THE KANSAS Agricultural Student

OCTOBER, 1950

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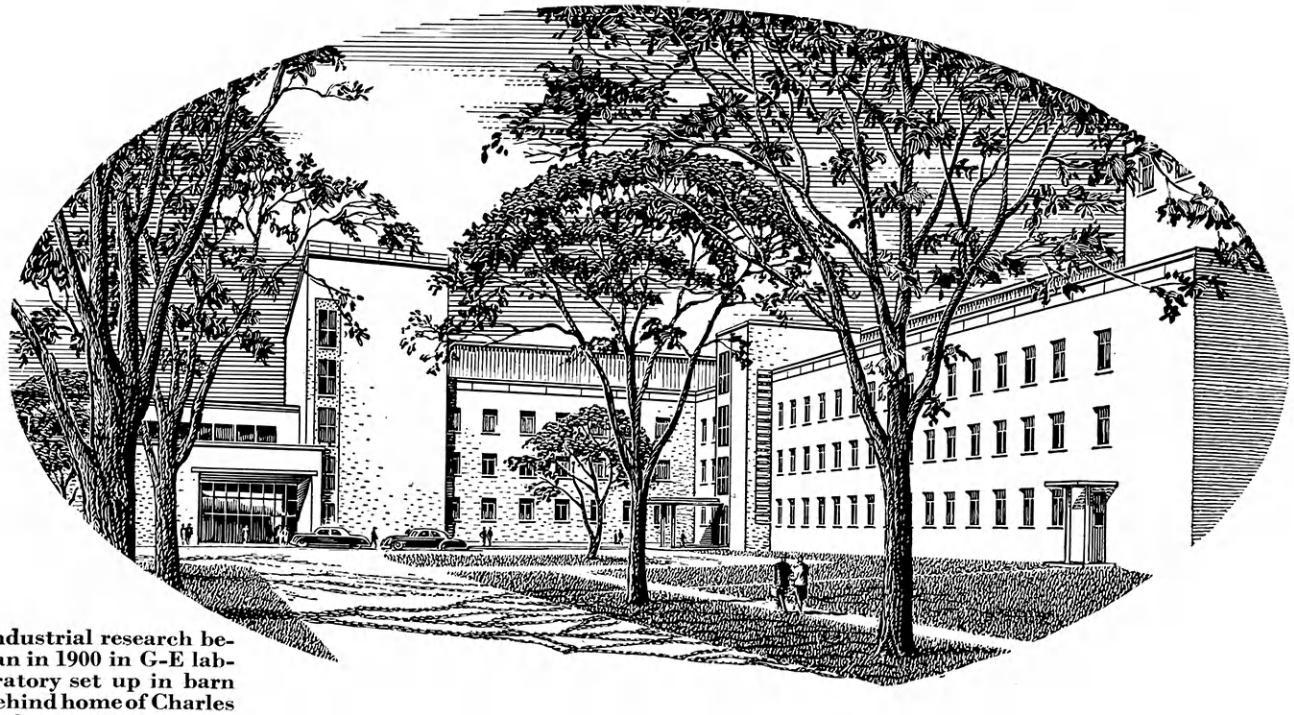
50 YEARS of General Electric Research



Industrial research began in 1900 in G-E laboratory set up in barn behind home of Charles P. Steinmetz.

When the General Electric Research Laboratory was established in 1900, it was the first industrial laboratory devoted to fundamental research.

At that time E. W. Rice, Jr., then vice president of General Electric, said:

Although our engineers have always been liberally supplied with every facility for the development of new and original designs and improvements of existing standards, it has been deemed wise during the past year to establish a laboratory to be devoted exclusively to original research. It is hoped by this means that many profitable fields may be discovered.

Many profitable fields *were* discovered—profitable not only for General Electric but also for industry, the American public, and the world.

A half century ago the industrial experimental laboratory was itself an experiment. This month it begins its second half century with the dedication of a new building, greatly augmenting the facilities it offers to the advancement of man's knowledge.

You can put your confidence in—

GENERAL ELECTRIC

THE KANSAS
Agricultural Student
KANSAS STATE COLLEGE
OF AGRICULTURE AND APPLIED SCIENCE
MANHATTAN, KANSAS

VOL. XXVII OCTOBER, 1950 NO. 1

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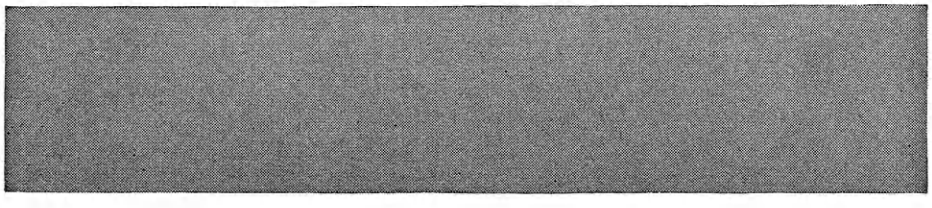

On the Cover . . . Five Beauties Compete For Barnwarmer Queen

The five coeds on the cover were selected by Ag students to compete for the title of Queen of the 1950 Barnwarmer. The five were picked at the Ag Seminar, October 5.

