained from the National Safety Council and one of the manufacturers of the triangular emblem. Pictures and stories were supplied the local newspaper and releases prepared for the neighboring radio stations. These releases described the emblem, its proper use and the importance of its use.

F.F.A. members appeared before farm and civic groups, carrying demon-

stration kits and showing colored slides. Local machinery and implement dealers were asked to join in the campaign.

Enough emblems were ordered to supply each of the 68 chapter members with two emblems, each with a different type of mounting, usually, the member kept at least one to show while he took orders for emblems.

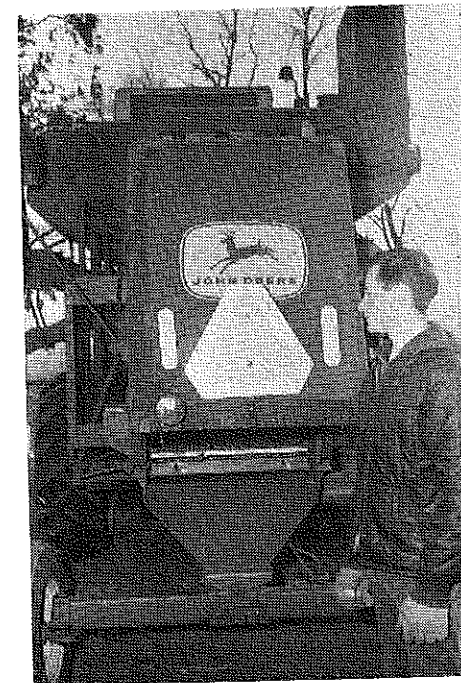
The Results

Key farmers and custom operators, known to have their equipment on roads quite often, were approached first. Some farmers ordered as many as seven of the emblems the first week. During the period from October 1965, through December 1966, Chapter members placed 300 SMV emblems in this community. Local dealers, service centers and others who had started carrying emblems in stock estimated they had sold another 100 emblems.

During 1967, the Chapter has placed a total of 50 emblems and we are currently carrying an inventory of four dozen. Promotional circulars are still in use and periodically a news story is released. Pictures of local farmers, displaying this triangular accident pre-



The Sumner, Iowa, SMV Promotional Program was an integral part of an overall rural safety program. Here FFA members set up an exhibit urging drivers to have their automobiles and trucks safety checked.



FFA member observes proper safety lighting and SMV emblem on combine used for custom work.

venting, life saving emblem on their equipment is used with publicity releases.

Chapter members point with pride to their accomplishments. Each time they see a machine on the road without an SMV emblem, the operator is contacted and encouraged to procure and use the emblem. They are also rather quick to point out that in addition to the more than 450 emblems placed, another 400 mounting brackets were sold, which would seem to indicate that as many as 850 machines and implements might display the Slow Moving Vehicle emblem.

Perhaps in the near future, SMV emblems will be required equipment in our state. There are those who will never display the emblem unless required to do so. However, if our state does enforce the use of this safety device, this community will be prepared. Thanks to a group of young men who believe in the sign on the entrance to our classroom. "Through These Doors Pass the Future of Our Community." They are building for that future and the farm safety program is designed to aid in assuring each member his future.

How about it? Are you an SMV? If you are, wear the emblem, you may be a hazard. If not, wear it anyway and get a program going in your community.



Mr. Nelson

HOW MUCH INSTRUCTION IN FARM MACHINERY?

TRAVIS NELSON, Vo Ag Teacher, Winona, Minnesota

and

W. FORREST BEAR, Agricultural Engineering, University of Minnesota



Dr. Bear

Vocational Agriculture Instructors generally agree that farm machinery instruction is an important phase of the Agriculture Mechanics program in Vocational Agriculture; however, many instructional programs do not reflect this importance.

A study¹ designed to determine the effect of various factors on the scope of the farm machinery instructional programs for high school students and the beginning and adult farmers was initiated at the University of Minnesota.

Method

Questionnaires were submitted to 150 vocational agriculture departments in Minnesota High Schools. The data received were tabulated according to the following criteria: single (63) and multiple (28) teacher departments, large (58) and small (33) shops, length of class period, ten common farm machines, and thirty selected tools and supplies considered essential for teaching the ten farm machines.

Findings

The number of teachers in a department influenced the scope of the farm machinery instructional program. A greater percentage of the multiple teacher Departments provided instruction on eight of the ten machines in the high school program, and on six of the ten machines in the beginning and adult farmer program than did the

instructors in single departments. A larger percentage of the multiple teacher departments taught eight of the ten machines for six or more hours than did the single teacher departments. Note Tables I and II.

