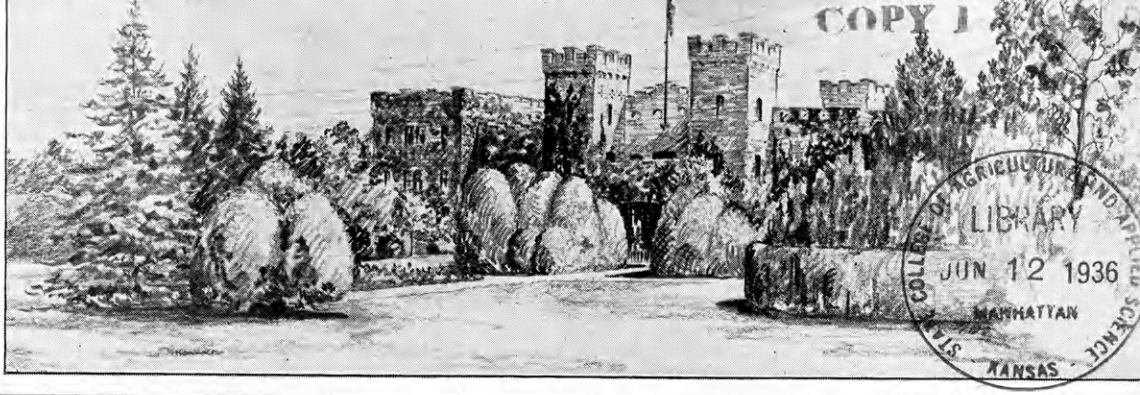

THE KANSAS AGRICULTURAL STUDENT

MANHATTAN, KANSAS

VOL. XV
No. 4
MAY 1936

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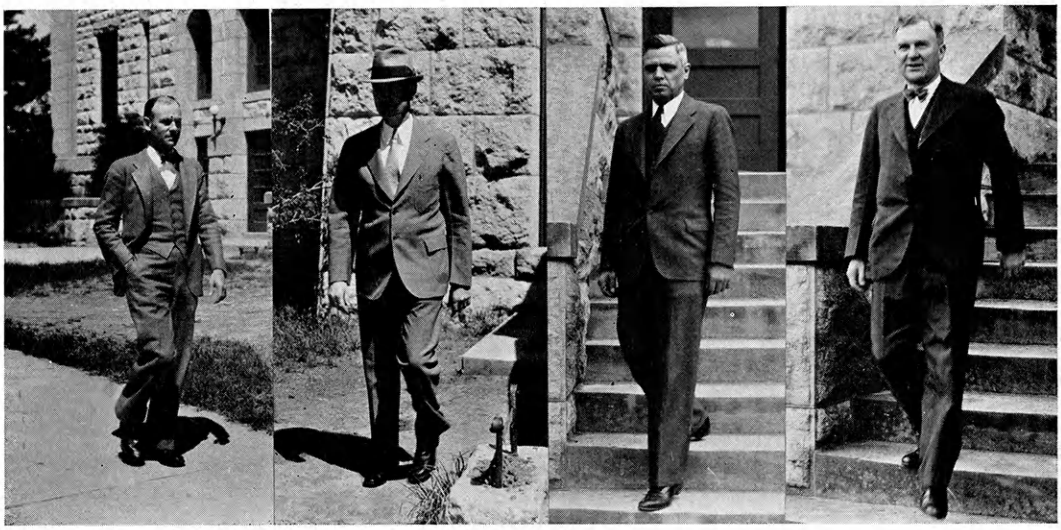
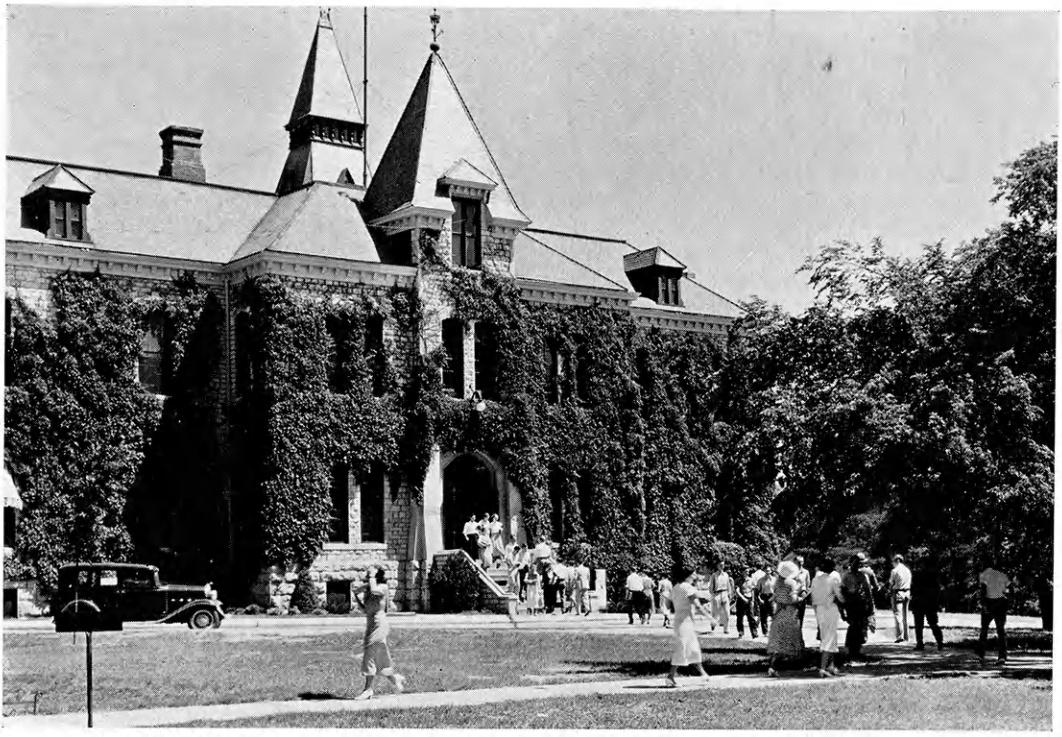


FACULTY PROMOTERS OF AND BOOSTERS FOR THE STUDENT JUDGING CONTESTS

Left to right: Prof. F. W. Atkeson, head of Department of Dairy Husbandry; Dr. C. W. McCampbell, head of Department of Animal Husbandry; Prof. R. I. Throckmorton, head of Department of Agronomy; Dean L. E. Call, Division of Agriculture.

The Kansas Agricultural Student

VOL. XV Manhattan, Kansas, May, 1936 No. 4



A SPRINGTIME VIEW OF THE SOUTH ENTRANCE OF ANDERSON HALL

CONTENTS

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Kansas Agricultural Conditions

Gerald J. Brown, '36

From a recent survey it appears that agricultural conditions in Kansas are considerably below normal. The winter wheat crop in all sections of the state except the northeastern section is very far below normal, the result primarily of three factors: Drought, wind erosion, and insect damage. In the northeastern part of the state wheat is showing very favorable prospects for a good crop. Oats and barley are spotted and in some of the western sections were never planted because of dry seedbeds. Conditions for planting corn and sorghums throughout most sections have materially improved as a result of rains which fell the early part of May. Although a large percentage of the alfalfa acreage has been lost the past two years because of old stands dying out and the failure to get new stands, that which remains in most alfalfa sections shows promise of a fair to good first cutting. The livestock situation seems to be below normal as much of the stock came through the winter in thin condition. The following specific conditions are reported by men in various sections of the state.

Northeastern. Merton L. Otto, county agricultural agent of Leavenworth county, reports the wheat crop as looking good with the exception of a small acreage of late-seeded wheat and wheat on very thin upland soil. Oats is spotted. Alfalfa should produce a heavy first cutting. Cattle numbers are about normal and cattle are in much better condition than they were last spring. Hog numbers are below normal.

Southeastern. According to Albert Brown, county agricultural agent of Bourbon county, wheat is considerably below normal because of poor growing conditions last fall and this spring. Much of the wheat is infested with Hessian fly. Chinch bugs are numerous and combined with the dry weather are damaging some wheat fields badly. Most oats were severely damaged by a freeze. Lack of rain has prevented pastures from making their usual growth and are practically as short as in midsummer. The first cutting of alfalfa hay will be very light in this section.

Central and South Central. R. B. Cathcart, county agricultural agent of Kingman county, says winter grain crops show great promise at this time. R. M. Karns, director of vocational agriculture in the Newton High School, reports that wheat prospects in his section are not very good. In general wheat in most parts of this section has been very hard hit. Oats is in about the same condition as wheat. Livestock in this region has come through the winter in thin condition. Repeated freezes and the dry spring will give a short first cutting of alfalfa. Conditions for planting corn and sorghums have been improved by recent rains.

In the Hays area, L. C. Aicher, superintendent of the Fort Hays Agricultural Experiment Station, says the wheat situation is spotted and from one half to two thirds of a normal crop is expected. Alfalfa is looking fine and should give a heavy first cutting. In this section there is developing a widespread interest in water conservation and the anticipations are that the basin or dam lister will be used extensively as a summer fallow tool just as soon as the farmers can get them or buy the attachments.

North Central. According to F. A. Blauer, director of vocational agriculture at Lebanon, the wheat crop is better than one half normal. Oats have a nice start but are a little late. Conditions for planting corn and sorghums are good since recent rains.

John G. Bell, county agricultural agent of Norton county, says that wheat in his section is not thriving so well as some reports indicate. Barley and oats are in much the same condition

(Continued on page 105)

The Fort Hays Basin Lister

L. C. Aicher, '10

Superintendent Fort Hays Agricultural Experiment Station

The vast amount of attention given to soil conservation by the United States government during the last two years has resulted in farmers generally becoming soil conservation conscious. The drought the last two years and one of its resultants, the "dust bowl," with all the publicity the condition engendered, have added stimulus to the need for water conservation. Scientists and farmers have been at work devising equipment for use in making the soil save more water, showing thereby the widespread interest in the need for its conservation.

The Fort Hays branch of the Kansas Agricultural Experiment Station has been building such equipment for the past six years. The most recent machine developed at this station for this purpose is a basin lister attachment. This attachment makes dams in lister furrows. It is attached to a lister and is operated from the tractor by a lever. The attachment is simple, easy and inexpensive to make, is made as an integral part of the lister, and is as readily portable as is the lister itself. It does a very effective job of making dams automatically as the lister advances down the field. The damming attachments cause the lister to pull a little harder. For lack of actual measurement of the difference in pull, it is estimated that a three-row lister with damming attachments will pull about as hard as a four-row lister. The best dams are made when the tractor is running at about 2½ miles per hour. High speed lengthens out and reduces the height of the dams. By the addition of 25-pound weights, dams as high as the ridge can be made, but it is very doubtful if such dams would ever be needed.

The dams are made at 10-foot intervals in the row and are caused by a lug on the wheel lifting the attachment every time the wheel makes one revolution. Practically the only wearing part on the attachment is the roller on the lug which does the lifting of the dam-making attachment. The blade on the attachment drags the soil along in the furrow until the lug on the wheel lifts it. The lifting of the blade automatically makes the dam, by depositing the soil which has been collected. The wheel is 38 inches high and the lug is 6 inches in from the rim. The curved iron on top of the side irons rides down on the roller as the wheel

A LISTER WITH DAMMING ATTACHMENTS AND SOME OF ITS WORK

advances, thus permitting the blade to drop slowly instead of abruptly as it otherwise would. By dropping slowly, all the soil deposited by the blade is left to constitute the dam. The way the machine is made, if the blade dropped abruptly, part of the soil brought in would be cut off by the blade and taken on to the next dam.