The girls are Doris Burt, upper left; Jo Ellen Stark, lower left; Betty Taylor, upper right; Patsy Davies, lower right; and Mary Ann Dickinson, center.

The candidates compete in farm contests during Ag Week and the queen is announced the night of the Ag Barnwarmer. The queen is chosen by the vote of Ag students who attend the dance.

The seminar was given a lively send-off this year by the AGR pep band and by two robust cuties who introduced themselves as candidates in the queen contest. They turned out to be Gene Dade and Kent Smith, dressed in feminine attire. The two even managed to draw a few votes in the balloting.

Bob Sterling, acting as master of ceremonies, asked each of the girls a question pertaining to the farm. Some of the questions were just a little on the tricky side.

The professor approached the manager of the summer resort and asked, "Do you mind if I use that abrasive device out by the tool house?"

"What device is that?" inquired the manager.

"Why," explained the professor, "the one in which a pedal attachment is utilized in conjunction with a fulcrum lever to convert a vertical reciprocal motion into a circular movement, developing an ensuing torque which, applied through the axis of a disc, causes it to revolve in a vertical plane and permits functional abrasion to be performed by impact at the periphery."

"He means the grindstone," interpreted the manager's wife.

Opportunity merely knocks—temptation kicks the door in.

Our favorite Racing Form is a good looking gal late for work.

Will we ever run out of gas?

RUNNING OUT of the crude oil that powers and lubricates our civilization is not an immediate danger. Scientific methods of exploration, drilling, and recovery keep pushing farther and farther into the future the day when petroleum must be supplemented by other raw materials. When that day comes, however, there is no danger that the American economy will slow down.

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Work with synthetic fuels is only one example of how Standard Oil plans ahead to serve its customers. By working to keep this company in the forefront of one of America's most competitive industries, our researchers and engineers are helping to keep America itself ahead and to make life better for every American.

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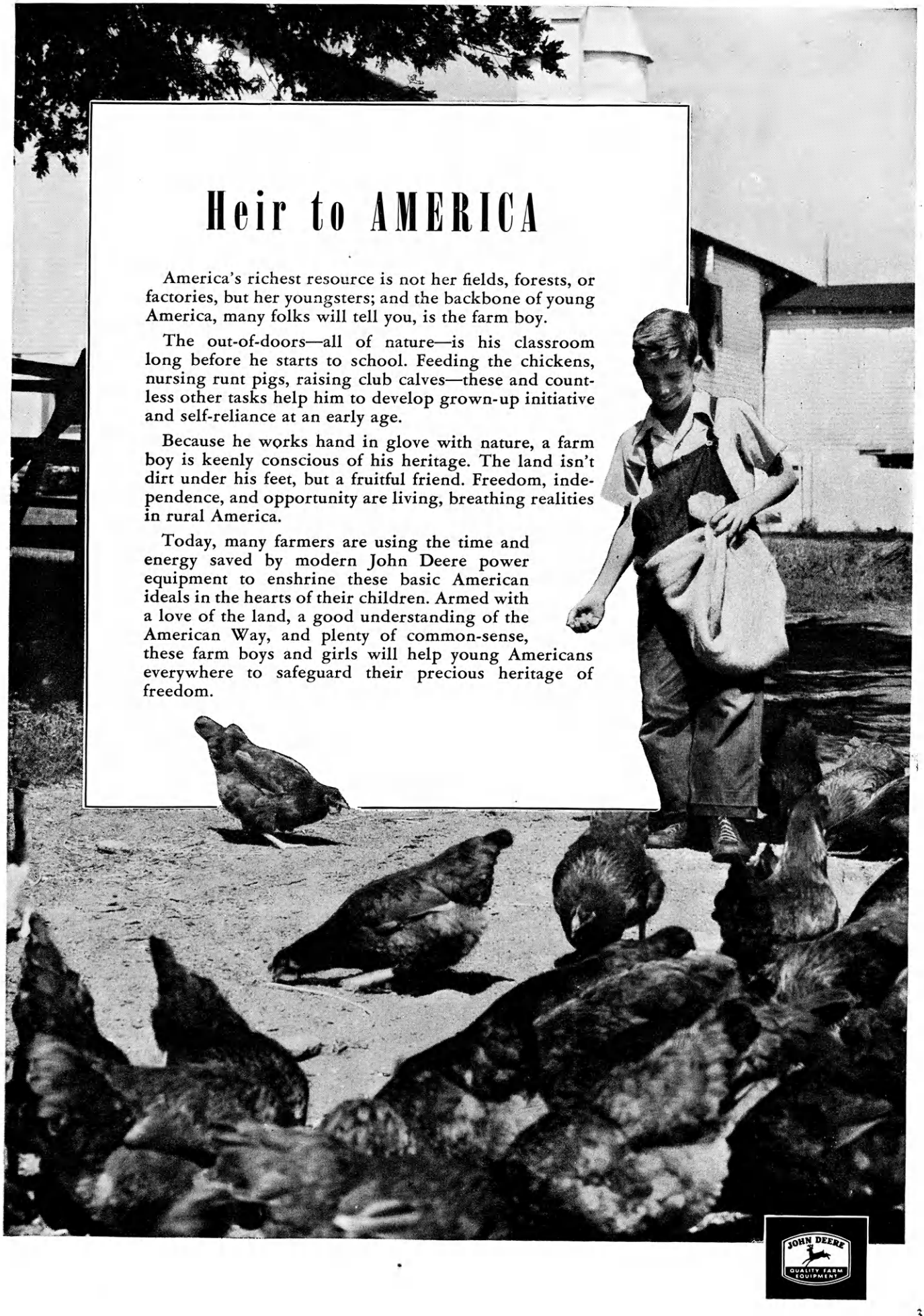

