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THE AGRICULTURAL EDUCATION MAGAZINE

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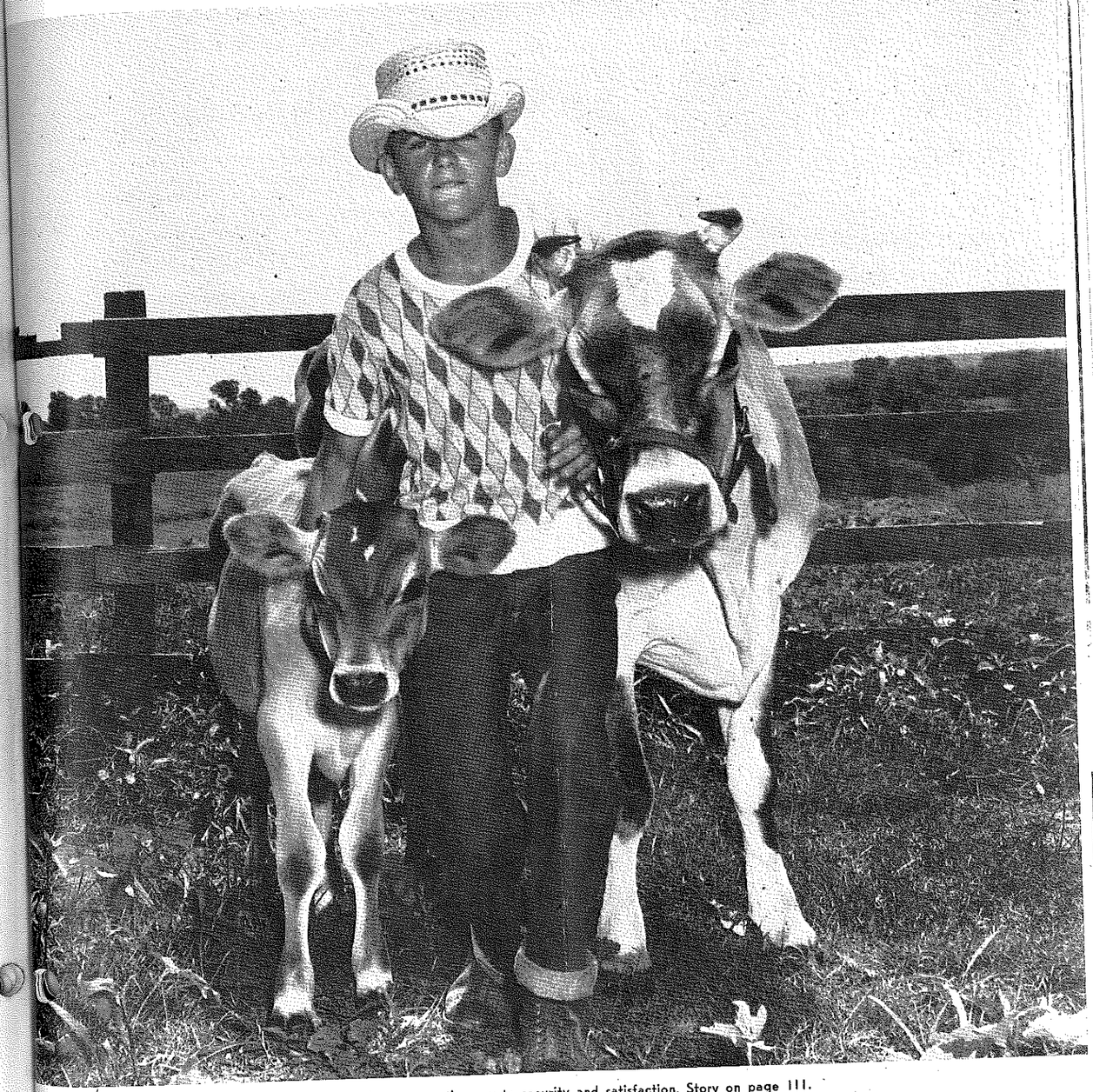
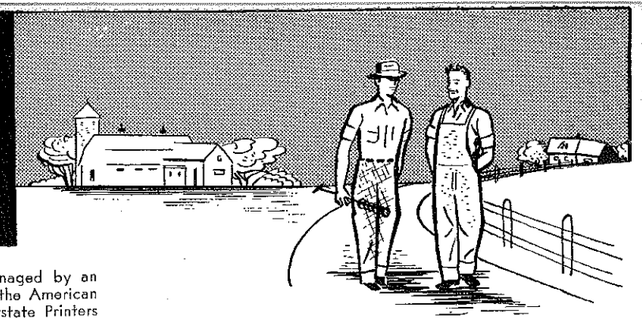


Good livestock can pave the way to security and satisfaction. Story on page 111.

The Agricultural Education Magazine



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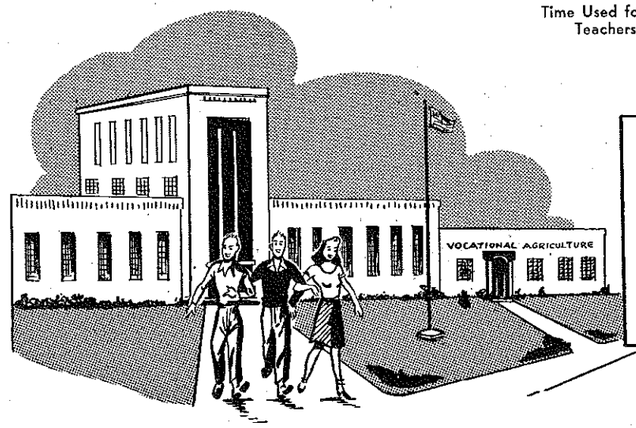
THE INTERSTATE 1901 DANVILLE, ILLINOIS

Contents



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Editorial Comment

Time to teach

"MY life is filled with a lot of little things." Thus, many people frequently complain that they can never quite find the time to do all the things that they would like to do and should do. In the ordinary trend of events our obligations often tend to pile upon us.

Nor is it always the item to which we would like to give priority that receives first attention. Seemingly many times a person feels compelled to direct his attention largely to minor details with the result that matters which are recognized as most important are pushed aside.

How to keep our attention and energy focused on the major aims and purposes of our jobs, how to prevent minor obligations from overshadowing and crowding out our major responsibilities—in other words how to *keep first things first,* is a real problem.

So it is with teachers of vocational agriculture! Most teachers would readily agree that supervised farming and all that it implies in making it possible to carry instruction to the doing level on the farm, is one of the primary responsibilities of the teacher of agriculture. Yet with the multiplicity of demands made on his time, many a teacher finds himself hard-pressed to do this job as effectively as he would like.

Other Activities Compete

About a year ago I spent a day with a beginning teacher of agriculture. As I was making ready to leave, he commented to me that the faculty members of his school were acting as hosts that Thursday evening to a district meeting of the teachers' association. When I inquired as to the extent that such events came up to compete for time with jobs he might otherwise do in carrying out his own program of vocational agriculture, he quickly enumerated his other special assignments for the week.

The following night the principal had asked him to sell tickets at a football game. On Wednesday he served as a substitute bus driver. The preceding night he attended a church dinner and entertainment. On Monday he met with a P.T.A. committee. While this teacher, no doubt, had more than the usual number of special demands placed on his shoulders during this particular week, his experiences do serve to point up that other school assignments and community obligations can become so numerous at times that they practically rule out the possibility of doing much of anything else.

Length of Work Week

Faced with this dilemma, is there any way out for the teacher who is determined to maintain regular contacts with his students at their homes? After all some might say, he has Saturdays that can be used for farm visits. Still, teachers of agriculture, more and more, are tending to look upon Saturdays as their days. They can point out with considerable justification that the five-day week has become the common pattern of work. "Other teachers, County, State, and Federal employees," they say, "generally do not work on Saturdays so why should teachers of agriculture?" Granted that the majority of the teachers of vocational agriculture do work on Saturdays and will probably continue to do so, there are some strong arguments which they could present for limiting their work-week to five days.

It is fairly possible that many teachers have not done all that they could to thoroughly acquaint administrative officials with the extreme importance of on-farm instruction. When school superintendents and principals are not fully informed on the value of setting aside time for conducting supervised farming, they will continue to make assignments to the teacher of agriculture such as driving a school bus or doing any one of the miscellaneous chores that come up around the school.

Working With Administrators

Once administrators are convinced that there is a real need for on-farm instruction, most of them will try to relieve the teacher of routine jobs in so far as possible. They will, of course, expect the teacher of agriculture to show results. If routine school assignments are made to persons other than the teacher of vocational agriculture so that he can have more time for his programs then he is necessarily expected to demonstrate that he is putting the time to good use.

Nor should the teacher expect the impossible whenever the administrator moves in the direction of attempting to lighten his load of general teaching responsibilities. It goes without saying that the teacher of agriculture is a member of the teaching staff and consequently he would never want to put himself in the position where he could be accused of expecting special privileges over other teachers of the school. This being the case, it is taken for granted that there are some obligations such as attending a teachers' meeting from which he would not expect to be released.

That superintendents and principals are beginning to recognize the value of on-farm instruction through supervised farming is demonstrated in the tendency for more and more of them to set aside time in the school day which the teacher can use for making farm visits. This plan offers many possibilities for providing time for the overworked teacher that he can center almost entirely in furthering his program of on-farm instruction. The extent to which other administrators will make similar time available for farm visits will be determined in a large measure by the ability which the teacher shows in being able to use this time effectively.

RAYMOND GARNER, *Teacher Education, Michigan State College*

This issue

LIVESTOCK has an important role in the American economy and its production makes possible our high standard of living. It is appropriate that we give recognition to it in terms of agricultural education. The major emphasis of articles in this issue which deal with livestock is given to instructional problems involved. The unique approaches illustrated are worth careful consideration.

Unsolved

We have learned to solve the problems of production in agriculture to the point where we can produce an abundant supply of food and fibre. We have yet to lick many of the problems of distribution. Social controls for agriculture constitute a challenge to our economy.

Our farm program or national plans affecting agriculture are in a state of flux at the present time. These concern all farmers who with other groups have a very real stake in the outcome. We present in this issue a discussion of the Brannan Plan. It may serve as something of a guide to teachers of agriculture who desire to study proposed *Farm Plans* with their groups.

What Is A Complete Program

Priorities on teacher time are necessary. Contributions by Hill, Garner, Kitchens, and Erwin serve to highlight the significance of this problem for vocational agriculture. For teachers to serve effectively and still work a normal number of hours and days, a choice of activities must be made.

We like the programs reported by Eastwood and Erwin for effective service to adult groups. These clearly indicate that if teachers of vocational agriculture are to have responsibility for out of school groups, that a definite and considerable amount of time must be provided for this specific purpose.

PROGRAM — Agricultural Section AVA Convention, Atlantic City, December 5-10, 1949

President of Section

Louis M. Sasman, Chief Agricultural Education, State Board of Vocational and Adult Education, Madison, Wis.

Program Chairmen

H. O. Sampson, State Supervisor, Vocational Agriculture, Department of Education, Trenton, New Jersey. W. A. Smith, Professor Rural Education, Cornell University, Ithaca, New York. C. W. Seabold, Teacher of Agriculture, Reisterstown, Maryland.

MONDAY—December 5, 1:30 P.M.

Conference, Research Group, North Atlantic Region. W. Howard Martin, Professor Agricultural Education, University of Connecticut, Storrs, Connecticut, in charge.

Executive Committee Meeting, National Vocational Agricultural Teachers' Association, L. E. Cross, President, in charge.

TUESDAY—December 6, 9:30-12.00 A.M.

Conference, Research Group, North Atlantic Region, continued.

Executive Committee Meeting, National Vocational Agriculture Teachers' Association, continued.

TUESDAY—December 6, 1:30-5.00 P.M.

Conference, Research Group, continued.

Executive Committee Meeting of National Agricultural Teachers Association, continued.

WEDNESDAY—December 7, 9:0-12:30 A.M.

Combined Vocational Agriculture Groups — Teacher Trainers, Supervisors, and Vocational Agriculture Teachers.

Chairman: G. P. Deyoe, Professor, Agricultural Education, University of Illinois, Urbana, Illinois.

The Role of Vocational Agriculture in Life Adjustment Education

Welcome—Louis M. Sasman, A.V.A. vice-president for Agriculture and L. E. Cross, President, National Vocational Agriculture Teachers' Association.

Our Role in a Changing World—R. W. Gregory, Assistant Commissioner for Vocational Education, U. S. Office of Education, Washington, D. C.

Symposium—Contributions of Current Programs of Life Adjustment Education. H. S. Brunner, Department of Agricultural Education, Pennsylvania State College, State College, Pennsylvania (chairman).

Relationships with the Total School Program in Furthering Life Adjustment Education. Benjamin C. Willis, Superintendent of Schools, Yonkers, New York.

WEDNESDAY—December 7, 1:30-5:00 P.M.

Chairman: Roy H. Thomas, Supervisor Agricultural Education, Department of Public Instruction, Raleigh, North Carolina.

Establishment in Farming, How Can It Be Attained Through Vocational Agriculture?

Combined Vocational Agriculture Groups.

Getting Control of $40,000—S. W. Warren, Department of Agricultural Economics, Cornell University, Ithaca, New York.

Symposium—Establishment in Farming Speaks for Itself. R. E. Naugher, U. S. Office of Education, Washington, D. C., Chairman.

Panel Discussion—Continuing to Make Establishment in Farming the Goal of Vocational Agriculture.

M. D. Mobley, State Director of Vocational Education, Atlanta, Georgia, Discussion Leader.

J. T. Wheeler, Department of Agricultural Education, University of Georgia, W. J. Weaver, State Supervisor of Agricultural Education, Albany, New York. (Others to be added to include teachers and school administrators).

Business Session in charge of Vice-President Sasman.

THURSDAY—December 8, 7:30-9:00 A.M.

Teacher Trainer Breakfast in charge of Professor V. G. Martin, Mississippi State College.

Supervisors Breakfast in charge of Vice-President Louis M. Sasman.

Vocational Agricultural Teachers Breakfast in charge of President L. E. Cross.

THURSDAY—December 8, 9:00-11:00 A.M.

Agricultural Section view exhibits.

THURSDAY—December 8, 11:00 A.M.-5:30 P.M.

Agricultural Trip. Courtesy the Sears Roebuck Foundation.

FRIDAY—December 9, 8:00-9:30 A.M.

Regional Meetings of National Vocational Agricultural Teachers' Association (six regions).

FRIDAY—December 9, 9:30-112:00 A.M.

Business Session of National Vocational Agricultural Teachers' Association. President L. E. Cross in charge. Supervisors and Teacher Trainers Group.

Research

Chairman: W. Howard Martin, Professor Agricultural Education, University of Connecticut, Storrs, Conn.

Secretary: M. C. Galbreath, Director, Agricultural and Technical Institute, Morrisville, New York.

The National Study of Institutional On-Farm Program for Veterans. H. M. Hamlin, Professor of Agricultural Education, University of Illinois.

Future Programs in Agricultural Education and Their Development. J. Bryant Kirkland, Dean School of Education, North Carolina State College, Raleigh.

Discussion—T. G. Walters, State Department of Education, Georgia.

Regional Developments—
Western—R. W. Cline, University of Arizona.
Southern—J. B. Kirkland, University of North Carolina.
Central—J. B. McClelland, Iowa State College.
North Atlantic—W. H. Martin, University of Conn.

Progress and Standards in Agricultural Education. L. R. Humpherys, chairman of A.V.A. Committee on Agricultural Education Policy and Standards; Professor of Agricultural Education, Utah State Agricultural College.

FRIDAY—December 9, 12:00 N.-1:30 P.M.

Luncheon for Vocational Agricultural Groups, Courtesy the Great Atlantic and Pacific Tea Company.

SATURDAY—December 10, 9:30 A.M.-12:00 N.

Vocational Agriculture Teachers. Program by New Jersey Vocational Agriculture Teachers' Association.

Teacher Trainers and Supervisors.

Chairman: E. P. Hilton, Director Agricultural Education, Department of Education, Frankfort, Kentucky.

General Program

Use of the Radio in the Vocational Agriculture Program. Phillip Alampi, WJZ Farm Program Director.

Wheeler McMillan, Editor, Farm Journal.

Edward Babcock, Ithaca, New York.

The Work of the Sponsoring Committee of the F.F.A. Foundation. Frank Jenks, Vice-President, International Harvester Company.

Business Session in charge of Vice-President Louis M. Sasman.

New farm program
What it is and how it differs from other plans

STEWART JOHNSON and GEORGE BRINEGAR, Department of Agricultural Economics, University of Connecticut

THE new farm plan proposed by Secretary Brannan on April 7 has been described as "spectacular." And differ it does in many respects from the present support price program based on parity. On the other hand, it is similar in many ways to various proposals made in the past. The purpose of this article is to describe and to appraise the new farm program.

First of all, why do we have any farm program at all? In the past quarter of a century we have seen the McNary-Haugen Farm Bill passed by Congress and vetoed by President Coolidge, the Federal Farm Board Program under President Hoover, A.A.A. acreage and livestock reduction programs under President Roosevelt, and price supports at 90 per cent of parity under President Truman. Why has agriculture in the United States been given special consideration by government in such programs?

Part of the answer lies in sticky industrial prices and wage rates. As isolated individuals, each supplying a very small part of the total output, farmers have no way to adjust their total market volume to changing demand, and thus have no control over the prices they will receive. They go ahead and produce, and take whatever they can get for their product. Farm prices, therefore, go down faster and further than other prices when our economy is heading downward. Stripped to its essentials, the basic objective of the new farm program is to prevent a general collapse in farm prices such as those of 1920-21, 1929-33, and 37-40. If this objective is accomplished, it can help prevent a possible depression which would hit city and farm people alike.