GROUND FALL LISTED, 1935

The picture was taken after 2½ inches of rain had fallen in 30 minutes.

One of the experimental machines was used to basin list a field in the fall of 1935. This field carried slopes up to 4½ percent. The basins made at that time were subjected to a rain of 2½ inches which came in 30 minutes and all the water was held.

The accompanying photographs show the lister with the damming attachment, some of the work that it does, and also shows the field which was basin listed in the fall of 1935. Upon close inspection of the photo showing water in the basins on sloping land, it will be noted that one lister furrow is empty. The basin lister failed to work at that particular point and no dams were made. The photo effectively demonstrates the value of the basin lister in catching and holding water. On less sloping land or on contour the basin listed land would easily hold a 4-inch rain without loss.

Utilization of Soil Moisture by Alfalfa

Numerous studies at the Kansas and Nebraska Agricultural Experiment Stations have shown that alfalfa is capable of removing moisture from the soil to depths of 15 to 35 feet, depending upon the nature of the subsoil. The question arose as to whether this subsoil moisture could be restored by fallow and if so, how long a fallow period would be required. One of the experiments recently completed by the Department of Agronomy throws some light on this question.

The experiment was started in December, 1929, by plowing a four-year-old alfalfa sod.[1] Five plots of the ten-plot series were used for fallow and five were used for a rotation of grain crops. Each summer one fallow plot and one cropped plot were plowed in July and seeded to alfalfa in August. Thus, the fallow periods varied from one to five years and subsequent alfalfa cropping periods also varied from one to five years.

In March, 1930, three months after plowing the alfalfa sod, soil samples were taken in 1-foot sections to depths of 25 feet on all plots. Each year fol-

(Continued on page 124)

1. The experiment was conducted by C. O. Grandfield and W. H. Metzger of the Department of Agronomy, and F. L. Duley, formerly of the Department of Agronomy. The writer is indebted to these men for much of the information contained in this article.

Influence of Fall Moisture on Winter Wheat Yields at Hays, Kansas[1]

David A. Reid, '36

Crop adaptation and the success or failure of a particular crop are definitely associated with the environmental conditions under which the crop is grown. The principal factors which influence the distribution of crops into restricted areas of the world are the character of the soil, distance from market, topography, and climate. Among these factors, climate is by far the most important, not only in influencing the geographical distribution of crops, but also in determining the suitability of the land for agricultural production. A desirable combination of soil type and topography would be of little use if the climate was unfavorable.

Some plants grow best in warm dry climates, while others prefer warm humid surroundings. This can be seen readily by the different types of vegetation in the several climatic regions of the world. Even within our own country we find subtropical, temperate, desert, and near arctic conditions, each region having a type of natural vegetation characteristic only of a certain environment.

Of the three climatic agencies that dominate plant growth—light, precipitation, and temperature—temperature is probably the most important in determining which plants will thrive and which will fail entirely in their development. Each crop plant has an optimum temperature range as well as a maximum and minimum temperature beyond which the crop will not survive.

While temperature limits crop areas more definitely than does the moisture supply, the effect of temperature is materially modified by the amount of moisture available to the plant. Light also plays an important part in controlling the daily activities and the structure of plants. Moisture conditions, temperature, and light must all be favorable for the successful growing of crops, as any one of them alone can limit crop production. In general, then, it can be said that for best development and maximum production crops require a favorable combination of heat, moisture, and sunshine during growth, and a deficiency or excess of any of these usually results in a decreased yield. Where climate and other conditions permit and diversified farming is practiced, the risk of loss from abnormalities in the weather is very much reduced as the failure of one crop may, to some extent, be offset by the success of others whose critical growth periods did not coincide with the unfavorable weather.

One of the most important problems that must be considered by the Kansas wheat farmer nearly every fall is whether conditions are such as to warrant seeding a large or a small acreage. As is well known, Kansas leads all other states in the production of wheat, and nearly every farmer in the central and western parts of the state depends at least partially on this crop for his living. Obviously then, if a farmer can determine at seeding time what his chances are for a successful crop, he will save himself time and money.

For this reason, investigations have been carried on by the Division of Dry Land Agriculture of the United States Department of Agriculture and the Kansas Agricultural Experiment Station to determine the relation between

1. Much of the information and data used in this article was obtained from an article by A. L. Hallsted and E. H. Coles published in the Journal of Agricultural Research, Volume 41, 1930. Mr. Hallsted furnished data on soil moisture and wheat yields at Hays, 1928-'35. Kansas Bulletin 273 by A. L. Hallsted and O. R. Mathews, "Soil Moisture and Winter Wheat with Suggestions on Abandonment," gives more detailed information. The author is also indebted to Dr. John H. Parker for his helpful suggestions.

moisture and the yield of winter wheat.

The relation between the precipitation from July to December and the yield of wheat the following harvest at Hays, from 1907 to 1935, is shown graphically in figure 1. The correlation coefficient is +0.65.[2] This means that there is a fairly close relationship between precipitation during this six-month period and the wheat yield the following summer.

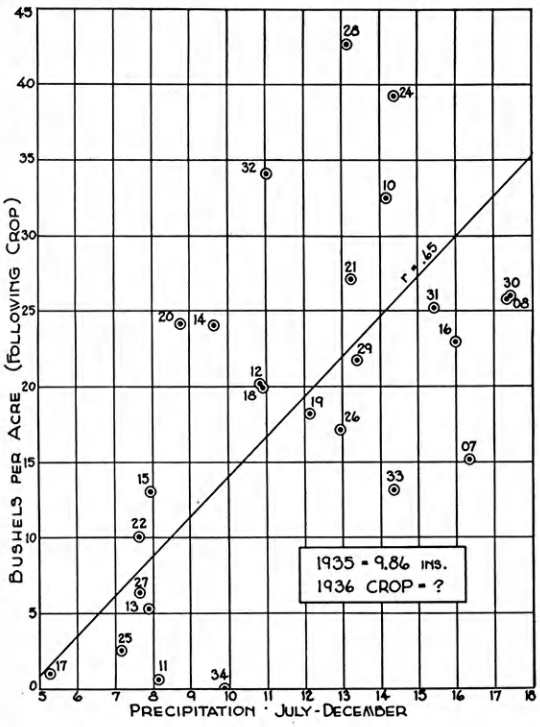

Fig. 1.—Chart showing the relation between the precipitation from July to December and the yield of wheat, 1907 to 1935, at Hays, Kansas.

A significant relationship between the percentage of moisture in the upper 3 feet of soil at seeding time and the yield of wheat at Hays, is shown in figure 2. The correlation coefficient between these two factors is +0.74± 0.0325. These data show that moisture content of 20 percent or more in the upper 3 feet of soil at seeding time nearly always eliminates the possibility of a crop failure as a result of drought, although other factors such as hail may cause crop failure. Hail caused a complete failure of wheat at Hays in 1923.

It should be understood that not all of the moisture held in the soil is available for plant use. The point below which soil moisture cannot be removed by plants is known as the "minimum point of exhaustion," and only moisture above this point is of use to crops.

Before moisture can penetrate the soil to any given depth, the soil above it must be holding as much water as possible, or it is said to have reached its "water holding capacity." This capacity differs with different types of soils. A heavy soil is able to carry more water in a given depth than is a soil of sandy composition, but water in a sandy soil is more easily removed by the plant.

Keeping these facts in mind, the farmer can easily determine with spade or post-hole digger, the depth to which a given soil is wet, and this bears a direct relationship to the amount of available water in that soil.

The studies at Hays and other dry-land stations have shown that in relatively heavy soils, the chances for a successful crop are comparatively great if the soil is wet down 3 feet or more, unless very adverse conditions occur during the growth of the crop. On the other hand, if the soil is dry or is wet down only a few inches, the chances for securing a large crop are much less, while the chances of a small yield or even a failure are greatly increased.

It is not believed, however, that a good crop could be produced, even if the soil moisture were above average at seeding, unless some rain fell between seeding and harvest. In most cases, this is not a serious problem unless the available water supply is so low at seeding time that the crop is en-

2. The term "correlation coefficient" is used by statisticians to express the degree of relationship between two variables; the value of "r" may range from +1 to —1. When it is +1, it signifies perfect positive correlation; when —1, perfect negative correlation.

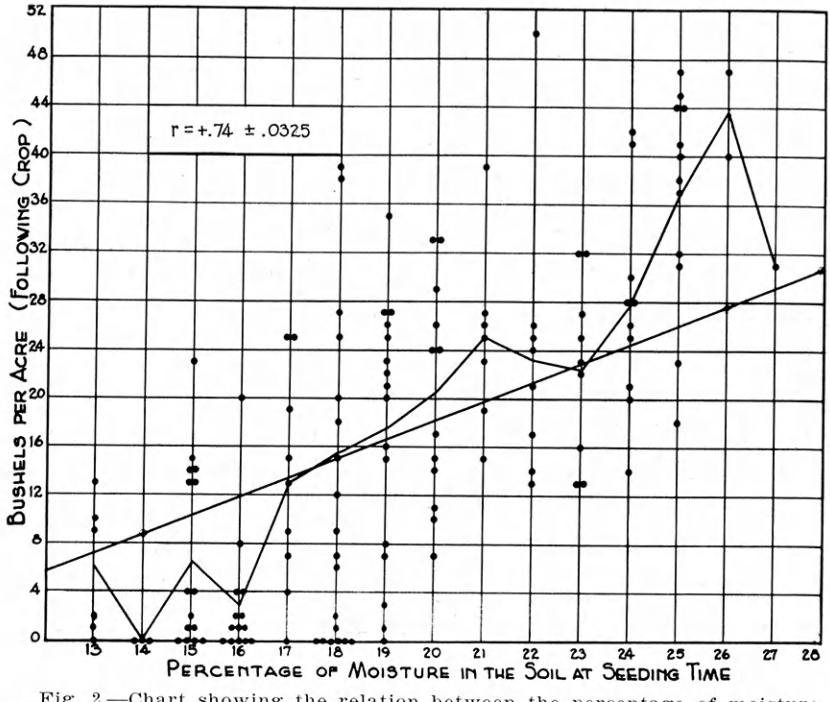

Fig. 2.—Chart showing the relation between the percentage of moisture in the upper 3 feet of soil at seeding time and the yield of wheat, 1910 to 1935, at Hays, Kansas.

tirely dependent on subsequent precipitation.

The importance of the relationships between climatic factors and the yield of crops has gained the attention of the Bureau of Plant Industry and the Bureau of Agricultural Economics of the United States Department of Agriculture, and a research project on long-range weather and crop forecasting has recently been inaugurated in cooperation with the United States Weather Bureau. Data are being collected in several states where crop yields and weather variations are accurately known, with the purpose of stimulating further research and looking toward the possibility of long-range forecasting from weather data and previous experience.

All of these studies will aid materially in making possible more accurate crop estimates, thus helping the farmer to grow and market his crops with greater profit.

KANSAS AGRICULTURAL CONDITIONS

(Continued from page 100)

as wheat. Pastures are very poor, probably about 10 to 15 percent normal. In his opinion, summer fallow, contour farming, strip cropping, and crop rotation are beginning to receive adequate consideration by farmers of western Kansas and will hereafter have an important place in their agricultural program.

