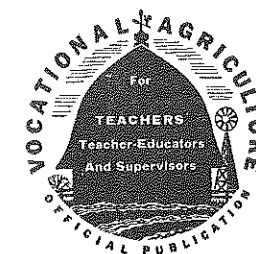


WHETHER we shall have new frontiers at all, whether they shall be large or small, grand or petty, will depend on the spirit of the men now young who must make them.—Owen D. Young.



The Agricultural Education Magazine

A monthly magazine for teachers of agriculture. Managed by an editorial board chosen by the Agricultural Section of the American Vocational Association and published at cost by the Meredith Publishing Company at Des Moines, Iowa.

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Editorial Comment

What Is an Education?

TO MANY people, schooling and education mean the same thing. Such individuals consider that they have completed their education when they have finished the eighth grade, high school, or college. To all intents and purposes, probably, many of them have. But to the farmer, or to anyone really interested in progress, schooling and education have never been synonymous terms. We have all known people who have been thoroly schooled but never educated and, on the other hand, many of the leaders in American life have been well educated without very much schooling. The great majority of people in America will never have a college education but those who have the mental ability can, in the course of a lifetime, be as well educated as those who have received a college education.

The part-time and adult programs in vocational agriculture are especially designed to help young and older farmers to maintain those correlations with work and study which are necessary to an education. Too many instructors in vocational agriculture still think they are teaching agriculture to their pupils and, when the course has been completed at the end of three or four years, the contact of those instructors with the students is also completed, as the students have "graduated." Part-time schools in agriculture are intended to give some school contact to those young men preparing for farming who have never had the opportunity of high-school training, and to provide continuation training for the students who have completed their high-school work. Gradually, workers in vocational agriculture are developing a program of farmer-training really designed for those who "have entered upon, or are preparing to enter upon, the occupation of the farm." When that program is developed, it will not be a high-school program as high schools are now constituted, altho it may be developed around the high-school center.

WITH all credit to the fine program of agricultural education in the high schools, the greater portion of that program is pre-vocational rather than vocational. High-school pupils, at least in their early high-school years, have not decided to enter upon the occupation of the farm. In fact, a large percentage of high-school students from the farms may be planning to enter other vocations. They take vocational agriculture in high school because it is more interesting to them than other subjects that they might be required to take. Those who have completed high school or, being out of high school, are entering upon the occupation of farming, find themselves facing specific problems of how to get started in farming and how to farm after they are started. The best device so far developed for providing this specific training is the part-time and adult program in vocational agriculture, supplemented in the various states by the program of agricultural extension.

If instructors in vocational agriculture can impress their students with the fact that the instructor's purpose is not to teach facts but to help develop the ability to study; if the idea can be firmly implanted that the acquiring of an education is a life program for which the foundations are laid in youth; then those who for various reasons cannot spend the first third of their three score years and ten in school will realize that the part-time school, combined with a program of practical application, offers the ideal opportunity for the acquiring of both schooling and education.—L. M. Sasman, Wisconsin.

IT IS thru organizations like the F.F.A. that the problem of defense can become real. There are excellent opportunities in this organization to study the vital needs for common defense. After all, agriculture is still the basic industry of our country in times of war and peace. The future farmer has an opportunity to study the problems of defense on a practical level and in a real situation. America needs better farmers as an integral part of any well-planned organization for the common defense.—J. R. Hukee, Superintendent of Schools, Cromwell, Minnesota.

Where Shall We Send Them?

THE editor recently received a letter from the secretary of a state association of teachers of vocational agriculture in which the question was asked, "How can teachers of agriculture go about getting articles published in the *Agricultural Education Magazine*?" He further stated that a large number of teachers in his state were very anxious to contribute, but did not know where to send their stories. We hastened to assure the teacher that there is nothing mysterious about getting articles accepted, and that every article received is carefully read and evaluated in terms of its value and appeal to teachers of agriculture and other readers.

With the thought that there may be others who want to learn the "ropes," may we say that anyone who has prepared a manuscript for publication should send it to the special editor for the section in which his article will logically appear. If the article is acceptable to the special editor it is sent to the editor. In case the author is in doubt as to the proper section for his article it may be sent directly to the editor at East Lansing, Michigan. All news, notices of professional activities, and announcements of events and programs should be sent directly to the editor.

The masthead of each issue, as well as the mastheads for the section, always carries the names of the special editors. However, for the convenience of contributors we list the special editors, together with their full addresses.

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	I. B. Pollom	State Supervisor of Agricultural Education, Topeka, Kansas.
Farm Mechanics	L. B. Pollom	Department of Rural Education, Pennsylvania State College, State College, Pennsylvania.
Studies and Investigations	C. S. Anderson	Department of Agricultural Education, Utah State College, Logan, Utah.
Future Farmers of America	L. R. Humpherys	Department of Agricultural Education, Utah State College, Logan, Utah.

Self-Winding Clocks

"TICK, tock, tick, tock,"—so time marches on—measured off by grandfather's old clock, still standing on the floor in his old home where it stood one hundred years ago, still ticking off the time if you wind it up.

The New Year is a good time to learn a lesson from grandfather's clock. I am thinking of the faithful performance of one's tasks, the facing of life with constancy, and the necessity of being "wound up" occasionally for the run ahead. Now the difference between the old clock and a person is that an individual must be self-winding, while the old clock must be wound. There must be within one those springs of life that can coil and strengthen themselves, taut for the tasks that lie ahead of him. True, we may receive inspiration and strength from others, and in a sense be "wound up" from outside sources, but the chief source of personal power and strength must come from within: we must be self-winding clocks.—A. W. Nolan in *The Fan Mill*, Jan. 1939.

Farm Research Narratives

The Hormone Basis of Animal Health and Production

S. A. ASDELL, Professor of Animal Physiology, in collaboration with
W. A. SMITH, Assistant Professor of Rural Education, Cornell University

IF YOU include yourself among the large proportion of people who have little more than a "hearsay" understanding of hormones and, more specifically, the hormone basis for animal health and nutrition, your lack of knowledge in this direction may be accounted



W. A. Smith

for reasonably on the basis of the recency with which research in this field has been conducted and made known. It is only within the last two decades that the bio-chemist and physiologist have been prepared to present to the layman the results of what may well prove to be only the beginnings of investigation of these substances which play such an important role in all vital bodily processes. When one considers the fact that hormone substances exist in the body in seemingly infinitesimally small quantity, that they are active in the minutest traces, and that their barest excess or deficiency may affect the whole course and development of bodily processes, it is little wonder that science has proceeded with extreme care and apparent hesitation in making known its findings. Even so, a great deal of quackery has centered about medicinal products prepared and offered to an unsuspecting public on the basis of the meager findings which the scientist was ready to release concerning the ductless glands and their products, the hormones. Witness the "monkey gland" and other pseudo-theories of rejuvenation of recent years.

We turn to a scientist who has devoted a major share of his time and attention to this intriguing and fascinating field of research for a period of some 15 years. Dr. Asdell was born in England and educated in Cambridge University, in which institution he became a research assistant. He came to America in 1926 to study under Dr. G. W. Corner at Rochester, and later spent two years in New Zealand at the Massey Agricultural College. Since that time he has been at Cornell in the laboratory of Animal Nutrition, where his work has dealt with the physiology and endocrinology of reproduction and lactation. When approached with the request to prepare material for this article, Dr. Asdell had just returned from a trip to the Western states on matters pertaining to practical application of the scientific knowledge which is a part of his chosen field of work. His willingness to contribute to

this series of Farm Research Narratives is an evidence of his interest in the subject, and a tribute to the place he occupies as a scientist in this field. His story follows:

Recent Advances

"The greatest advances in the field of physiology during recent years have been made in the field of endocrinology, or the study of hormones. These sub-

BEGINNING on this page is the first of a new series of articles under the central caption, "Farm Research Narratives." It is the purpose of the editors to present in this series, in story form, basic materials derived from research agencies throughout the country which have a particular bearing on agricultural practices. At the close of this series the narratives will be assembled in the form of a special booklet for the use of our readers. This policy is in keeping with such earlier booklets as the "Contributions of Leading Americans to Agriculture," "Whither Agricultural Education," etc.

A. K. G.—R. W. G.

stances are poured out in minute amounts by the ductless glands of the body, circulate in the blood, and affect structures at a distance from their sources. They differ from nerve impulses in that they depend upon the blood for their transport and not upon nerve fibers; they use the waterways rather than the telegraph wires. Their action is usually more continuous than that of the nervous impulses. Perhaps the most familiar example to the general public is that of insulin. This is a substance produced by certain cells of the pancreas. It is a fairly simple protein in its composition. It affects the metabolism of sugars and, without it, sugars cannot be used. Consequently, in disease of the pancreas, when insulin is not being produced in sufficient quantity, unused sugar accumulates in the blood and is voided thru the urine, the condition known as diabetes. The failure in sugar metabolism upsets fat metabolism, a good example of the way in which body functions are interconnected so that if one is thrown out of gear, others are disturbed at the same time. As we all know, the deficiency can be remedied by the injection of insulin prepared from the

pancreas of other species—for example, the ox, hog, or sheep. The hormones are not individual substances peculiar to each species but they have the same composition wherever they are found in the animal kingdom. This greatly simplifies their preparation and use.

"So far, hormones have been found which control or affect general metabolism, sugar, calcium, and salt (sodium) metabolism, blood pressure, contraction of smooth muscle, the rate and quality of growth, the development of the sexual organs and their functions, lactation, digestion, and mental characteristics. It will thus be seen that their importance can hardly be overestimated, and, as our knowledge accumulates, it becomes increasingly evident that many of the inherited factors or genes are acting by their control of the development of the endocrine system and of its proper balance. A trip to the midway of any fair will give us an idea of some extreme effects of improper endocrine function. The dwarfs, giants, bearded ladies, hermaphrodites, lactating he-goats, are all the effects of hormone deficiencies or excesses. As we look around us in everyday life, we see all gradations from the normal individual to the extremes of the midway.

How Hormones Are Studied

"The development of our knowledge of the hormones and of the glands which secrete them has followed a fairly definite pattern in most cases. Clinical observation has shown in man the existence of a type of abnormality, often extreme, with rather definite characteristics. Giantism, with the usual disproportionate overgrowth of hands, feet, lower jaw, and tongue, is a good example. Anatomy and histology have linked this type of abnormality with a constant overgrowth or tumor of a certain gland, in this case the pituitary. A connection between the two observations is suspected. Removal of the glands in animals is then found to have the opposite effect to that observed where excessive working is believed to occur, while surgical removal of the gland or tumor in the affected person is found to arrest the development of the symptoms in man. Then an attempt is made to isolate the active substance. The injection of extracts of the gland obtained from slaughter-house material into normal animals, for instance the rat, is found to produce similar symptoms to those described in the original observations. Experiments, continually checked by injections, are made to determine the

probable class of substances to which the active principle belongs. When this class is determined, a logically planned attempt may be made to isolate and purify the substance. This is a long and tedious process, as the hormones are present in very minute amounts and we do not know their composition at this stage. Each process to which our extract has been submitted must be checked by an experiment on animals, since this is the only way of knowing that we still have the active substance in our extracts. Eventually by close co-operation between the chemist and biologist a pure substance is obtained. The next step is to determine its exact chemical constitution, and then to synthesize it if it is simple enough. Synthesis has been successfully carried out in a few instances, notably in the field of sex hormones.

"It is impossible in the course of this article to describe each hormone and the function attributed to it but some will be dealt with at length to give some idea of their importance.