Any farm program to be successful must be in the public interest. It must be consistent with a stable prosperous economy in the United States, it must permit trade among nations, much the same as we now have among the 48 states, and it must make its contribution toward world peace. To a limited extent we will examine the new farm program from this standpoint in the latter part of this article.

Under the present farm program we seem to be heading for trouble. The government has acquired huge stocks of many farm products through purchases which have been necessary to keep the price as high as that pledged to producers. For even such a minor product as flax, more than 130 million dollars has been spent to keep up the price. For wheat, the cost last year has been about 600 million dollars, and for cotton, about 700 million. Already the program has cost about 2½ billion dollars, and seems likely to cost as much more, barring drought, before the end of 1949.

For this huge expenditure, the producers of some products have obtained material benefits, particularly farmers who produce cash grains, flax, cotton, tobacco, wool, and potatoes. Dairy farmers, on the other hand, have had little direct benefit to date from government purchases, and have their dairy ration prices held high by government support of grain prices. The program also favors producers distant from their markets relative to those with markets nearby, as in the Northeast. Despite these differences among products and regions, there seems no doubt that farmers in the United States, as a whole, have had much higher incomes in the past year with the program than they would have had without it. From the standpoint of the public interest, however, the following two weaknesses of the program are evident:

(1) Consumers have had to pay twice, once for the taxes to finance the support-price purchases, and again in high retail prices at the grocery store. Using potatoes as an example, a consumer pays not only the cost of the program to divert potatoes out of the market, with millions of dollars worth of government potatoes rotting and wasted, but also pays the high retail price resulting from the limited supply after government purchases are made.

Professional

S. S. SUTHERLAND — B. C. LAWSON

(2) The program has retarded world trade, and has been a stumbling block in the way of world peace. It has been said that if goods cannot cross international boundaries, armies will. We cannot sell farm products in the world market if we keep their prices artificially high through price supports. The loss of our world cotton market during the 1930's is an example. Neither are we inclined to permit imports if the market for some product is made attractive, through support-price operations, to producers in other countries. Last fall, for example, we took action to strengthen trade barriers against Canadian potatoes. We are also not inclined to permit goods made from farm products, such as textiles made from cotton, to enter the United States if we are spending huge sums to keep the price of the product high here at home. The writers of this article recognize that many other reasons, some associated with the destruction of resources during World War II, currently are tending to dislocate world trade, and that the support-price program is only one of several obstacles in the way of freer exchange of commodities.

The revision of the present farm program in the Agricultural Act of 1948 and to become effective in 1950 would substitute flexible supports ranging from 60 to 90 per cent of parity for rigid support of prices at 90 per cent of parity. Secretary Brannan has recommended that this revision be abandoned before it becomes effective, however, and that the new farm program described below be adopted.

The new farm program recommended by Secretary Brannan has four parts:

(1) A minimum goal would be established for gross farm incomes, in other words, for cash receipts by farmers in the United States. This goal would fluctuate from year to year depending on changes in the index of prices paid by farmers for goods used on the farm and in the home. For 1950, the program would assure a gross income of about 26 billion dollars for agriculture as a whole. This figure is lower than the peak-year cash receipts in 1948 of 31 billion dollars, but three times higher than pre-war cash receipts in 1938 of 8 billion dollars.

(2) To reach this goal, support prices would be fixed on individual products. To arrive at the support price for a given product, assuming a farm-income goal of 26 billion dollars in 1950, 25 per cent would be added to its 10-year average price in 1940-1949.

(3) For products which can be stored, such as wheat, corn, wool, and cotton, farmers would sell their products to the government if market prices were not up to the support level, and the government would hold the product in storage, much the same as under the present program. For perishable products, such as fruits, vegetables, meats, milk, and eggs, farmers would sell their product in the market in the regular way, and if market prices fell below the support level, farmers would receive a government check for the difference. For an individual farmer the government check would be based on the average market price received by all farmers, and not vary according to the particular price each farmer received.

(4) Farmers would not be eligible for price supports if they did not comply with requirements for

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New farm program

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acreage restriction and other limitations on output which might be established. Neither would they be eligible if they failed to carry out certain specified soil conservation practices. For any products on which quotas for individual producers were not established (probably fluid milk, meat animals, poultry, and eggs), large farms would receive support only on part of their production; on dairy farms, the price support would not extend beyond 20 cans daily per farm.

These four points cover the new farm plan in brief. In the remainder of the article, comments are designed to indicate wherein the plan conforms with, or departs from, suggestions made in the past, and possible modifications of the plan.

The Farm Goal

The first point in the new plan, the setting up of a goal for annual farm income, appears to be desirable. There may be some question of whether the initial goal, a $26 billion farm income in 1950, is the optimum amount, or whether the index of prices paid by farmers, which has been chosen as the formula factor to adjust the goal from year to year, is the best possible "mover," but the principle of establishing an income goal each year appears to be desirable. It should be recognized, however, that we also need to maintain a stable over-all economy in the United States. To do this, the first need is to define the goal in specific terms. The writers of this article are of the opinion that it would be desirable for the government to guarantee that the wholesale commodity price index, using the present as a base, be kept between say 90 and 110 for the indefinite future. This could be done through changes in monetary and fiscal policy from time to time, allowing individual prices to fluctuate freely, but so adjusting tax rates, money supply, interest rates on government debt, etc. that booms and busts would be prevented. A new National Monetary Council, as suggested recently by the Hoover Commission, could adjust national monetary and fiscal policy to reach this over-all goal, or it could be done by any of several other different ways. If the whole economy is maintained on a stable level, if reasonable farm income goals are set, and if a few other modifications as outlined below are made, it appears to the writers of this article that the suggested method of establishing income goals has considerable merit and could be operated without undue cost to the taxpayers.

The question may also be raised as to whether support prices on individual products are desirable to reach whatever goal is set. Government payments, if necessary to achieve the minimum set as the goal, could be made according to the value of farm products sold, less purchases of such major items as feed and livestock. If a goal of $26 billion farm income were set for 1950, and farmers' cash receipts were $27 billion, no government payments would be made. But if the cash farm income were only $25 billion, the $1 billion deficit would be made up by government checks to farmers at the rate of 4 per cent on the value of sales which were made in the preceding year. If an individual farmer had gross of $10,000 after allowing for purchases of feed and livestock, he would receive a check for $400. It would not matter at all what the $10,000 was received for—whether wheat, hogs, milk, or eggs. Administratively, the plan could be operated in a simple manner by basing payments on sales as reported on federal income tax returns. This change would be a marked variation from the proposed plan, but probably would receive support from the majority of agricultural economists as being a decided improvement. The elimination of support prices for individual products would avoid the problems of marketing quotas, acreage allotments, etc. resulting from the relative prices of agricultural products being out of line.

Some may object to the direct-payment feature of the new farm plan—the fact that farmers will receive checks directly from the government to the extent necessary to achieve the income goal which is established. To the writers of this article it appears, however, that such payments have a great advantage in their directness. Just as there is merit in direct taxes in that the payer more fully recognizes the cost of government, there is merit in receiving government payments in a way recognizable as such rather than disguised in the form of loans through bankers, pegging market prices, and other indirect subsidies.

Basis of Payment

If the new farm plan is not changed so as to base payments, if required, on the value of sales off farms rather than setting up support prices by individual products there appear to be important advantages to use the production-payment plan proposed for perishables for storable farm products as well. For all farm products, then, consumers would pay only the market price, whatever that might be, with the government paying the difference if the average selling price for all farmers fell below the support standard. This change would prevent the piling up and wastage of storable products which, to the authors of this article, appear inevitable under the plan exactly as proposed. Northeastern dairy and poultry farmers who buy large quantities of feed from the Middle West also have a special interest in changing the support procedure for grain to the same as for perishables so that they will have the benefit of cheap feed in years of bumper crops.

If the change were made to payments based on sales value regardless of what particular products were sold, or if the proposed new plan were modified to extend the payment method suggested for perishables to storables, it appears to the writers that it would be possible and desirable to operate the program without the use of any production restrictions—acreage allotments, individual farm marketing quotas, limits to payments based on size of farm, tie-in with soil conservation requirements, and the like. The proposed production restrictions appear to the writers to be the worst feature of the new farm plan recommended by Secretary Brannan. Modifications so that such restrictions are unnecessary are highly desirable. And either of the two ways mentioned at the beginning of this paragraph would help to accomplish the objective of eliminating the need for any and all quotas, acreage allotments, etc.

Changes In Plan Desirable

Let us look for a moment at the question of whether the new farm plan will allocate resources most efficiently as between agriculture and non-agricultural occupations. Whether it will or not depends in large part on the level of national farm income chosen as the goal. If the goal is on the high side, giving agriculture a higher percentage of the total national income than it has obtained in recent years, too large a share of our resources will be used in agriculture. But if the goal gives agriculture only as high a percentage of the national income as in the recent past, and is adjusted downward if payments under the program exceed a certain specified percentage of farm income from regular marketing, little difficulty would be expected in resource allocation as between agriculture and industry.

Any farm program which bases payments on sales does not meet the problem of those who do not produce a large enough volume to make a good income at any price. And there are several hundred thousand small farmers in the United States who are on the economic borderline, not far from the self-sufficient type of inefficient operation which gives them enough to subsist and little more. To give these farmers sufficient income through a price program would mean prices so high that too many resources would be attracted into agriculture, and would wreck the program. For farms on the economic border-line, assistance to move to other areas and fields of work should be given through other programs specifically designed to accomplish this end.

As among agricultural products, there is danger that under the new farm plan exactly as proposed, there will be resources used for the production of commodities which are wasted, never reaching consumers, resulting from setting prices of individual products out of line in relation to other farm products. Extending the payment method recommended or perishables to storables would lessen or eliminate this danger. Similarly, the danger would not exist if payments were based on the value of sales rather than establishing support levels for individual products.

Probable Strengths

One of the chief merits of the new farm plan compared with the present program is that for perishable farm products consumers get the benefit of low retail prices. The objection to the present program illustrated with potatoes —that consumers pay twice, a high retail price plus the taxes to buy excess

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Vocational agriculture rides high

C. S. ANDERSON, Teacher Education, Pennsylvania State College

C. S. Anderson

VOCATIONAL agriculture as an integral part of our secondary school rides *high, wide,* and *handsome* across the nation, if we accept the word of the boys who study it. Dads, too, watching their sons develop honest-to-goodness farming programs under the guidance and able leadership of teachers of vocational agriculture are loud in their praises.

Yes, according to a self-styled poll which I recently conducted as I drove about the United States visiting with high school boys and their dads, vocational agriculture really rates. No longer do we need to explain what it is, why every progressive rural community high school should offer a course in agriculture, and why it may cost a trifle more than some other studies in the curriculum. This spade work for vocational agriculture is a thing of the past.

The trip referred to was a sabbatical leave from my teaching duties. To some extent it was a health seeking venture. Mrs. Anderson and I had no appointments, no commitments, and no actual destination. We had an abundance of time and we spent much of it talking and visiting with farm folks. It took us five months to travel 10,000 miles and cross eighteen states. Just to make sure we were severed as completely as possible from old lines of duty, we only made arrangements to pick up our mail four times during the five months; at Tucson, Arizona; Palm Springs, California; Oakland, California; Eugene, Oregon; and Dixon, Illinois. We seldom stayed over night in a town larger than the one we call home, State College, Pennsylvania.

Before departing on the trip I formulated a few stock questions about vocational agriculture, about boys' farming programs, and even included one or two questions about teachers. Then I went out of my way to find folks who could answer the questions. My doctor approved the idea. His parting admonition was to take it easy, and I guess he knew if I was hanging over a fence talking to farmers and their sons I was not likely to drive too far or too fast that day.

You may wonder how I broke the conversational ice with farmers and their sons who were complete strangers. It is not hard to do. I carried a camera over my shoulder and could always make the excuse that I had stopped for a picture. I could always be lost. Mrs. Anderson says that if I had been lost half as often as I pretended I was we would not be home yet. Most farm boys like to render assistance, give directions and road information, and be generally helpful to strangers. They like to answer inquiries about their farm crops, their livestock, or the farm machinery they happen to be using. They like to have their pictures taken. Most of them will talk freely about their school. I kept my questions simple and slightly on the dumb order, and above all I tried to be a good listener.

Upon completing an interview I lost no time getting back to my car where I made a record in a notebook carried in the glove compartment for that purpose. Between the covers of that little black book I have fifty-six recorded cases, each one a frank, honest testimonial in support of vocational agriculture and for the men who teach it. There is not a sour case in the entire lot.

It was spring and summer. It seemed to us that everywhere we went teen-age farm boys were driving tractors, cultivating corn, operating combines, baling hay, filling silos, riding the range, or were engaged in one of a score of other activities of seedtime and harvest.

Enter into conversation with farmers and their sons across the country and you will soon learn the high regard they hold for Vocational Agriculture, now an integral part of the instruction in most progressive rural community high schools.

One of my best leads was the trail of F.F.A. wind blazers, T-shirts, and F.F.A. insignia that now extends from coast to coast. It is a pretty safe assumption that a boy in an F.F.A. shirt will have the answers to questions about vocational agriculture.

I avoided asking state supervisors of vocational agriculture or teacher trainers for the names of boys whom I should interview. I was afraid they might send me to American Farmers, State Farmers, and boys with contest-winning farming programs. I wanted to make my own random sampling, to take just the run-of-mine farm boys as I followed my road maps from state to state.

In Illinois I stopped to photograph a silo filling operation. Soon I learned that five boys working on the job were students of vocational agriculture and Future Farmers. Our conversation got off to a good start and before long they were all trying to talk at once, telling me of their work in school, shouting the praises of a top-rating teacher and describing farming programs that made my head swim. When I inquired what they intended to do with the 200 tons of alfalfa silage they were making, one of the boys pointed to 20 Hereford steers grazing in a nearby meadow, and remarked, "Dad and I almost topped the Chicago market on a load of poorer ones last year. This time we are really going to hit the jackpot." And quite by accident I found that I had discovered one of the finest father and son partnerships that has ever come to my attention.

A 75-year old sheep baron in central Utah introduced me to his grandson adding this comment, "Man, when I see the opportunities my grandson, Steve, has, I figure I was born fifty years too soon. He goes to a wonderful high school and has the privilege of studying farming with a fine teacher like Mr. X. I had to get mine the hard way." We were remaining over night in the town and Steve asked if he could not stop around the next morning and take me to the ranch to see the sheep. As we drove over thousands of acres with thousands of grazing sheep, I decided the old man had not done so badly himself, even the hard way. Young Steve will have an increasing interest and responsibility in the ranch, the confidence of an understanding grandfather, and the guiding hand of a teacher. It makes me wonder what he may be saying about his opportunities as compared with those of his grandson fifty years from now.

A young farmer in Ohio got down from his tractor and came over to speak to me. He had been a State Farmer and active in F.F.A. affairs until a few years ago when he was

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Farmer Classes

J. N. WEISS — MARK NICHOLS

Something special in adult education

JOHN E. EASTWOOD, Head, Dairying and Animal Husbandry Department
Essex County Agricultural School, Hathorne, Massachusetts

ESSEX County Agricultural School provides for adult education by giving the adults what they want when they need it most, for the good of their farming, processing or marketing enterprises.

Essex County Agricultural School develops adult education on the part-time individual problem basis and, as a result, adults get the information they want, when they need it most. All instruction is centered on individual problems and all instruction points toward the solution of that particular problem. Each student has a highly developed motive to get a solution to his problem. In fact, the solution to his problem eventually means a better income and a more efficiently operated business.

Charges Made

One of the best mediums of instruction is through the school's special services offered to the farmers. These services may be furnished at cost or given free. It has been my observation that people are inclined to put more value on results that they pay for rather than for things they get free.

Here in Essex County we offer farmers many special services such as examination of bull semen, microscopic examination of milk, bacteria count of milk, butterfat testing of milk, cream and dairy products, laboratory tests for mastitis, physical and flavor defects in milk and soil testing.

These services or similar services form the basis of adults bringing their problems to the school for individual instruction. The results of laboratory tests or examination will inform the farmer where his trouble may be located. The farmer will then in turn look to the school in order that he may learn how to cope with the problem.

A few examples will show how the special services given to the farmer through our *dairy service laboratory* develops into a very effective force for improved farming.

A farmer in a nearby town came into the laboratory and informed us that the Board of Health was going to shut off his milk because of high bacteria count. This farmer had 60 cows and the loss of his market even for a few days would run into considerable money. We went to his farm and made a complete check of his milk from the cows to the dealers plant. We then notified the Board of Health what we were doing and made an arrangement with them to allow the milk to go to the dealer for one week. In the meantime, as the result of bacteria plate counts, we found that the source of the farmer's trouble was dirty milking machines and poor cooling. So we went to the farm and gave a demonstration on proper procedure for cleaning milking machines, including the cleaning of the pipe line and we also had the farmer put the refrigerator into first class shape. Three days later we again made a complete check of the milk from the cows to the milk dealer and found the milk to be of very high quality. At this point, we asked the Board of Health to check with us. After this was done, the Inspector telephoned us that everything was satisfactory. A check again a month later indicated that the instruction the farmer received was still effective and he had learned his lesson on the importance of *quality milk control*. At our suggestion the farmer is now sending a sample of his milk to the laboratory every two weeks to keep tabs on the quality of his milk continuously.