Southwestern. H. W. Clutter, county agricultural agent of Finney county, reports that 95 percent of wheat acreage has been destroyed by drought and wind erosion. Practically no oats were seeded this spring. The irrigated crops, including alfalfa, sugar beets, and some barley are making a very good growth considering the season. The county is in much better condition for crops this year than last. Pastures are very thin and have been damaged by soil blow-

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THE KANSAS AGRICULTURAL STUDENT

KANSAS STATE COLLEGE OF AGRICULTURE AND APPLIED SCIENCE

MANHATTAN, KANSAS

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THE COLLEGE YEAR 1935-'36

As we go to press the Seventy-third Annual Commencement closes another college year. Men with years of experience on the faculty of the Division of Agriculture are agreed that this is the best college year they have ever known. We have had good student groups before but it is just a simple fact that the percentage of faithful, conscientious, capable, dependable students in the Division of Agriculture has been outstandingly high during 1935-'36. They are not perfect and in one way or another we would have to apologize for a few but we have never had the satisfaction of being gratified and proud of the attitude, purpose, and accomplishments of the members of a student group as nearly 100 percent of the time as during 1935-'36.

The Kansas Agricultural Student has made it a matter of first importance during the past year to chronicle adequately the activities of the students of the Division of Agriculture. The generous use of pictures has added to the value of the discussions. As a key to this purpose our cover pages presented some of our outstanding winners.

The students have worked hard and they have enjoyed attaining valuable training. That is what makes a great year. Any farm-minded young man may be proud to enroll in the Division of Agriculture of K. S. C. He will get a broad college training and have a lot of leeway in the selection of courses best suited to his needs.

ON TO 1936-'37

To old students, especially members of the Class of '37, the cover page of this issue points toward work and victories for next year. An atmospheric view of ten students is presented. These men were members of one or both of our junior livestock judging teams which competed at Denver last January and at Fort Worth last March. Six students, possibly six out of these ten, will win the distinction of representing K. S. C. in the livestock judging contests at the big shows next fall. This is one of the most coveted honors available to students of agriculture. To get the names of these men turn to pages 73 and 87 of our March issue.

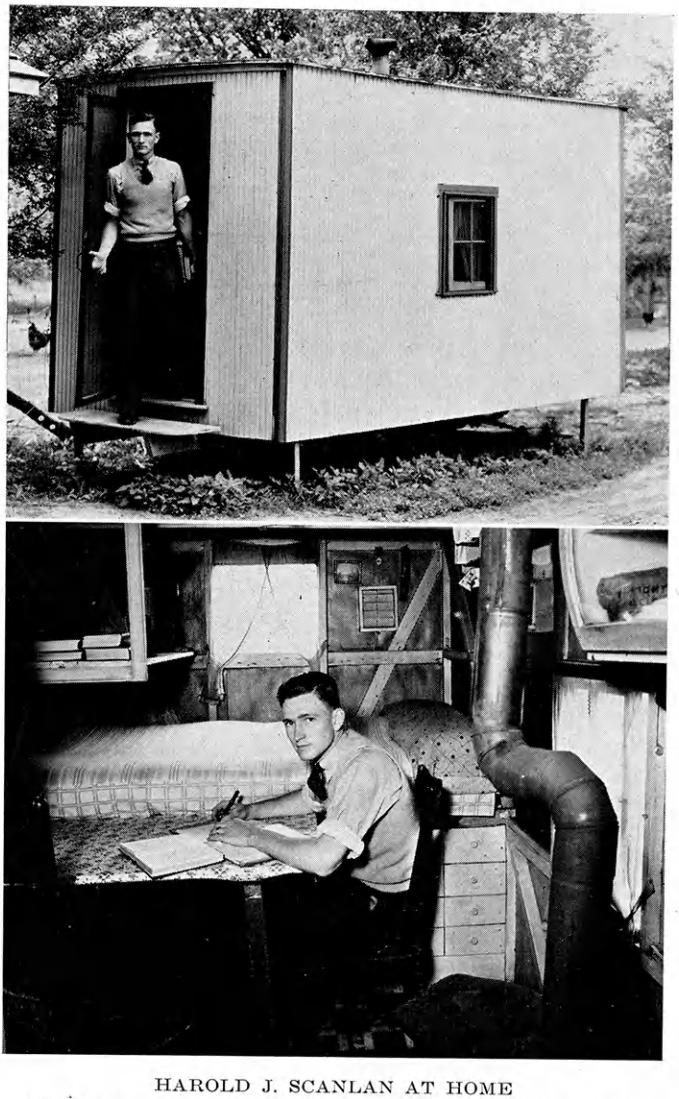
Find a Way or Make One

K. S. C. students have many unique ways of providing all or a large portion of their necessary funds for the college year. The pictures in the column to the right tell something of one of these unique stories. The student concerned is Harold J. Scanlan, who has just completed his junior year in the Division of Agriculture.

Harold spent eight years in St. Joseph's Home near Abilene, during the last four of which, 1929-'33, he completed a regular course in the Abilene High School. Each year in high school, as he filled out the usual questionnaire, in answer to the question, "Do you intend to go to college?" he said "yes." His optimism and perseverance were working. He determined to find a way.

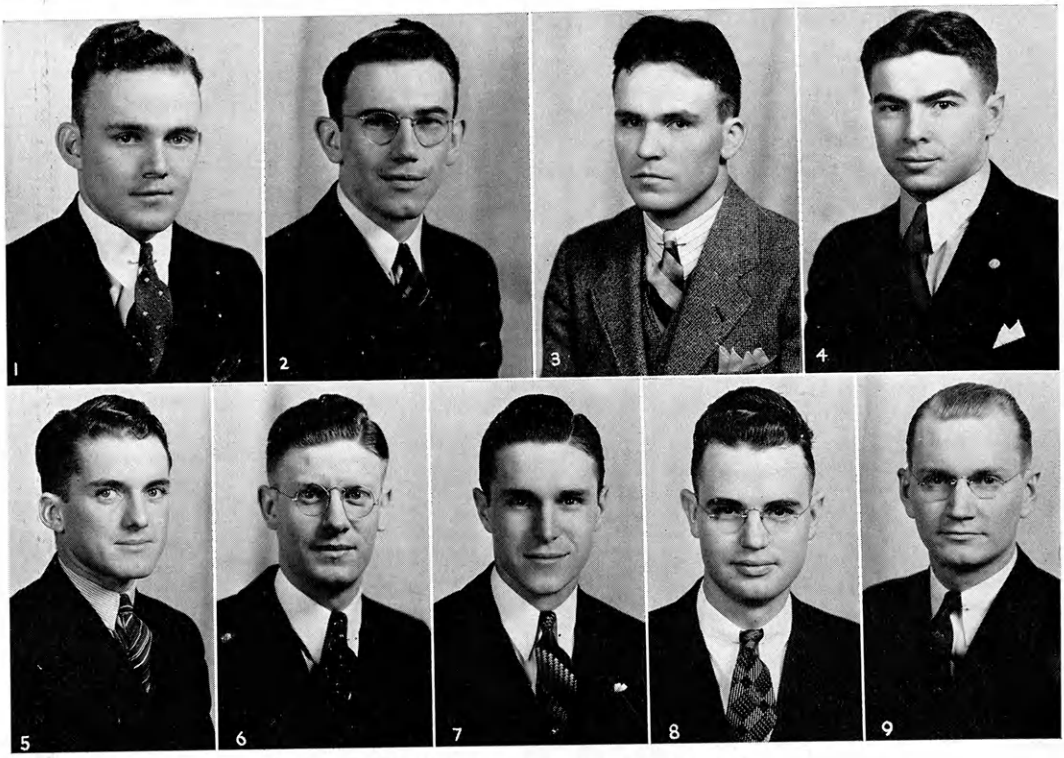
He was helpful in the dairy at the home and made a place for himself hard to get others to fill. He interested himself in the watermelon industry in the Abilene Sand Springs district. By hard work in various ways he made watermelons bring him good returns for each summer's labor. Finally a Union Pacific scholarship good for $100 in K. S. C. practically assured his enrollment. At the same time an aunt removed to Manhattan and promised substantial assistance on boarding and rooming expenses.

Harold finished his freshman year O. K. but then the aunt removed from Manhattan and Harold saw the necessity of greater income and less expense. He thought of building his own home as a trailer and moving it to Manhattan for his school home. Finally he purchased a trailer house for $55, remodeled and repaired it for limited additional expense. Both the exterior and the interior of this house are shown in



HAROLD J. SCANLAN AT HOME

His house is "parked" just west of the city limits and less than 80 rods from most of his classes. He has a good electric light for studying.



AGS ELECTED TO PHI KAPPA PHI

These nine students of the class of 1936 of the Division of Agriculture had the highest scholarship average for all of the undergraduate college courses they took in K. S. C. (1) H. Frederick Dudte, (2) J. Edwin McColm, (3) Karl F. Finney, (4) Emory L. Morgan, (5) Lewis S. Evans, (6) Leon E. Wenger, (7) Arthur C. Ausherman, (8) L. Wayne Herring, and (9) Leonard F. Miller.

the accompanying picture. The proud owner may be seen starting for classes in one view and seated at his study table in the other.

Harold's purpose and the work he has to do will not allow him to be lonesome. He is a good housekeeper and a student of high scholarship. The first semester this year he carried 15 credit hours and made 32 points—a B+ average. He was a member of the Denver Junior Livestock Judging team last January, won the Capper award this spring for the most outstanding work in agricultural journalism, and is president of the Collegiate 4-H Club for next year. He does his part. Who would estimate the value of his training?

Gamma Sigma Delta

Each spring the Honor Society of Agriculture, Gamma Sigma Delta, elects approximately the 15 percent highest in scholarship of the graduating class of the Division of Agriculture to membership. This spring the following seniors of the division were elected:

Karl F. Finney	Salina
Leon E. Wenger	Powhattan
Emory L. Morgan	Ottawa
J. Edwin McColm	Emporia
L. Wayne Herring	Tulia, Tex.
Leonard F. Miller	Agra
Lewis S. Evans	Washington
Arthur C. Ausherman	Elmont
David A. Reid	Manhattan
H. Frederick Dudte	Newton
Edwin C. Sample	Council Grove
Royse P. Murphy	Norton
Ned O. Thompson	Manhattan
Ival J. Ramsbottom	Munden

KANSAS AGRICULTURAL CONDITIONS

(Continued from page 105)

ing. Livestock came through the winter in fair shape.

Western. T. B. Stinson, superintendent of the Tribune Agricultural Experiment Station, writes that crop conditions are very poor in the extreme western part of the state. Winter wheat would rate at 5 percent of normal. The barley crop just wasn't planted this spring. Pastures are in very poor condition, some having greened up a little while but others are covered with dust and no growth has appeared.

Northwestern. M. M. Taylor, county agricultural agent of Thomas county, says dust storms killed or thinned out a number of wheat fields. Some winter injury and wireworm damage have been reported. In summarizing the wheat situation he says there are scattered fields of very good wheat but on the whole it is only about 60 percent normal. Barley seeding was normal, and crop prospects are good to date. Above normal seeding of sorghum crops and a normal crop acreage of corn are expected. Livestock numbers are very low, but all seem to have come through the winter satisfactorily. There is an increasing interest in sheep production in this section. The lamb crop is good and some lambs will be ready to go to market this month.

Prof. R. J. Barnett of the Department of Horticulture, K. S. C., summarizes the fruit situation by saying that in general the crop will be light. The apple crop in the Arkansas valley was all killed by frost except in the vicinity of Hutchinson. Conditions in northeastern Kansas promise a medium crop. Scattering orchards are spotted. Those in the Council Grove area have promise; others appear badly injured. The peach crop will be very light throughout the state. The cherry crop will be below average. Grapes were weakened by past seasons drought but promise a fair crop. The strawberry crop will be light because of the loss of plants in the summer of 1935.