The Thyroid Gland

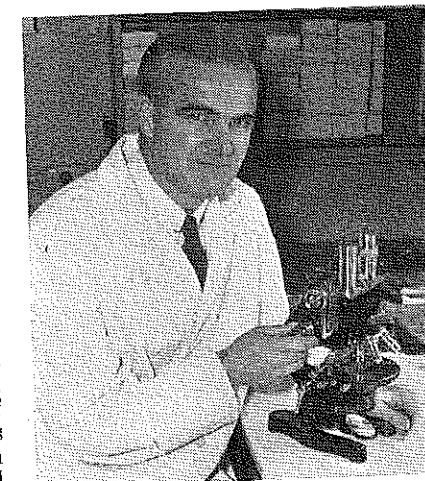
"The thyroid gland, a bi-lobed organ in the neck with an isthmus across the trachea, produces the hormone known as thyroxin. Deficiency of this hormone in the mother causes a deficiency in the newborn young which is shown as a lack of vitality, hairlessness, and oedema or a puffy swelling of the tissues. Continued failure of the gland to produce sufficient thyroxin causes a failure of growth and of mental development so that cretinism results. The defect may be remedied by feeding or injecting thyroxin or thyroid tissue. With this treatment growth and normal development result, but as is the case with all hormones, medication has to be continued or the individual reverts to the hormoneless condition. Growth is not lost because skeletal development, once made, cannot be lost. Lack of thyroid function in the adult produces myxoedema, a fat, flabby condition with considerable physical and mental lethargy. The features become coarsened, the hair drops out, and sexual functions are in abeyance. Thyroxin is especially interesting as it contains in its molecule four atoms of iodine. Lack of iodine in the food or water, therefore, causes a failure of the thyroid to produce the hormone, and hence symptoms of thyroid lack. This condition is especially prevalent in mountain districts with considerable amounts of limestone—for example, in areas of tertiary mountain uplift such as the Alps of Europe and the Himalayas of Asia. The Great Lakes region of North America and the Western states, particularly Washington, Oregon, and British Columbia, are areas of iodine deficiency in this hemisphere. This type of thyroid mal-function is readily prevented by the addition of iodine salts to the food, either in the salt or drinking water.

"The function of thyroxin is to control in some way the rate of oxidation or of general metabolism in the body. There is a quantitative relationship between the two. Excess of thyroxin, which is caused by an overgrowth or a tumorous condition of the thyroid, produces a thin, restless individual who wears himself out rather quickly and has little staying power. Overgrowth of the thyroid, or goiter, is also often seen in per-

sons suffering from underfunctioning of the thyroid. In these cases it is due to an attempt by the gland to produce more thyroxin by developing more tissue, which cannot function normally if there is insufficient iodine in the food.

Relation to Milk Secretion

"It is important in iodine-deficient areas to make sure that sufficient iodine is supplied both for man and beast so that proper growth and metabolism may occur. There is some evidence that the level at which the thyroid functions is inherited. We all know of lazy or energetic families. There are also indications that milk yield is related to an extent to thyroid functioning. Beef cattle, slow and lethargic, have thyroids which produce thyroxin at a lower level than dairy cattle, while there are indications that the level of milk secretion in the dairy breeds is also related to the level of thyroid activity. More thyroxin is needed at the higher levels of production. "The parathyroids, minute glands often embedded in the thyroid substance, are necessary for proper calcium metabolism. A deficiency of parathyroid substance will cause a decrease in the amount of calcium salts in the blood. As



S. A. Asdell in his laboratory

calcium is necessary for the ordered functioning of muscles, this deficiency produces unco-ordinated muscular twitches and even a strong continued contraction of some muscles. Vomiting or diarrhea are also symptoms. This condition is known as tetany. It is similar to the symptoms of milk fever, but this appears to be due to a deprivation of calcium from other causes. There is no reason at present to link it with parathyroid deficiency. Injection of parathyroid hormone (or pure extract of parathyroid glands) cures tetany. The hormone is a protein and cannot be fed successfully as it is destroyed by the digestive juices of the stomach. Like most proteins, its exact composition is unknown and it has not been synthesized.

"Excess of parathyroid raises the calcium level in the blood by taking the calcium from the bones, which soften in consequence. Paradoxically, a large excess of parathormone returns the calcium to the bones, but in the wrong places, producing the condition known as marble bone. The bones become very brittle. One wonders whether hyperparathyroidism is one of the normal conditions of old age.

"The adrenal glands, paired structures, are above each kidney and consist of two parts. The inner part or medulla produces adrenalin, a substance which regulates the blood pressure of the body. It also controls to an extent the release of glucose from the glycogen of the liver. Production of adrenalin by the medulla seems to be somewhat an emergency reaction; under the influence of fright or of danger, its output is increased, raising the blood pressure and releasing glucose, the most facile producer of muscular energy, so that the organism is the more ready to meet an emergency.

"The adrenal cortex is at present the least understood of the ductless glands. It produces a substance, cortin, which is essential for life. It is also concerned in carbohydrate and in sodium metabolism in some obscure way. Tumors of the adrenal cortex in children produce precocious sexual development and in mature women they cause masculinization. The fat distribution of the subcutaneous regions becomes male-like, hair grows in the regions, such as the face, which are hairy in the male, and the external sexual organs become more male in appearance. The normal condition may be restored by the removal of the tumor. There is also evidence that the adrenal cortex produces a hormone essential for milk secretion.

The Pituitary Gland and Growth Hormones

"The pituitary gland or hypophysis is a small gland securely protected in a bony capsule at the base of the brain. Its importance is fully in keeping with its position, for it appears to control the working of most of the other endocrine glands. One scientist has euphuistically called it "the conductor of the endocrine orchestra." The anterior lobe secretes hormones that control the activity of the thyroid and adrenal glands. In addition a hormone, lactogen or prolactin, is essential for the manufacture of milk by the mammary cells. Another hormone is essential for growth. Its absence, or presence in unusually small quantities, causes the individual to be a dwarf. If local genetic factors are at work simultaneously, the proportions of the dwarf are not those of the normal adult and the result is a broad-shouldered, large-headed dwarf. These achondroplastic dwarfs are often seen at fairs. The dachshund dog is another example. The pygmy or ateleotic dwarf is an example where the proportions are normal in spite of the small stature. Insufficient growth hormone at the time of puberty tends to produce the overfat child, tho this is probably not a simple insufficiency of growth hormone. A similar reaction occurs to pituitary insufficiency in adult life, with especially great depositions of fat in the lumbar and gluteal regions.

"An overproduction of growth hormone produces a giant when it is effective during the growth period. As the bones ossify and cease growing those still capable of growth continue to increase in length and a disproportioned giant is produced. The bones of the extremities, the lower jaw, hands, and feet are affected for a longer time than the rest of the body so that these parts

(Continued on page 138)

Training for Farming Versus Preparing for Farming*

LESTER B. POLLOM, Supervisor,
Topeka, Kansas

IN SETTING up general objectives in vocational agriculture, is it appropriate to make a distinction between "training" a boy for the business of farming and "preparing" him for the business of farming? Just what is the difference? Usually we think of training a boy for the business of farming as constituting an experience or a series of experiences which gives him the ability to perform the operative and managerial skills of the farm reasonably well. He acquires this ability thru a farming program which he carries along in his own right thru his high-school experience, paralleled by the supplementary farm-practice program that enables him to acquire skills and employ approved practices not actually encountered in his own farming program. The boy acquires technical information and a knowledge of scientific principles and learns how to apply them to real farm problems. In general, when this is completed, we speak of it as having trained the boy for the business of farming.

How Far Have High-School Graduates Progressed?

An inventory typical of many Kansas farm boys following the completion of the day-school course might read something like this: "One or more good brood sows bearing annual or semi-annual litters, one or more producing cows acquired as calves earlier in his high-school experience, from a half dozen to two dozen ewes bearing the annual lamb and wool crop." Probably the program is rounded out with a flock of laying hens. This program is sustained by the annual production of feed and pasture crops and perhaps supplemented occasionally with a cash crop.

The boy may own some equipment—a brooder house, a farrowing house, self-feeders, interior poultry-house equipment, some hand tools, etc., which he has accumulated and conditioned, and perhaps even some farm machinery. Is such a boy *prepared* for the business of farming, or is he merely *trained* for the business of farming?

Might it not be truthfully said that the boy is not prepared for the business of farming until every obstacle standing in the way of his operating a farm in his own right has been removed? What obstacles remain after the foregoing accomplishment? Does he not still lack machinery, harvesting machinery, as well as power to propel such machinery? And he probably still lacks land on which to farm. He of course lacks maturity, but time will take care of that during the next four or five years, by which time he should have a much more intense desire to engage in farming in



L. B. Pollom

his own right if he has made up his mind to become a farmer.

Results of Changing Times

Ten years ago probably many farm parents were in a position to contribute substantially to the boy's becoming established in the business of farming when his maturity and desires warranted, even tho the boy had made little or no accumulation of his own. Today, according to the estimate of a score or more of the experienced teachers who have spent years in their present locations, less than 10 percent of the parents are in a position to contribute substantially to the establishment of their boys in farming. It appears that most boys who become farmers will be obliged to do it thru their own efforts.

Who will question the statement that debt is the curse of the agricultural industry today? Have we really contributed to the success of the boy by embarking him on the business of farming if he gets his start with an unbearable debt hanging over him, or if he is obliged to dispose of all, or even a major portion of his accumulation of livestock in order to purchase machinery and equipment to operate a farm?

Go out to any moderately equipped farm in your community. List what you consider to be the essential machinery that is being used in operating that farm. Then go to the implement store and price these various implements. By a simple process of addition you begin to appreciate what the young man is facing.

Contribution of Farm Mechanics

Are we, in our farm mechanics program, capable of doing anything about it? If not, just why do we have such a program? Just how far can we reasonably be expected to go with such a program? It is idle to assume that even the best of our boys in any great number will be able, while in high school, to accumulate and condition all the machinery necessary for the operation of a farm. The earnings from farming programs usually will not permit it. It is hardly likely that many of the boys will be seriously concerned about such accumulation of machinery until they are closer to the time when they expect to start farming in their own right. The incentive to such an accumulation is not likely to be with boys short of their late years in high school, and the nearer they approach the point of starting in their own right, the greater becomes their interest in such an accumulation. Certainly the basic mechanical skills and judgment acquired during the high-school years should prepare them to meet the problems incidental to the accumulation of used machinery and its conditioning and repair.

We are not assuming used farm machinery can be found at every cross-road and in every fence corner. But we are assuming the boy has had, in high

school, training that will enable him to purchase such machinery intelligently once it is found for sale. We assume he will be able to judge whether the machine is worth repairing and to judge the approximate cost of such repairs if the day-school training has measured up. He should know whether parts for such an implement are available.

Some boys may have accumulated the tools and equipment needed in overhauling farm machinery, permitting the work, or most of it, to be done on the farm. Others may find it necessary to do part or most of the work in the school shop.

Expansion Necessary

It is not meant to imply that the only problem of the boy out of school is one of accumulating machinery. It is obvious that if he accumulates it out of the earnings of his own farming program in most cases it will be necessary to further expand the program of farming when the boy gets out of school.

Doubtless in many instances the boy, while in high school, has developed his farming program up to its limit so far as size and scope are concerned. The parent may already be making a sacrifice in order to permit him to use land for the production of feed for his livestock at the present volume of production, yet this farming program must be expanded and enlarged if the boy is to become better prepared for the business of farming. Is there anything a teacher can do to enable him to go forward with further development of his farming program?

Is it possible that a group of three, or four, or more boys needing land for further accomplishment might be brought in contact with a land-owner who is willing to rent them a farm, each boy taking a portion, farming it with machinery owned by his father? Possibly this may sound fantastic. If the boy is to keep on growing and expanding, more land will be necessary.

It is conceivable that some fathers are waiting for the time when the boy graduates from high school in order to acquire additional land, in which event the boy's need for more land for expansion would be automatically met.

It is impossible to anticipate the varying circumstances under which boys will find themselves when they attempt to enlarge and keep going forward with their farming programs and the accumulating of machinery essential to operation of a farm.

High-School Courses Not Enough

Some of you may say, and not without some logic, "After what I have given these boys in day school, if they have the right stuff in them, they will succeed without further help from me; and if they are not made of the right kind of stuff, further effort on my part probably will matter but little." But can we afford to accept this view?