Cooperation With Other Agencies

Another example in adult education are the services that we render in connection with the drawing of and examination of bull semen. A farmer in the northern part of the county who owned a well bred bull was on the verge of disposing of this animal, because of his failure to get cows with calf. The farmer was very much discouraged and was about to dispose of the animal when I convinced him that he should have a microscopic examination of the bull semen. We drew the semen at the farm and made the microscopic examination. We found the semen in excellent condition; there was a high concentration of sperms showing a high rate of motility. The farmer became very much interested in the procedure and as a result a rather lengthy discussion followed on the whole problem of breeding.

We also examined the cows and found several with bad cases of vaginitis. Instruction was given as to how to cope with this situation with the recommendation that he consult his veterinarian for complete instructions. The farmer and the veterinarian worked out a complete control program. As a result of our program in adult education, the farmer has had success in breeding several of his troublesome cows. The above program again shows the importance of using cooperative services in developing effective adult education.

In looking over our reports, we find still another good example of how basic services aid in the development of adult education. In late winter, we had several farmers come to us with off-flavor milk. We traced this off-flavor to an oxidized condition of the milk. General observation and experiments show that oxidized flavor in milk is tied in with the feeding problem. We pointed out to our farmers that this flavor is usually caused by low Vitamin A content in the feed fed to cows at that time of the year. Therefore, we gave the farmers the instruction in proper feeding methods pointing out that those feeds high in green matter should be fed in abundance in late winter to prevent oxidized flavor

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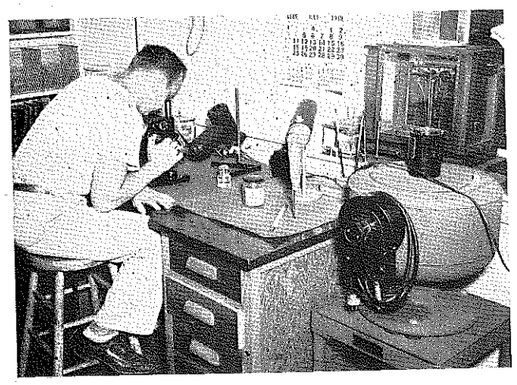
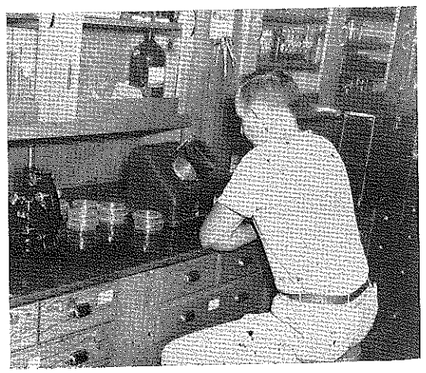


Adult student examines semen.



Checking for mastitis.

Hitting the bullseye with adult farmers

H. P. ERWIN, Teacher, Mattoon, Illinois

"FARM profits mean progress for every one." We all agree to that, but how can vocational agriculture lead farmers over the hump from group discussion of general practices to the actual DOING of applicable management practices which will bring increased profits?

The writer has been "holding" adult evening classes with varying degrees of success since 1932. Attendance in most years has been quite gratifying. Farmers have attended consistently, but what about those management practices that were actually adapted and put into use on individual farms? What were the results? Why have farmers attending actually used so few of the ideas discussed in the meetings, or did they try many of them without our knowledge? Favorable answers to such questions would be stimulating to any teacher working with adults. We believe our program will bring increased farm profits to those farmers enrolled and also give us the answers to questions raised above.

Program is Specific

Our program is simple. Farmers are enrolled for a period of 3-5 years during which we agree to help the individual develop a management program for his farm. Basic data for such a program consists of mapping the farm, appraisal of all factors affecting the productivity and use of the land such as soil type, drainage, erosion, field arrangement, fences, adaptation of farm buildings, farming equipment, livestock on the farm, weeds, physical condition of the soil, crop yield records including pastures, available plant food supplies (as shown by soil tests), and the total amount of fertilizer and lime needed field by field to bring the land to full productive capacity. Such appraisal is used as the basis for reorganization and development of a program for the farm. It is worked out by the farmer, step by step with such individual instruction as is necessary at the farm. Simultaneously with the appraisal, the farmer begins some of the obviously needed improvements such as drainage improvements, establishing erosion control practices (most of the land is relatively flat black land but destructive sheet and gully erosion is present on many of the farms), fertilizer applications (following soil tests), pasture improvements, more effective weed control and many others as plans are developed.

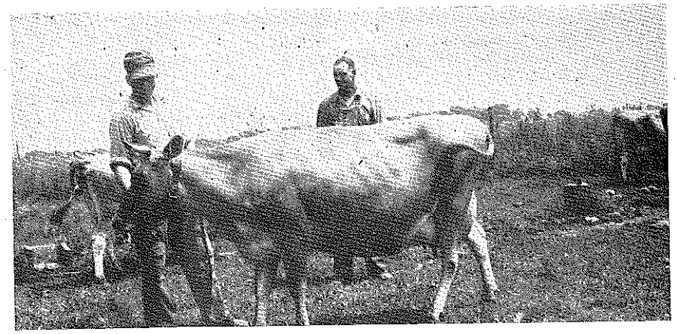
Preferred procedure on individual instruction to implement the program is an appointment with the individual farmer at his home where a plat of the farm is made to the standard scale of 8 inches to the mile. In so far as possible, this plat will show all field and lot outlines, gullies, fences, roadways, high and low ground, and other major physical factors such as growing crops, pasture and wooded land and the like. The plat is first used to locate all soil test stations. Each test station is then numbered and a paper bag numbered to correspond. A few soil samples are then taken to show the farmer how to locate the stations on the field and how to do a good job of soil sampling. The next major call (this may require two calls) at the farm comes after the soil samples for the entire farm have been tested and the results are ready to spread on the field maps. The purpose of this second call is to help the farmer draw three maps for each major field (the scale for each 40 acre field is now doubled, or 4 inches per mile) and spreads the test. Also it will be necessary to walk over some of the fields in order to identify soil types and check physical conditions which will be helpful in making interpretation of fertilizer needs as shown by soil tests. During this second visit a written record of previous soil treatment, crops grown and yields harvested the past four years is made. With this information at hand, application rates and total fertilizer needs are determined and recorded on the page beneath the map, one page each for lime, phosphate and potash. Standard good quality typing paper is used. Paper should be punched so it can be inserted in an ordinary report cover which costs about 25 cents. The above process is carried out for each field until the entire farm is completed after which the total fertilizer needs are summarized in terms of tons of lime, phosphate and potash needed for the farm.

The third major call at the farm should deal with completing the appraisal of other major factors affecting management of the farm. An outline is used on which the farmer is encouraged to record in a simple clear statement answers to such questions as: "Is additional tiling needed? Are present fences adequate? How much manure is produced and spread on the land each year? How much of the land is subject to sheet erosion and on which fields? Completion of this part of the appraisal requires ingenuity and good judgment on the part of the instructor. All of the appraisal is best done at the farm.

When the appraisal is completed, it is time to start planning improvements. If the member is a tenant operator, a visit should be made to the landlord where possible farm practices and improvements will be discussed. Following such conference, desirable plans are written up which tell in simple words what should and can be done. Here is where real instruction begins. Into such a planned program should go written plans for making the improvements indicated by the appraisal, such as soil treatment, cropping system, erosion con-

(Continued on Page 106)

Father and son discuss rotation pastures for their 360 acre farm as it affects their farm plan.



Mr. Cole, President of Farm Management Association, and son Glen are planning to increase soil productivity with dairy cattle.

Advisory committee for adult education

ROY CHAFFINS, Teacher, Holton, Indiana

BEFORE an attempt is made to start an adult educational program there must be a felt need for such a program. This may be realized by making a farm survey and interpreting the findings to reveal community educational needs.

Once a positive decision is reached regarding the need for an adult educational program, an advisory committee becomes an essential element.

An advisory committee should be chosen by the teacher and the board of education.

There should be enough members on an advisory committee to bring out a variety of viewpoints; yet not so many as to cause the progress of plans to become bogged down in discussion. A desirable number of members to have on an advisory committee may vary from three to nine. An odd number will eliminate ties when voting.

As to the individual to choose for an advisory committeeman, consideration should be given to his standing as a citizen in the community. The people in the community should have confidence in him and there should be a general feeling that he is a good neighbor.

The ages of the committeemen probably should have a rather wide range. The more youthful members usually bring out new ideas, while the wisdom of older members prevents hasty action on a radical proposal.

It would perhaps be wise to have more than one religion and more than one political party represented on the committee.

Early in the organization of an advisory committee some system of tenure should be devised. In most cases the entire committee, by the end of the fourth year, should be composed of new members; unless re-elected by popular vote of the committeemen and the board of education.

The committee members should be rather uniformly dispersed over the area from which the school draws its pupils.

An advisory committee for an adult educational program should be an alert and functioning element of that program. Any instructor having a committee serving merely as "yes man" would do well to cause a change to be made—election and more forceful members.

The instructor and the advisory committee should be held equally responsible for the type of service rendered. The instructor who uses his advisory committee primarily as a shield against public criticism is guilty of a great injustice to his community.

The instructor, working with the committee, should develop a course of study based upon units and covering the educational needs of that specific community. The instructor should never attempt to develop a course of study without the aid of his advisors. The members on this committee represent many years of living in that community and they possess some excellent ideas regarding their educational needs.

The school administrators, advisory committee and the instructor should work together in making such decisions as the place to meet, time to meet and necessary facilities for teaching.

Regular meetings are desirable only so long as there is some definite business to consider. It often happens that committee members lose interest if they feel there is little or no cause for a meeting. These men who serve on the committee are usually busy people. They have many chores to do at home and attend church and take part in numerous clubs. Since, in most instances, committee members receive no monetary recompense for their services it would seem advisable to call meetings only as necessity demands.

Hitting the bullseye with adult farmers

(Continued from Page 105)

trol plans, the livestock system, field rearrangement, fence and building improvements and others. If the member is not already keeping satisfactory farm accounts they should be started for obvious reasons.

Our membership in this program at the present time consists of 25 men from 20 farms. Their ages vary from 18-60 years. Some are owner-operators, some tenant-operators, one is landlord only, three are former all-day students, three are former self-employed veteran class trainees, and all except one have been in some phase of our department program before. Farms operated vary in size from 160 to 400 acres, five of which are operated strictly as grain farms and the others grain-livestock. Fourteen of the farms have completed the appraisal or are well under way. Improvements based on at least partial appraisal are under way on all the farms. Among such improvements are soil treatment applications based on needs determined by test, improvement and more effective use, of pastures, grass waterways and other erosion control practices, improvements in livestock management, farm accounts started, size of the farm business increased, and in at least one or two cases, landlord cooperation appears improved.

Group meetings are held as needed. Most meetings are planned for the winter months, with a minimum of ten such meetings for the year. Group instruction is largely left to the instructor who is to use his experience at the members' farms in selecting or recommending group instruction topics. However, special meetings can be called by the chairman to consider problems of immediate special interest. One such special meeting was called to consider chemical weed control methods and equipment. Certainly some group instruction will deal with what can be done with facts developed in the appraisals. Individual instruction at the farm is planned on the basis of 25 hours per farm annually, including travel time.

Membership is limited to twenty farms at the present time but it is expected that another group of up to twenty farms will be organized this fall. The present group was quick to see the advantages. Private agencies charge 75 cents to a dollar per acre for services covering the planning stage of the program. Thus the farmer can get the instruction needed and develop his own program, saving $120.00 to $300.00. Likewise, he often saves two to five times that amount in soil treatment materials by making applications according to needs, besides getting increased crop yields as a result of proper soil treatment and management.

Our program at Mattoon at present is based on the concept that approximately half of one instructor's time will be devoted to adult class work. Besides the above outlined program, we will continue to operate the traditional type classes in "farm management," and "farm equipment repair and construction." These latter classes will meet weekly during the winter months, 20-36 hours of group instruction per section, and will be open to any farmer who is interested. Enrollment in the farm management sections will continue to be limited to 20 out-of-school people and shop sections to 15. A small laboratory fee is charged in all cases to help cover the cost of instructional materials.

Obviously it is too early to see how many errors are being made in our procedure. We are certain the program has possibilities in this community and that when carried out will give some answers to questions raised at the beginning of this discussion.

A former veteran trainee exhibits the results of improved practice followed in corn production on the farm which he works.

Swine for farming programs

CONRAD WHITE, Research Assistant, Michigan State College

Conrad White

SWINE production is centered on farms that produce a large amount of corn, which is economical to use in feeding hogs. Farms, that produce an abundance of concentrated feeds such as small grains and forage crops, provide a place for hogs. Dairy by-products have long been highly regarded as a feed by hog raisers; this makes hog production a very profitable enterprise on a lot of dairy farms. The farmer, who is feeding beef cattle, usually finds it profitable to have hogs following the cattle. Assuming that the type of farming on the home farm is conducive to the production of swine, there are some very important factors which tend to make the swine enterprise rank high when the selection of the kinds of projects is being considered.

Brief mention will be made of the objectives of the supervised farming programs. First to be considered is to provide experiences that aid in the development of abilities needed for proficiency in farming. The boys should not merely have the knowledge about hog production but in addition should be able to apply that knowledge in order to improve the hog production on their home farms.

The supervised farming should provide a means for the boys to earn some money. Hog production provides an excellent opportunity. The fat hogs may be marketed within 9 or 10 months after the sow has been bred. Also, there is an opportunity to have an income twice a year by operating on the two-litter-per-year system.

The supervised farming program should be an aid in becoming established in farming. The students of vocational agriculture most likely to farm are those who have better than the average farming programs. By acquiring a good herd of swine, not necessarily a large herd, and the establishment of a father and son partnership, the boy in vocational agriculture will be well on the road toward becoming a farmer.

A good supervised farming program helps to improve the home farm business. If the boy conducts some improvement projects in swine, such as developing a swine-health program, the swine business on the home farm may be improved.

The farming in the community can be improved by good supervised farming programs of the students in vocational agriculture. If the boys in a department have some outstanding hog projects in their farming programs, their dads and neighbors will see these hogs and will try to improve their own herds.

Swine production in the boys' supervised farming programs can be an aid in the improvement of the living conditions on the home farms of the boys. One example of this would be the killing, curing and storing of the meat supply for the families of the boys.

Supervised farming helps to increase the interest in farming. If the boy does an outstanding job with his sow and litter, he feels as if he has made an accomplishment. This helps to improve the father-and-son relationships, if the "boy's pigs" don't become "dad's hogs."

If the boys in a department purchase a good registered boar to be used cooperatively, the swine enterprise in the farming programs aids in developing spirit of cooperation among the boys.

Types of Swine Projects

In the sow and litter project the boy owns and manages the sow or sows during the periods of gestation and lactation and the pigs during the periods of growing, fattening and marketing. The normal cycle of pork production covers the period from selecting the foundation stock to marketing of offspring.

The common methods of securing foundation stock for the sow and litter project are: buying a gilt at weaning time and weighing 35-40 pounds, buying an open sow or gilt and buying a bred sow or gilt. The cost of a bred sow or gilt will probably be greater than the cost of an open sow or gilt. However, a bred sow or gilt should be bought if the service of a good boar is not available on the home farm or nearby.

In the feeder pig project, the pigs are purchased at weaning time, when they will weigh 35 to 40 pounds, and fed to a desirable marketable weight and finish.

Next to be considered are some reasons why hogs fit into the supervised farming programs. The hog is the most efficient converter of farm grains, into meat, of all farm animals. Between 400-500 pounds of grain will produce 100 pounds of pork live-weight. This compares favorably 500-700 pounds of grain required for 100 pounds of beef and 500-600 pounds of grain for 100 pounds of mutton, live-weight.

As has been previously mentioned, the returns from swine come rapidly. The pigs can be marketed within 5-6 months after farrowing or about 10 months after the sow has been bred. This is very appealing to the boys, who are anxious to be making some money as soon as possible. The production cycle is completed during the school year.

Some of the boys don't have very much money to invest in foundation stock and equipment. One good gilt or sow will not cost as much as one good dairy cow or beef cow, which would be the minimum number of animals for any project. The sow doesn't require as much housing space or pasture as the cow. In starting their supervised farming programs, some of the boys might be handicapped because of a lack of housing and pasture space.

The roughage and pasture requirement for hogs is very small compared with other livestock. This is of importance to the boy who is on a small farm or one who is on a large farm where cash grain is the main source of income.

While the student of vocational agriculture is in high school, he is frequently handicapped for ample time to care for the livestock in his supervised farming programs. Since hogs are adapted to self-feeding, the amount of man labor is rather low. This factor is very important to the boy who is trying to do good work in school and at the same time have a good supervised farming program.

The hog cycle is from 3 to 5 years as contrasted to 5 to 7 years for sheep and 14 to 16 years for beef cattle. This is beneficial to the boys, who are yet in high school, in adjusting their production programs.

More pork and pork products are consumed in the U. S. than any other meat. In 1940, the per capita consumption of pork and lard was 87 pounds, beef and veal 62 pounds, and lamb and mutton 7 pounds. The Future Farmer, who is producing pork, is producing meat that has a stable demand.