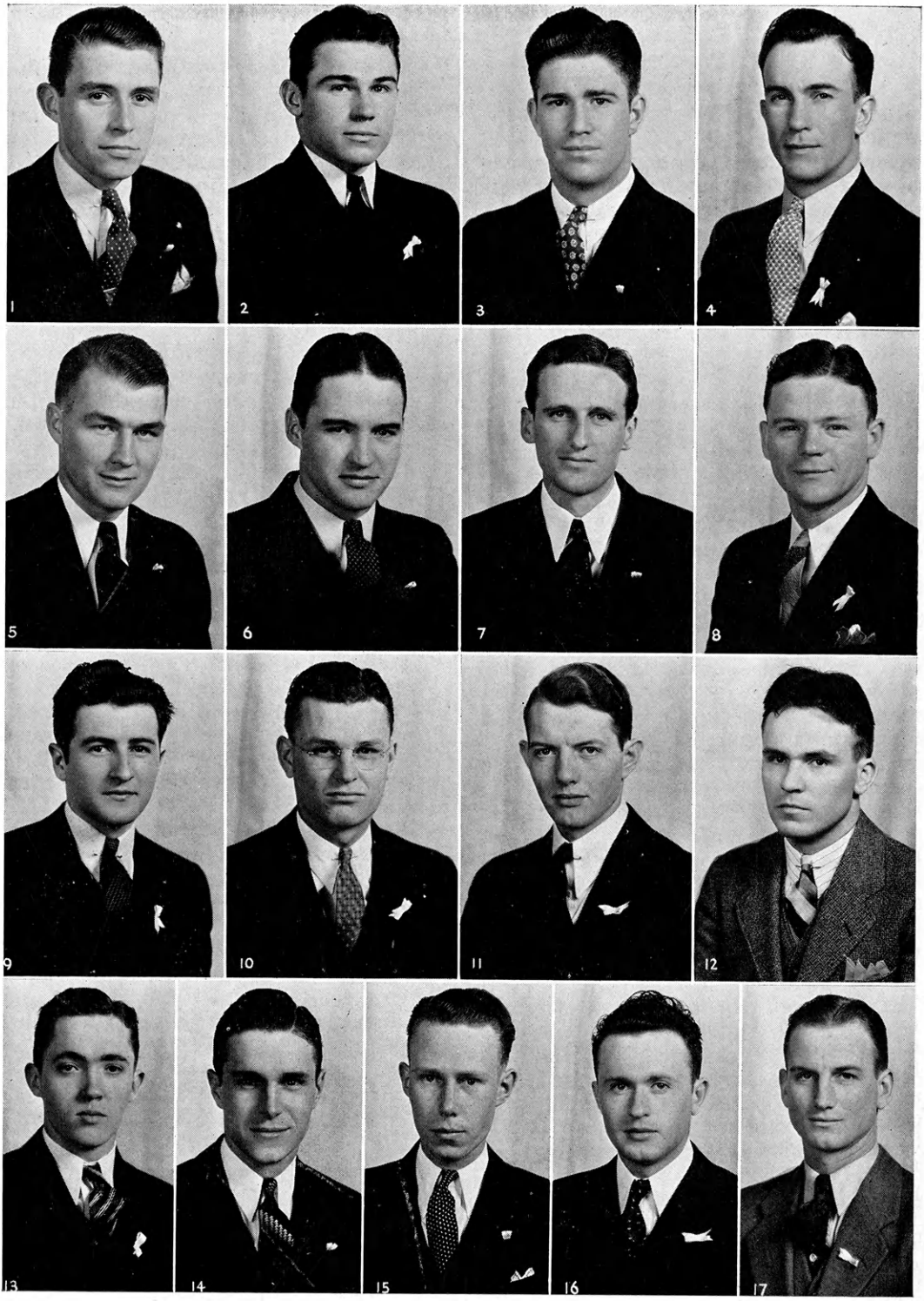
In regard to the poultry situation, Prof. H. M. Scott, of the Department of Poultry Husbandry, says inferior hatchability and fertility are reported by hatcherymen of the state. Eggs laid the latter half of February and the first of March were particularly poor in hatching power. In spite of this a bumper crop of broilers, fryers, and springs is expected. The increased demand for baby chicks and the excellent livability that most growers are experiencing will more than offset the low fertility and poor hatchability that marked the 1936 hatching season. For the first time in several years hatcherymen are finding it necessary to turn down chick orders so brisk has been the demand. This means that but few started chicks will be sold.

It looked as though too many people were going to raise turkeys in 1936. Nature appears to have stepped into the picture for extremely poor turkey hatches are common. Flocks that have hatched 60 to 70 percent in the past are finding it difficult to come through with 40 percent hatches this year. If there is a surplus of turkeys in the United States, Kansas will not be a great contributor.

Thus Kansas farm conditions about May 25 are improving. They really range from excellent, in the main, to poor, but with new hopes and promise. May is pushing the area of profitable wheat production farther southwest and making soil conditions favorable for row crops over a large percentage of Kansas counties. That improvement may continue is a true Kansan's hope.

K. M. Gapen, '30, is with the United States Department of Agriculture Radio Service at Washington, D. C.

Harold Howe, '22, professor of agricultural economics in K. S. C., will complete his work for the doctor's degree in the University of Wisconsin and return to Manhattan July 1.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New Members of Alpha Zeta

Each semester the Kansas chapter of Alpha Zeta, honorary agricultural fraternity, elects new members. Last semester 17 students of the agricultural division were selected. The basis for membership is scholarship, character, leadership, and personality.

No student is considered for Alpha Zeta membership who does not rank in the upper two fifths of his class scholastically; therefore all selected men are good students. Character and personality, the more intangible traits, are judged by those Alpha Zeta members who are best acquainted with the candidates. Leadership is shown by the candidate's activity record. A few of the various activities and honors considered in elections to membership are presented in statements in this article regarding the chapter's 17 new members whose pictures are shown on the opposite page.

Two seniors were elected this semester. Naturally a senior is judged upon his past college record for he is nearly ready for his degree. Arthur C. Ausherman (14) has been a member of the livestock judging team, a member of Dynamis, and was elected to Gamma Sigma Delta and Phi Kappa Phi. Karl F. Finney (12) also became a member of Gamma Sigma Delta and Phi Kappa Phi this year as well as making Sigma Xi.

The juniors elected are now in the midst of making their college records. All of them have done and are doing outstanding work. Harold A. Borgelt (5) gained distinction as an orator by winning the Capper award for Kansas Day oration. Vernal G. L. Roth (8) and C. Peairs Wilson (10) were the champion showmen of this year's Little American Royal. Fred G. Warren (3) was a member of the K. S. C. dairy products judging team and Carrol L. Wahl (15) was a member of the poultry judging team. Alfred G. Schroeder (11) won a trip to Chicago this year for outstanding work on a study dealing with cooperative marketing. Charles W. Pence (9) is one of the few Ag students to be musician enough to play in the college orchestra and band. Clarence E. Cook (1) has been active in Tri-K and scored high in the student crops judging contest this year. Robert F. Sloan (4), also a Tri-K member, is going to test his agronomic ability this summer on the Garden City Agricultural Experiment Station.

The sophomores have not as yet had time to enter into many activities. They are elected because Alpha Zeta men feel they undoubtedly will be leaders in the division and will make Alpha Zeta proud of them. Walter Abmeyer (17) is a member of the Athenian Literary Society and Tri-K, in which he is a member of the program committee. Roland B. Elling (2) won a blue ribbon in the Little American Royal. He also holds a Union Pacific scholarship. William R. Allen (13) belongs to the Hamilton Literary Society and Tri-K. Allen is working this summer in the Northeastern Kansas Experiment Fields. Rollin C. Parsons (6) is secretary of Tri-K and a member of the Collegiate 4-H Club and Hamilton Literary Society. Fred H. Muret (16) is a Collegiate 4-H boy and Tri-K member. Elmer A. Dawdy (7) won a blue ribbon in the Little American Royal, placed second in the junior division of the Student Crops Judging Contest, and holds a Union Pacific scholarship. These sophomores complete the list of those chosen to fill out the ranks of the Kansas chapter of the Fraternity of Alpha Zeta this year.—H. M. L., '37.

Fred P. Eshbaugh, '26, is state forest nurseryman at the Fort Hays Agricultural Experiment Station.

C. C. Griffin, '24, who has been teaching and coaching at Hoxie, has accepted a position as director of vocational agriculture at Pleasanton for next year.

Student Judging Contests

As usual, three student judging contests were held on Saturday afternoons near the close of the school year. The crops judging contest was April 18; the dairy judging contest, May 2; and the Block and Bridle judging contest, May 9. Winners in these contests, as well as some characteristic views of contestants and those in charge, are shown in the accompanying illustrations.

WINNERS IN THE STUDENT CROPS JUDGING CONTEST

Left to right: Bottom row—Darrell Morey, Kenneth A. Fisher, J. Dean Lerew, D. Dean Dicken, Elmer A. Dawdy, Carrol L. Wahl. Second row—G. Edwin Jordan, Irwin A. Miller, Arthur F. Leonhard.

SCENES AT THE CROPS JUDGING CONTEST

David A. Reid (1), Royse P. Murphy (2), and Leon E. Wenger (3), students in charge of the contest, discussing the progress of the contest with Prof. J. W. Zahnley (4). Dr. J. C. Hide (5) observing some of the contestants at work. Prof. C. D. Davis (6) pausing for a question while giving instructions to the registrants.

CROPS JUDGING CONTEST

The crops judging contest sponsored by the Klod and Kernel Klub, the Kansas chapter of the Student Section of the American Society of Agronomy, was held April 18, 1936. The contest was divided into three divisions: Freshman, junior, and senior. Students who had no college work in farm crops or grain grading were entered in the Freshman Division; those having credit in or enrolled in the college course in Farm Crops were registered in the Junior Division; and those enrolled in Grain Grading and Judging or having credit in advanced courses in the Department of Agronomy competed in the Senior Division. In the Senior Division there were 11 contestants; in the Junior, 38; and in the Freshman, 7.

The possible score for each contestant in the Junior and Senior divisions was 1,060 points and for the Freshman Division, 700 points. The high-ranking men in each division were:

		Score
Senior Division	Darrell Morey	978
	Kenneth A. Fisher	904
	J. Dean Lerew	893
	Robert T. Latta	865
	Clarence E. Cook	837
Junior Division	D. Dean Dicken	866
	Elmer A. Dawdy	836
	Carrol L. Wahl	811
	Wayne Tjaden	731
	Clifton Dawson	731
Freshman Division	G. Edwin Jordan	520
	Irwin A. Miller	516
	Arthur F. Leonhard	457
	James F. Mugglestone	418

Morey and Fisher, by winning first and second, respectively, in the Senior Division, are the winners of the $50 scholarship presented by the Kansas City Board of Trade. The three high men in the Senior Division received medals presented by the Chicago Mail Order Company. Morey also won the silver loving cup presented by the Chicago Board of Trade. Fisher also received $10 in cash and Lerew $5 in cash in addition to one year subscriptions to the Kansas City Daily Drovers Telegram.

In the Junior Division, Dicken received the silver loving cup presented by the Kansas Crop Improvement Association and $10 in cash. Dawdy received $5 in cash presented by the Southwestern Miller and a subscription to the Kansas City Daily Drovers Telegram for second place, and Wahl received $5 in cash presented by Sears, Roebuck, and Company for third place.