What about the problem of acquiring land on which to start farming in his own right once the boy has accumulated the necessary equipment and reached maturity? There are thousands of Kansas farms that are farmed by tenant farmers, and the number appears to be increasing. Usually increasing farm tenantry is viewed with alarm, but the

greater the chances of the young man better the chances of the young man who is actually prepared for farming for renting a piece of land.

Let's assume, for a moment, that you have a group of boys who have come to your day school and have followed their farming program while accumulating the most essential machinery for farm operation. In other words, they are all prepared for the business of farming, excepting that they have no land on which to farm. Let us bear in mind that few land-owners will rent land to tenants who are not fully equipped from the standpoint of machinery with which to operate the land.

How Find Farms to Rent?

In most towns can be found business and professional men who own a piece of land somewhere in the trade territory. Sometimes they may own several. Quite frequently they are concerned about securing suitable tenants. Would it seem fantastic to suggest that the teacher of agriculture make contacts with these men individually and talk over the matter of permitting one of his day-school boys, who has followed up with a part-time program to the age of 23 to 25 years and built himself a start, to take over one of these farms?

Many of you belong to chambers of commerce, or civic clubs, which bring you in contact with these businessmen who own farms. Occasionally you have the opportunity to talk to these groups about your department of vocational agriculture, and the problems confronting you and your graduates. Would it be out of the way to point out to them that each year young men who have come thru your program and have attained the age of 22 to 25 years, have made a nice accumulation of livestock, and have built up the necessary machinery and equipment, and to ask them if they would be willing to take a chance on one of these boys operating one of their farms?

When Is a Boy Prepared?

Let us keep in mind that the boy is not prepared for farming until the last obstacle standing in his way has been removed. Is there nothing that can be done after the boy leaves the day school even tho the training there has been all that could reasonably be expected?

I am not thinking of a program that merely brings 15 or 20, or more, boys together twice a week for a session in the classroom. I do not know whether it has ever been ascertained whether a good part-time program can be carried on in 20 meetings or whether 10 would be enough, or whether 50 would be required. That seems incidental. Certainly it would be a distinct advantage to both the teacher and a group of boys to get together occasionally to study pertinent problems common to the group.

It is conceivable that certain small groups of individuals within the whole group would have occasion to talk over their problems with the teacher, it being unnecessary for the balance of the group to be present. Certainly we should make contacts with those boys as frequently as practicable during the year. We make contacts with the day-school boys five days a week thruout the school year, supplemented with occasional visits to

typical farmer. I had the privilege and honor, 20 years ago, to recommend Walter Newlin to Casey as the teacher of vocational agriculture, and happier still to see and know that he has successfully lived up to the high calling you gave him. Whenever young teachers of agriculture ask, "What is the future for us as teachers of agriculture?" I point to Walter Newlin and say, "There is a career worthy of the life of any strong young man."

We are assuming that most of these boys, especially those who have come thru the day school, are reasonably well versed in the technical farming skills and technical information underlying farm operations. (This may not hold true in part-time groups in newly established departments.) What, then, would be the minimum procedure in

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A Tribute to a Worthy Teacher of Vocational Agriculture

A. W. NOLAN, Teacher Education,
Urbana, Illinois

WALTER A. NEWLIN, for the past 20 years teacher of agriculture in Casey, Illinois, Township High School, was the guest of honor at the annual farmers' meeting of the Casey Rotary Club, Monday, October 14th, at 7 p. m. in the high-school gymnasium. The meeting was a surprise for Mr. Newlin and was planned by his fellow Rotarians, at the suggestion of the University of Illinois, where Mr. Newlin received his Master's Degree the previous June. In recognition of his services a number of professors, advisers, and students came from the university campus to attend the gathering. A hundred farmers and their wives from the community were invited. Members of the high-school faculty were also present.

The president introduced Mr. Newlin as Rotary Honor Man No. 1, and a gift of a reading lamp was given him in recognition of his services to the school and community.

Dr. A. W. Nolan, professor of agricultural education, University of Illinois, had been chosen to pay tribute to Mr. Newlin. He read several quotations from letters received from former students of the Casey teacher. One said, "Admiration and respect for Mr. Newlin and his profession led me to follow the teaching of vocational agriculture. My greatest ambition has been to be as good a teacher of vocational agriculture as Walter Newlin." Another, "One never had to take another's word as to Mr. Newlin's value to the community around Casey. His value is shown in his fine work."

What the Community Wanted

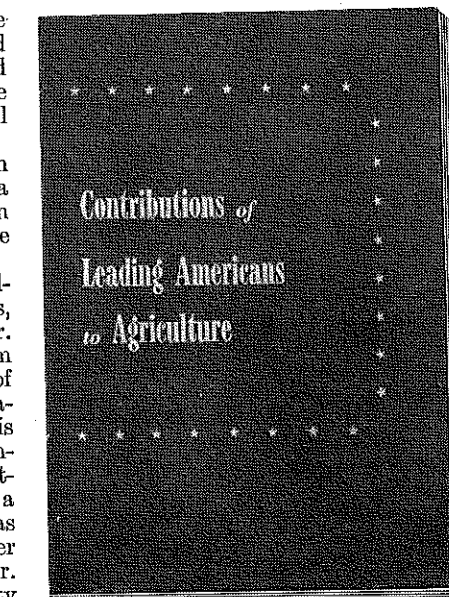
Professor Nolan finished with this statement: "When the farm people of Casey community sent up an S. O. S. 20 years ago, calling for a man to teach vocational agriculture, they said, 'Give us a man, mountain high, strong as Gibraltar, true blue as the sky, a man who loves the farm and farm people, a man who will spend his life among us, and settle down to the long, steady pull of helping to build here a strong, productive, and permanent agriculture, and

typical farmer. I had the privilege and honor, 20 years ago, to recommend Walter Newlin to Casey as the teacher of vocational agriculture, and happier still to see and know that he has successfully lived up to the high calling you gave him. Whenever young teachers of agriculture ask, "What is the future for us as teachers of agriculture?" I point to Walter Newlin and say, "There is a career worthy of the life of any strong young man."

Special guests besides Dr. Nolan and Dr. Burlison were: Dr. George Dungan—Professor of Crop Production, University of Illinois, Dr. H. M. Hamlin—Professor of Agricultural Education, University of Illinois, Mr. Ed Hill—State Supervisor of Vocational Agriculture, Springfield, Mr. L. C. Cannon—Assistant State Supervisor, Vocational Agriculture, Springfield, Mr. J. H. Pearson—U. S. Office of Education, Division of Vocational Education, Washington, D. C., William Regel—Master Farmer, President of Illinois Crop Improvement Association, Tolono, Illinois, teachers of agriculture, and others.

If more of our rural communities would show their appreciation of the work of our splendid teachers of vocational agriculture as the Casey Community has done for Mr. Newlin, it would improve the morale of the teachers and be an inspiration to the young men who may be looking to this worthy career.

A New Reference



STUDENTS of agriculture who want to know who is responsible for the great strides made by agriculture in this country will find this 74-page booklet a veritable mine of information. Fourteen pioneers in agriculture are included in this unique publication, which is already functioning as a source of inspiration to Future Farmers in many schools. Teachers can still secure this booklet by ordering directly from L. L. Anderson, Meredith Publishing Company, Des Moines, Iowa. The price is still the same: 15c per copy or 10c each in quantities of 20 or more.

The Teacher of Agriculture Develops a Speaker

LESLIE S. CRAWFORD, Teacher Education, Laramie, Wyoming



L. S. Crawford

SOME teachers of agriculture may feel that training in public speaking is entirely out of their sphere of work. This may be true since courses in agriculture are not built around the English "major." However, the teacher of agriculture must acknowledge that he is training the students of today to be leaders of tomorrow.

In order to become a leader, it is an unquestioned necessity that those individuals must learn to express themselves in the spoken and written word. And to express themselves coherently, they must learn to prepare public speeches in a systematic way.

Consider the Audience First

In choosing a subject for an oration, the audience to whom the speech is to be given must be the first consideration of the speaker. What type of subject matter would best hold the interest of the audience, and yet not arouse any of its prejudices?

Here the teacher must act as a guide. He should also see to it that the subject is a timely one, as well as one that will stimulate the student so that he feels that it is important enough to champion. When a boy wants to fight for a cause, the teacher will find that a clear and vivid oration will soon be forthcoming. Naturally, the particular occasion for which the speech is to be given is also another very influential factor. If the speech is to be given to a Future Farmer group, it is desirable to make those members feel that they, personally, and as a group, have a definite relationship to the topic. It then remains to convince the group that it, in turn, would like to champion the chosen cause. It is needless to say that an audience receives the timely topic much better if the information is new, than it does a worn-out subject.

How to Collect Ideas and Information

Collecting material is usually the second step. With the great tide of literature that is available to a teacher of agriculture this is almost an unnecessary step to consider. But the questions remain as to authenticity of the material and authority of the men who wrote the publications. Recognized authorities only should be quoted. No one, whether teacher or student, can be too careful in

examining the literature before filing it to use in the construction of the speech. The content of any and all of the chosen subject matter should be digested before preparing a written outline of the speech.

Read and Think!

Let these two words be the guide after choosing the reference literature. If a desirable and forceful bit of information comes to light, it should be placed on a reference card to be used as a quotation.

Simple index cards may be kept by students during their reading. The teacher, incidentally, finds these cards easy to check when determining just how much the student is gaining from his reading. A few simple questions relating to the reference on the card will usually get the student to tell why he considers the quotation of such great importance as to give it a place on his reference card. These cards are later of great help in making the outline of the speech.

After the material is well in mind and the references carefully made on the index cards as suggested, the work of construction begins. First, the divisions into which the material will naturally fall should be considered. These must be limited to as few as possible. Two or three headings are enough for an amateur to attempt. These points may be considered as the main body of the speech. Even the greatest speakers confine their speeches to a few topics on which they can elaborate.

The Conclusion Is Important

In arranging the conclusion one should consider the results expected and work to that purpose. It may be a brief, condensed summary, an informal summary of the vital parts of the speech, or it may be one illustration that forcefully closes the summary so that the audience will be thoroughly convinced that the cause the speaker champions is vital. The amateur will find it well to use care in ending his speeches with illustrations, quotations, and anecdotes, because they must be forceful to be convincing. A poor ending may leave the audience, which was previously sympathetic with the cause, in cold disappointment. Then the cause is lost.

After the cards are arranged, the entire lot may be gone over for sequence. Does the information build up to a climax? The arrangement of the most important points of the oration just before the conclusion is usually best. This arrangement leaves the audience with the feeling of the cause being worth while.

If these steps are followed the material will be well in mind, and the actual work of putting the material down on paper may now begin. Public speeches, no matter how simple or elaborate, are nothing more than a detailed conversation between the audience and the speaker. This is why it is necessary for the prospective speaker to know his facts and ideas so well that he can write them in his own words. This will help to make the speech natural and sincere. Above all things, it will help to make the speaker at home on the platform, free from intense nervousness.

How to Write Good Speeches

It is well to remember that it is the business of the writer to fill in the connectives between the various points. One should become acquainted with such transitional words and phrases as: *moreover, however, sometimes, on the other hand, on the contrary, yet, next*, and many others that are equally effective. These terms should be instilled in students until their use becomes automatic.

In writing the introduction, one should be sure that it serves the purpose of placing the audience and the speaker on the common ground of understanding. This may be done by many methods. First, by telling the audience something of the history of the subject. It is well for the speaker to give the audience full credit for knowing a great deal about the subject. However, at the same time, he should present a thoro history of the problem. The second method may be that of defining the subject in relationship to its place in today's problems. Another, and third type of opening, can be made by explaining certain terms that will come up later in the oration; the most common method, the fourth, is to analyze the problem that is to be answered. Another effective method is to outline for the audience the important steps that are to be taken up in the discussion. This last, or fifth method, is often used by the professional speaker.

When choosing the type of introduction, the speaker must always consider his audience. How well acquainted is the prospective audience with the subject at hand? The introduction should be shortened as much as necessary to make it as effective as possible.