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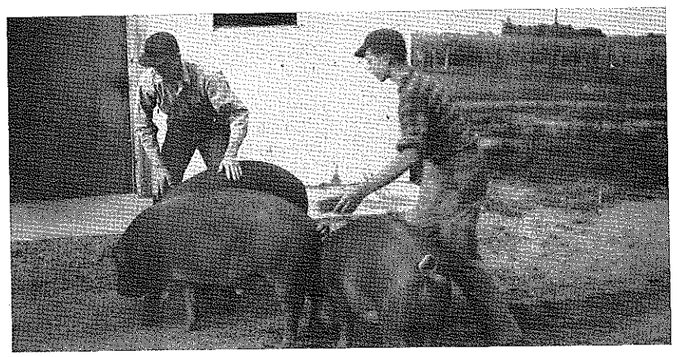


A partnership project; brothers are getting their pen-of-three ready for a fat barrow show, Williamston, Michigan.

Swine for farming programs

(Continued from Page 107)

Hogs are efficient converters of farm by-products into meat. This is very important to the boy, who is trying to lower his cost of production. The hog adapts itself to other kinds of livestock. If the boy has a dairy cow project, the skim milk can be fed to the pigs very profitably. If he has a fattening beef cattle project, it is profitable to have pigs following the steers.

Goals of Productive Efficiency

1. Number of pigs per litter, 8. The maintenance cost per year of the sow that produces 6 pigs or less per litter is practically as much as it is for the sow that produces 8 or more pigs per litter. The 2 or 3 extra pigs per litter might mean the difference between profit and loss. Pigs from the larger litter will usually weigh as much at weaning time as the pigs from small litters.

2. Average weight of pigs at 56 days, 35 to 40 pounds. This is a very good weight for pigs at weaning time from the consideration of rate of gain, economy of gain and desirable weight to begin feeding the pigs for growth before fattening.

3. Average litter weight at 56 days, 280 to 320 pounds. The achieving of goals 1 and 2 will result in this goal being achieved. However, it is important for the boys to think in terms of litter weights as well as of the weight per pig in the litter.

4. Number of days required to develop for market, 180. The hogs that require longer than 180 days to reach a marketable age are usually the result of being a poor type, of improper feeding or of poor management practices or of a combination of these three factors. If the hogs are ready for market at 180 days, it is possible for the boy to have a cash income within 9 to 10 months from the time the sow is bred.

5. Averaged amount of pork per sow at 6 months, 2,000 pounds. Here again the type of hogs being raised and the feeding and management practices used will determine to a certain extent whether this goal can be reached. If the sow had only 8 pigs and the market was the highest for 225 pound hogs, the desired litter weight would be 1,800 pounds at market time.

6. Amount of feed consumed per pound of pork produced, 4 pounds. Increased production is desired but economical production helps to increase net earning on the project. In producing pork economically the student is learning better methods of pork production.

Creating interest in farming programs* — Part I

LLOYD J. PHIPPS, Teacher Education, Illinois

Lloyd J. Phipps

TEACHERS of vocational agriculture, administrators, boards of education, and parents have recognized the importance of learning by doing provided in supervised farming programs. Generally, however, teachers have ignored this recognition in their classroom teaching by not basing their teaching on the problems which these programs provide.

Many arguments are presented by teachers for not basing more of their instruction on supervised farming programs. One of the most common arguments is that their boys' programs are so narrow that it would be impossible to base a very large portion of their teaching on these programs. This argument is partially valid and indicates the need for developing interest in and broadening supervised farming programs. Broad farming programs provide problems for use in classroom discussions which are real, interesting, and challenging because they arise out of the pupils experiences.

The Situation

Our records of farming programs of high school boys show evidence that many boys in Illinois have only one project and for more than three-fourths of these pupils this is a livestock project. Swine in Illinois is the most important type of livestock project and is growing in importance. The number of crop projects in Illinois per hundred boys is only approximately one-half as great as in 1926-27 and their number is decreasing. Fruit projects have almost disappeared. The number of vegetable projects per hundred boys is less than one-half as great as in 1926-27. Many boys report no improvement projects and some no supplementary practices.

The above figures show that if our goal is to provide farming programs which offer maximum opportunities for learning, we can conclude that the farming programs should be broadened so that experiences that will train for farming can be received.

If farming programs are the means used in facilitating the development of desired abilities, they become of fundamental importance. Likewise, if they are to provide worthwhile experiences of a variety and type which will provide training in necessary farm abilities, they must be broad, growing programs.

The perennial problem of teachers is how to develop interest in farming programs so that their teaching can be made more meaningful.

Information from Questionnaire

To obtain information on the procedures which teachers have found successful in motivating supervised farming programs, a questionnaire was sent to 337 Illinois teachers of vocational agriculture of whom 84.5% returned completed forms. These instructors were asked to rate the importance of each promotional and motivational item included in their program as far as high school pupils were concerned. The rating scheme used was: (1) very important; (2) above average in importance; (3) average importance; and (4) some importance.

It is evident from a study of the survey summary in Table I that most instructors make use of a large number of procedures in encouraging the development of broad farming programs. A comparison of Table I and II (see pages 109 and 119 for tables) shows that the rank of a procedure based on its use does not correspond highly with its rank based in its value rating. If through this study and independent studies by instructors the more valuable procedures can be determined and elimination of the less valuable procedures stimulated, considerable of a teacher's effort and time may be saved which he then may expend on other phases of a total program of vocational agriculture.

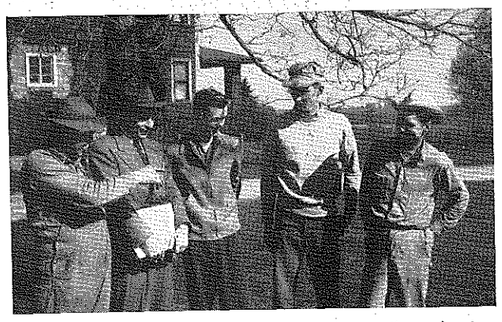
The *discussion of opportunities for profit* was used by practically all instructors (97.5%) and ranked first in value. *Judging contest* were participated in by 86.6 per cent of the departments and were second in frequency of use, but they were ranked 18th in value. Since boys enjoy participating in judging contests, contests probably will not be discontinued; but these results seem to indicate a need for studies of possible revisions which would make them more valuable educationally.

The *discussion of state requirements for a supervised farming program* was followed by a large percentage of instructors (85.9) but ranked 22nd in value. This ranking indicates that some of the other procedures, used by fewer teachers but ranking higher in value, might profitably be substituted for the above procedure. The argument against using discussion of state requirements for supervised farming programs is that the minimum requirements of the state too often become the maximum.

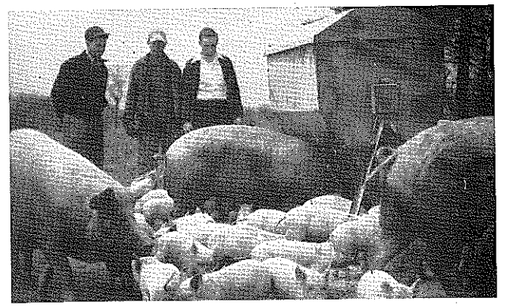
*Based on a research project concerned with the trends and procedures in supervised farming programs in Illinois. A more complete report may be found in University of Illinois Bulletin Vol. 46, No. 63—"Supervised Farming Programs in Illinois."

Farming Programs

C. L. ANGERER



Supervised farming programs require cooperative planning. Morris, Illinois.



A father-son partnership project at Ohio, Illinois. Photos from G. P. Deyoe.

Newspaper publicity was used by 77.5 per cent of the instructors, but its value rating varied from one to four and its final rank was thirty among thirty-seven items. Many instructors felt that newspaper publicity regarding pupils' farming programs wes necessary and valuable, but that a voluminous amount may produce little additional motivation for better farming programs over and above what is obtained from a moderate news coverage and that a voluminous amount may even be detrimental.

Imitation, maintaining the tradition of a department, and *understanding what constitues a good farming program* are evidently important in motivating vocational agriculture pupils as shown by the high value rating received by such procedures as (1) discussion of accomplishment of other boys, and (2) use of older boys to discuss their farming programs with beginners.

Fifty-nine per cent of the instructors indicated that they conducted community fairs or local Future Farmers of America fairs. Some instructors evidently confused a local Future Farmers of America fair with the sectional Future Farmers of America fair because it is doubtful that so large a percentage of departments have local fairs. Local fairs were given a higher rating than other fairs although both received a relatively high value rating. This study seems to indicate a need for increased attention to the possibilities of local shows.

TABLE I.—Activities for Promoting and Motivating Supervised Farming Programs Used By 285 Instructors of Vocational Agriculture in Illinois.

Activity	Number of Instructors Using Procedure	Percentage
1. Discussion of opportunities for profit from farming programs	278	97.5
2. Discussion of opportunities for learning in connection with farming programs	267	93.6
3. Showing at fairs	266	93.0
4. Field trips and tours	265	92.9
5. Discussions of how farming programs help one become a farmer	263	92.0
6. Participation in judging contests	247	86.6
7. Discussion of accomplishments of other boys	246	86.0
8. Discussion of state requirements for supervised farming programs	245	85.9
9. Newspaper publicity	221	77.5
10. Grading of record books	218	76.4
11. Display of pictures of projects	207	72.6
12. Survey of needs and facilities of home farm	198	69.4
13. Banquets	198	69.4
14. Encouragement of 4-H	194	68.0
15. Use of older boys to discuss their farming programs with beginners	188	65.8
16. Extra school credit for projects	183	64.0
17. Percentage of grade based on a boy's farming program	172	60.3
18. Local community or Future Farmers of America fair	168	58.9
19. Adult and part-time classes	163	57.0
20. Farm shop activities	161	56.4
21. Advancement within Future Farmers of America	148	51.9
22. Establishment of department or Future Farmers of America program goals	147	51.5
23. Visiting elementary pupils	134	47.0
24. Use of point systems, awards, and activity charts	118	41.4
25. Acting as local 4-H leader	111	38.9
26. Retaining vocational agriculture graduates in Future Farmers of America	109	38.0
27. Project marker	103	36.0
28. Use of radio	99	34.7
29. Egg, milk, and other records placed on chart of blackboard	91	31.9
30. Cooperation between department and elementary schools	77	27.0
31. Exhibit of record books	76	26.6
32. Planned visiting of farming programs by farmers, parents, and business men	68	23.8
33. Department or Future Farmers of America newsletter	65	22.8
34. Summer Future Farmers of America program with eighth graders	64	22.0
35. Assembly programs	55	19.0
36. Subsidiary Future Farmers of America organizations	50	17.5
37. Auction sale of surplus products from farming programs	42	14.7

Farm shop activities, although checked on only 56.4 per cent of the surveys returned, ranked seventh in value. If those rating farm shop activities were correct in their estimation of its value, the supervised farming programs in the state should improve as more farm shops are provided. Farm shop activities may affect farming programs by increasing interest in vocational agriculture and by providing the pupil with an opportunity to construct needed equipment with which to carry on and develop his farming program.

Adult and part-time classes are usually not considered by instructors as a means of motivating farming programs, but those instructors conducting adult and part-time classes rated them above average in importance, and they received a value rank of twenty-three in a list of thirty-seven procedures which were designed specifically for promoting farming programs.

Advancement within the Future Farmers of America was rated by the instructors participating in this study as the most valuable aspect of the Future Farmers of America for promoting farming programs. *Subsidiary Future Farmers of America organizations for soil savings, cow testing, and swine herd improvement,* were present in only 17.5 per cent of the departments returning surveys, and the instructors in these departments indicated that these subsidiary organizations were very valuable. The results of this study seem to indicate that subsidiary Future Farmers of America organizations might profitably be given more attention in many departments of vocational agriculture.

Point system, awards, and activity charts were used by less than half of the instructors, but received a relatively high value rating. One of the possible reasons for the small number of instructors using point systems, awards, and activity charts may be the large amount of record keeping which is necessary to successfully carry them out. Including point systems, awards and activity charts in the same item made the item difficult to analyze as shown by the follow-up interviews of selected instructors. Some of the instructors interviewed were highly in favor of awards but critical of point systems and vice versa.

The instructors who criticized point systems and awards, stated that they were usually not based on educational objectives. Both the survey and the interviews seemed to indicate that awards, point systems and activity charts may be worth consideration if (1) the instructor is careful to establish a system which bases measurement on educational objectives, and (2) the instructor is able to delegate most of the responsibility for records and measurements to the pupils.

The instructor of vocational agriculture, as shown by this survey, acted as a *leader of a 4-H club* in 38.9 per cent of the departments, and the instructors acting as leaders rated the leading of 4-H Clubs in 36th place among 37 methods of promoting farming programs. *Encouragement of 4-H*

(Continued on Page 119)

Hawaii Staff

CHARLES W. LUM, Secretary Hawaii Agricultural Teacher's Association

AS of July 1, two top supervisory positions in the Territory of Hawaii, Department of Public Instruction, were filled by former teachers of vocational agriculture. Upon the retirement of William W. Beers, W. H. Coulter was promoted from the position of Director of Agricultural Education to Deputy Superintendent for Vocational Education. Clarence R. Ferdun succeeded Mr. Coulter. Both men possess wide and varied teaching, vocational and administrative experiences.

W. H. Coulter

Born and raised on a farm, Mr. Coulter's educational attainments include a B.S. Degree and M.S. Degree from the University of Missouri. In 1929, he began his teaching career in Missouri. Later, he journeyed to Hawaii and taught in several departments there. During 1939-40, Mr. Coulter was appointed as principal and teacher-trainer at Poyer School, Pago Pago, Samoa, and in 1940-41, he was Superintendent of School for Samoa. He then returned to Hawaii and assumed positions of successively greater responsibility and importance—supervisor of interne teachers at the University of Hawaii, assistant supervisor of agricultural education, director of the occupational information and guidance service, director of agricultural education, and now, the position of deputy superintendent for vocational education.

The newly-appointed director of agricultural education, Clarence R. Ferdun, also grew up on a farm. He holds a B.S. Degree from Oregon State College and M.S. Degree from the University of Hawaii. For seven years, he played a highly constructive role in Hawaii as a teacher of vocational agriculture. His merits won for him the appointment to the position of interne teacher trainer at the University of Hawaii. He taught agricultural education courses and conducted foremanship classes attended by top supervisory staff members from sugar and pineapple plantations.

Tribute to W. W. Beers

At this time, it is appropriate to mention the attainments of William W. Beers, the retired Deputy Superintendent for Vocational Education. Mr. Beers was among Hawaii's first teachers of vocational agriculture. He became the director of agricultural education in 1927 and was appointed deputy superintendent in 1945. Through Mr. Beers' enthusiasm and untiring efforts, agricultural education in Hawaii was permanently established and assumed a prominent place in the Territory's educational scheme. Ill health forced Mr. Beers to retire.

Future Farmers of America

H. N. HANSUCKER

Stock at school—a cooperative project

HAROLD J. PRITCHARD, Supervisor, Mississippi

ONE of the teacher's most valuable teaching aids—and one which is in many cases lacking—is the cooperative project carried on right at the school. We might say that it serves as a "proving laboratory" for at least some of the methods that are taught in the classroom.

The Farmhaven F.F.A. chapter has been able to increase interest in the cooperative project activity by combining it with the fund-raising program. In fact, the cooperative project idea at Farmhaven resulted from the chapter's desire to make money with which to finance a tour.

In 1946 the boys bought three pigs to be fed out and sold by the chapter. This in itself proved to be a good "lesson" since it served to point out the importance of having plenty of feed on hand before obtaining the pigs. But the enterprising lads got around this immediate problem by donating corn from their own projects to the chapter.

The following year, however, they were prepared. By securing additional ground from the school, they were able to expand their project to produce enough corn for the fattening ration. The teacher exercised close supervision of all the work but encouraged the chapter members to make all decisions.

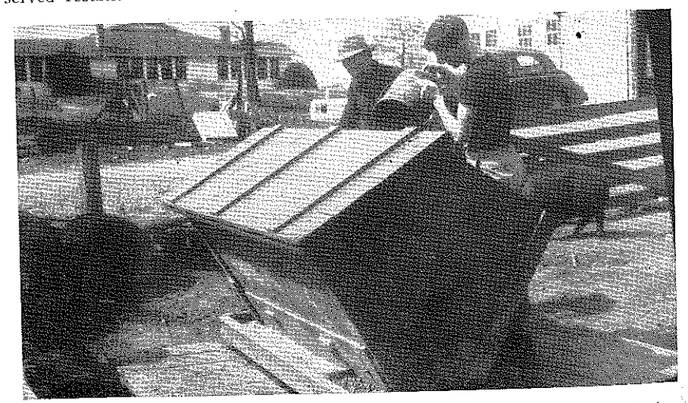
This resulted in a wealth of teaching opportunities. Decisions had to be made relating to sanitation, vaccination, housing, rations and methods of feeding. The corn project was particularly fortunate since it came at a time when the state's 100-bushel per acre program was receiving its greatest emphasis. Students learned in the classroom, went out and did the job, then later observed results.

The project reached its maximum in teaching effectiveness during the past school term. All labor, of course, was being contributed by chapter members. But they began questioning the necessity for expending the labor and energy then required. Here was the opportunity for the teacher to bring the subject of "work simplification" into the project.

During the first two years the chapter had used a small self-feeder and water container, both of which required daily attention. These were discarded and replaced with a 30-bushel self-feeder, that also held 300 pounds of supplement, and an automatic waterer made from a 30-gallon oil drum. Both labor-saving devices were constructed by the students as a part of the farm shop course. The boys now fill the feed bin once a week and replenish the water only every third day.