Jordan received the silver loving cup presented by Harry E. Witham, of the Farmers' National Grain Corporation, and $5 in cash presented by Albert Weaver, McDonald, Kan., for winning first place in the Freshman Division. Miller received $5 in cash for second place, and Leonhard received one bushel of sweet clover seed for third place.

Other prizes of merchandise and subscriptions were presented to winners down to seventh place. These prizes were supplied by Successful Farming; Country Gentleman; Red Star Milling Company, Wichita; Hays City Flour Mills, Hays; Montgomery Ward and Company, Kansas City; Sedgwick Alfalfa Mills; D. O. Coe Seed Company, Topeka; Barteldes Seed Company, Lawrence; Bowman Seed Company, Concordia; Peppard Seed Company, Kansas City; and the Anaconda Fertilizer Company, Chicago.

The manager of the contest was Royse P. Murphy, Norton. Horton M. Laude, Manhattan, and J. Lowell Myler, Andover, were in charge of publicity.—R. P. M., '36.

DAIRY JUDGING CONTEST

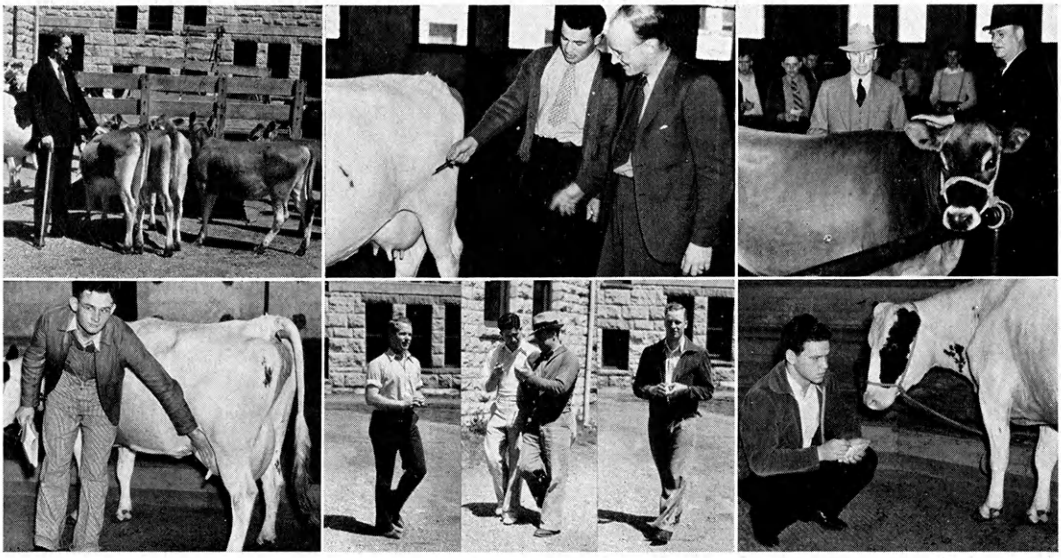
Vernal G. L. Roth, Emporia, and Cecil R. Robinson, Nashville, won the Senior and Junior divisions, respectively, of the dairy judging contest held May 2. Each was awarded a pair of electric clippers valued at $17.50. Awards were made to those placing in the first ten places of each division and to the three men having the highest ranking on each breed of dairy cattle in each division.

The Senior Division included those contestants who had had advanced

work in dairy cattle judging. Previous winners of the Junior Division were also in the Senior Division. The remainder of the contestants were in the Junior Division. There were 23 students in the Senior Division and 45 in the Junior Division. The high men in each division were:

WINNERS IN THE STUDENT DAIRY JUDGING CONTEST

Left to right: Bottom row—Vernal G. L. Roth, J. Edwin McColm, Emory L. Morgan, Cecil R. Robinson, Farland E. Fansher, Carol E. Coleman. Second row—Robert E. Kitch, Carl H. H. Beyer, Harold A. Borgelt, Harold J. Scanlan, Fred L. Fair.



SCENES AT THE DAIRY JUDGING CONTEST

Top panel: The official judges looking over some of the cows and heifers. Bottom panel (center): Clarence L. Bell, Frederick G. Warren, Emory L. Morgan, and F. Monroe Coleman, students in charge of the contest.

		Score
Senior Division	Vernal G. L. Roth	560
	J. Edwin McColm	539
	Emory L. Morgan	523
	Edwin L. Schuetz	518
	Howard O. Meyer	497
Junior Division	Cecil R. Robinson	541
	Farland E. Fansher	540
	Carol E. Coleman	529
	Alvin M. Driscoll	515
	Harold A. Borgelt	512
Ayrshire Breed	Sr., Vernal G. L. Roth	146
	Jr., Harold A. Borgelt	145
Holstein Breed	Sr., Carl H. Beyer	147
	Jr., Farland E. Fansher	146
Jersey Breed	Sr., Vernal G. L. Roth	140
	Sr., J. Edwin McColm	140
	Jr., Robert E. Kitch	138
Guernsey Breed	Sr., Harold J. Scanlan	142
	Sr., Vernal G. L. Roth	142
	Jr., Fred L. Fair	146

the Department of Dairy Husbandry. Dairy manufacturing concerns, machinery and supply houses, and dairy publications cooperate by contributing many of the prizes.—E. L. M., '36.

BLOCK AND BRIDLE JUDGING CONTEST

The thirty-third annual Block and Bridle judging contest was held May 9 with 153 contestants. As usual the contest was divided into Senior and Junior divisions, the former including students who had had advanced work in livestock judging, and the latter including all other contestants. There were 25 contestants in the Senior Division and 128 in the Junior.

WINNERS IN THE BLOCK AND BRIDLE JUDGING CONTEST

Left to right: Bottom row—J. Alfred McMurtry, Roy H. Freeland, Wilton B. Thomas, Kenneth A. Fisher, George W. Aicher, Norman W. Hildwein. Second row—Vernal G. L. Roth, J. Donald Andrews, James H. Hickert, J. Clayton Buster, John Harris, Jr.

A class of four cows and a class of four heifers of each of the four breeds in the dairy herd were judged. Contestants in the Senior Division gave oral reasons and those in the Junior Division written reasons on each of the mature classes. There was a possible total of 600 points, as 50 points were possible for each placing and each set of reasons.

This annual contest is sponsored by the Dairy Club with the cooperation of

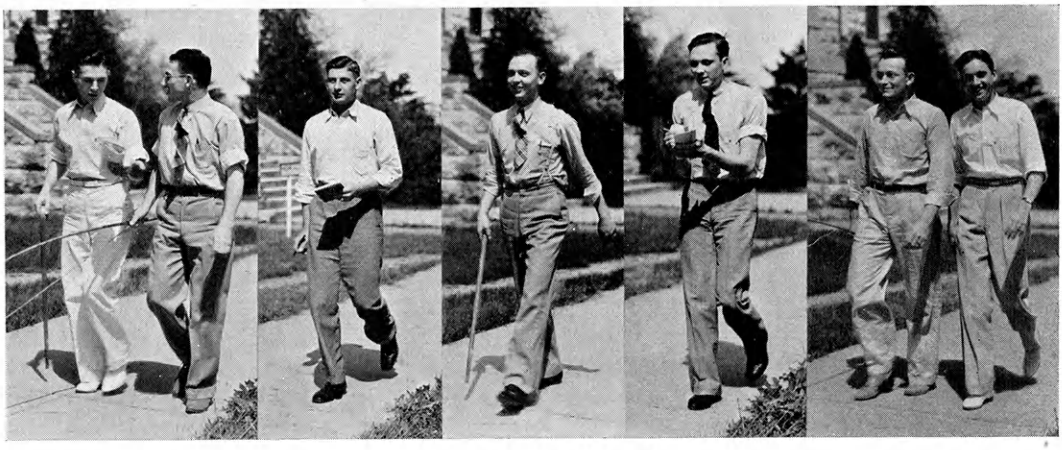
J. Alfred McMurtry, Clarendon, Tex., won highest honors in the Senior Division and was presented a gold medal given by the National Block and Bridle Club. Kenneth A. Fisher, Newton, was high man in the Junior Division. He was awarded a silver trophy presented by the American Royal Livestock Show.

Each contestant placed eight classes of livestock, including two classes each of horses, beef cattle, sheep, and swine.

In the Senior Division, the classes consisted of four animals and oral reasons were given on four classes. Contestants in the Junior Division placed three animals in each class and gave written reasons on four classes.

The high ranking men in each division and on each kind of livestock in each division are given in the following tabulation:

STUDENTS AT WORK IN THE BLOCK AND BRIDLE JUDGING CONTEST



STUDENTS IN CHARE OF THE BLOCK AND BRIDLE JUDGING CONTEST AND THE WINNER OF THE JUNIOR DIVISION

Left to right: Arthur C. Ausherman, J. Edwin McColm, Kenneth A. Fisher (winner of junior division), Philip W. Ljungdahl, Ned O. Thompson, Gilbert A. Guthrie, Howard A. Moreen.

ENTIRE CONTEST

		Score
Senior Division	J. Alfred McMurtry	548
	Roy H. Freeland	537
	Wilton B. Thomas	535
	Elmer A. Dawdy	535
	Clare R. Porter	534
Junior Division	Kenneth A. Fisher	571
	George W. Aicher	553
	Norman W. Hildwein	545
	J. Elwyn Topliff	542
	Edward F. Moody	541

SENIOR DIVISION

Beef Cattle	J. Alfred McMurtry	148
	Thomas M. Potter	147
	Vernal G. L. Roth	145
Horses	J. Clayton Buster	142
	Clare R. Porter	133
	Carl M. Elling	131
Sheep	J. Alfred McMurtry	148
	Wilton B. Thomas	148
	Elmer A. Dawdy	148
Swine	Vernal G. L. Roth	145
	J. Alfred McMurtry	139
	Oren J. Reusser	136

JUNIOR DIVISION

Beef Cattle	J. Donald Andrews	148
	George W. Aicher	146
	Roger Spencer	146
	Gordon Marold	146
	Clyde D. Mueller	146
Horses	James H. Hickert	146
	Kenneth A. Fisher	144
	John A. Shetlar	136
Sheep	John Harris, Jr.	145
	Roger Spencer	144
	Norman W. Hildwein	143
	Elton Endacott	143
	Frank Bott	143
	Paul H. Wilson	143
	H. Allen Nottorf	143
Swine	Kenneth A. Fisher	147
	Winzer J. Petr	146
	Carl Erickson	144
	G. Edwin Jordan	144

Prizes were awarded at a get-together meeting Monday evening following the contest. The principal speaker was Dr. E. C. Miller who talked on "Farm Animals and Other Folks I Have Met." Prof. F. W. Bell gave a short talk, and Fred L. Fair, president of the Block and Bridle Club, awarded the prizes.

It is the policy of the club to return all entry fees to the contestants in the form of prizes. Besides the gold medal and the trophy awarded to the two high men, the following prizes were awarded: Silver medals to second place winners in each division; bronze medals to third place winners in each division; one-dollar bills for those ranking fourth to thirteenth in the Senior Division and to those ranking fourth to twenty-first in the Junior Division; and subscriptions to various livestock publications for those ranking among the high three in each class of livestock in each division.—R. H. F., '37.

J. D. Adams, '23, is director of vocational agriculture in Garden City High School. He has the distinction of having triplet girls in his family.

P. H. Lambert, '13, Hiawatha, and W. C. Hall, '20, Coffeyville, are members of the Kansas State Board of Agriculture. Both men are past presidents of the board.