The style of the introduction is next to consider. Shall the *headline* style be used which involves picking out a statement from the body of the oration and presenting it to arouse the interest of the audience? It is proper to arouse the audience, but one should be sure that the audience fully realizes that the statements will be developed later on. Whatever method is finally chosen, the speaker should see to it that the audience does not grow weary during the introduction. The more foreign the material, the more time the speaker can spend on the introduction.

The body of the oration should not be divided into more than three main points. The speaker should not use a

(Continued on page 135)

Pupils in Self-Rating

ROGER J. SCHULTE, Graduate Student, University of California, Berkeley

ONE of the most difficult jobs for many teachers in the field of vocational agriculture is the assignment of grades or marks. Many teachers have had the experience of being told by pupils that their low term marks were not fair. The solution may be found in the fact that the pupil does not clearly understand how his instructor arrives at the mark in question.

Term marks are not the best stimuli to better work, but since they are used thruout the system in many schools, teachers of agriculture must use them. The problem, then, is how to make the very best use of such a device. Can we use it in such a way as to promote greater progress and efficiency in our teaching?

A very simple system used by the Agriculture Department at Manteca, California, is that of self-rating, or allowing each pupil to score his own work at the end of the term or marking period. This system is based upon certain specific items. These items include: the farming program, additional farm practice, classwork, record-keeping, field work, and Future Farmer activity. Any others could be added as the instructor deems necessary in carrying out the objectives of his work.

TOWARD the end of each marking period the student rates himself on each point such as: size of farming program, diversity of program, etc. He does this by checking the respective mark in the

Pupil Self-Rating Card for Vocational Agriculture

	A	B	C	D	F	Inc.	Remarks
1. Size of home farm program. Is your project program large enough to be profitable and to give you the experience you will need to enter farming?							
2. Diversity of home-farm program. Are you receiving experience in more than one kind of farming?							
3. Suitability of projects to home farm. Does your home-farm program fit in with the type of farming found on the home farm?							
4. Enlargement of home-farm program. Is your home-farm program larger now than it was six weeks ago?							
5. Proper care of projects. Are you using approved methods of sanitation, feeding, cultivation, housing, breeding, marketing, etc. in conducting your project?							
6. Time spent on projects. A boy with a good farming program should spend at least one hour of self labor per day.							
7. Additional farm practice. What jobs are you doing on your home ranch to improve it? (Examples are cow-testing, planting shrubs and lawns, grafting trees, culling hens, etc.)							
8. Accuracy and completeness of records. Are your project records kept up to date with all entries complete and neatly made?							
9. Attitude in class. Do you co-operate with your teacher and the other students in maintaining good class order?							
10. Class discussion. Do you participate freely in the class work?							
11. Attitude on field trips. Do you co-operate with the others to make the field trip a success?							
12. Attendance at F. F. A. meetings. Do you attend regularly and take part in the meetings?							
13. Co-operation in F. F. A. activities. What have you done for your chapter? (Examples, hot-dog sales, farm surveys, junk drive, etc.)							
14.							
(Give yourself the grade you think you have earned during the past 6 weeks after you have considered these items.)							

other than A-B-C-D could be substituted with comparable results. Under remarks may be designated the specific improvements made by the boy since the last marking period. An example of this might be the purchase of 300 baby chicks or the renting of two additional acres in the enlargement of the farming program. After each item is scored the pupil can then add his scores and determine the one that he thinks he has earned during that particular marking period. This mark can then be compared with the one given by the teacher. Individual conference can then bring out any difference of opinion by going over each item with the pupil. Thus a better understanding is developed between the teacher and pupil in the assignment of marks.

One may ask the question, "will not the pupil have a tendency to over-rate himself? In the writer's experience a very high correlation has been found to exist between the pupil's grade and that awarded by the instructor. The tendency with a few students is to under-rate themselves.

Values of Self-Rating

The value of the self-rating system does not end at this point, but it can be made more useful by group and individual discussion as to a plan for improvement during the ensuing period. The class can work out, as a group, such things as Future Farmer activities for the following weeks, how individuals could co-operate in such activities, what constitutes good field trips, and how to keep record books with greater accuracy. Individual help will point out gaps in the home-farm program and will stimulate the boy to think in terms of approved methods in caring for projects, as well as the addition of jobs for home-farm improvement or farm practice. After such discussion the final step is to place these plans for improvement in writing. This can be done by a list of jobs or practices which each boy hopes to accomplish during the next marking period with the items on the self-rating chart serving as a guide. All of this can be accomplished in one class period or less after the plan has once been placed in operation. It is a class period that brings concrete results.

In summarizing, the following major advantages of this self-rating system seem apparent:

1. It develops a better understanding of what constitutes a good mark in vocational agriculture.
2. It charts the progress of the student. This leads to more efficient learning.
3. It creates a co-operative attitude within the class.
4. It may be used by teachers as a basis for individual pupil guidance in their work.
5. It serves as a means of pupil motivation.
6. It acts as a more reliable means of evaluation.

*Mr. Schulte was formerly teacher of agriculture at Manteca, California.

BE practical as well as generous in your ideas. Keep your eyes on the stars, but remember to keep your feet on the ground.—Theodore Roosevelt.

Activities for Young Farmers' Groups

C. S. HUTCHISON, Teacher Education,
Columbus, Ohio



C. S. Hutchison

A LARGE number of teachers of vocational agriculture in Ohio have been meeting with groups of young men and endeavoring to develop the individual as much as possible. The first organized group of young men in Ohio was organized under the direction of W. F. Bruce at Hamilton Township in 1922. The young farmers' association serves the out-of-school young farmers in a way similar to that in which the F.F.A. serves the farm boy in all-day high-school instruction. There has been a steady growth in the number of young-farmer groups, with 239 courses for young farmers in the state of Ohio in 1938-39.

V. G. Martin has stated that "the primary aim in education in agriculture is to train present and prospective farmers for proficiency in farming with reference to organized standards of efficiency, and to promote the progressive advancement of such standards in keeping with the ideas of democracy." His article also stressed that it is our responsibility to develop the individual as completely as possible and to promote group relationships with emphasis upon home and family life as fundamental to public welfare. Such abilities as: (1) co-operating in rural activities; (2) maintaining a farm home; (3) appreciating farm life; (4) exercising leadership and recognizing and following worthy leadership; and (5) becoming established in farming³ are abilities that can be developed in a young farmers' group.

Purpose of Organization

Glen Miller's study of 118 young farmers' associations in Ohio⁴ revealed the fact that young farmers' associations are organized with the following purposes in mind: (1) to improve farm practices (for example, to introduce hybrid corn, to run a sprayer, to carry on worth-while projects, to improve farm income, and the like); (2) to provide further education (to educate for democracy, to take educational trips, and the like); and (3) to improve the recreational and social program.

Types of Activities

According to the experience and judgment of the advisers who guide the organizations, the most worth-while activities in building the young farmers' associations, exclusive of part-time

group lessons, have been largely those of the social and recreational program. Out of a total of approximately 200 activities reported as most worth while in building the organization, 166 were social and recreational in nature, 25 were related to techniques of organization and methods of teaching, 16 were related to improving the community, and 13 were related to various other activities.

Other activities reported include: working with the Future Farmers of America; helping farmers' institutes; co-operative buying of feed, chicks, and hybrid seed corn; conducting rabbit fry; planning trip; making the annual program; meeting with the wives of the members of the association; holding roller-skating party; having each member lead a discussion, practicing parliamentary procedure; playing games and working puzzles in the agriculture room; helping with the county fair; aiding Boy Scouts; "visiting" before and after lessons; sponsoring co-operative gilt chain; showing at fairs; participating in pest hunt; assisting with county livestock directory; participating in square-dance party; helping with the hot-fly control campaign; playing in hillbilly band; conducting house parties; participating in district leaders' conferences and county-wide organization of associations; and serving as a member of an advisory council.

Planning a Program

The fall months are program-planning months for the young farmers' association, as 70 percent of the 102 organizations reporting planned their programs in September, October, and November. Seven of the 118 associations reporting indicated that printed or mimeographed annual programs were used. Long-time programs extending over a period of years were reported by 24 associations. Fifty percent of the organizations held one or more committee meetings in addition to the regular meetings of their group.

Interest in the program is enhanced by democratic participation of the members. The standing committees appointed indicate to some extent member participation in program planning and the type of activities carried on. The following seven committees composed 83 percent of the (185) committees reported: food, 34; program, 31; recreation, 29; athletics, 21; executive, 15; social, 15; and membership, 11.

Other standing committees used were publicity, speakers, subject-matter, project advisory, initiation, junior fair, constitution, nominating, tour, F. F. A. degree, farmers' institute, educational, picnic, course of study, county meeting, and ways and means.

Facing Problems and Difficulties

The greatest problem faced by the young farmers' associations as reported by their advisers is that of conflicting interests of other organizations and activities. The rural community has many activities and organizations which compete for facilities and for the time and energy of the young men. In particular, 23 associations reported that they had trouble in scheduling a suitable meeting night. It seems difficult to get a community to give "right of way" for the meetings of the young-farmer groups. "Other organizations absorb leaders of young farmers' associations," "too many community activities," "commercial amusements," and "little co-operation from other community agencies" are difficulties mentioned in particular by a number of associations. Social and recreational difficulties include: basketball trouble, girl-friend trouble, finding recreation facilities, and coon hunting. Attendance difficulties included too rapid turnover in members, getting initial enrollment, and irregular attendance. Twelve reports indicated that there was "too great an individual difference to meet the needs of all." Vocational difficulties include lack of farming opportunity, loss of interest by farm boys being employed in shops in the wintertime, young men who are not farming attending farm outlook, and too many tenant farmer boys. Three associations reported difficulty in interesting boys just out of high school in enrolling in the association.

Recommended Practices for Improving the Organization

An organization grows by utilizing past experience in finding worth-while activities and ways of action to meet present difficulties and needs. A wide variety of activities was recommended by the advisers. The recommendations which were reported by five or more advisers are as follows: take trips, improve the social and recreational program, use outside speakers, visit other young farmers' associations, play basketball with other associations, serve food, have group discussion led by members, and help with farmers' institutes. Other specific recommended practices include the following:

1. Improving the recreational and social program (mentioned 51 times) thru such activities as: (a) having the membership divided into "eats" committees which take turns in serving; (b) sponsoring parties with young ladies' groups; (c) holding a county young farmers' association banquet, (d) maintaining a softball league during the summer, and by (e) having a rabbit fry.
2. Improving organization and methods of instruction (mentioned 42 times) by: (a) visiting other young farmers' associations; (b) having group discussion led by members; (c) starting the evening by having boys do preliminary work as they arrive; (d) having the young men plan their own meetings; (e) having the young men, rather than

the instructor preside over the meetings; (f) giving membership certificates; and by (g) displaying shop work in post office.

3. Improving program content (mentioned 34 times) by: (a) having successful farmers for guests; (b) having a session of shop work; (c) taking short trips to unusual places; (d) attending district meetings; and by (e) participating in community activities.

4. Improving farm practice (mentioned 20 times) by: (a) repairing farm machinery; (b) conducting hot-fly control work; (c) cow-testing; (d) buying purebred hogs; and by (e) soil-testing.

The 700 Club

MARK MATLEY, Teacher,
Coalville, Utah

"WHAT next for us?" was the question asked by 20 Future Farmers finishing high school concerning their future activities in agriculture and Future Farmer work. The answer to this question was the successful promotion of a part-time class in hog production, and the pooling of their interests in practicing some of their skills in co-operating for the benefit of the group.

These boys agreed to go into the hog-production enterprise. They spent most of the time in the part-time class in delving into the problems of hog production. They set as their goal the sale of 700 hogs for the coming year. To promote their mutual efforts, and as a basis for co-operation, they organized what they chose to call "The 700 Club." With a full set of officers ready to do business, this organization bought breeding gilts and sold their fat hogs co-operatively. At the end of the year, the weigh-bills indicated that these Future Farmers had sold 580 hogs for which they received \$9,120.73. The number of hogs was a little short of the goal, but the total receipts and the price for pork were in excess of what they had anticipated. Never before have farmers in this town been known to produce so many hogs with as much profit.