TABLE I. Hours of High School Machinery Instruction in Multiple Teacher Departments

Farm Machine	Hours of Instruction						Total Number Teaching (N = 28)	
	0		1-5		6 or more		No.	%
	No.	%	No.	%	No.	%		
Plow	4	14.3	19	67.8	5	17.9	24	85.7
Mower	7	25	17	60.7	4	14.3	21	75
Row Crop Planter	6	21.4	17	60.7	5	17.9	22	78.6
Crop Sprayer	5	17.9	18	64.2	5	17.9	23	82.1
Grain Drill	9	32.1	17	60.7	2	7.2	19	67.9
Baler	8	28.6	15	53.5	5	17.9	20	71.4
Combine	6	28.6	15	53.5	5	17.9	20	71.4
Corn Picker	11	39.3	15	53.5	2	7.2	17	60.7
Manure Spreader	20	71.4	8	28.6	0	0	8	28.6
Forage Harvester	16	57.1	11	39.3	1	3.6	12	42.9
All Machines	94		152		34		186	66.4

TABLE II. Hours of High School Machinery Instruction in Single Teacher Departments

Farm Machine	Hours of Instruction						Total Number Teaching (N = 63)	
	0		1-5		6 or more		No.	%
	No.	%	No.	%	No.	%		
Plow	15	23.8	38	60.3	10	15.9	48	76.2
Mower	18	28.6	40	63.5	5	7.9	45	71.4
Row Crop Planter	20	31.8	34	53.9	9	14.3	43	68.2
Crop Sprayer	20	31.8	38	60.3	5	7.9	43	68.2
Grain Drill	22	34.9	37	58.7	4	6.4	41	65.1
Baler	23	36.5	28	44.4	12	19.1	40	63.5
Combine	26	41.3	29	46.0	8	12.7	37	58.7
Corn Picker	30	47.6	25	39.7	8	12.7	33	52.4
Manure Spreader	37	58.7	24	38.1	2	3.2	26	41.3
Forage Harvester	35	55.6	25	39.6	3	4.8	28	44.4
All Machines	246		318		66		384	61.0

¹Nelson, Travis N. A study of Farm Machinery Instruction in Minnesota Vocational Agriculture Departments. Unpublished MA Colloquium Paper, University of Minnesota Agricultural Education Library, St. Paul, Minnesota, 1967.

Shop Size

Shop size influenced the high school farm machinery instructional program more than it did the beginning and adult farmer programs. Instruction was provided, considering all ten farm machines, in 71 percent of the possible cases in shops having more than 2,000 square feet as compared with 47.9 percent of the possible cases in shops with less than 2,000 square feet. Instruction on the plow was the most frequent, whereas instruction on the manure spreader was less prevalent. All ten machines were taught to beginning and adult farmers in 15.7 percent of the possible cases in the larger shops as compared to 15.8 percent in the smaller shops. Instructional time on the major farm machines as the combine, corn picker, drill and baler was less than other machines, namely, the plow, mower, planter and sprayer when compared by size of shop.

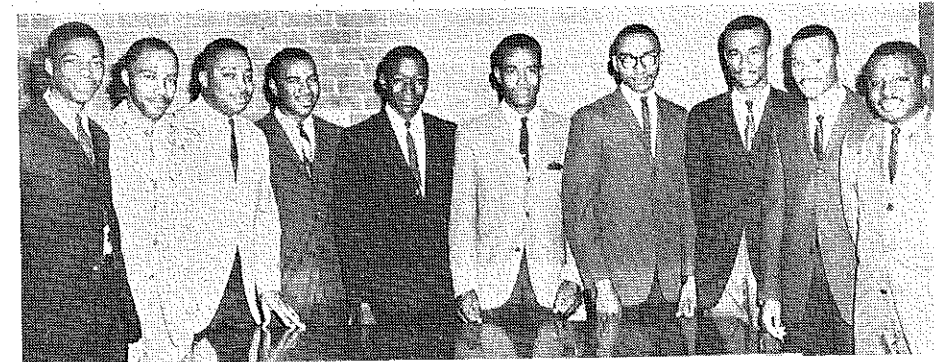
The agricultural shops with more than 2,000 square feet of floor space had a larger number of the selected tools and supplies, 26-30, than did the smaller shops, 20.7 and 3.0 percent respectively. Fifteen or less of the selected tools and supplies were owned by 6.9 percent of the departments with 2,000 square feet or more and by 30.3 percent of the departments having less than 2,000 square feet.

The multiple teacher departments with 2,000 square feet or more of shop area were better equipped than the single teacher departments with the same floor area. Fifteen percent of the schools with larger shops and single teachers had twenty-six or more of the thirty selected items and 33.3 percent of the schools with larger shops and multiple teachers had this same number of tools and supplies.

Instructional Period

The length of the agricultural mechanics class period affected the scope of the farm machinery instructional program. One hundred percent of the instructors with a two hour class period taught the plow, row crop planter, crop sprayer, baler and combine. The plow was taught by 77.1 percent, planter by 68, sprayer by 69.9, baler by 62.7 and combine by 59 percent of the instructors with one hour class periods.

The instructors with the longer class periods spent more time teaching each machine. When averaging instruction



Why not let practical measures function in recruiting Agricultural Education students? Eleven students who did Directed Teaching agreed to do something about the shortage of Vocational Agricultural Teachers after participating in a seminar on the problem. This group brought in the names of twenty-six students whom they sold the idea to continue in Agricultural Education. Students are now writing the Agricultural Education Department stating that they will join the Agricultural family at the College in September. In several cases conferences were held with the boy and his parents about coming to College and majoring in Vocational Agriculture. The Department of Agriculture Education gave each future teacher a special citation for having done an acceptable job. (C. E. Dean, Teacher Education A & T University, Greensboro, N.C.)

for all the ten machines, 18.8 percent of the instructors with a two hour period compared to 8.4 percent of those with a single period provided six or more hours of instruction.