OFFICIAL JUDGES IN THE BLOCK AND BRIDLE JUDGING CONTEST

Left to right: Professors Bruce R. Taylor, F. W. Bell, D. L. Mackintosh, Carl G. Elling, Henry W. Schmitz, Rufus F. Cox, C. E. Aubel, Lawrence F. Hall, A. D. Weber.

Activities of the Future Farmers of America

The eighth annual convention of the House of Delegates of the Kansas Association of Future Farmers of America convened at 7:30 p. m., Monday, April 27, 1936. J. W. England III, Shawnee Mission, president, presided. The convention was in connection with the sixteenth annual state high school judging contest April 27 and 28. There are 115 chapters of Future Farmers of America in Kansas with an active membership of 2,209. Each chapter is entitled to two delegates to the convention. The delegates elected the following officers for 1936-'37: John Dean, Ottawa, president; Arnold Lohmeyer, Linn, vice-president; Robert Finch, Lebanon, reporter; Arnold Sawyer, South Haven, secretary; and Thomas Whitaker, Reading, treasurer.

The House of Delegates elected 25 Future Farmer members to the degree of State Farmer. These boys were selected on the basis of scholarship in all subjects, their project program of supervised farm practices, and leadership in various high school activities. Twenty-three of these State Farmers are shown in the picture in the column to the left. Their identification follows:

Left to right: Bottom row—Loren Van Petten, Linn; Harry Lightner, Garden City; Robert Finch, Lebanon; Newell Melcher, Ottawa; Wayne Harper, McDonald; John Dart, Newton; Ernest J. Pannbacker, Jr., Washington.

Second row—Junior Norby, Pratt; Max E. Zook, Newton; Gilbert D. Gilges, Lawrence; John Dean, Ottawa; Arnold Lohmeyer, Linn; Lloyd Stamm, Washington; Arnold Sawyer, South Haven; Marvin Prinds, Shawnee Mission.

Third row—Thomas Whitaker, Reading; Edward Berrie, Winfield; Ralph Perkins, Howard; Clayton David, Silver Lake; Walker Olivier, Harper; Marion Woods, Bird City; Pardee Woods, Bird City; Francis Kemmerer, Ottawa.

Thello Dodd, Linn, and James Niell, Miltonvale, were also elected but are not in the picture.

The state F. F. A. public speaking

contest was held Tuesday morning, April 28, with 11 contestants entered. Prof. A. P. Davidson was in charge of this contest, with Pres. J. W. England III presiding. The judges awarded first place to Paul Smith, Lebanon; Homer Jury, Abilene, was given second place, and Ernest Cowles, Lawrence, third.

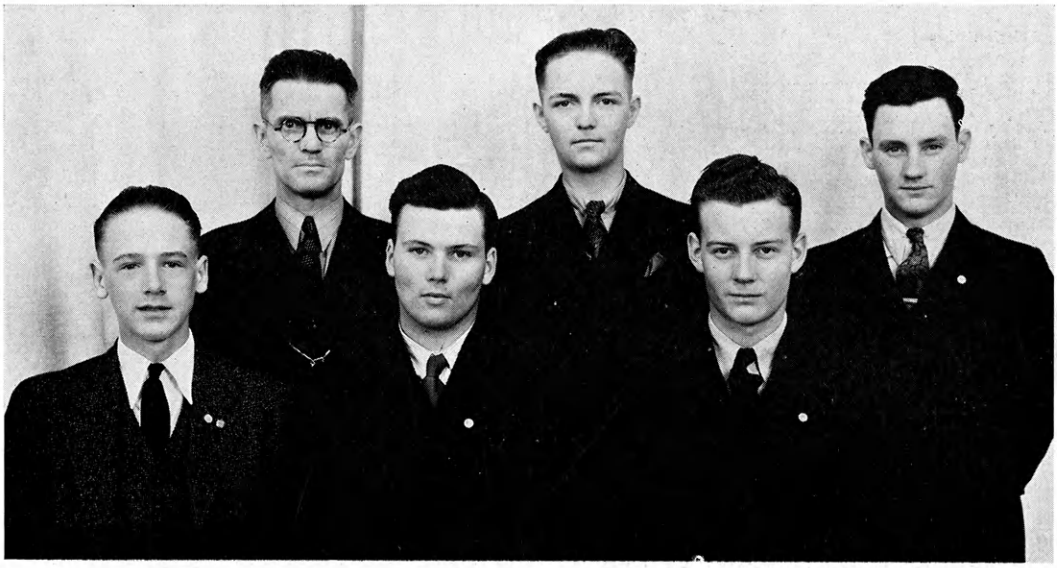
The House of Delegates announced the following ten outstanding F. F. A. chapters in Kansas: Washington, Linn, South Haven, Lebanon, Ottawa, Lawrence, Parker, Reading, Shawnee Mission, and Mound City.

The annual banquet given by the Manhattan Chamber of Commerce was held Tuesday evening, April 28, at the Community House. It was attended by approximately 500, including judging teams, coaches, F. F. A. delegates, and guests. The program consisted of group singing, led by Tom McClung, Manhattan; a vocal solo, "Hail F. F. A." by Loren Van Petten, Linn; instrumental solos by Elmo Alexander and Dillard

(Continued on page 126)

WINNER OF THE 1936 F. F. A. PUBLIC SPEAKING CONTEST AND HIS COACH

Left to right: F. A. Blauer, coach, director of vocational agriculture, Lebanon Rural High School; Paul Smith, winner of the public speaking contest.



OFFICERS OF KANSAS ASSOCIATION OF FUTURE FARMERS OF AMERICA FOR 1936-'37

Left to right: Bottom row—Arnold Lohmeyer, John Dean, Robert Finch. Second row—Lester B. Pollom, state adviser, Arnold Sawyer, Thomas Whitaker.

State Vocational Agriculture Judging Contest

WINNERS OF THE 1936 STATE CONTEST IN THE JUDGING OF FARM PRODUCTS AND THEIR COACH

Left to right: Melvin Brunner, R. M. Karns, coach, John Dart, Max Zook, Newton High School.

HIGH TEAMS IN THE ENTIRE CONTEST

High School	Score					Coach
	I	II	III	IV	Total	
Newton H. S.	1,389	716	1,991	1,063	5,159	R. M. Karns
Ottawa H. S.	1,297	678	1,773	1,100	4,848	C. O. Banta
Howard H. S.	1,383	725	1,700	1,017	4,825	S. S. Bergsma
Washington H. S.	1,374	703	1,586	981	4,644	H. H. Brown
Quinter R. H. S.	1,340	717	1,533	1,009	4,599	J. F. Shea
Lawrence H. S.	1,316	614	1,601	1,065	4,596	W. R. Essick
Oskaloosa H. S.	1,380	634	1,534	987	4,535	H. R. Bradley
Linn R. H. S.	1,406	661	1,293	1,023	4,383	C. C. Milligan
Decatur Co. Com. H. S.	1,350	661	1,432	936	4,379	S. H. Howard
Morrowville R. H. S.	1,277	625	1,513	948	4,363	I. E. Peterson

HIGH INDIVIDUALS IN THE ENTIRE CONTEST

Contestant	I	II	III	IV	Total	High School	Coach
Max Zook	459	262	696	365	1,782	Newton H. S.	R. M. Karns
John Dart	513	245	651	350	1,759	Newton H. S.	R. M. Karns
Philip Mosher	484	254	565	374	1,677	Ottawa H. S.	C. O. Banta
Cleland Wells	467	249	570	357	1,643	Howard H. S.	S. S. Bergsma
Charles Kinzie	458	240	588	351	1,637	Quinter R. H. S.	J. F. Shea
John Dean	487	185	620	347	1,630	Ottawa H. S.	C. O. Banta
Melvin Brunner	417	209	644	348	1,618	Newton H. S.	R. M. Karns
Lloyd Stamm	486	222	577	324	1,609	Washington H. S.	H. H. Brown
Armand Wilson	451	255	536	353	1,595	Washington H. S.	H. H. Brown
Clyde Morse	489	249	543	312	1,593	Howard H. S.	S. S. Bergsma

The sixteenth annual state high school vocational agriculture contest was held at K. S. C. April 27 and 28, 1936. The contest, being handled the same as in recent years, was divided into four sections. Section I consisted of judging two classes each of horses, beef cattle, sheep, and swine, and giving oral reasons on one of each two classes; Section II, judging four classes of dairy cows and giving oral reasons on two of them; Section III, (1) judg-

ing crops, (2) identifying grain, forage crops, and weeds, and (3) grading wheat, grain sorghums, shelled corn, and alfalfa; Section IV, placing four classes of hens, one class of exhibition females, two classes of market poultry, and one class of hatching eggs.

This is the fourth consecutive year that the Newton High School team, coached by Mr. R. M. Karns, has won the contest. The members of his team were first, second, and seventh high individuals in the entire contest.

Sixty-eight schools were represented in the contest, sixty-six of them entering a team of three individuals in one or more of the four sections. The scores of the winners and others meriting honorable mention, both teams and individuals, are given in the accompanying tabulation of results.

HIGH TEAMS IN EACH SECTION OF THE CONTEST

High School	Sec.	Score	Coach
Abilene H. S.	I	1,432	F. D. Allison
Linn R. H. S.	I	1,406	C. C. Milligan
Manhattan H. S.	I	1,404	H. W. Schmitz
Oxford R. H. S.	I	1,397	John Lowe
Argonia R. H. S.	I	1,395	M. W. Pearce
Clay Co. Com. H. S.	II	762	R. H. Perrill
Miltonvale R. H. S.	II	745	J. H. Kerr
Highland Park H. S.	II	733	F. E. Carpenter
Howard H. S.	II	725	S. S. Bergsma
Reading R. H. S.	II	722	J. W. Taylor
Newton H. S.	III	1,991	R. M. Karns
Ottawa H. S.	III	1,773	C. O. Banta
Howard H. S.	III	1,700	S. S. Bergsma
Lawrence H. S.	III	1,601	W. R. Essick
Washington H. S.	III	1,586	H. H. Brown
Ottawa H. S.	IV	1,100	C. O. Banta
Lawrence H. S.	IV	1,065	W. R. Essick
Highland Park H. S.	IV	1,064	F. E. Carpenter
Newton H. S.	IV	1,063	R. M. Karns
Concordia H. S.	IV	1,026	A. G. Jensen

HIGH INDIVIDUALS IN EACH SECTION OF THE CONTEST

Contestant	Sec.	Score	High School
Harmon Bear	I	519	Abilene H. S.
Audrey Klipper	I	516	McDonald R. H. S.
John Dart	I	513	Newton H. S.
Ralph Preston	I	505	Highland Park H. S.
Wendell Buss	I	498	Oxford R. H. S.
Ben Tempero	II	283	Clay Co. Com. H. S.
Glenn Barber	II	271	South Haven R. H. S.
Lloyd James	II	263	Frankfort H. S.
Max Zook	II	262	Newton H. S.
George Fritz	II	256	Medicine Lodge H. S.
Max Zook	III	696	Newton H. S.
John Dart	III	651	Newton H. S.
Melvin Brunner	III	644	Newton H. S.
John Dean	III	620	Ottawa H. S.
Charles Kinzie	III	588	Quinter R. H. S.
Francis Kemmerer	IV	379	Ottawa H. S.
Bill Penny	IV	375	Lawrence H. S.
Ned Nusbaum	IV	374	Highland Park H. S.
Philip Mosher	IV	374	Ottawa H. S.
George Wreath	IV	366	Manhattan H. S.