The opportunity for co-operation among these boys extended beyond the mere financial aspects of this project. They took a number of excursions to important agricultural centers and co-operated in recreational and social functions.

As a result of this initial experience, "The 700 Club" extended its co-operative efforts by purchasing eight head of Holstein heifers and a fine Holstein bull. This new venture had for its purpose the expansion of the agricultural programs of the individual members. Continuing their efforts in part-time work, they are asking for a class in dairying the coming year.

This is but one example to show that organization for co-operation provides a means for bettering the individuals and promoting a program in part-time education. "The 700 Club," organized as a result of training in Future Farmer activities, has been the means of giving our department of vocational agriculture one of the most actively supported agricultural projects in the history of the community.

tioned eight times) by: (a) holding seed corn sales; (b) conducting a wool show; (c) sponsoring a Bang's disease testing program; and by (d) helping with the community fair.

1. This paper was presented at the 1940 North Atlantic Agricultural Education Conference.

2. V. G. Martin, "Objectives in Vocational Education in Agriculture," *A. V. A. Journal*, February, 1940, p. 50.

3. Op. Cit. P. 50.

4. *Young Farmers' Associations in Ohio, Program Suggestions No. 9*, Columbus, Ohio: Agricultural Education Department, Ohio State University, 1939.

Training Versus Preparing for Farming

(Continued from page 127)

carrying on not a part-time course but a part-time program? The course seems futile without the program.

Evidence of Results

Definite, recorded evidence of accomplishment and progress should be available. It is highly desirable that each boy keep cost accounts of his farming program. If, however, there are those boys who dislike the routine and detail of keeping cost accounts, they should not be driven out of a part-time program because of such dislike, and if they cannot be induced to actually keep cost accounts, that must not be the reason for their ceasing growth and progress.

It seems reasonable, however, that if a boy is to carry on a part-time program, certain definite evidence of progress and accomplishment should be available. An original inventory of all livestock, equipment and feed owned by the boy should be taken. As each succeeding year shows accumulation, the manner of such accumulation should be shown. Was it by natural increase? Was it a gift? Was it purchased? Such an annual report should also show the various farming enterprises in which he engaged and their scope, even tho it does not show costs, receipts, profits, and losses.

Opportunities for Co-operative Effort

Certainly there should be an opportunity for considerable co-operative effort in this group of boys. For a number of years day-school boys have been co-operatively financing, purchasing, and marketing. It seems reasonable that the opportunity for such co-operation is present on even a larger scale, since the older boys will doubtless carry on more comprehensive programs. Certainly it will be desirable, if not essential, to call meetings to plan such co-operative enterprises.

I am confident that a plan can be worked out whereby a more effective and more comprehensive part-time program can be gotten under way that does not content itself with merely training boys for the business of farming but ceases only when boys are prepared for the business of farming. Several different agencies have seriously concerned themselves in recent years with farm youth out of school. Not one of these is nearly

as the teacher or vocational agriculturalist. He has his classroom and laboratory, and his farm shop. He has a running start in that he has had these boys in the day school; he knows their abilities, attitudes, and home circumstances. But if the teacher of agriculture does not meet this challenge, some organization sometime in the not distant future is coming along that will meet it, and that will rightfully become the dominant out-of-school farm youth program.

The Challenge

I am not saying it will be easy. Whatever you do in this direction will be that much more than most of you are doing now. I know most of you feel that you have a pretty full day's work each school day and each day thruout the year. On the other hand, I see no reason why it should be particularly burdensome if our day-school effort has approached its possibilities in the development of attitudes, in the development of knowledge of technical agriculture, in the development of managerial and operative skills. The older the boy becomes, the more anxious is he to get started in his own right. But first he must have the livestock, machinery, and equipment with which to stock and operate a farm, and he must have a farm to operate, and this accumulation must be free of excessive debt if he has any chance of success. Not until then can we logically lay claim to having prepared boys for the business of farming. Shall we accept it, or is it too much for us?

What could bring more satisfaction to a teacher of agriculture than being able to point to appreciable numbers of successful farmers who, under his guidance and direction, had been not only trained but prepared for the business of farming?

^{*}Presented at the Annual State Conference of Teachers of Vocational Agriculture at Manhattan, Kansas, June 17, 1940.

Book Review

Swine Production in the South, by Southwell, Wheeler, Duncan. 307 pp., illustrated, published by The Interstate Printers & Publishers, list price \$2.00. The book deals specifically with swine production problems peculiar to the South and should prove helpful to pupils enrolled in vocational agriculture in that region. Factual information from all the agricultural experiment stations in the South has been analyzed and interpreted and included in this book. No attempt has been made to set up practices or programs applicable to specific farms or to the region as a whole. Rather, an attempt has been made to present factual material in such a manner that it will enable individuals to develop sound practices and programs in swine production. Suggested problems, activities, and references follow each of the 15 chapters included.—A.P.D.

The making of a living is absolutely necessary to the making of a life. Bread and meat must precede sonnets, pictures, or sculpture. Vocational education is therefore the primary need in the whole field of education.—Willis A. Sutton.

Studies and Investigations

C. S. ANDERSON

Characteristics of Teachers of Vocational Agriculture:

A Study to Facilitate a More Careful Selection of Candidates for Teacher-Education in Agriculture*

F. E. ARMSTRONG, Teacher Education, Honolulu, T. H.



F. E. Armstrong

SHORTLY after Federal funds appropriated for salaries of teachers of vocational agriculture under provisions of the Smith-Hughes Act had attained their maximum in 1926, an over-supply of teachers in this field began to appear. This condition was relieved, in part, by additional, temporary Federal appropriations for salaries of teachers of vocational agriculture made in 1929 and in 1934. With the passage of the George-Deen Act in 1936 Federal funds for salaries of teachers of vocational agriculture were authorized to be increased by more than 130 percent and Federal teacher-training funds were authorized to be increased 100 percent. Because of the greatly increased demands for teachers, enrollment in agricultural teacher-education departments has trebled in many cases. It is obvious, however, that when the period of rapid expansion ends the number of teachers needed will be considerably fewer than is now the case, unless other factors affect the demand. It is also clear that departments of teacher education will need to give greater consideration to selecting candidates who apply for admission to their curricula.

Procedure Followed

The writer has made an attempt to discover desirable characteristics found in successful teachers of vocational agriculture with a view to choosing more successfully the candidates who apply for admission to curricula for educating teachers of agriculture. The study is an intensive investigation of the characteristics of 25 outstandingly successful, and 26 less successful, teachers of vocational agriculture.

The group of "successful teachers" and the group of "less successful teachers" were determined as follows: All teachers of vocational agriculture in the State of Pennsylvania with more than one year of service were divided into three experience groups: those with from one to four years experience; those with from five to nine years; those with 10 or more years of service. Five men who are well acquainted with the work of the teachers in the state, each selected 10 individuals from each experience

group whom they considered outstandingly successful, and 10 individuals from each experience group whom they considered "less successful." If three of the five agreed that an individual teacher was outstandingly successful, or that he was less successful he was asked to participate in the study.

Twenty-five outstandingly successful teachers were chosen and 26 less successful teachers were chosen to participate in the study. It should be noted that county supervisors of vocational education in Pennsylvania were not included. They were among the most successful teachers of vocational agriculture in the state, but their duties were largely supervisory and administrative.

Each teacher supplied information concerning his physique, health, physical defects, high-school record, college record, farm experience, business and social contacts, previous teaching experience, and the conditions under which he teaches vocational agriculture. Each teacher's county vocational adviser and his supervising principal supplied similar information about him, and, in addition, information concerning the teacher's personality.

Conclusions

The following conclusions apply to the teachers studied and under conditions prevailing in Pennsylvania. To the extent that conditions elsewhere are similar these conclusions may be likewise applicable.

1. Success in teaching vocational agriculture does not depend upon the physical size of the teacher. The personal appearance of the teacher, however, does influence his success.

2. Better than average health is a prerequisite for success in teaching vocational agriculture.

3. Major physical defects should bar a man as a teacher of vocational agriculture. Lesser defects will seriously interfere with his success.

4. Persons who were graduated from the high-school curriculum in vocational agriculture have a better chance of becoming outstandingly successful as teachers of vocational agriculture than do those who were not. Ability to rank in the upper fifth of one's high-school class is another factor that may be relied upon in predicting teaching success.

5. Persons who are graduated from the curriculum in teacher-education or who begin their careers as teachers of vocational agriculture after reaching the

age of 30 have less chance of becoming outstandingly successful as teachers than have those who are graduated from the curriculum in teacher-education and who enter the profession before reaching the age of 25.

6. Certain phases of a man's college record are predictive of future teaching success. Among these are graduation with a major in the college curriculum for education of teachers, a high grade-point ratio, and ability to rank in the upper fifth of his class.

7. The data do not show whether prior farm experience is essential to success in teaching vocational agriculture. They do indicate that prior farm experience in no way assures success.

8. A lack of proper social contacts prior to beginning his career as a teacher of vocational agriculture will cause the man to be less successful than he would otherwise be. A lack of proper business contacts is a less serious matter, but may cause the man to be less successful.

9. Less than five years of previous experience in teaching other subjects makes little difference in the success a man attains in teaching vocational agriculture. More than five years of such experience may be detrimental.

10. Extensive participation in extra-curricular activities while a student in high school seems to have little value in predicting a man's future success as a teacher of vocational agriculture. The extent to which he participated in extra-curricular activities in college is of little value in predicting future teaching success, but the type of activity in which he participated does have predictive value. Membership in national honor societies bears a close relation to success in teaching vocational agriculture. Experience gained in appearing before an audience as a speaker, debater, or in a musical or dramatic production is associated with future teaching success.

11. Earning more than 75 percent of his own expenses while a student in college is detrimental to a man's future teaching success.

12. Personality traits definitely influence success in teaching vocational agriculture. The type of personality desired is not a matter of outstanding superiority in a few traits, but rather of general excellence in, and balance among all desirable traits.

13. Teaching facilities available in the schools influenced, but did not determine the success each man attained.

14. The qualities which county vocational advisers and supervising principals most frequently associate with teaching success are a desirable personality; extensive farm experience; ability to get a great deal of work done; ability to co-operate with others; extensive knowledge of technical agriculture; and the ability to maintain discipline. The deficiencies most frequently noted are an undesirable personality; lack of farm experience; devoting too much energy to work outside the school; poor teaching technique; failing to co-operate; and inability to maintain discipline.

maintain discipline in his classes. If he has not been a good disciplinarian, he probably will not be outstandingly successful as a teacher of vocational agriculture, and should not be admitted to the curriculum for educating teachers.

Inability to attain outstanding success in teaching vocational agriculture may be caused, in certain cases, by the absence or near absence of a desirable trait, or by the presence of an undesirable trait in the man's makeup. In other cases, lack of success may be caused by an unfavorable proportion of several characteristics combined in the one individual.

Recommendations

1. In admitting candidates to curricula for educating teachers preference should be given to those who have graduated from departments of vocational agriculture, or, if such candidates are not available in sufficient numbers, to those who have had some training in vocational agriculture.

2. In admitting candidates to curricula for educating teachers, preference should be given, where possible, to those who have graduated in the upper fifth or in the upper two-fifths of the high-school classes. As few candidates as possible should be admitted from among those who graduated in the lower half of their high-school classes.

3. Admit no candidates to curricula for educating teachers who have serious physical disabilities. Candidates with minor physical handicaps should be admitted and trained only when well-qualified candidates are not available.

4. Candidates whose eyesight or hearing is seriously defective, or whose general health is below average should not be admitted to curricula for educating teachers. This is not to be construed as barring candidates with defective eyesight if the defect is corrected with suitable glasses.

5. The amount of practical farm experience that is desirable for a teacher of vocational agriculture should be determined. No candidates should be admitted who are deficient in practical farm experience, or who cannot or will not make arrangements to acquire such experience.

6. Preference should be given to candidates who will graduate from the teacher-education curriculum at about age 22 to 26. Candidates who will graduate after reaching the age of 30 should be admitted only when such men have other compensating qualities.