The instructive value of the project was further enhanced by conducting a little "experiment" in connection with it. From the 10 pigs that were fed last year one was placed in an adjoining lot and fed by hand—corn twice a day, salt every few days and no supplement. The other nine were given free access to the big self-feeder which was kept filled with yellow corn, a 40 per cent protein and mineral supplement and salt.

After 20 weeks of feeding, the self-fed hogs averaged 260 pounds each while the hand-fed animal weighed only 110 pounds, or a difference of 150 pounds. Accurate records on the project showed that the larger hogs brought an average net return of $29.95 above cost of feed, compared to $4.00 for the one that was fed by hand.



J. C. Cauthen, Farmhaven Chapter Adviser, guides chapter's pig feeding project.

F.F.A. members offer proof of the effectiveness of instruction given them in livestock selection and management. Pictures are of Oklahoma F.F.A. members. Courtesy of Tom Daniels.

Cover photo

TOMMY WOODS, 14, got a Canadian heifer and she has already calved. Pictured on the cover is Tommy with his heifer and his new Jersey calf. He is just a freshman in school, but has already sold a lot of whole milk.

About a year ago, Weleetka, Oklahoma businessmen decided to aid the farmers of their community in emphasizing an improved dairy cattle program. The idea generally was prompted by a gradual decline in watermelon production in the agricultural area.

Leaders in the movement are confident that a program of this type will more nearly balance the farm program of the community.

After much serious thought on the part of the businessmen, they decided upon the approach—get some good dairy cattle and put them into the hands of the Weleetka Future Farmers of America.

Howard Williams, instructor of vocational agriculture, was given the "go sign." He went to Canada and purchased eleven cows and a bull. When the animals arrived, members of the local F.F.A. chapter drew numbers from a hat to decide who would get them. The lucky boys took the fine animals home to start feeding them out and getting them ready for production. The Jerseys had a wonderful record behind them. Their butterfat record showed 450 to 800 pounds each. They were all registered animals costing $200 to $300 apiece.

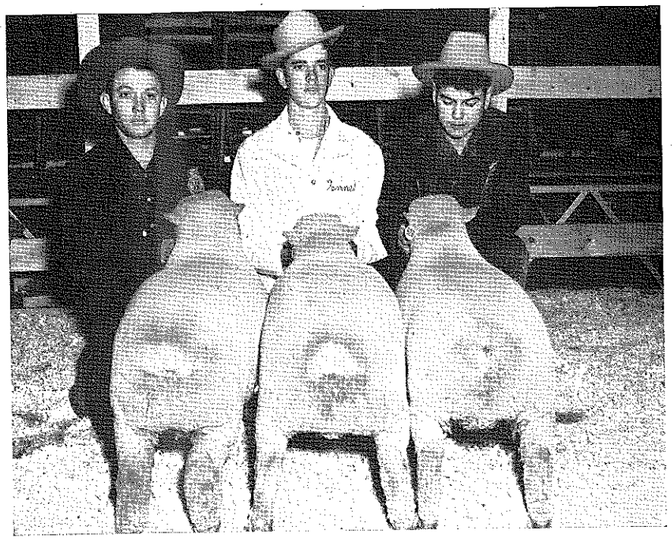
That's where the businessmen came in. That kind of money is hard for a growing boy to rake up, so the men furnished the money, and a plan which wouldn't be giving the boys too much and, at the same time, would be furnishing that extra boost that makes for good farm programs where they're tried.

The boys have three years to pay back the money or give offspring to their sponsors worth as much as the cow which was given them.

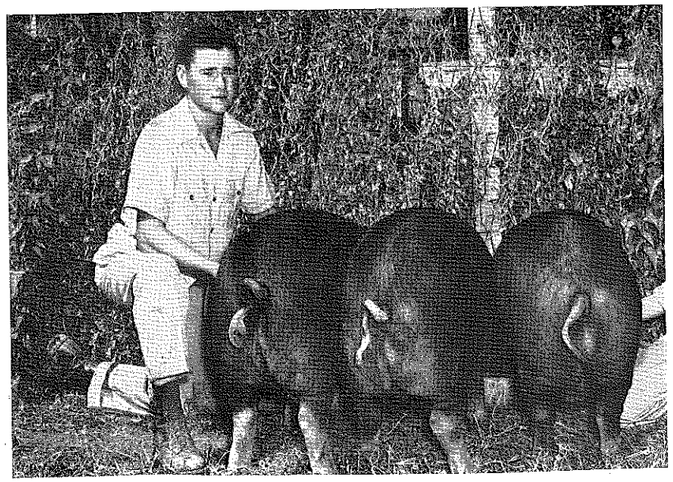
The program has grown appreciably since it was inaugurated. Several of the cows have calved and are in production. After a year of it, the businessmen are as enthusiastic about the deal as ever. The boys are happy about it and the Weleetka community is getting more and more fine Jersey cattle from the seed stock brought in a year ago.

TOM DANIELS
Executive Secretary
Oklahoma F.F.A. Association

Claude Millwee, Fort Cobb, Oklahoma F.F.A., and grand champion steer.



Kenneth Privet, Sayre, Oklahoma F.F.A., center, and his first place light pen of 3 lambs.



Bobby Scott, Carnegie, Oklahoma F.F.A., and reserve champion pen of barrows.

Methods and Materials

W. A. SMITH

Visual aids program

C. E. RICHARD, Teacher Education, Virginia Polytech Institute, Blacksburg, Virginia

MOST of the types of visual aids used today have been known and used for many years. The many improvements in photography and in devices for projecting pictures or printed material, together with the wide use of visual aids during the war, have stimulated an increased use of them in education.

Use Real Object

Regardless of this, I am sure we will all agree that the best visual aids for use by any teacher are actual specimens. We should not lose sight of this fact in spite of the emphasis being placed on other types. That was impressed on me when I was a student during my practice teaching days. It is true that one can see more when he sees an actual potato than looking at a picture of one. There are, of course, some exceptions to this basic principle. For example, a diagram of an internal combustion engine of a tractor, may have more teaching value than the tractor itself with respect to certain phases of construction and operation.

The job of securing actual specimens is largely the job of the local teachers and we as teacher-trainers and supervisors can do little about this except direct and encourage them in this effort. We can, however, do a great deal in preparing and supplying teachers with other types of visual aids. I am much more optimistic now than I was two or more years ago when it became evident that more emphasis should be placed on the use of visual aids and when we started to do something about it.

Locating Available Materials

Our first step in this direction was to prepare mimeographed lists of available teaching materials consisting of books, teaching aids, charts, pictures and specimens, film strips and 16 mm. films. After preparing these lists of needed and available teaching materials, our next step was that of preparing supplementary materials. This brought up two problems that needed to be solved before we could advance further. They were, first, to determine what teachers needed most and in what form and second, what equipment would be needed by them in order to use the material prepared. At this point, we gained much from trial and error. After trying various types of visual aids and methods of providing and presenting them there were two types that seemed to stand out as most promising. They were color slides, and material for use in the opaque projector. We have chosen these two types of visual aids because our experience seems to show that they are of greatest value to the teacher of agriculture. These materials are better adapted to the teaching of specific points, can be generally accessible at the time needed, and can be catalogued and stored without too much work. As a result of this selection, each school was provided with a projector for 2" x 2" slides and strip films and an opaque projector.

This is what we have done in securing 2" x 2" slides. Our first move was to contact other departments of the Agricultural College and the Chilean Nitrate of Soda Educational Bureau. It was surprising to us to find out how many people have good color slides they will let us use for the asking. They even seem anxious to have us use them and have spent hours showing them to us and explaining them. Specialists in technical departments have proved a most important source. Some of the sources of 2" x 2" slides that we have used are as follows: Men at the college in the Experiment Station, Extension Division and teaching faculty, Soil Survey Service, T.V.A., and commercial concerns. To a lesser extent we have secured slides from supervisors and teachers and have made some ourselves. Teachers themselves are improving in their ability to get good pictures. Many of these pictures are suitable for duplication on a state-wide basis.

When the slides have been selected, they are sent away for duplication. We are having enough duplicated for each department to have a set, for teacher training use, and for the supervisory staff. At the present time we have had 267 slides duplicated and sent to teachers. One set is sent to a department for use by all of the teachers in that department. Additional slides will be prepared and sent to teachers to be added to these sets as they become available.

Supplying Teachers

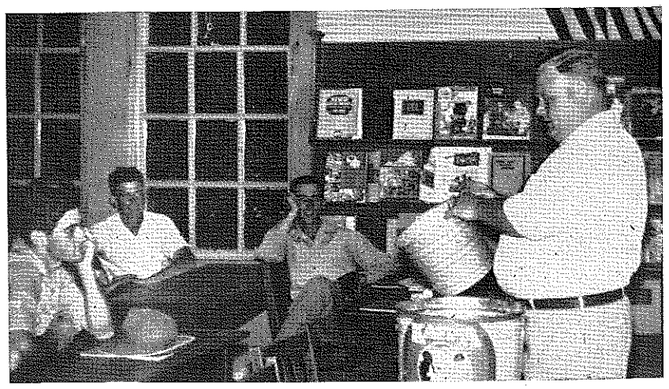
By the end of this school year we will have duplicated and sent to each teacher who has organized a veterans' class a total of 480 slides.

When these slides are sent to teachers, it is important that a rather detailed syllabus be prepared and sent with them to insure their proper and maximum use. The person who took the picture is the one who should write the "story behind the picture." So far each person from whom we have secured slides has been willing to write this description. These have been mimeographed and sent with each set of slides.

Small metal slide boxes were purchased in which the slides were arranged by enterprises and by teaching units before sending to the teachers.

The type of material that we have prepared and sent to teachers for use in the opaque projector includes mimeographed factual data, a set of colored pictures showing plant food deficiencies in crops secured from the Chilean Nitrate of Soda Educational Bureau, and reproduced black and white Kodak pictures. Cuts were made from Kodak pictures and duplicated on paper suitable for use in opaque projector. We have found that where color is not needed this type of picture is very effective and inexpensive. The cost was 1.5 cents per print. Colored prints are much more expensive. During the last year we have sent to our teachers 112 pieces of factual data and picture sheets for opaque projector use. Some of these picture sheets were in color. Each month we set up a goal as to the kind and amount of material to prepare and send to teachers.

Experience has shown that opaque projection is difficult unless this type of material is properly mounted. Teachers are urged to paste them on a good quality cardboard or binders that will not warp with heat and moisture and then place in the file boxes. Commercially this is known as Binders Board Number 20.



Actual specimens constitute good visual aid and should be utilized freely. J. W. Strickler, Jr. in Riner, Virginia is following this practice with his class of veterans.

In addition to the material sent out from our department, many valuable visual aids suitable for teaching agriculture can be collected by the teacher. A wealth of material to use in the opaque projector can be found in the form of actual specimens (mounted on heavy paper), picture sheets sent out by commercial firms, pictures, diagrams, charts, and tables printed in bulletins and farm magazines, and photos taken by the teacher.

Local Organization and use of Materials

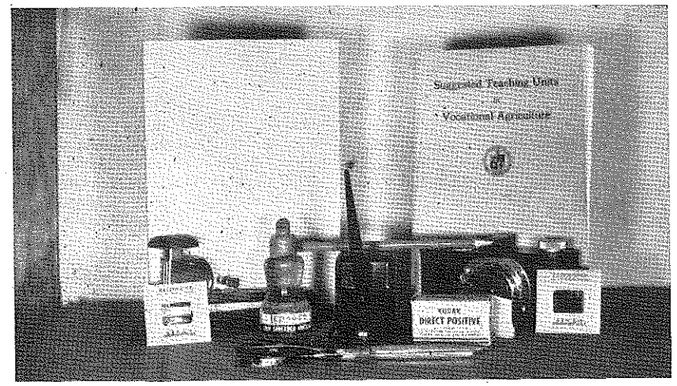
In order for this material to be of maximum use to the teachers in a department it must be classified, numbered, listed, mounted, and filed. Any convenient system of cataloging and filing visual aids will have the same symbol for an enterprise, the job under that enterprise, regardless of whether the piece of visual aid is to be used in an opaque projector, a 2" x 2" slide projector, or a film strip projector. With this principle in mind we have set up a standard system to be used throughout the state. We have a printed bulletin entitled "Suggested Teaching Units in Vocational Agriculture" in the hands of each teacher. In this bulletin are listed all of the enterprises and practically every job or teaching unit under each enterprise that will be taught by any teacher in the state. The enterprises are indicated by Roman numerals and the jobs are indicated by Arabic numerals. As an example, Roman numeral I indicates corn and Arabic numeral 1 under corn indicates the job "Determining the Acreage"; Arabic numeral 2 indicates "Selecting the Land," and so on. All of the material that is sent out by our department and all material prepared by the teacher in his department is numbered by the same system. All teachers are urged to make a master list of all visual aids. This should be arranged by enterprises and should have the filing number of each piece of visual material clearly indicated. We suggest that this be kept in a loose leaf note book, having a thumb index for enterprises so that additions can easily be made. When a teacher is planning his lesson he should consult this master list to determine what visual aids are available to illustrate the specific job he wishes to teach. The filing numbers will help to find the specific visual aid quickly and easily.

What are some of the difficulties encountered in using visual aids? You, in other states, may not be having any problems, but we cannot say that in Virginia. Some of the problems we have observed throughout the State are as follows:

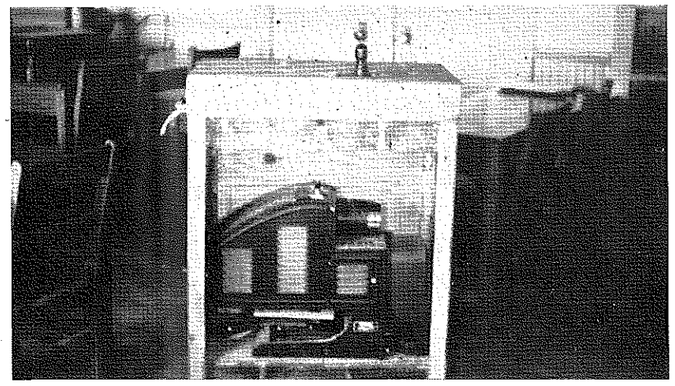
1. Good material is frequently hard for teachers to get. Consequently, much poor material is too often used or none is used at all.

2. The teacher has not given careful thought to the techniques in its use and therefore does not get the full benefit of the good material he has on hand.

3. It usually takes more time to prepare a lesson when visual aids are used, and teachers are not aways willing to devote the necessary time.



Equipment is necessary to properly prepare and label visual aids material for opaque projector and slide projector.



Storage space and stand for the opaque projector.

4. Caring for equipment and keeping it in good operating condition is tedious, time-consuming, and sometimes expensive.

5. Some of the equipment is mechanically defective. This discourages its use.

6. The problem of making rooms sufficiently dark in the daytime and providing ventilation when projection equipment is being used has not been satisfactorily solved.

Teachers are asking many questions regarding the use of visual aids. This, of course, is a healthy situation. Three of the most important questions seem to be; first, what kind should I use?; second, when should I introduce it in the lesson?; and third, how much time should be devoted to its use? These questions are difficult to answer specifically unless one is familiar with the situation. However, there are certain principles and practices that should be observed in the use of any visual aids.

Some of the important ones are as follows:

1. Keep in mind the objectives of the lesson in selecting visual aids. Use only material that will contribute to those objectives more efficiently than anything else.

2. Use only visual aids that can be readily and easily understood.

3. Preview all visual aids before using. Avoid showing any visual aids until you are certain as to the story it tells. Make a list of questions covering points to be emphasized.

4. Visual aids showing local conditions are preferred to others.

5. Avoid the use of too much material. Learning by seeing is effective but there is a limit to the amount that one may see and retain in the class period.

6. Try to make the mechanics of presentation as perfect as possible.

7. Introduce visual aids at the point in the lesson where they will be most effective to illustrate a practice or a point. Indicate in the lesson plan the place where each piece of visual aids is to be introduced.

8. Give the learners an opportunity to make their own interpretations and draw their own conclusions as to the significance of the material presented. This may require much questioning and some discussion. It will certainly require more time but usually it is time well spent.

Despite the growth of recreation in rural areas, both in attitude and actual activity, the opportunities and facilities for recreation available to rural people are still far behind those available to urban people.

Success with local planning

A. E. KITCHENS, Teacher, Screven, Georgia

WHEN I was employed the first of April, 1947, as a teacher of agriculture in the Screven high school I was "fresh off the campus" of the University of Gerogia, and in a community which had been without vocational agriculture for several years. Having been raised in a different section of the state I realized that I would need help in planning and carrying on an adequate and well-rounded program of agricultural education.

At a meeting of the local trustees I explained my situation: we needed a group of farmers representing each farming type who would act as an advisory council. The council was needed in planning a program in order that the program of work in agricultural education would meet the needs and desires of the community. The board unanimously approved the idea and together we appointed an advisory council consisting of one member from the board of education, one member from the local trustees, an advisory council consisting of one member from the local trustees, an officer from the farm bureau, the principal of the Screven high school and a successful leading farmer from each of the communities in the Screven school district. These twelve men were selected so as to have a good representation of the various types of farming. A share-cropper, a large land owner, a young veteran, and an experienced farmer were appointed. They were selected for their leadership and public-mindedness in their various communities. They also were not too busy to serve in an advisory capacity to the local program in agricultural education.