Upward Trend in Farm Income

The trend in farm income in the Northern and the Southern Farm Bureau-Farm Management Associations has been distinctly upward since 1931. Farms within the associations showed a much greater percentage increase in income than the total farm income for Kansas. The following tabulation gives significant figures:

	Net farm income		
Year	Northern Assoc.	Southern Assoc.	Kansas gross farm income (in millions) (a)
1931	$ −408.48	$ −13.21	230.4
1932	132.86	4.26	167.1
1933	1,248.71	1,292.44	175.8
1934	938.77	2,922.91	248.7
1935	1,834.00	2,519.00	265.4

(a) Source: Report of the Bureau of Agricultural Economics, United States Department of Agriculture.

In the uptrend of a business cycle there is necessarily an increase in inventory values. This, of course, accounts for part of the increase in incomes. Another factor that has increased farm income in general is an increase in the farmer's purchasing power.

One of the chief reasons for the advantage shown by association farms is the marketing service which they receive. Members of the associations sell more of their hogs closer to the seasonal high prices than do Kansas farmers in general. Association members market approximately one half of their hogs during the seasonal high months (March, July, August, and September), while the state markets less than one third of the hogs during this period. In nearly every year in both associations the farms in the high-income group (upper 25 percent) have marketed a larger number of hogs during the seasonal high and fewer during the seasonal low than have the farmers in the low-income group (lower 25 percent). Although the gross hog receipts have not exceeded one fifth of the gross farm receipts in either Northern or Southern

(Continued on page 123)

Contest in Farm Mechanics

In the state contest in farm mechanics, the scores of the high teams in the entire contest and the scores of both the high teams and the high individuals in each section of the contest are as follows:

WINNERS IN THE FARM MECHANICS CONTEST
Lloyd Wooley S. H. Howard, coach Arthur May

HIGH TEAMS

Entire Contest	Score	Coach
Decatur Co. Com. H. S.	8,860	S. H. Howard
Lawrence H. S.	7,563	W. R. Essick
Wamego R. H. S.	7,209	H. P. Walker
Agricultural Engineering		
Sec. I Lawrence H. S.	1,672	W. R. Essick
Sec. II Decatur Co. Com. H. S.	1,646	S. H. Howard
Sec. III Decatur Co. Com. H. S.	1,729	S. H. Howard
Shop Practice		
Sec. I Decatur Co. Com. H. S.	1,700	S. H. Howard
Sec. II Neodesha H. S.	1,068	A. T. Heywood
Sec. III Decatur Co. Com. H. S.	1,550	S. H. Howard

HIGH INDIVIDUALS

Agricultural Engineering	High School	Score
Sec. I Noel Reed	Lawrence H. S.	896
Sec. II Arthur May	Decatur Co. Com. H. S.	838
Sec. III Ray Mosher	Frankfort H. S.	878
Shop Practice		
Sec. I Dean Urquhart	Wamego R. H. S.	1,000
Milo Goering	Moundridge H. S.	1,000
Sec. II Dean Urquhart	Wamego R. H. S.	579
Sec. III Arthur May	Decatur Co. Com. H. S.	790

The Decatur County Community High School placed first. This is the fourth consecutive year that a team from Oberlin has won. The winning team consisted of Lloyd Wooley and Arthur May. Lloyd's total score was 4,475 and Arthur's, 4,383. These scores made Lloyd high individual in the entire contest and gave Arthur second place.

The coaches of the Oberlin team are S. H. Howard and Thue Jorgensen. Mr. Jorgensen has been teaching blacksmithing and tool finishing in the Decatur County Community High School for 14 years. He learned the trade in Denmark, his native land.

This contest was the eleventh annual state high school contest in farm mechanics and was held April 27 and 28, 1936. Thirty-six teams competed. As the printed results show, one division of the contest was conducted by the Department of Agricultural Engineering. It was divided into three sections—Section I, farm power; Section II, farm machinery; and Section III, concrete work. The other division of the contest was conducted by the Department of Shop Practice and also consisted of three sections as follows: Section I, roof framing; Section II, identification; and Section III, forging.

George D. Oberle, '31, is professor of agriculture in the Arkansas State Teachers College, Normal Station, Conway, Ark.

UPWARD TREND IN FARM INCOME

(Continued from page 121)

association any year since 1931, there has been a direct correlation between the percentage of hogs marketed during the seasonal high prices and net farm income.

Through an accurate system of bookkeeping the farmer in the association learns which enterprises are the most profitable and thus he places his working capital where it will give the greatest return.

The fieldmen for the associations bring the latest methods in crop and livestock production and disease and insect control direct from the college to the farmers. Fieldmen give valuable advice on all phases of the farm business.

Through the recommendations of the fieldmen in the associations there has been an increase in legume acreage. The percentage of land in rotation in legumes in the Northern Association has increased from 10.8 percent in 1931 to 13 percent in 1935. The percentage of legumes in the Southern Association for the same period has increased from 17 to 18 percent.

Although the immediate tangible results of the work of the Farm Bureau-Farm Management Associations may be measured by an increase in farm income, the farm improvement aspect of the work should not be overlooked. The future of American agriculture depends upon scientific management of our farms.—J. E. M., '36.

Purebred Livestock

Fred L. Fair, '37

Purebred livestock production is a phase of the great livestock industry which is a basic element of sound diversified farming. This phase, like the others, has its requirements that must be met to make the enterprise a success. Purebred livestock production is a far more complex type of endeavor than most farmers realize and this accounts for a high mortality among beginners. Greater risks must be taken and a larger expenditure for equipment and animals is required than in ordinary commercial phases of raising and fattening livestock. The breeder of purebred livestock should know the laws of genetics and should have a working knowledge of the principles used in breeding animals to gain the benefits of inheritance. Purebred livestock also require more expensive feed, better care, and more labor.

The sale of purebreds is often a restricting factor in this phase of farming. Unless the breeder is located in a community already noted for its purebred livestock, he must hunt a market, or by extensive advertising create one. That is why it has been said that "personality and sales ability rate 50 percent in the success one may have in purebred livestock production."

Purebred livestock production should be recognized as a long time enterprise. Many people enter into this work with the idea of making outstanding success within two or three years. This seldom happens. Outstanding purebred herds of today are those that have been kept together for many years. This has been true from the very beginning of breeds. Hugh Watson of Keillor, credited as founder of the Aberdeen Angus breed of cattle, received his start from a bull and six cows given to him by his father, who had received his start also from his father. The same situation occurred in the family of our first noted Hereford cattle breeder, Benjamin Tomkins. Many other such instances could be cited. Patience and time have always been fundamental requirements in breeding purebred livestock.

The fundamental purpose of the purebred is to improve market livestock. Purebred livestock have played a leading role in the development of all the outstanding breeds of today. The purebred, however, must be a good individual or he cannot improve market livestock any more than a grade sire

could. A purebred with a good pedigree but without good individuality is usually valueless for improvement purposes, and until the livestock breeder recognizes this fact he cannot hope for success. A good example of this frequently made mistake is the "Bates boom" of Shorthorn cattle beginning in 1850. Prominent American and English breeders developed a craze for Bates-bred cattle. Fad and fancy in pedigrees dominated the situation. The climax to the craze came in the New York Mills sale held in September, 1873, when the seven-year-old 8th Duchess of Geneva sold for the present world's record price of $40,600. Such injudicious practices can never do a breed any good.

Not only good individuals should be selected but these animals should be developed to the maximum of the possibilities of their inheritance. Proper care and management as well as good feeding are necessary in the development of purebred stock to their greatest possibilities. The old slogan is still good—"We must feed out what we have bred into our purebreds."

The value of purebreds on the farm may be summarized in one statement. All improvement in market livestock has come about through the influence of good purebred sires. Good dams are also necessary but sires are generally emphasized because they assert an influence on a much larger number of offspring. The advantage of good purebreds over grade sires in improving market stock is due to the fact that the former usually possesses a useful and improved type and is descended from a long line of ancestry of the same type. Thus these characteristics are more intensified in such a sire and he has more power to transmit these desirable characteristics to the offspring.

Aside from the value of purebreds as improvers of common and grade stock the enterprise is beneficial to the individual breeder. The man who produces worth-while purebreds is a public benefactor and there is no more satisfying work in which anyone can engage than in the successful production of purebred livestock. The satisfaction derived is typified in the following quotation: "I would rather be the owner and breeder of an international grand champion than be the governor of the great commonwealth in which I have the honor and pleasure to reside. The fact that a host of other livestock breeders throughout the length and breadth of our land cherish a similar ambition to a like degree only enhances the honor, makes the delicate purple tints of the ribbon more radiant, more resplendent; for every glint and glimmer of its sheen speaks of satisfying toil and of obstacles overcome, of some approach to nature's truths, of some good work for man. It is the silent reminder of the transient thought of twilight, harvested ofttimes only in experience in the duties of the day. It is the inspiration of one successful act harvested from a heavy seeding of carefully cultivated endeavor. It is the bright and beaming harbinger of the fruition of coming years, remembering that, 'Duty and today are ours, results and futurity belong to God'."

UTILIZATION OF SOIL MOISTURE

(Continued from page 102)

lowing all plots were again sampled in the same manner.

The percentage moisture and wilting coefficient of the samples were determined in the laboratory. The wilting coefficient is supposed to be approximately the moisture content of the soil at which the plant can no longer withdraw water rapidly enough to survive. The samples taken in March, 1930, showed that the four-year-old alfalfa previous to beginning of the experiment had reduced the moisture to a point near the wilting coefficient to a depth of 20 feet.

At the end of the first summer of fallow the soil was wet only to a depth of about 8 feet, while at the end of two

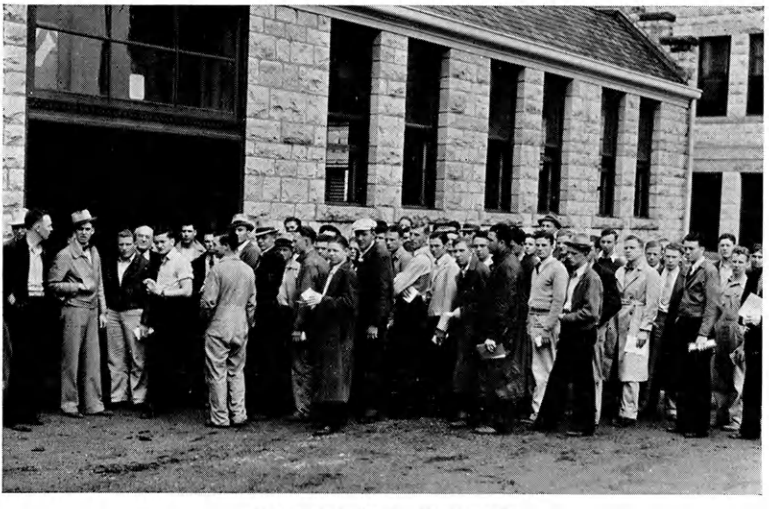
years of fallow, the soil had accumulated some moisture to the full depth to which it had been dried by the previous alfalfa cropping. It required between two and three years of fallow, however, to build up the moisture supply throughout the 25 feet to the point where it probably existed before any alfalfa had been grown upon it.

On plots which were fallowed long enough to re-establish the moisture content of the subsoil completely the new seeding of alfalfa reduced this moisture content to or near the wilting coefficient again to a depth of approximately 20 feet, in about two years. Unless the roots of the plants could get sufficient moisture from a source below 20 feet, therefore, these plants were dependent after two years upon moisture from current rainfall for all subsequent growth.