7. Preference should be given to candidates with outstanding personality. In determining whether the candidate possesses a desirable personality, ratings should be obtained on his personality as a whole from the greatest possible number of persons who know him well. These ratings can be consolidated for an average rating. Another alternative is to obtain ratings from several persons on a large number of personality traits, and to consolidate these for an average rating.

8. Preference should be given to candidates who have had adequate social and business contacts.

9. Preference should be given to those candidates who have taught other subjects for less than five years.

10. If the candidate has had previous teaching experience, it should be de-

termined whether the candidate possesses a desirable personality, ratings should be obtained on his personality as a whole from the greatest possible number of persons who know him well. These ratings can be consolidated for an average rating. Another alternative is to obtain ratings from several persons on a large number of personality traits, and to consolidate these for an average rating.

11. If candidates are admitted to the curriculum for teacher-education after completing one or more years of work in the teacher-educating institution, the following may be used in obtaining students with good chances of developing into outstandingly successful teachers of vocational agriculture: Give preference to candidates with high grade-point ratios; give preference to candidates

Graduate Study by Minnesota Teachers

G. F. EKSTROM, Teacher Education, St. Paul, Minnesota



G. F. Ekstrom

THIS brief analysis of the graduate work of the teachers of vocational agriculture in Minnesota was undertaken for the following purposes: (1) To establish an accumulative record of the professional training of the teachers of vocational agriculture in the state; (2) To summarize data on the graduate work completed by this group; (3) To analyze these data and to show relationships between the amount of graduate work completed and certain factors such as ages and teaching experience; (4) To provide information which will be of assistance to members of the agricultural education staff in serving as advisers to graduate students.

The study pertained to the 154 men who were employed as teachers of vocational agriculture in Minnesota as of October 1, 1939. Many of the data were obtained from the registrar's office at the University of Minnesota, from other colleges and universities which teachers of agriculture had attended, or from transcripts of credits solicited directly from the men.

Other data were obtained from the certification and vocational agriculture divisions in the Minnesota Department of Education, and from reports submitted by the teachers to the state supervisor of vocational agriculture.

Summary

1. A total of 101 of the 154 teachers, or 65.6 percent, had completed an average of 20.3 term hours of graduate work by October 1, 1939. (These percentages compare rather favorably with the data reported by W. A. Smith of Cornell University in a study of 10 states, which showed that 85 percent of those teachers with three or more years of experience had completed an average of 16.5 hours of graduate work.)

2. The 89 men without the master's degree have an average of 15 credits, and a range of credits from 3 to 46.5. The master's degree group of 12 men

had an average of 59.3 credits and a range of 42 to 106 credits. Four of these men have done additional graduate work since completing their master's degree.

3. Ninety percent of the graduate group have advanced credits in technical agriculture, 88 percent in agricultural education, 32 percent in educational areas other than agricultural education, and 10 percent in miscellaneous areas.

4. More teachers registered for courses in dairy husbandry than other divisions in technical agriculture with animal husbandry, agriculture economics, agronomy, and horticulture following in order.

5. Twelve of the Minnesota teachers, or less than eight percent, have the master's degree as contrasted to 17 percent for the states sampled in Smith's study. (Four additional teachers were awarded the master's degree during the fiscal year which ended June 30, 1940.)

6. Of the 89 men with graduate credits who do not have the master's degree, 39, or nearly one half, have a maximum of 10 term hours of graduate credit or the maximum equivalent of one summer session. But 15 teachers have more than 25 credits beyond the bachelor's degree and only two have more than 40 credits.

7. The average age of 146 of the 154 teachers was 33.6 years. The men who had done graduate work averaged 36.5 while the others averaged 27.2 years of age.

8. The average experience for the 154 men in teaching vocational agriculture in Minnesota was 5.1 years; for the 101 men with graduate credits it was 6.6 years, and for the 53 men without graduate credits it was 2.2 years.

9. Thirty-one of the non-graduate-credit group of 53 teachers had one year or less of teaching experience in Minnesota at the beginning of the 1939-40 fiscal year.

*An abstract of a dissertation submitted in partial fulfillment of the requirements for the degree of Doctor of Philosophy at the Pennsylvania State College.

THE 1940 revised edition of the Official Manual for the Future Farmers of America is larger by 16 pages than the previous edition. Included among the new features of the manual are some duties and responsibilities of local chapter officers, ceremony for installing officers, suggestions on financing chapter activities, building a chapter library, writing news, putting on radio programs, and many other helpful materials.

Future Farmers of America

L. R. HUMPHERYS

D. F. F. A.—Dads of the Future Farmers of America

R. E. HUBBARD, Instructor,
Montevideo, Minnesota



R. E. Hubbard

THE agricultural program in the schools of Minnesota is a busy and ever challenging one to the teachers of agriculture. All-day classes, part-time classes, adult classes, F. F. A. activities, together with many outside duties in urban and rural services demand that the teacher of agriculture receive local help in carrying out a good agricultural program.

Three years ago I found this help in the "Dads of the Future Farmers of America." The thought that other teachers might be interested in the idea has prompted me to write this brief story of our helpful venture.

Origin

During my years of work with boys in their many activities I have observed that the dads are more interested in their own sons than are other men. If this be true, then the dads would be the best group of men to have in an organization to study their sons' problems in agricultural education. It occurred to me that I could carry out a better agricultural program if the dads would become more interested in and better acquainted with the F. F. A. program.

With the above facts in mind and the knowledge that many growing youth organizations are sponsored by a group of adults, I have taken the dads of the boys who are members of the local chapter of the F. F. A. and organized them into a sponsoring organization known as the D. F. F. A., "Dads of the Future Farmers of America." We soon discovered that Mother is also very much interested in the activities of her son. Therefore, after the first year, the mothers were voted in as honorary members. All mothers are interested in the programs and they have brought into the organization more color, song, sociability, interest, and a larger attendance.

Aims and Objectives

The following aims or objectives were set up to guide the organization.

1. To bring the dads and mothers together to study their sons and their sons' educational problems.
2. To give to the F. F. A. a sponsoring body of adults who are most likely to give help to the boys in their daily desires and home needs.

3. To bring the dads and boys closer together as pals and partners, both in play and in work.

4. To give to the teacher a group of adults to help solve the problems of the individual and of the class which are, directly or indirectly, the parents' problems.

5. To keep the teacher in close contact with Dad and Mother and the farm.

6. To give to the teacher a good adult evening class.

7. To bring about a closer relationship between the dad and son, thus bringing about more happiness in the son's life and in his financial success.



Charter members of the D. F. F. A., Montevideo, Minnesota

8. To guide the son in the direction he should go from where he is to where he ought to be.

9. To deal with the son's specific goals of achievement along the way of educational development.

10. To give to the F. F. A. a progressive program in farming.

11. To develop a good agricultural program.

12. To develop in both dad and son appreciative attitudes toward scientific development in agriculture.

13. To give to the dad a solution to some of his economic problems.

14. To give to the son an opportunity to honor his father and mother.

15. To improve and build for better farm living.

Organization

The aims and objectives of the organization were explained to the F. F. A. members at the regular meeting. The boys were fully convinced of the advantages to them of such an organization. Most of the boys not only asked their fathers to attend but urged them to come. After this, I tried to visit all parents before a written invitation was ex-

tended to the first meeting. The dads were notified of the first meeting by the sons.

Extracts from the first letter follow:

Dear Dad:

"This is what your son calls you in school. I have your son in my class and he is a fine fellow. I have 49 other farm boys, a group of boys who have so many problems it is hard for me to help solve all of them. Maybe you did not know that your son is interested in some of the many things you are doing. He is very much interested in doing something for himself, and he wants your help and advice.

"I know some things about your son that you do not know and you know many things that I do not know. Your son is a member of the F. F. A., a national organization of farm boys studying vocational agriculture. As a father you will be interested in knowing the program of this organization."

CONSTITUTION

Article I—Name and Purpose

Section A. The name of this organization shall be "The Montevideo Chapter of the Dads of the Future Farmers of America." Members are hereinafter referred to as "The Dads of the Future Farmers of America."

Sec. B. The purpose. (Given under aims and objectives.)

Article II—Organization

Section A. The Montevideo Chapter of the Dads of the Future Farmers of America is composed of the fathers of the members of the Future Farmers of America, who are receiving organized instruction in vocational agriculture under the provisions of the National Vocational Education Acts.

Sec. B. Local D. F. F. A. chapters shall be established only in schools where systematic instruction in vocational agriculture is given under the provisions of the National Vocational Education Acts.

Sec. C. Members of the local chapter shall meet, organize and adopt a constitution not in conflict with the State or National F. F. A. constitution. They shall elect officers, set up a program of work, and then apply to the state F. F. A. executive committee for their approval. After this application has been approved, the members of the local chapter shall be known as "The Dads of the Future Farmers of America."

Article III—Membership

Section A. Membership in this organization shall be active and honorary.

Sec. B. Active membership. The father of any male student of vocational agriculture who is regularly enrolled in a part-time, day-unit, or all-day class is entitled to active membership in the D. F. F. A. He may retain his membership only so long as his son retains his membership in the F. F. A. In case of a student who has lost his father, his stepfather or legal male guardian shall be eligible for membership.

Sec. C. Honorary membership. The adviser, who in all cases is the vocational agriculture teacher, and the mothers of the male students of vocational agriculture are entitled to honorary membership. In the case of a student who has lost his mother, his

stepmother or

Article IV—Degrees and Privileges

Section A. There shall be four degrees of membership based upon the achievements of the son. These degrees are (1) Green Hand, (2) Future Farmer, (3) State Farmer, and (4) American Farmer.

Sec. B. The Dads of the Future Farmers of America shall hold the same degree as their sons.

Article V—Officers

Section A. The officers of the Montevideo Chapter of the Dads of the Future Farmers of America shall consist of the president, vice-president, secretary, treasurer, reporter, host, and advisor. These officers shall be elected annually by a majority vote of members present at a regular monthly meeting. The officers shall perform the usual duties of their respective offices.

Sec. B. After the first year of organization officers of the local chapter must have been members of the Dads of the Future Farmers of America one year before being eligible to hold office.

Sec. C. Honorary members shall vote but they shall not hold any office except that of advisor in the local D. F. F. A. chapter.

Sec. D. The executive committee of the Montevideo Chapter of the D. F. F. A. shall consist of the chapter officers. This committee shall perform the usual duties of an executive committee, review and approve receipts and disbursements, and be responsible for the welfare of the organization.

Article VI—Meetings (Omitted)

Article VII—Dues (Omitted)

Article VIII—Amendments (Omitted)

Article IX—Emblem

Section A. The emblem of the Dads of the Future Farmers of America shall be made up of five symbols: namely, the plow, the owl, the rising sun, a cross section of an ear of corn, and an American eagle. The emblem shall carry the four letters "D. F. F. A." and "Vocational Agriculture."

Sec. B. All active members shall be entitled to wear the emblem of the same degree as their sons. Until made they shall wear the F. F. A. emblem.

Article X—Colors

The same as the F. F. A.

Article XI—Creed

The same as the F. F. A.

BY-LAWS

Article I—Duties of the Local Officers (Omitted.)

Article II—Committees (Duties have been omitted.)

Section A. In addition to the executive committee the following committees are suggested and may be appointed annually by the president: entertainment, educational, refreshment, productive enterprise, farm boys' personal problems, co-operative activities, camping, marketing school, community service, and finance.

Article III—The Fiscal Year

Section A. The new year shall begin July first.

Article IV—Ceremonies for Opening and Closing the Meetings

Section A. The opening and closing ceremony shall be the same as for the F. F. A. meetings with these exceptions:

1. President in opening paragraph will use "Dads of the Future Farmers" instead of "Future Farmers."
2. Adviser will omit "being older than the rest of you."
3. President in closing will use "men" instead of "students and classmates."