Teaching Method

A comparison of high school class teaching methods used by instructors with single and double periods did not vary a great extent for the plow, mower and planter. The high school class instructors with two hour periods gave fewer reading assignments, worksheets and job sheets to their students than did those with the one hour period. Adjustment and service of the machine was the activity most generally performed by the high school students in the shop rather than assembly or repair of the machine.

The teaching methods used for beginning and adult farmers differed from those used in teaching high school students. Very few teachers (11.8 percent for the plow) had assigned reading for the beginning and adult farmers, whereas better than 60 percent had assigned reading on the plow for the high school students. Worksheets and job sheets were also used to a lesser degree with the beginning and adult farmers. Shop demonstrations were comparable for both groups, whereas demonstrations on the farms were more frequently used for beginning and adult farmers than for the high school classes.

Occupational Training

A number of the vocational agricul-

ture instructors believed they are training their students sufficiently during the farm machinery instruction to qualify them for jobs related to farm machinery. Fifty percent or more of the instructors considered their students were qualified to enter the following occupations; mechanics helper, truck driver for a feed mill, or a farm cooperative, feed mill employee, bulk fertilizer truck driver and farm hardware equipment employee, which represented five of eighteen listed occupations.

The relationship between the number of hours the shop was used for other classes and the scope of the farm machinery program revealed that instructors in shared shops spent as much or more time teaching these machines as those whose shops were used entirely by the agricultural instructor.

Conclusions

This study indicated that the departments with the largest shops, more than one instructor, two hour class periods, and the greatest number of tools and supplies were teaching farm machinery a greater number of hours. The significance of shop size should be emphasized since other factors are dependent upon it.

With the increasing value of the farm machinery inventory, complexity of the machines and the increasing opportunities in agricultural machinery related fields the vocational agriculture instructors are obligated to update their instructional programs and to improve their own understandings and abilities.

Should I Enroll In VO AG??—

Each year you probably find freshman boys that question whether they should enroll in vocational agriculture. They don't want to farm or they want to take other academic subjects in school which will better prepare them for college.

To help the student make a decision and help him to understand more about vocational agriculture and its importance, I have used an information form which I present to each prospective student when I make a farm call in the spring or summer.

The information form provides an opportunity to sit down with the boy and his parents to explain the agriculture program and opportunities in agriculture. I also emphasize the importance of planning the high school curriculum so the college bound student can meet college entrance requirements and still enroll in agriculture if he is interested. If a boy desires, I help him plan a schedule for grades 9-12. Following is the form which I have found useful.

Red Wing High School
Red Wing, Minnesota 55066

Vocational Agriculture will help you if:

1. You plan on farming
Today it is important to know scientific farming methods and modern farm management. In agriculture you learn how to farm better and live better.
2. You plan on working in some agriculture-related field.
Some boys who do not have the opportunity to farm, but who have a genuine interest in farming, work in jobs related to agriculture. In agriculture you will learn much that will help you as a machinery dealer, a farm equipment repairman, a land appraiser, a DHIA tester, an elevator manager, or a landscape planner.
3. You plan on attending a college of agriculture.
If you plan on attending college and have an interest in agriculture, don't overlook the possibility of attending a college of agriculture. Many jobs in research, industry, business, education, communications, conservation, and other services are available for boys who have a farm background and a college education in agriculture.

This year in Vo-Ag more emphasis will be placed on

1. Science:
Today a successful farmer is a scientific farmer. In agriculture you will put biology, mathematics, chemistry, and physics into practice.
2. Farm Management:
In agriculture you will not only learn how to keep farm records, but also how to use the records and how to analyze the farm business.
3. Job Opportunities in Occupations Related to Agriculture:
Today there are fewer farmers, but there are more people working in ag-related jobs. Of the 28 million people employed somewhere in agriculture, only 5.5 million are farmers; the rest produce for and service farmers, or process and distribute farm products. Over a half million scientists serve agriculture.

In Vo-Ag you will also learn

1. Leadership and self confidence:
Agriculture students conduct parents' night, hog sale, corn drive for Camp Courage, and parent-son banquet.
2. Responsibility:
Through judging contests, farm projects, and FFA activities boys develop responsible independence.
3. Cooperation:
In ag you will learn to work together for mutual benefit. This may involve helping a friend test milk in the lab, selling popcorn at a football game, or serving on an FFA committee.

Things to consider

1. You may wish to take Vo-Ag as a fifth or sixth subject. You will be required to take at least five subjects in Red Wing this year.
2. You may wish to include several science courses in your schedule, just in case you some day do attend college.

You will note that the information form does not contain a section on Farm Mechanics. Farm shop facilities are not provided at Red Wing High School. One paragraph on farm mechanics will be added as shop facilities become available.



Donald Barber
Vo Ag Teacher
Red Wing, Minnesota

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