The results emphasize the need for at least a full summer of fallow when alfalfa is to be seeded on land which has grown a crop previously. This is true for all parts of Kansas except perhaps the extreme eastern part and even there at least a fallow period following an oats crop is desirable. Two years of fallow is not recommended since it requires the land to lie idle for too long a period of time.—H. G. M., '38.

C. P. McKinnie, '30, is farming at Glen Elder.

Aden C. Magee, '24, is located at 2118 Twenty-second Street, Lubbock, Tex. He is an assistant in farm management work with the Texas Agricultural Experiment Station.



ONE MOMENT, PLEASE
One group of contestants ready to enter the judging pavilion in the Block and Bridle judging contest.

Charles Mantz, '30, is teaching vocational agriculture at Medicine Lodge.

Elbert L. Eshbaugh, '36, is assistant county agricultural agent in Doniphan county. He is located at Troy and his work consists of helping the fruit growers in their problems.

O. O. Browning, '16, is a farmer and stockman located at Linwood. He is operating 500 acres of Kaw valley land and doing some dairying. He has been an administrative field man for the corn-hog program in the northeastern Kansas district.

ACTIVITIES OF F. F. A.

(Continued from page 119)

Cox, Parker; announcements of the winners of the F. F. A. public speaking contest by Prof. K. W. Given, Manhattan; the winning speech by Paul Smith, Lebanon; announcement of the ten outstanding chapters; a talk by Daryl Berglund, Shawnee Mission, on "Our Trip to Florida"; and the announcement of the new state officers for the coming year. The newly elected members were raised to the degree of State Farmer by formal initiation.

The meeting was then turned over to the chairman of the college contest committee and the prizes and awards were presented to winners in both the state vocational agriculture contest in the judging of farm products and the state high school contest in farm mechanics. Reports of these contests and lists of the outstanding winners are given in other articles.

R. H. Lush, '21, is in charge of dairy research for the Louisiana Agricultural Experiment Station, Baton Rouge.

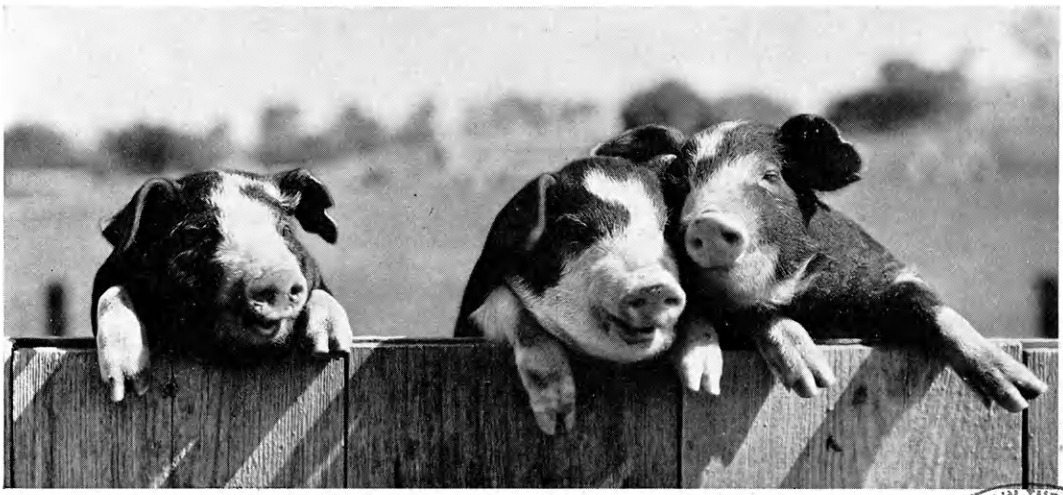
Marion B. Noland, '35, is county agricultural agent of Riley county, Manhattan.

Poultry Graduates at Work

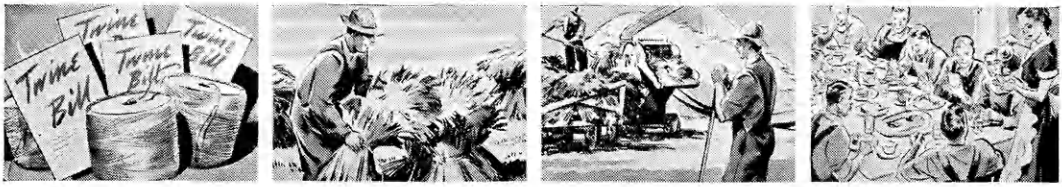
Teaching, research, and extension work have proved popular for graduates in poultry husbandry. Of the 41 students who have in recent years completed their work in the poultry field as graduate and undergraduate students, 16 or 39 percent are now engaged in college work in 14 states and in South Africa. Of this number, five are now serving as heads of poultry departments in the universities or state colleges of Rhode Island, Alabama, Louisiana, California, and Orange Free State, South Africa.

Of the other 25, eight are managing commercial hatcheries, six returned to the home farm, four are teaching vocational agriculture, two are managing produce plants, two are in charge of college and institutional poultry plants, and one is employed in each of the following activities: Manager of a commercial breeding plant; fundamental research worker for a feed company; market specialist in the United States Department of Agriculture.

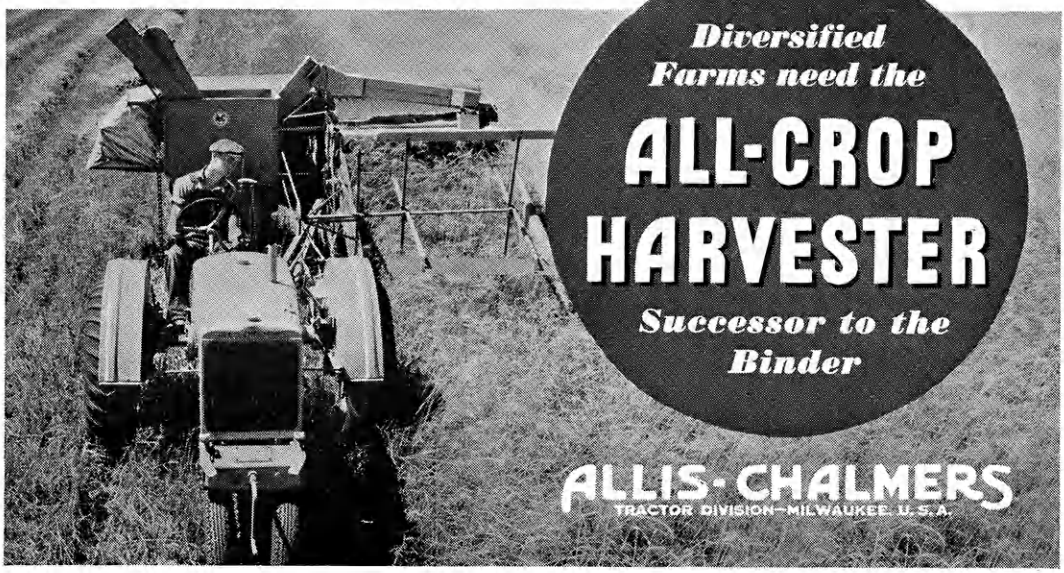
J. F. True, '29, is county agricultural agent in Coffey county, Burlington.



IVALOO BETH CLIFF



No Twine - No Shocking - No Threshing - No Extra Men



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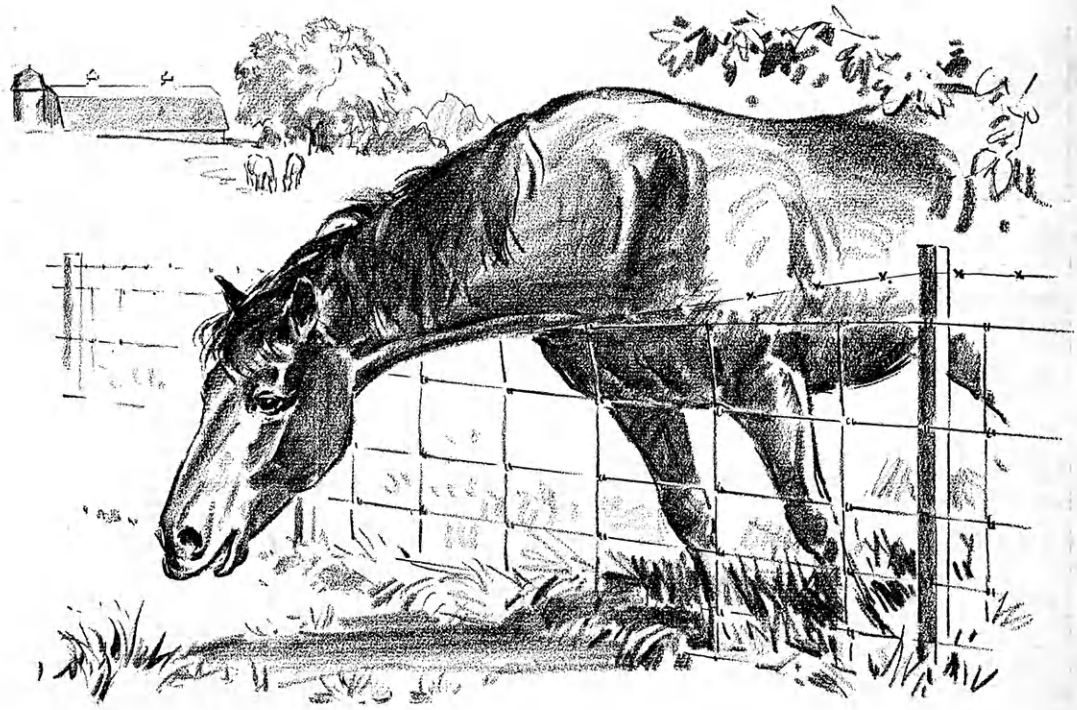

THE GRASS ON THE OTHER SIDE

YOU can excuse a horse for galling his neck on barbed wire, trying to reach the scraggly grass on the other side of the fence, *when he's already standing knee-deep in clover* . . . for, after all, he's just a horse! But you CAN'T excuse intelligent human beings for making the same mistake.

* * *

Every day you hear people raving about "the good old days!" . . . wishing they could live 'em all over again! . . . straining to reach back for the grass on the other side of the fence!

* * *

"GOOD OLD DAYS!" When you couldn't phone for a doctor. When you had to take your bath in a washtub. When the only way to cure a toothache was to pull the tooth. "Good old days" of undelivered mail, forded creeks and hub-deep mud; of dropping corn by hand, cultivating it with a hoe and grinding your own corn meal. "Good old days" of green coffee out of a burlap sack, of home-roasting and of hand coffee grinders. "Good old days" of no automobiles, or movies . . . no newspapers or magazines; when the most exciting thing you could do was to write a jingle in her autograph album or butter your hands and pull taffy. When you took heated rocks to bed with you in winter and shooed flies all summer with slit paper on the end of a hickory withe. How can anybody, spinning along over perfect roads in one of these slick-running 1936 cars, *with the radio on*, talk about "the good old days?"

* * *

Mother, would you like to go back to the old tin cupboard and wood box? Would you like to drain lye out of an ash barrel, make your own soft soap and boil your clothes in an iron kettle? Father, would you like to take a wax-end and a mouthful of wooden pegs and make yourself a pair of boots? "The good old days" were noble. Viewed down the long corridor of memory, they lure us . . . but not for long. Our better sense tells us *all that* is just "grass on the other side of the fence." *And we give thanks that this is 1936!*

* * *

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