A D. F. F. A. initiation ceremony has been worked out for Green Hand Degree to be put on by officers and sons, as well as a ceremony for raising of Green Hands to the Degree of Future Farmer. These are patterned after the regular initiation ceremonies. In addition, a ceremony has been written for initiation of mothers into honorary membership. Because of limited space these are omitted here.

Results

Parents were invited once a month to the department.

Parents became acquainted with sons' project books, references, laboratory equipment, and the general characteristics of the school.

Problems of the boy, home, and community were presented thruout the year as they appeared. At each meeting the dads used the F. F. A. manuals for opening and closing ceremony.

Dads learned the different F. F. A. degrees and, because their degrees are the same as their sons', they seemed to take a great deal of interest in determining the kinds of projects the sons should carry on.

More and better varieties of corn and grain have been grown.

higher grades of animals.

Cars for trips are now easily obtained. Dads will often go along to such places as the West Central School and Station at Morris.

Several dads have expressed a desire to attend the marketing school.

This year they are sending an F. F. A. member to the National F. F. A. Con-

The Teacher Develops a Speaker

(Continued from page 128)

main point unless it decidedly helps to prove the point. He should state the point, then elaborate upon it. This can be done by interesting examples; but care should be taken not to let the audience drift away from the outline thru other associations that might arise from the story or the example. To bring the audience back to the outline, McNeil and Weaver, in *Elements of Speech*, suggest the following method:

"Up to this point I have attempted to do three things: one, . . . ; two, . . . ; three, . . . Now I shall attempt to present two more considerations before closing, namely, one, . . . and two, . . ."

In writing the summary or conclusion of the speech, it is well to state the problem again and to give the main points in summary form. These points have been previously proved for the audience. The summary should be brief, complete, and forceful. It will be well worth the speaker's time to prepare the conclusion with the greatest care.

Practicing the Speech

To memorize a speech, psychologists suggest that the orator read the speech over and over with undivided attention. This method will at first seem slower than memorizing a paragraph at a time, but in the end it will be faster. A simple choice of words and a well-outlined speech will also greatly assist the memory work.

Practice before a mirror will eliminate most of the unbecoming and awkward gestures that the speaker might have. A word might be said on the subject of hands. The very mention of them somehow makes the speaker let them seek shelter in the pockets of the coat or trousers. One should forget that the hands exist and usually they will take care of themselves.

While memorizing the speech, it is well to practice in a slow tempo. To race thru an oration will spoil it for the audience. No fast speaker can expect to gain the sympathy of the audience. Since most orations have a time limit, the speaker will be able to finish in the given time and will not receive a penalty if practice on tempo is thoroly done. Enthusiasm in the voice and a good tempo are always pleasing.

After the speech is prepared and memorized, the speaker should give the oration before as many groups of people as possible. Those groups should be, preferably, people well acquainted with the subject matter and who can ask good, thought-provoking questions similar to those that the orator may have to

Several financial problems were

For the first time, the boys had a chance to initiate their parents into an organization, present them with emblems, and congratulate them.

It has given me closer friendship with many parents and a greater enjoyment in the last line of the F. F. A. motto—"Living to Serve."

answer for the judges at the final contest. If the orator repeats the question, it not only assures him that the audience heard it, but it also gives him time to word his answer.

If possible, on the night before the final contest, the orator should be allowed to practice alone on the platform from which he is to speak. In this way he will find out how loud his voice should be pitched and where he should stand without distracting annoyances such as squeaky boards and glaring lights.

During the following day he should find a new interest. The orator is ready to win!

SELECTED REFERENCES

- McNeil and Weaver, *The Elements of Speech*. Longman's, Green and Co., New York 1934. Pp. 407, 410, 432.
- Phillips, Arthur Edward, *Effective Speaking*. The Newton Co., Chicago. 1923. P. 222.
- Smith, Edwin Lloyd, *Making Words Work for You*. Blue Ribbon Books, New York. 1930.
- Winans, James Albert, *Public Speaking*. The Century Co., New York. 1923.
- Dolman, John, *A Handbook of Public Speaking*. Harcourt, Brace Co., New York. 1922.

Wyoming Establishes Future Farmer Camp

SAM HITCHCOCK, State Adviser,
Cheyenne, Wyoming

THE first State Future Farmer Summer Camp was established this year in the Big Horn Mountains on the shores of Ten Sleep Lake. Fifty-two Future Farmers enrolled, with representatives from nine chapters. The chapter advisers accompanied their boys in the training program at the camp. An organization was set up to take care of all activities of the camp, which consists of log buildings with sleeping quarters and equipment to take care of 150 boys.

The main purpose in organizing the summer camp activities was to provide recreation and leadership training for the boys. A definite daily schedule was set up and was followed thruout the week of training.

The degree of success of the camp this year has resulted in a decision to continue this type of education in the years ahead. Our state is large and the distances that some of the boys have to travel is too far. Because of these facts two camps will be established next year, one for the Northern half and the other for the Southern half of the state. This arrangement will make it possible for a larger percentage of the boys to participate. The dates for the summer camps will be arranged at a time when the largest percentage of boys can leave their farm work.

The year's experience leads us to believe this type of instruction is helpful in promoting the program of vocational agriculture.

We Do It by Districts in Minnesota

HARRY PETERSON, Executive Secretary, Minnesota Association, F. F. A.,
St. Paul, Minnesota

EXPERIENCE teaches us that one of the prerequisites for progress in the Future Farmers of America organization is "distributed responsibility." This applies to state associations as well as to local chapters. We have seen many excellent annual programs of work prepared by chapters only to be filed away and referred to casually during the year. Chapter officers may be enthusiastic over the F. F. A. and probably are willing to spend a great deal of time carrying out the annual program of work. However, unless responsibility is delegated to the membership thru committees willing to function, there will be relatively little accomplishment.

One of the problems of the Minnesota Association has been to establish an effective leadership contact with local chapters in order to help carry forward an effective program designed to accomplish the major objectives of the F. F. A. and vocational agriculture.

District Organizations

For the past several years Minnesota departments of vocational agriculture have been grouped geographically into seven districts for convenience in carrying on the instructional, inspectional, and promotional work of the office of the state supervisor. District lines are rather indefinite and teachers in borderline departments decide for themselves to which district they want to belong. Meetings of teachers called by the State Department of Education are usually conducted on a district basis in order to avoid having teachers travel too great distances. The Minnesota Vocational Agriculture Instructors' Association, which is the official organization of the teachers of agriculture, is organized also on a district basis with a member of the board of directors elected from each district. The number of departments in each district varies from 16 to 25, the number changing somewhat from year to year as the whole program in the state develops.

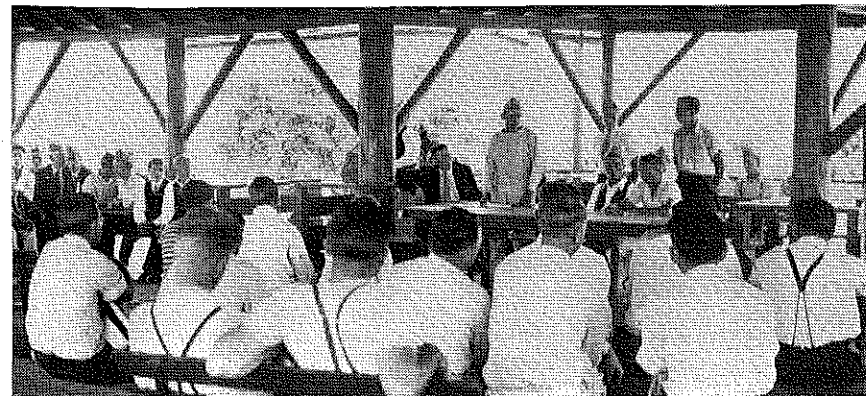
With the increasing interest in the Future Farmers of America organization in Minnesota, a need for an effective way of assisting local chapters to carry out programs became apparent. In 1938 the idea was suggested that district organizations of Future Farmers of America, corresponding to the district divisions already established, would provide the desired contact between the state association and local chapters. It would provide a means by which the state association could promote activities with a unit of workable size.

National Leader Assists

Mr. W. A. Ross, National Executive Secretary, was invited to Minnesota by Leo L. Knuti, State Supervisor of Agriculture Education, for a series of district F. F. A. rallies or leadership-training schools. One-day meetings were held on December 5-9, 1938, at convenient points within each district. Approximately 100 F. F. A. chapters were represented, with over 1,000 members

participating. This series of leadership meetings was the official "opening gun" of the district organization idea in Minnesota. Each district elected a full set of officers and appointed one of the teachers of agriculture to serve as district adviser.

The district organizations proved their worth almost immediately. Some of the activities completed during the year 1938-39 included many of a promotional and educational nature. Two of the districts held picnics, four districts sponsored tours, five held leadership-training schools, while three had meetings for special instruction in Future Farmer work. Six districts held public speaking contests, with a total of 38 contestants participating. A total of 19 district newsletters were published during the year. Four districts prepared booths for the state convention, and all seven districts co-operated in preparing a booth at the state fair. One of the districts sponsored a series of eight radio broadcasts and a district banquet. Another district organized a summer camp in which 10 schools participated with approximately 60 members in attendance.



District officers call a business meeting during the day at the District VII summer picnic and rally at Eveleth Park, Minnesota. With the officers is W. J. Kortsmaki, district adviser. Over 250 members attended the rally.

Recreation and Leadership Training

During 1939-40 the districts increased their planning activities. The organization procedures improved considerably and there was evidence of more systematic planning on a district basis for nearly every activity. Four districts operated summer camps for recreation and leadership training. The facilities of several state park camps were leased by the district organizations for this purpose. Two districts held a banquet with from 200 to 300 F. F. A. members, farm leaders, and businessmen present. One of the banquets was sponsored jointly by the district organization and a local commercial club. The F. F. A. members contributed food products for part of the food cost. Several of the state officers attended both banquets. The primary benefit of the district banquets has been the inspiration and enthusiasm developed among members and farm and civic leaders for the programs of work of the F. F. A.

Contests Planned

All seven districts conducted public speaking contests, at which time the speaker was selected to represent the district in the state public speaking contest.

Each of the seven districts conducted a livestock and crops judging contest in which five teams were selected in each division to represent the district in the state contest. This contest is not sponsored entirely by the F. F. A., but rather in co-operation with the teachers' organization.

One district has successfully carried out a summer picnic at one of the local lakes. Over 250 F. F. A. members have attended this picnic for the past four years. A program of recreation and leadership is carried out. The picnic has proved to be a successful way for getting the group together during the summer when school is not in session and keeping up interest in the F. F. A.

Training Thru Committees

From September 7 to October 2, 1940, the seven districts in Minnesota completed a series of rallies and leadership-training meetings. The meetings were planned jointly by the State Association and the district organizations and were held on the same day and at the same place as meetings of the teachers' group.

on each district committee. The following committees were appointed in each district:

1. Supervised farm practice,
2. Co-operative activities,
3. Community service,
4. Leadership,
5. Earnings and savings,
6. Conduct of meetings,
7. Scholarship,
8. Recreation,
9. Publicity.

Arranging for committee meetings of district committees has always been a problem because of the widely scattered location of members. The new arrangement suggests that one member from each committee in each chapter, equipped with a district program of work, will be conscious of his responsibility on his particular committee. This responsibility may result in each chapter carrying out its part of the program of work, since someone in each chapter is alert to and responsible for a definite part in the district program.

Generally speaking, we have found that local chapters of F. F. A. and their committees do none too good a job of planning. Therefore, in our leadership meetings we have emphasized the importance of complete and detailed plans for action, with dates set for definite events. Building of complete plans for accomplishing the program of work helps us to separate the "grain" from the "chaff." In other words, it keeps impossible goals out of our programs of work. Then, too, when dates and places are cleared in advance, we obligate ourselves to carry out our plans.

Applying Psychology in Leadership Training

IVAN JETT, Adviser,
Stamping Ground, Kentucky

LEADERSHIP training for the rural youth of America is the common cry today, but what are we doing about it? The Future Farmers of America probably offers us the greatest opportunity to develop this essential quality. If the American farmer is to receive his share of the national income, preserve the fertility of the farm lands, and be released from his position as the lowest paid class in the country, a vigorous leadership must be developed. Then let us do something and let us do it quickly.