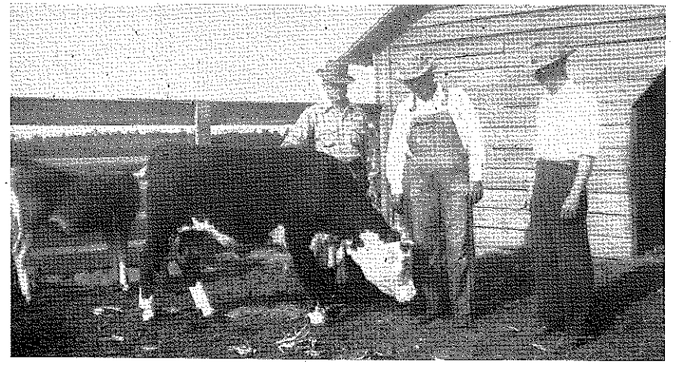
Orienting Members

After the members had been selected the principal and I contacted each one and informed him that he had been chosen to serve in an advisory capacity to the program of agricultural education representing the community in which he lived. The fact was emphasized that each member would actually help plan and carry on the program in order that the needs of the community would be fulfilled. Each member was assured that he would be relieved after the first meeting if he were not convinced that the program in agricultural education in the Screven high school would meet a definite need in the community and that their services would be a great help to the program as well as the communities which they represented. All of the members orginally appointed are still serving.

At the first meeting of the council we spent a brief time explaining the job to be done, stressing the point that any enterprise or undertaking had to meet the desires and needs of the people to survive. Examples used were: If a grocery man doesn't sell the kind of groceries that the people want and need he soon goes out of business, or if a barber doesn't give the types of haircuts that people want the customers will soon stop coming. The same thing is true of a program in agricultural education. Unless a program was planned and developed that the people needed and wanted, agricultural education would soon be dropped from the school. The fact that they represented the people of the school community and were acquainted with the needs and desires of the people helped to insure a well planned program which would meet the needs of the people of the area.

A pre-planned procedure was followed in leading the group to plan the local program of agricultural education. To get the members of the group into the problem of planning, they were led to examine and discuss the following types of data: population trends for Wayne County and Screven; principal occupations of people in Screven; population mobility among white persons of Screven school district; a summary of the farming types of Wayne County, showing what the average yields were and what the better farmers' yields were; and the amount of formal education of the rural men of Wayne County over 25 years of age.

There were three aspects of the planning done by the advisory council in the first few weeks of our working together. Namely, planning the program for in-school boys, planning the program for adult farmers, and providing, maintaining and utilizing the facilities needed.



Advisory Council gives sound advice to aid in developing the local program.

After the members of the group had discussed somewhat thoroughly each of these three aspects of the program in light of what the members thought the program ought to be, and after they had become familiar with the laws and policies governing a program of agricultural education, four carefully selected schools were visited and their programs and facilities were studied. This additional information and the ideas obtained on these visits were used in evolving an initial program of agricultural education in our community.

I have found an advisory council to be helpful in the following ways:

1. Helping plan a program of work in agricultural education which meets the needs and desires of the community.
2. Assisting me in carrying out the program plans.
3. Serving as representatives of their communities to explain the program to their people, securing their aid and support.
4. Serving as listening posts to detect weaknesses that are appearing in our program.
5. Being alert at all times to advise me on any problems that arise.
6. Establishing policies for maintaining the facilities of the department.

Some of the achievements which have been made that would have been impossible without the advisory council are as follows:

1. A county bond election for $260,000 was held February, 1948. Screven's proposed share of the bond issue was to have been $75,000. This was to have been used for a vocational building. The bond issue was carried in the Screven school district by a vote of two to one but failed in all the other precincts, thus failing county wide. If it had not been for the support of the 12 men on my advisory council it would have been defeated in Screven.

2. The council has helped me over a few rough spots in getting the program continued on an even scale through changes from one school administration to another. At the same time it has helped to lead school administrators through participation in council affairs, to arrive at a better understanding of the program and, therefore, to become stronger supporters of it.

3. One of the members selected to serve on the council was not a supporter of any of the agricultural agencies. Now he is one of the most enthusiastic members of the council. He is president of the county farm bureau and a cooperator of the soil conservation service.

4. The council planned for us to hold a county wide fat steer show each year. The county agent, the other teacher of agriculture in the county and I met and made plans for such a show.

I have never taught without an advisory council and I hate to think of the predicament I would have been in had it not been for this one.

Visual teaching

D. R. McCLAY, Teacher Education, Pennsylvania State College

D. R. McClay

FIVE HUNDRED years before the birth of Christ, the Chinese philosopher, Confucious said, "A picture is worth 10,000 words." This statement is one of the important keys to good teaching. Confucious might have added to the above statement—"if the real thing or object is not available." During the past war—with young men away from home, I often heard conversations like, "Gee — — if I only had a picture of her — — you could see for yourself how pretty she is."

Yes, a picture is worth 10,000 words to the teacher of vocational agriculture too, when the real thing is not available. However, the good teacher will first attempt to conduct his class in an environment which includes the subject under discussion. This means a maximum of teaching should be done *out* of the classroom to be effective. I recently observed a new teacher of vocational agriculture attempting to teach a lesson on the various types of tree shapes—in the classroom. He did use the blackboard to illustrate certain points which was good. However, not once did he call the attention of the students to the trees growing on the school lawn—which they could see by looking out the window. I think this illustrates an important point to those of us in vocational education—which is education by doing. That is—we must be careful else our teaching will become artificial and not the real, vital-true-to-life kind of teaching that develops farm boys to their fullest capacities.

Phychologists have proved that approximately 80 per cent of all learning comes through the eyes of the student. Of course, the other senses are important in certain instances in learning some things, for example—the difference between the odor of gasoline and kerosene—here the sense of smell is the medium for best learning.

If we, therefore, accept as true that most learning comes through the use of ones eyes—then certain rules can be formed that the good teacher will obviously recognize as truths and will put into practice. Some of these rules are:

1. Show students the real object or thing under discussion—don't just talk about it.
2. "Seeing is believing"—let students see and find out for themselves.
3. Let them see, feel, taste, smell, etc. In other words—make use of all the senses in teaching. If you do —information is learned quicker, easier, and is retained longer.
4. Use demonstrations frequently in your teaching. Demonstrations are excellent for teaching manipulative skills—the how to do something, where coordination of mind and muscle is concerned.

Teachers of agriculture are fortunate in having, right outside the school door the greatest laboratory and classroom a teacher could ever hope for. Contrast this with the history teacher who must restore to text books and memory for the tools of his trade. The sooner the teacher recognizes this great natural laboratory and class environment—the sooner he really gets down to doing effective teaching.

Most teachers are familiar with the various types of visual aids available in varying degrees for their use in teaching. However, I would like to review the most commonly used visual aids and offer a few suggestions in their use.

1. *Real Objects or Specimens*

Make certain the object or specimen is truly representative of that which it is to represent. For example: A teacher who makes a collection of weeds in the summer months for use during the winter when such weeds are not available, should collect specimens that are typical—not the largest or smallest of the variety—but one which is similar to what is usually found. He should avoid collecting "sports" or freaks of nature—except where he plans to use such for creating interest in something else.

In addition to size, make certain the specimen is typical as to shape, color, and texture.

2. *Charts and Graphs*

Charts and graphs are important tools of the good teacher. Many commercial companies provide good charts on phases of agriculture in which the companies are interested. Sometimes these charts are usable—sometimes not. Teachers can often make a commercial chart more usable by wise use of the scissors and scotch tape. To make a good usable chart, the following suggestions are offered.

a. Use heavy 22" x 28" show card cardboard for chart making. This type of chart will stand rigid and is easily stored.
b. Use a speedball lettering pen and black India ink. With this equipment a novice is almost immediately an expert; then too it takes little time to make letters using a speedball pen.
c. Make each letter large enough to be seen by every member in the classroom.
d. Don't put too much on a chart.
e. Leave a good margin around the edges of the chart—approximately two inches.

3. *Moving Pictures*

a. Show the movie only when it relates directly to the subject being discussed. Don't allow movie films to collect until the first rainy day for screening. If the movie does not relate to the lesson—don't show it.
b. Preview every movie before showing.
c. In showing a movie, try the following procedures:

1. Set up the screen and the projector before the class starts.
2. Start the lesson in the usual way up to where the movie "fits in."
3. Announce the title of the movie and point out what the students should look for in the movie.
4. Show the movie. Don't hesitate to stop the movie—should the film be a lengthy one—to summarize and preview what is to come next.
5. Discuss what was seen in the movie.
6. Show the movie again—immediately after the discussion if time permits. This repetition of rescreening the film after a good discussion is effective teaching.
7. Have the room well ventilated.
8. The teacher should remain in the room while the movie is being screened.

4. *The Blackboard*

This familiar teaching aid is a "must" in every classroom. Teachers who have had to teach without blackboards because of certain circumstances — soon recognize their importance.

Following are a few points on the use of the blackboard:

a. Write a letter large enough so that all students can see it.
b. Write a letter plainly or legibly.
c. Develop drawings or sketches sufficiently to put over the point. Don't be too sketchy—neither try to make a "masterpiece"—which would consume a great amount of time.
d. Erase the material on the board as soon as the need for the material has been met. Since black boards are usually in the front of most classrooms, material left on the board when the discussion has passed on—serves only as a distraction to the student. (The writer recently observed a student teacher teach for two hours. During the full two hours, I found my attention being focused on a pupil's drawing of his impressions of the teacher's appearance—done during the noon hour—and located on the blackboard directly back of the teacher. Never once did this neophyte turn around and look at the blackboard. He displayed poor classroom "generalship." Teachers are supposed to develop as a second nature or to unconsciously recognize the characteristics of the room such as light, heat, seating arrangements and order.

In conclusion—when the real thing or object is available don't resort to a visual aid or a substitute. Don't try to teach in an artificial, make believe environment when with a little effort the class can be taught in a real situation. Confucius in saying, "A picture is worth 10,000 words," inferred there-in a greater hidden meaning for teachers. This hidden meaning is—show and demonstrate most—use a minimum of the lecture method in your teaching.

Cooperative Livestock feeding project

M. C. RALSTON, Teacher,
San Jose, California

COOPERATION, a hard-to-reach objective in many instances, is the life blood of the Abraham Lincoln F.F.A. Chapter of San Jose, California. Since its organization seven years ago, this urban high school chapter in a city of 90,000, faced typical problems in the attempt to fulfill project programs. Three years ago, however, a local stockyard furnished the solution to the problem by providing facilities for a cooperative livestock feeding program.

The record of results is revealing. One hundred and thirty head of hogs and thirty-four beef have been fitted out for livestock show and fairs as a result of sharing feed costs and labor requirements by the boys. Each boy's share of the total feed bill is proportionate to his animal's gain in relation to the total pounds gained in the cooperative. Chores are divided likewise, with each boy alternating by the day or week throughout the fitting periods. As many as three feed coops have run concurrently since animals of similar size gain most economically.

The Abraham Lincoln Chapter is consistent in its adherence to cooperative principles, not limiting its cooperation to the operation of its own enterprises but buying and financing through other cooperative organizations.

Although these boys were forced by conditions into cooperative feed practices, the habit is set and is there to stay. Cooperation and success are synonymous to the members of this San Jose Chapter.

The Abraham Lincoln school is one of three San Jose schools supervised by Lionel Cross, President of the National Agriculture Teachers Association.

Participation key to success

Division of Responsibilities in Y.F.A.

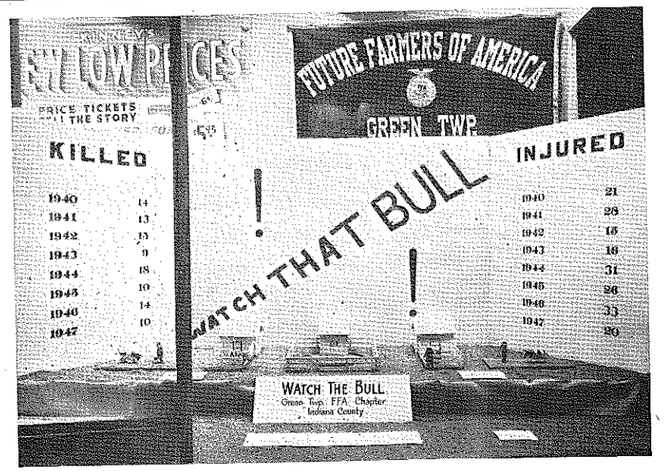
INTEREST IN THE Y.F.A. program is enhanced by democratic participation of the members. The success of such an organization depends upon its need in the community and the nature of its activities. A well selected constitution and by-laws are not enough to make and maintain a successful organization. It must have a program of work and some definite objectives upon which it operates. At the second annual Ohio Young Farmers' Conference held at Ohio State University, the delegates from the Ohio associations agreed that a division of responsibilities was a democratic way of developing leadership, and confidence in oneself.

Officers and committees suggested by the group were as follows: President, Vice-President, a separate Secretary and Treasurer in large organizations, a Reporter, and a Sergeant-at-Arms. It was recommended that an Executive Committee, consisting of three members elected for 6 months, three members elected for 12 months, and three members elected for 18 months, be elected by the members and that this Executive Committee meet with the officers in planning the program for the year, in securing the enrollment, and in generally being responsible for the organization.

The young men recommended that a Recreation Committee be appointed by the Executive Committee, the chairman on Athletics to be appointed for the season while the chairman for parties and dances be appointed monthly. They recommended that the chairmanship of the refreshment committee be changed so that all held the responsibility sometime during the year. They recommended that Project Committees be appointed as needed for such projects as Livestock Sales, Project Tours, Special Community Project, Cooperation with the F.F.A. in some activity, or Special Speaker committee. Eleven of the delegates favored setting up all committees at the time the program of work was made up, while 24 delegates favored setting up the committees as needed during the year.

Success of the program depends upon the participation of its members. Most of us as teachers of agriculture are very apt to try to carry the entire load of responsibility, and the credit for work done among our young farmers group. We might be criticized for being pushers instead of leaders. Let's give the young men a chance to show their ability; kindle their interests, and by all means visit them often at their place of business, namely the farm. They need and appreciate our help in the form of suggestions, development of plans, and the confidence we can help them develop in themselves. Don't forget these of tomorrow; let's help them by making them a definite part of the community.

Reported by John E. Everett, Discussion Leader In Summary of Second Annual Ohio Young Farmer Conference.



First place downtown vocational agriculture window display, during the 1949 Pennsylvania Farm Show. The Green Township F.F.A. Chapter had as their theme "Watch That Bull." C. L. Walker, teacher.

Out-of-School Rural Youth

E. W. Garris

I met a teen-age boy in my school area
One among a million such boys, and more,
Who live on a farm in our great country,
Out-of-school — never entering the door;
This boy was naughty, so local people said—
In fact, he was leader of Devil Gang,
Bringing terror at all public meetings,
Playing pranks on every woman and man.
He had left school while in the sixth grade,
Trouble with a teacher, the local legend ran;
He had vowed to be an enemy to teachers—
Giving each one of them his ban;
But an agricultural teacher saw him
Placing wiggly worms in a rusty can—
He received an invitation to go—
The teacher went—not for fish but a man.
Step by step the boy climbed from Greenhand
To the coveted American Farmer degree,
And the athletic hero of his school—
A faithful leader of other boys, you see;
The results were not because the boy was bad,
Nor from the influence of the Chapter clan—
It was the usual service of an ag teacher
Who was willing to put faith in a man.

—E. W. GARRIS, *University of Florida*

Vocational agriculture rides high

(Continued from Page 103)

graduated from high school. With the help of his dad and perhaps the local bank, he had recently purchased a run-down quarter section. In rapid succession he told me of his plans. In the renovated barn was a milking machine. A silo would be erected in time for the corn in the fall. Twenty-five high grade dairy cows were already coming into production. And, as we looked over the field he was cultivating, he said with an unusual degree of confidence, "Just give me two or three years and I can easily have this place producing 100 bushels of corn to the acre."

We drew up to a lunch stand along an Iowa roadside for a bite to eat. Parked not far away was a truck load of fat Poland China pigs, obviously headed for market. I soon met up with the young truck driver. The pigs were his. He had raised and fattened them as a part of a farming program that had developed and expanded over the six years since he entered high school and enrolled in vocational agriculture. Now he is an established farmer. He paused long enough to answer most of my questions, to tell me what great help and inspiration his teacher of agriculture had been to him,—and then off to market. Perhaps I shall never find out, but unless I miss my guess or just do not know my hogs they did not come far from topping the market the next morning in Omaha.

We witnessed a Wyoming Future Farmer swing a lariat and bring in a steer as skillfully as it is generally done in the best of rodeos. He was at home on the ranch and in the saddle and was a young cowboy of the first magnitude. His stories of "operation haylift" and the "blizzards of '49" made easy listening. Quite by accident we came across the lad with others a week later in one of Cheyenne's popular eating places and I visited with him again. He was just as much at home in a plushy cafe with a beautiful girl as I had found him the week before out on the range. I concluded that Wyoming F.F.A. boys could teach the rest of us a thing or two in versatility.

In the upper Imperial Valley of California a khaki-clad boy was laying the irrigation leads and preparing to water a field of beans. From his liquid dark eyes, black hair, and swarthy complexion I concluded that he had at least a dash of Indian or Mexican blood in his veins. We got on well, for when it comes to irrigation or beans I experience no difficulty in asking the dumb questions. The boy was graduated two years ago from a high school where he had studied vocational agriculture, but he had been truck farming more or less on his own for five years. Still only twenty, he had built a modest home, was married and had a son, and had recently purchased a used car, all accomplishments of which he was extremely proud. He was not the richest young man, I interviewed, but I believe he was the happiest. Even his sense of humor surprised and delighted me. When I remarked on how high the beans were for having been planted so recently, he smiled and added, "Yes sir, it is really true that out in this country we toss the seeds in the ground and then jump back in a hurry to keep from getting tangled up with the vines." This boy genuinely appreciates what the study of vocational agriculture has done for him.