Leadership, that intangible characteristic and ability, is admired, coveted, and desired by everyone. We are trying to follow methods that have been successful and that are giving us desired results when we use them. What are these methods? Basically: romance, publicity, self-importance, economy, practicality, self-satisfaction, work, play, and health are the factors which function with major significance. There are many other factors, but we will confine ourselves to the above. If we adopt the above essentials, we will have a live, interesting F. F. A. activity program that will get the desired results of training leaders and guiding farm boys.

Getting On With Other People

One of the first things boys must learn is the knack of getting along with other people. These boys will learn the principles involved to some extent while going to school, and in their everyday

Each year early in January the state officers of the Minnesota Association of Future Farmers call a leadership meeting of all district officers and advisers. This is usually a one-day meeting held at University Farm, St. Paul. The primary purpose of this meeting is to focus attention on the state program of work with special emphasis on ways and means of accomplishing the program. Definite plans are made for carrying out state-wide activities such as (1) The annual state convention, (2) The state public speaking contest, (3) The chapter procedure contest, (4) The national chapter contest, (5) The ear-of-corn contest, (6) Chapter and district exhibits, (7) Participation in the Minnesota State Fair, (8) Participation in the national convention.

Each district is asked for a report of progress of local and district programs. This meeting motivates district officers and develops interest and enthusiasm for the F. F. A. at a time of the year when it is most needed.

Generally speaking, we have found it desirable to draw as large a number of F. F. A. members into positions of leadership as is possible. The district organizations in Minnesota have helped materially to distribute leadership and to intensify activity among the individual members of the chapters in the state.

life—but when they go to camp during the summer, on a summer outing, belong to an organization where they must co-operate, they acquire this ability far better. Circumstances demand immediate knowledge or a great deal of unhappiness. All of us can recall specific instances of great changes such as when a certain member was appointed as chairman of a committee and he was given responsibility.

Have you actually a knowledge of parliamentary procedure to a degree that the boys accept you as an authority or do you spoil their idealism by saying, "I don't know."? Bad psychology isn't it?

All boys realize that in the future it will be necessary for them to make a livelihood. They are interested in making this livelihood in the easiest way and in making the most money because, like us, they are interested in the ultimate goal, happiness. Most of these boys believe that money alone, with little work, will bring this happiness. How can we appeal to this belief and make the most of the opportunity? Proper teaching in the classroom and supervision will make efficient farm managers and prosperous farmers.

The Feeling of Self-Importance

This is easy to accomplish by having all the committees and offices possible and then by giving boys the responsibility in fact and action. It will keep an adviser busy getting the results—but why not, that is the job. Honest praise should be given when deserved.

Maybe some of us have heard the story of the town's worst citizen dying in a certain section. It was customary when going past the deceased in the church to speak some word of praise. All passed in silence except an "old

good whistler." When a boy gets the results we should tell about him in our conversation. We should give him the thrill of success and get it in the local paper. We all like to hear and see our name. His accomplishment may not seem to be much, but it means a lot to him and his parents. Yes, it will require a little time and lots of thought, but the effort will pay well.

If home beautification is properly encouraged the desire to remain on the farm will become an active force. Nothing has quite the appeal of an attractive, happy home. It means more work, but it also means lots of fun and immediate results.

Wisconsin F. F. A. Camp

LOUIS M. SASMAN, State Adviser,
Madison, Wisconsin

THE Wisconsin Association of Future Farmers of America has begun the development of a state camp in the extreme northern part of the state.

The site for the camp was selected by a committee of instructors in vocational agriculture in co-operation with the state adviser and the state executive committee of F. F. A., after many different sites had been visited and thorough discussion had been held at the annual summer conference of instructors in agriculture and the state meeting of Future Farmers of America.

The camp property occupies 40 acres on a small lake in the Northern Highlands State Forest, owned by the State of Wisconsin and under the direction of the State Conservation Department. This site is about 250 miles directly north of Madison. A five-year lease of the property has been entered into by the Agricultural Division of the State Board of Vocational Education and the State Conservation Department.

THE first building on the camp site was built in the fall of 1938 by an experienced carpenter, well known to one of the instructors in agriculture. This building was 16' x 28' and is equipped with eight double-deck bunks, and with facilities for preparing and serving food in camp fashion. In the summer of 1940 an addition, 14' x 14', was made for kitchen space, thus releasing room in the original building for group meetings.

The camp development has been financed entirely from Future Farmer funds, in the first place by setting aside each year a sum of \$200 in the budget, and in the second place by collecting a \$5 fee from each chapter for three-day use of the camp.

Use of the camp is available to chapters in three-day periods, and a schedule is worked out on this basis for the entire season. In July, 1940, the camp was used for a two-day meeting of the officers of the State Association, but otherwise its use has been limited entirely to groups from local chapters, and not to exceed 16 members from a chapter.

Future plans provide for the construction of a fireplace and a porch on the building. After that, if demand for expansion still continues, another unit will probably be constructed about the same as the first.

become abnormally large. These giants are usually proportionally strong at first, but after a time the pituitary wears itself out so that eventually they may become weak and diabetic. If the pituitary begins to overfunction later in life, the hands and feet grow, and also the bones of the spine, producing a hump-back type.

THE anterior pituitary gland also produces at least two hormones which affect the development of the sexual organs. One of these is necessary for the production of ova (or eggs) and spermatozoa. It appears first to be released in quantity about the time of puberty. Some types of infantilism or underdevelopment of the sex organs may be cured by the injection of the sex-stimulating hormone of the pituitary. Apparently this organ is not functioning correctly in these cases. The amount of this hormone released and the times at which it is released probably determine the number of young produced at a time and the season of breeding. Litters of 20 or more rats have been produced by the injection of anterior pituitary hormone (gonad stimulator) which has caused the release of an abnormally large number of eggs at one time. Sheep have been induced to breed out of the usual breeding season by similar injections. The other sex-stimulating hormone (lutinizer) is essential for the replacement of the egg in the ovary by the corpus luteum or yellow body. As this organ is essential for the maintenance of pregnancy and for the development of the mammary gland, the importance of this substance certainly cannot be overestimated.

The posterior pituitary produces at least two hormones. One of these, pitressin, regulates the blood pressure by its action on the smooth muscle of the arteries. The other, pitocin, causes the contraction of the smooth muscle of the uterus. It thus is of material aid in the birth process and it is often used, both in human and veterinary practice, in delayed birth or in cases of retained placenta. The pituitary hormones are protein, and as yet little is known of their structure.

Sex Hormones

The testes, after they have been stimulated by the anterior pituitary, secrete a hormone, testosterone, which causes the development of the accessory sex organs necessary for the storage and transport of semen. Like the other hormones of the sex glands this is a sterol or fat-like substance. Altho its composition is rather complex, it has been synthesized.

The ovaries produce at least two hormones. One, estradiol, is produced while the eggs are ripening. It causes the mental reaction in animals which is called the heat period, and increases the vascularity of the uterus in preparation for the transport of spermatozoa and for the implantation of the egg if it is fertilized. The corpus luteum, already mentioned, causes the growth of the glandular portion of the uterus so that the egg may be nourished before it is

planted. It controls the pituitary in the sense that it prevents the further secretion of gonad-stimulator so that ripe eggs are not produced during pregnancy; thus the danger of superfetation or the presence of embryos of different ages in the uterus at the same time is avoided. It persists for the duration of pregnancy in all the species known except for the mare. It has an important part to play in the growth of the mammary gland in preparation for secretion.

Balance of Hormones Essential

Sufficient has been said to demonstrate the importance of the hormones. What must be stressed now is that the balance of the amounts of the hormones circulating in the blood is equally important. This is a subject upon which little is known. The only methods of assay available at present require the use of living animals as objects and fairly large quantities (milligrams) of hormone. The amount circulating in the blood at any time may probably be measured in thousandths of milligrams so that assays upon the blood or tissues taken from living organisms become very difficult. There is no doubt, however, that the balance differs from species to species both at any one time and from time to time, and that many species' peculiarities both in structure and in physiological behavior (such as in the patterns of reproduction) will eventually be explained in terms of hormones and their balance. The same remarks hold true for individual differences, tho here probably small differences in the organism modify the hormonal response within narrow limits. We are only just beginning to work in this field and much remains to be done. As in the case of insulin, which has proved rather an easy substance with which to work, hormonal lack of balance can be rectified by artificial means so that the diabetic can now lead a reasonably normal life. Infantilism, non-descent of the testes, some forms of sterility, and cretinism can also be treated successfully.

Practical Applications

In the agricultural field the hormones have not yet found much application. Methods of preparation from organs obtained from slaughterhouses are long and tedious, and the yields so small that the purified hormones are too expensive to be used economically in all but a very few instances as, for example, in the aiding of birth in cattle, horses, or swine. Our knowledge of the normal balance in each species must be worked out in detail. The extent to which we may safely modify the balance and the results to be obtained also needs study. Eventually, by a combination of chemical skill and a judicious use of genetics, the physiologist will be able to inject his hormones and produce animals with almost any combination of shape, milk yield, and fecundity that may be required.

For those who may wish to gain a further familiarity with the subject of hormones as presented in popular, rather non-technical discussion, Dr. Aspell and the writer suggest the following references: Sure, Barnett, The Little Things in Life. Mathews, Albert P., Vitamines, Minerals, and Hormones. Moyers and Welton, What We Are and Why. Stockard, C. R., Physical Basis of Personality. Gregory, Jennie, The A. B. C.'s of Endocrines.

Results of National Contests

THE team from Dresden, Ohio, won the 1940 National Livestock Judging Contest for Students of Vocational Agriculture held at Kansas City, Missouri, November 9-16. Following Ohio in order were Pennsylvania, Nevada, Montana, and Wyoming.

The dairy cattle judging contest was won by the team from Hyrum, Utah. Marshfield, Missouri, was second, followed by Illinois, Wisconsin, and Kansas.

Placing in the poultry judging contest were: first, Missouri; second, California; third, Kansas; fourth, Wyoming; and fifth, Maryland.

Teams ranking in order in the milk judging contests were from Virginia, New Jersey, Illinois, Mississippi, and Nebraska. The Meat Judging winning teams in order were from Oklahoma, Missouri, Illinois, Minnesota, and Wisconsin.

The Maltby trophy for high score in both dairy cattle judging and livestock judging was won by Ohio.

The winner of the F. F. A. public speaking contest was Douglas Charles Fisk, Hunter, N. Dak., with the subject "Between Men."

The Committee on Rural Education

A RURAL school supervisory demonstration project in McDonough County, Illinois, a rural community high-schools project in Wisconsin, and a field service project for the cultural improvement of rural teachers in service, in Missouri, are activities launched by the Committee on Rural Education during the first year of its existence. The Committee, which was organized in March, 1939, has selected from among the many problems of rural education two main activities to which to devote its energies, according to the First Annual Report just issued. These two fields of activity are as follows: first, the growth and development of rural children and youth—physical, cultural, and spiritual—as achieved thru school curriculum, techniques of teaching, and out-of-school experiences; and second, the promotion of better understanding by rural adults of the difficulties confronting rural schools, and ways and means by which these difficulties may be overcome.

The committee hopes to achieve its purposes thru co-operation with existing educational agencies, and thru bringing about needed co-ordination of effort directed toward the common goal of improving rural life. To this end advisory assistance and modest financial help have been given in the three states of Wisconsin, Illinois, and Missouri, to assist local agencies in carrying forward demonstration of improved educational techniques.

The Committee consists of nine members appointed by the American Country Life Association and supported financially by the Farm Foundation of Chicago. The headquarters of the Committee are in Chicago.

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*See complete directory of state directors; state and assistant state supervisors; regional or district supervisors; colored supervisors; teacher-trainers; itinerant teacher-trainers; research workers in teacher-training; supervising teachers; and colored teacher-trainers, in the December, 1939, issue (separate insert).