Sorry there is not space to even mention the remaining fifty cases. If I were a candidate for an advanced degree I think I would request the degree-granting institution to permit me to submit the finding of this cross-country poll as a thesis. It would not be as profound or as scientific as many thesis I have read, but at least it would make stimulating reading. The findings would be a consolation and inspiration to workers in agricultural education everywhere.

Welcome home

H. C. Fetterolf

MR. H. C. Fetterolf, Chief of Vocational Education in Agriculture in Pennsylvania has returned from his second foreign assignment. He was given a 60-day leave of absence to act as Vocational Agriculture Adviser for the Military Government of the state of Wuerttemberg-Baden in the American Occupied Section of Germany. He assisted members of the educational staff of the German state in a study of German methods of teaching and German skills with a view to giving them an understanding of the vocational agriculture program in America. Particular emphasis was placed upon work with young farmer groups.

Mr. Fetterolf left for Europe on July 25, and was assigned headquarters in Stuttgart. Soon after his arrival, he was transferred to Munich where he worked with Dr. Bennett, President of Oklahoma A. and M. College, and Alton D. Hill who is in charge of vocational education in Bavaria.

New farm program

(Continued from Page 102)

potatoes which are wasted or spoil—is eliminated. Unless modified in one of the ways already suggested, wastage and spoilage will continue with storable products. If modifications are made, however, the cost to the public of the proposed plan will likely be less than the present program after giving consideration to the benefits consumers will receive through lower retail prices. This will hold true even though payments from the government probably will be greater under the proposed plan, modified as suggested, than under the present program.

Another important advantage of the new farm plan is that it fits in with free world trade better than the present program. Again, modification of the recommended method of price support for storable farm products is required to make the plan consistent with international welfare. If this is done, the changes made may be expected to contribute toward world peace, certainly a major objective of our time.

It has been pointed out that the new farm plan has certain important advantages over the present farm program, yet needs modification in several important respects in the opinion of the writers. In conclusion, it should be pointed out that perhaps we have not yet advanced far enough in political science to use wisely as much "Government" as is called for in the new farm plan. With the modifications suggested, the plan would give individual farmers more freedom in the business decisions they make than they would have under a continuation of the present program, and would guarantee that there would not be a general collapse in farm prices such as occurred in 1920-21, 1929-33, and 1937-40.

Something special in adult education

(Continued from Page 104)

from developing in the milk. These checks on off-flavor problems and their solutions offer excellent opportunity to review the whole feeding problem on the farm—adult education at its best.

Still another service that we offer the farmers is a mastitis control program.

At the request of farmers, samples of milk are taken from each quarter of each cow. These samples are taken in special sterile bottles using a sanitary procedure to insure that the samples will not be contaminated from outside sources. The samples are then sent to the school laboratory where a complete mastitis test check is made on each quarter. The results of the test are then discussed with the farmer and his veterinarian and a definite control program is finally agreed on. This program is usually carried out under the guidance and supervision of the instructor. This again offers a splendid opportunity to do some excellent adult teaching.

As a final example of how special services to the farmers may become a vital part of an adult educational program, let us consider the case of a milk dealer, who was having difficulty in giving satisfactory butterfat test as a result of improper sampling of milk from producers composite samples. The milk dealer came to the school laboratory and asked that we give a demonstration on proper sampling procedure. Instruction and a demonstration of sampling was given at the plant, followed by a series of check tests on the dealers' sampling method. When the dealers' butterfat test consistently checked with ours, we concluded that the lesson had been learned. As a result of this instruction, the dealer and producers were both satisfied.

The preceding examples indicate services which the school offers to the farmers as a basis for highly motivated adult educational program in agriculture.

Time used for professional activities

by West Virginia teachers of vocational agriculture

C. W. HILL, Teacher Education, West Virginia University

THE vocational agriculture program has expanded in the last fifteen to twenty years. The number of activities for the teachers has increased. The length of the working day has increased in the opinion of many teachers and according to investigations in other states. Many teachers have been faced with the problem of completing suggested phases of the program in the time they have available. The teachers who have given some thought to the vocational agriculture program question the effectiveness of their work because their time and energies were, in many instances, spread rather thin. Teachers raise the question as to whether or not they were taking on additional activities at the expense of effective teaching.

Some specific bits of evidence, cited to show that the job of the teacher has increased, follow. Previous to 1934-35 the average all-day enrollment per department of West Virginia was less than 23 pupils. During 1947-48 the average enrollment per department was 45 pupils. Thus, we see that the load of all-day pupils has increased. In addition to a larger all-day pupil load we find that teachers are encouraged to engage in the following activities which were non-existent or existed only to a limited degree in the state previous to 1928-30: (1) A very active F.F.A. Organization; (2) teaching young farmer classes; (3) teaching and/or supervising farm mechanics courses for out-of-school groups; (4) supervision of school canning plants by several of the teachers; (5) supervision of the Institutional On-Farm Training Program; (6) an enlarged program of teaching farm mechanics to all-day pupils.

In a general way, annual reports show the activities the teachers of vocational agriculture conducted during a given year. Yet, we did not actually know the amount of time given to the various activities, the relationship of time for the activities and the number of hours spent on the job per week. Many views had been expressed, but it seemed that concrete facts were needed. It was the combination of the above which prompted the study.

Purpose of Study

The purpose of the study was to determine the following items: (1) The professional activities which engage the time of teachers; (2) the amount and percentage of time given to professional activities by teachers on a weekly basis; (3) the total number of hours teachers of vocational agriculture work per week, and (4) the distribution of the professional time of teachers according to: (a) enrollment in all-day classes, (b) years of teaching experience, (c) type of program conducted by the teacher, and (d) number of minutes required to be at school per day for teaching and assigned duties.

Data were obtained from sixty-five teachers who kept a record at irregular intervals devoted to professional activities on a weekly basis for a total of nine weeks during 1947-48. These intervals consisted of three-week periods during the first semester, the second semester, and the summer. The time record for each week was kept only for these activities which were a part of the teacher's job. No attempt was made to study the effectiveness or the efficiency of the teacher's work. The data reported indicate only the actual practice of teachers.

Findings

Sixty-five teachers reported that they used a median of 54.2 hours per week for professional activities. They reported a fraction of an hour more per week for the summer than for the school months. Twelve and three-tenths per cent of the teachers worked 45 or less hours per week, 46.2 per cent worked 46-55 hours, and 41.5 per cent worked 56 or more hours per week.

Studies and Investigations

E. B. KNIGHT

TABLE 1. Percentage of Total Time* Used for Professional Activities by 65 Vocational Agriculture Teachers in West Virginia, 1947-48.

Activities	School year	Summer
Teaching all-day pupils Vocational Agriculture classes	34.7	—
Preparing to teach	6.4	—
F.F.A. activities	8.3	12.8
Pupil supervision	4.3	27.7
Teaching non-vocational agriculture classes, supervising study halls and directing home rooms	9.9	—
Teaching and/or supervising out-of-school groups**	6.9	13.1
Contributing activities—keeping department in operation condition, office work, conferences and promotional activities	11.0	23.1
Attending meetings	7.8	6.0
Professional study and improvement	4.2	6.7
Community and personal services	3.7	6.0
Miscellaneous activities	2.8	3.9

*Total time of all teachers divided into total time used by the teachers for the activity.

**Young Farmers, adult farmers, farm mechanics, school canneries and Institutional On-Farm Training.

Table 1 presents an over-all view indicating the parts of the vocational agriculture program which received the attention and time of the teachers. During the school year, of the total hours used by the teachers, approximately 54 per cent was directly associated with all-day pupils. Almost ten per cent was used to teach and supervise non-vocational classes and activities. Out-of-school groups (young farmer classes, adult farmer classes, farm mechanics courses, school canneries and Institutional On-Farm Training Program) received only 6.9 per cent of the teacher's time. During the summer the all-day pupils received 40.5 per cent of the teacher's time. Almost twice as much time (13.1%) was used during the summer months. More than twice as much time (23.3%) was given to contributing activities during the summer.

All-Day Enrollment and Time Used

One of the factors used in the analysis of the data was the all-day vocational agriculture enrollment which was divided into four groups as follows: (1) 16-30 pupils per teacher; (2) 31-45 pupils; (3) 46-60 pupils, and (4) 61-103 pupils. The teachers with the largest all-day enrollment had a median of 57.4 hours per week while the median for instructors with the smallest enrollment was 48.8 hours. This difference was greater during the summer months.

As the size of the enrollment group increased, the number of hours used in preparing for teaching all-day classes decreased. The teachers with 16-30 pupils gave more time per pupil for supervision on the farms than the teachers with larger enrollments, yet they used the last number of hours per week.

In the supervision of school canneries teachers in the smallest enrollment group used the most time. The men in the largest all-day enrollment group used the most time for supervising Institutional On-Farm Training.

Personal service to patrons in the school area was given twice as much time by teachers in the small enrollment group. As the size of the enrollment groups increased, the number of hours used for professional study decreased.

Teaching Experience and Time Used

A second factor used in the analysis of the data was the number of years of teaching experience in vocational agriculture which was divided as follows: (1) 1-2 years; (2) 3-7 years; (3) 8-14 years, and (4) 15-26 years.

The teachers with 1-2 years of experience used a median of 4.3 hours per week when preparing to instruct all-day pupils. Teachers with 3-7 years of experience used the least time for that purpose.

The teachers with the most experience reported the most time for supervising all-day pupils and their farming programs, and the teachers in the 1-2 year group spent the least time for the supervision of pupils.

The teachers in the 3-7 year group used by far the most time for F.F.A. activities during the summer. The 8-14 years group used the least.

Time used for the supervision of Institutional On-Farm Training decreased as the length of teaching experience increased.

The least experienced teachers used one-half as much time for community activities as the other teachers. For personal service activities the teachers with 8-14 years of experience used twice as much time as the 1-2 year group and the 15-26 year group used three times as many hours as the 1-2 year group.

The teachers with 1-2 and 15-26 years of experience used fifty per cent more time for professional study than the other teachers. As the years of experience became greater, instructors spent less time attending agricultural meetings.

Type of Program and Time Used

Another factor used to analyze the data was the type of program conducted by the teachers. There were 34 part-time teachers divided into four groups and 31 full-time teachers divided into three groups.

Full-time teachers with no out-of-school groups used a median of 51.7 total hours per week. Those with one out-of-school group used 55.1 hours per week and men with two or more out-of-school groups spent a weekly median of 59.5 hours.

The full-time teachers with two or more out-of-school groups used the most time to supervise school canning plants and Institutional On-Farm Training, to do office work, and to attend teachers' and agricultural meetings. They used the least time for preparing to teach all-day classes and assist the F.F.A. members outside regular school hours.

Recommendations

1. Teachers working an excessive number of total hours per week should evaluate the program in which they engage to determine those activities which are most essential and of the greatest educational value to the people of the school area. They should plan cooperatively a program which can be effectively conducted in the time available.

2. Additional vocational agriculture personnel should be employed in schools with a large all-day enrollment and adult educational programs for farmers. This will conserve teacher energy.

3. If the young and adult farmer class programs are to increase in number many of the teachers will need to have their present loads reduced or additional teachers must be employed.

4. If additional personnel is not available or can not be employed, an adjustment in the scheduled in-school activities of the teachers should be made.

5. As new activities or phases of the program develop, teachers and administrators should determine which present activities must be dropped or given less emphasis.

6. Many teachers need to evaluate critically the amount of time used for some activities and to determine the possibility of accomplishing them more effectively in less time. The relative importance of the activities must be considered and the programs planned accordingly.

7. A larger proportion of the teachers' time needs to be given to the out-of-school classes.

8. The heavy burden many teachers are carrying is not conducive to the proper attitude toward the profession and their jobs. They need some time to call their own and to use as they choose. On the other hand, it is questionable whether a few teachers complete an effective program in the short time they work.

9. Consideration might well be given to a plan whereby the teachers would use one-half day in school to teach all-day pupils and one-half day for adult education work, and supervisory visits to students' farms for teaching on the farm.

Creating interest in farming programs

(Continued from Page 109)

was, however, considered more desirable and was used as a procedure for promoting farming programs in 68 per cent of the departments. In the interviews with instructors, which is reported upon fully in a later section of this study, several of the instructors expressed the view that encouragement of their advanced Future Farmers of America pupils to act as local 4-H leaders or assistant leaders helped develop local responsibility and, consequently indirectly improved farming programs more than they would have been improved had they themselves acted as the 4-H leaders. The instructors interviewed were in general agreement with the survey results in this respect.

Records, such as egg and milk production records, placed on a chart or a blackboard was used only by a small percentage of the instructors who participated in the study, but these instructors give it a high value rating. This study seems to indicate that this is a procedure which should be given increased attention.

An *auction sale of surplus products from farming programs* was practiced by only a few departments, and the instructors using the procedure rated it last place in value in promoting farming programs. *A department or Future Farmers of America newsletter* was not used in many of the departments (22.8%), and its value rating was relatively low. It may, however, have other values which are more important than promoting farming programs. The reader in interpreting the survey should not assume immediately that an activity is not worthwhile because it is not used extensively or has a low value rating. Communities and personalities of teachers vary, and a procedure found relatively inferior may be of considerable value in a specific community with a particular teacher.

It is hoped that instructors of vocational agriculture will not accept the results of this survey at face value, but will use these results to stimulate their further study of the procedures which they are using.

Rural people today have more leisure time than ever before. A recent national survey shows that the average workday of farm operators in the United States is about 10 hours in the winter time and 12 hours in the summer time.

TABLE II.—Value Ratings of the Activities for Promoting and Motivating Supervised Farming Programs by the Instructors of Vocational Agriculture Who Use Each Activity.

Activity	Number of Instructors Using Procedure	Value Rating
1. Discussion of opportunities for profit from farming programs	278	1.38
2. Discussions of opportunities for learning in connection with farming programs	267	1.46
3. Field trips and tours	265	1.47
4. Discussions of how farming programs help one become a farmer	263	1.51
5. Local community or Future Farmers of America fair	168	1.61
6. Discussion of accomplishments of other boys	246	1.70
7. Farm shop activities	161	1.70
8. Use of point systems, awards, and activity charts	118	1.72
9. Use of older boys to discuss their farming programs with beginners	188	1.72
10. Showing at fairs	266	1.74
11. Advancement within Future Farmers of America	148	1.76
12. Egg, milk, and other records placed on chart or blackboard	91	1.79
13. Banquets	198	1.81
14. Percentage of grade based on a boy's farming program	172	1.82
15. Survey of needs and facilities of home farm	198	1.84
16. Establishment of Department or Future Farmers of America program goals	147	1.84
17. Subsidiary Future Farmers of America organizations	50	1.84
18. Cooperation between department and elementary schools	77	1.87
19. Participation in judging contests	247	1.91
20. Summer Future Farmers of America program with eighth graders	54	1.92
21. Visiting elementary pupils	134	1.93
22. Discussion of state requirements for supervised farming programs	245	1.95
23. Adult and part-time classes	163	1.99
24. Display of pictures of projects	207	2.01
25. Extra school credit for projects	183	2.08
26. Planned visiting of farming programs by farmers, parents and business men	68	2.15
27. Grading of record books	218	2.15
28. Retaining vocational agricultural graduates in the Future Farmers of America	109	2.19
29. Encouragement of 4-H	194	2.21
30. Newspaper publicity	221	2.22
31. Exhibit of record books	76	2.38
32. Project markers	103	2.40
33. Assembly programs	55	2.49
34. Department of Future Farmers of America newsletter	65	2.51
35. Use of radio	99	2.57
36. Acting as local 4-H leader	111	2.61
37. Auction sale of surplus products from farming program	42	2.69

R. W. Gregory—Ass't Commissioner for Vocational Education
W. T. Spanton—Chief, Agricultural Education
D. M. Clements—Ass't Chief, Agricultural Education

Specialists:
H. B. Swanson—Teacher Training
A. H. Hollenberg—Farm Mechanics
E. J. Johnson—Program Planning
R. E. Naugher—Part-Time and Evening
A. W. Tenney—Subject Matter
W. N. Elam—Program Planning

d—directors s—supervisors as—assistant supervisors
rs—regional supervisors ds—district supervisors FFA—specialist FFA
t—teacher trainers it—itinerant teacher trainers
rt—research workers Nt—Negro teacher trainers
sms—subject matter specialists fms—farm mechanics specialists

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Note—Please report changes in personnel for this directory to Dr. W. T. Spanton, Chief, Agricultural Education, U. S. Office of Education.

ALABAMA
d—R. E. Cammack, Montgomery
s—J. C. Cannon, Montgomery
as—J. L. Dailey, Montgomery
as—L. L. Sellers, Auburn
as—H. F. Gibson, Auburn
as—T. L. Faulkner, Auburn
as—H. R. Culver, Auburn
as—B. P. Dilworth, Auburn
as—H. W. Green, Auburn
t—S. L. Chesnutt, Auburn
t—R. W. Montgomery, Auburn
t—D. N. Bottoms, Auburn
t—W. A. Broyles, Auburn
sms—E. L. McGraw, Auburn
Nt—Arthur Floyd, Tuskegee
Nt—F. T. McQueen, Tuskegee
Nt—E. L. Donald, Tuskegee

ARIZONA
d-s—J. R. Cullison, Phoenix
t—R. W. Cline, Tucson
t—W. A. Schafer, Tucson

ARKANSAS
d—J. M. Adams, Little Rock
s—C. R. Wilkey, Little Rock
as—S. D. Mitchell, Little Rock
ds—T. A. White, Monticello
ds—O. J. Seymour, Arkadelphia
ds—J. A. Niven, Russellville
ds—George Sullards, Jonesboro
t—Roy W. Roberts, Fayetteville
t—LaVan Shoptaw, Fayetteville
Nt—L. R. Gaines, Pine Bluff
nt—A. G. Kirby, Pine Bluff

CALIFORNIA
d—Wesley P. Smith, Sacramento
s—B. J. McMahon, San Luis Obispo
rs—B. R. Denbigh, Los Angeles
rs—Howard F. Chappell, Sacramento
rs—A. G. Rinn, Fresno
rs—J. C. Gibson, Los Angeles
rs—G. A. Hutchings, San Luis Obispo
rs—M. K. Luther, San Jose
rs—R. H. Podersen, Fresno
rs—J. Everett Walker, Chico
t—S. S. Sutherland, Davis
t—E. M. Juergenson, Davis
t—H. H. Burlingham, San Luis Obispo
sms—Geo. P. Couper, San Luis Obispo
sms—J. I. Thompson, San Luis Obispo
sms—John D. Lawson, San Luis Obispo

COLORADO
d—E. C. Comstock, Denver
s—A. R. Bunger, Denver
as—Irwin C. Elliott, Denver
t—R. W. Canada, Ft. Collins
t—E. J. F. Early, Ft. Collins

CONNECTICUT
d—Emmett O'Brien, Hartford
s—R. L. Hahn, Hartford
t—W. Howard Martin, Storrs

DELAWARE
d—R. W. Heim, Newark
s—W. L. Mowlds, Dover
t—Paul M. Hodgson, Newark
Nt—Wm. R. Wynder, Dover

FLORIDA
d—T. D. Bailey, Tallahassee
s—Harry Wood, Tallahassee
t—E. W. Garris, Gainesville
t—W. T. Loften, Gainesville
ds—J. G. Smith, Gainesville
ds—F. L. Northrop, Gainesville
ds—T. L. Barrineau, Jr., Tallahassee
Nt—L. A. Marshall, Tallahassee
Nt—G. W. Conoly, Tallahassee

GEORGIA
d—M. D. Mobley, Atlanta
s—T. G. Walters, Atlanta
ds—George I. Martin, Tifton
ds—C. M. Reed, Carrollton
ds—J. N. Baker, Swainsboro
ds—J. H. Mitchell, Athens
t—John T. Wheeler, Athens
t—R. H. Tolbert, Athens
t—G. L. O'Kelley, Athens
t—W. R. Brown, Athens
sms—Ray V. Neal, Athens
sms—A. O. Duncan, Athens
FFA—T. D. Brown, Atlanta
FFA—A. L. Morris, Atlanta
Nt—Alva Tabor, Fort Valley
Nit—S. P. Fugate, Swainsboro
Nt—B. Anderson, Fort Valley
nit—McKinley Wilson, Fort Valley

HAWAII
s—W. H. Coulter, Honolulu, T. H.
as—Riley Ewing, Honolulu, T. H.
t—F. E. Armstrong, Honolulu, T. H.

IDAHO
d—William Kerr, Boise
s—Stanley S. Richardson, Boise
as—E. L. Lovell, Pocatello
t—H. A. Winner, Moscow
t—Dwight L. Kindschy, Moscow

ILLINOIS
d—Ernest J. Simon, Springfield
s—J. E. Hill, Springfield
as—J. B. Adams, Springfield
as—A. J. Andrews, Springfield
as—H. M. Strubinger, Springfield
as—P. W. Proctor, Springfield
as—H. R. Damisch, Springfield
t—H. M. Hamlin, Urbana
t—G. P. Deyoe, Urbana
t—J. N. Weiss, Urbana
t—L. J. Phipps, Urbana
t—Leo L. Knuti, Urbana
sms—Melvin Henderson, Urbana
sms—H. J. Rucker, Urbana
sms—W. H. Witt, Urbana

INDIANA
d—Deane E. Walker, Indianapolis
s—H. B. Taylor, Indianapolis
t—B. C. Lawson, Lafayette
t—Ralph Bentley, Lafayette
it—K. W. Kiltz, Lafayette
it—H. W. Leonard, Lafayette
it—E. E. Clanin, Lafayette

IOWA
s—H. T. Hall, Des Moines
as—M. Z. Hendren, Des Moines
as—G. F. Barton, Des Moines
t—Barton Morgan, Ames
t—John B. McClelland, Ames
t—J. A. Starrak, Ames
t—T. E. Sexauer, Ames
t—C. E. Bundy, Ames

KANSAS
d—C. M. Miller, Topeka
s—L. B. Pollom, Topeka
t—A. P. Davidson, Manhattan
t—H. E. Kugler
it—L. F. Hall, Manhattan
it—Loren Whipps, Manhattan

KENTUCKY
d—Watson Armstrong, Frankfort
s—E. P. Hilton, Frankfort
as—B. G. Moore, Frankfort
as—S. S. Wilson, Frankfort
as—Floyd Cox, Lexington
as—W. C. Montgomery, Frankfort
t—Carsie Hammonds, Lexington
t—W. R. Tabb, Lexington
t—Stanley Wall, Lexington
Nt—P. J. Manly, Frankfort

LOUISIANA
d—J. R. Gamble, Baton Rouge
s—W. J. Parent, Baton Rouge
ds—I. N. Carpenter, Baton Rouge
ds—C. P. McVea, Baton Rouge
ds—Gordon Canterbury, Baton Rouge
FFA—Delmar Walker, Baton Rouge
fms—Curtis Jacobs, Baton Rouge
Nit—M. J. Clark, Baton Rouge
Nt—C. H. Chapman, Baton Rouge
Nit—E. C. Wright, Baton Rouge
t—A. Lanviere, Lafayette
t—A. A. LeBlanc, Lafayette
t—Roy L. Davenport, University
t—Malcolm C. Gaar, University
t—J. C. Floyd, University
t—Harry J. Braud, University

MAINE
d—Morris P. Cates, Augusta
s—John A. Snell, Augusta
as-t—Wallace H. Elliott, Orono

MARYLAND
d—John J. Seidel, Baltimore
s—Harry M. MacDonald, Baltimore
t—Arthur M. Ahalt, College Park
Nt—Claud C. Marion, Princess Anne

MASSACHUSETTS
d—M. Norcross Stratton, Boston
s—John G. Glavin, Boston
t—Jesse A. Taft, Amherst
t—Charles F. Oliver, Amherst

MICHIGAN
d—Ralph C. Wenrich, Lansing
s—Harry E. Nesman, Lansing
as—Luke H. Kelley, Lansing
as—E. A. Lightfoot, Lansing
t—H. M. Byram, East Lansing
t—H. Paul Sweany, East Lansing
t—Raymond M. Clark, East Lansing
t—Guy Timmons, East Lansing
t—Raymond Garner, East Lansing

MINNESOTA
d—Harry C. Schmidt, St. Paul
s—G. R. Cochran, St. Paul
as—W. J. Kortesmaki, St. Paul
t—M. J. Peterson, St. Paul
t—H. W. Kitts, St. Paul
t—W. T. Bjoraker, St. Paul

MISSOURI
d—Tracy Dale, Jefferson City
s—C. M. Humphrey, Jefferson City
ds—J. A. Bailey, Jefferson City
Nt—J. N. Freeman, Jefferson City
ds—Joe Moore, Mt. Vernon
t—G. F. Ekstrom, Columbia
t—C. V. Roderick, Columbia
sms—Joe Duck, Columbia
as—E. E. Gross, Hattiesburg
as—E. W. Holmes, Oxford
as—V. P. Winstead, Morton
as—T. V. Majure, Utica
as—A. E. Strain, Long Beach
t—V. G. Martin, State College
t—J. F. Scoggin, State College
t—O. L. Snowden, State College
t—D. L. Williams, State College
as—A. E. Strain, State College
Nt—A. D. Fobbs, Alcorn
Nt—A. G. Gordon, Alcorn
Nt—R. H. Derden, Alcorn

MONTANA
d—Ralph Konck, Bozeman
s—A. W. Johnson, Bozeman
as—Arthur B. Ward, Bozeman
t—R. H. Palmer, Bozeman
t—H. E. Rodeberg, Bozeman

NEBRASKA
d—G. F. Liebendorfer, Lincoln
s—L. D. Clements, Lincoln
as—H. W. Deems, Lincoln
t—C. E. Rhoad, Lincoln
t—C. C. Minteer, Lincoln
fms—M. G. McCreight, Lincoln

NEVADA
d—Donald C. Cameron, Carson City
s—John W. Bunton, Carson City

NEW HAMPSHIRE
d—Walter M. May, Concord
s—Earl H. Little, Concord
t—Philip S. Barton, Durham

NEW JERSEY
d—John A. McCarthy, Trenton
s-t—H. O. Sampson, New Brunswick
as-t—O. E. Kiser, New Brunswick
as-t—W. H. Evans, New Brunswick

NEW MEXICO
s—L. C. Dalton, State College
t—Carl G. Howard, State College
as—J. L. Perrin, State College

NEW YORK
d—A. K. Getman, Albany
s—R. C. S. Sutliff, Albany
as—W. J. Weaver, Albany
as—J. W. Hatch, Albany
as—A. E. Champlin, Alfred
t—Roy A. Olney, Ithaca
t—R. E. Hoskins, Ithaca
t—W. A. Smith, Ithaca
t—W. R. Kunsela, Ithaca

NORTH CAROLINA
d—J. W. Smith, Raleigh
s—Roy H. Thomas, Raleigh
FFA—R. J. Peeler, Raleigh
ds—E. N. Meekins, Raleigh
ds—J. M. Osteen, Rockingham
ds—T. H. Stafford, Asheville
ds—T. B. Elliott, Woodland
ds—N. B. Chesnutt, Whiteville
t—Leon E. Cook, Raleigh
t—L. O. Armstrong, Raleigh
t—J. K. Coggin, Raleigh
t—F. A. Nylund, Raleigh
Nt—S. B. Simmons, Greensboro
Nt—C. E. Dean, Greensboro

NORTH DAKOTA
d—E. F. Riley, Wahpeton
s-t—Ernest L. DeAlton, Fargo
as-t—Shubel D. Owen, Fargo
as-t—Winston H. Dolve, Fargo

OHIO
d—J. R. Strobel, Columbus
s—Ralph A. Howard, Columbus
as—W. G. Weiler, Columbus
ds—E. O. Bolender, Columbus
ds—F. J. Ruble, Columbus
ds—D. R. Purkey, Columbus
t—Ralph E. Bender, Columbus
t—W. F. Stewart, Columbus
t—Harold G. Kenestrick, Columbus
t—R. J. Woodin, Columbus
fms—A. C. Kennedy, Columbus
rt—Ray Fife, Columbus

OKLAHOMA
d-s—J. B. Perky, Stillwater
as—W. R. Felton, Stillwater
ds—Byrle Killian, Stillwater
ds—Hugh D. Jones, Stillwater
ds—Cleo A. Collins, Stillwater
ds—Benton F. Thomason, Stillwater
FFA—Tom Daniel, Stillwater
t—C. L. Angerer, Stillwater
t—Don M. Orr, Stillwater
t—Chris White, Stillwater
Nit—D. C. Jones, Langston

OREGON
d—O. I. Paulson, Salem
s—Ralph L. Morgan, Salem
t—H. H. Gibson, Corvallis
t—Henry Ten Pas, Corvallis

PENNSYLVANIA
d—Paul L. Cressman, Harrisburg
s—H. C. Fetterolf, Harrisburg
as—V. A. Martin, Harrisburg
t—Henry S. Brunner, State College
t—William F. Hall, State College
t—C. S. Anderson, State College
t—David R. McClay, State College
t—Glenn Z. Stevens, State College

PUERTO RICO
d—L. Garcia Hernandez, San Juan
s—Nicholas Mendez, San Juan (on leave
s—Samuel Molinary, San Juan (acting)
as—Rafael Muller, San Juan
as—Juan Acosta Henriquez, San Juan
ds—Frederico Carbonell, San Juan
ds—Juan Melendez, Cayey
ds—Gregorio Mendez, Arecibo
ds—Nicolas Hernandez, Aquadilla
t—Juan Robles, Mayagues

RHODE ISLAND
st—Everett L. Austin, Providence
as—W. E. Gore, Columbia
ds—W. M. Mahony, Honea Path
ds—W. R. Carter, Walterboro
ds—F. L. Barton, Chester
ds—C. G. Zimmerman, Florence
t—J. B. Monroe, Clemson
t—B. H. Stribling, Clemson
t—F. E. Kirkley, Clemson
t—W. C. Bowen, Clemson
t—T. A. White, Clemson
Nt—Gabe Buckman, Orangeburg
Nt—K. M. Keyes, Orangeburg

SOUTH DAKOTA
d—H. S. Freeman, Pierre
s—H. E. Urton, Pierre
t—Stanley Sundet, Brookings

TENNESSEE
ds—G. E. Freeman, Nashville
as—J. W. Brimm, Nashville
as—J. W. Carney, Nashville
as—S. L. Sparks, Nashville
ds—H. N. Parks, Gallatin
ds—L. A. Carpenter, Knoxville
ds—H. C. Colvett, Jackson
t—N. E. Fitzgerald, Knoxville
t—B. S. Wilson, Knoxville
t—R. W. Beamer, Knoxville
t—M. M. Clendenon, Knoxville
sms—A. J. Paulus, Knoxville
t—E. B. Knight, Cookeville
Nt—W. A. Flowers, Nashville
Nt—H. L. Taylor, Nashville

TEXAS
d—W. E. Lowry, Austin
s—Robert A. Manire, Austin
as—R. Lano Barron, Austin
as—George H. Hurt, Austin
rs—O. T. Ryan, Lubbock
rs—Vannoy Stewart, Commerce
rs—C. D. Parker, Kingsville
rs—A. B. Childers, Mart
ds—O. M. Holt, College Station
ds—W. E. Williams, Alpine
ds—J. B. Payne, Stephenville
ds—L. I. Samuel, Arlington
ds—J. A. Marshall, Nacogdoches
ds—T. R. Rhodes, Huntsville
t—E. R. Alexander, College Station
t—Henry Ross, College Station
t—W. W. Mellroy, College Station
sms—W. A. Sherrill, College Station
t—J. L. Moses, Huntsville
t—Ray L. Chappelle, Lubbock
t—T. L. Leach, Lubbock
t—S. V. Bucks, Kingsville
it—E. V. Walton, College Station
it—G. H. Morrison, Huntsville
it—F. B. Wines, Kingsville
it—L. M. Hargrave, Lubbock
it—Feral M. Robinson, Huntsville
it—Ray Epps, Huntsville
sms—Kyle Leftwich, Huntsville
Nt—E. M. Norris, Prairie View
Nt—O. J. Thomas, Prairie View
Nit—E. E. Collins, Texarkana
Nit—S. E. Palmer, Tyler
Nit—Gus Jones, Caldwell
Nit—Wardell Thompson, Prairie View
Nit—Paul Rutledge, Palestine

UTAH
d-s—Mark Nichols, Salt Lake City
as—Elvin Downs, Salt Lake City
t—L. R. Humpherys, Logan

VERMONT
d—John E. Nelson, Montpelier
s—C. D. Watson, Burlington
t—James E. Woodhull, Burlington

VIRGINIA
d—Richard N. Anderson, Richmond
s—F. B. Cale, Richmond
as—R. E. Bass, Richmond
as—T. B. Dowing, Ivor
ds—W. R. Emmons, Boykins
ds—Cabel Love, Blacksburg
ds—W. R. Legge, Winchester
ds—J. C. Green, Powhatan
ds—W. C. Dudley, Appomattox
ds—J. A. Hardy, Pulaski
N-ds—C. B. Jetter, Martinsville
t—H. W. Sanders, Blacksburg
t—T. J. Horne, Blacksburg
t—C. E. Richard, Blacksburg
t—C. S. McLearen, Blacksburg
t—B. C. Bass, Blacksburg
fms—T. J. Wakeman, Blacksburg
fms—E. G. Thompson, Blacksburg
Nt—J. R. Thomas, Petersburg
Nt—A. J. Miller, Petersburg
Nt—R. W. Watson, Petersburg

WASHINGTON
d—H. G. Halstead, Olympia
s—Bert L. Brown, Olympia
as—M. C. Knox, Olympia
as—H. M. Olsen, Olympia
as—J. W. Evans, Olympia
as-t—E. M. Webb, Pullman
as-t—Oscar Loreen, Pullman
fms—Dave Hartzog, Pullman

WEST VIRGINIA
d—John M. Lowe, Charleston
s—H. N. Hansucker, Charleston
as—S. D. McMillen, Charleston
t—D. W. Parsons, Morgantown
t—C. W. Hill, Morgantown
Nt—W. T. Johnson, Institute

WISCONSIN
d—C. L. Greiber, Madison
s—Louis M. Sasman, Madison
t—J. A. James, Madison
it—D. C. Aebischer, Madison
it—Clarence Bonsack, Madison
t—V. E. Nylin, Platteville
t—J. M. May, River Falls

WYOMING
d—Sam Hitchcock, Cheyenne
s—Percy Kirk, Cheyenne
t—Jack Ruch, Laramie