Heir to AMERICA

America's richest resource is not her fields, forests, or factories, but her youngsters; and the backbone of young America, many folks will tell you, is the farm boy.

The out-of-doors—all of nature—is his classroom long before he starts to school. Feeding the chickens, nursing runt pigs, raising club calves—these and countless other tasks help him to develop grown-up initiative and self-reliance at an early age.

Because he works hand in glove with nature, a farm boy is keenly conscious of his heritage. The land isn't dirt under his feet, but a fruitful friend. Freedom, independence, and opportunity are living, breathing realities in rural America.

Today, many farmers are using the time and energy saved by modern John Deere power equipment to enshrine these basic American ideals in the hearts of their children. Armed with a love of the land, a good understanding of the American Way, and plenty of common-sense, these farm boys and girls will help young Americans everywhere to safeguard their precious heritage of freedom.

JOHN DEERE
QUALITY FARM EQUIPMENT

Kugler Authors Welding Text

Book Devoted to Farm Applications Stands Alone in Field

Prof. H. L. Kugler discusses welding procedure with Gordon Cunningham, Ag Ed senior. Kugler is recognized as an authority on the subject.

By GLENN BENGTSON

"I don't like to write, don't want to write, and can't write," said Prof. Harold L. Kugler, when interviewed the other day. But a certain publication indicates, at least in part, that he wasn't telling the whole truth. For Professor Kugler is the author of a book that stands alone among welding texts, as it is entirely devoted to farm shop and machinery repair problems.

"The book is intended to be a basic reference to be used in developing skills in farm shop welding," Professor Kugler continued, "which is one reason why we named the book 'Arc Welding Lessons for School and Farm Shop.' Farmers have outdistanced the college trainee in their use and application of welding to their needs, and have shown such great enthusiasm that they have bought welders and are now asking us how to run them. I hope that this book will prove to be the answer to their questions."

The book is published by the James F. Lincoln Arc Welding Foundation. This foundation is known throughout industry as a sponsor of educational activities, and several students on the K-State campus have won scholarships sponsored by them. "Progress Through Study" is the motto of this organization, and they are attempting to further this motto by selling the book at a price below its cost.

An outstanding feature of the book is the way in which each operation is illustrated. Professor Kugler mentioned that very few pictures showing welding operations applicable to agriculture were available. So photographs were taken of machinery breakdowns on the animal husbandry and agronomy farms of the College, as well as of ordinary welding procedures and equipment in the vocational ag shop on the campus.

The book has been divided into three parts. The first is organized with informational lessons suitable for group or individual instruction. Lesson outlines and questions are included at the end of each chapter. The section begins with a short history of the development of welding. To write this part of the book, Mr. Kugler consulted with Mr. Jay Riggs, veterans' on-the-farm training instructor at McCune, Kansas. Mr. Riggs is an old hand in the farm welding trade, and possesses a detailed knowledge of the development of welding technique.

The second section is devoted to welding technique. Seventeen welding operations are discussed here, and their purpose is to develop skill in using arc welding equipment. The last section is devoted to welding projects which are useful in farming operations.

Professor Kugler majored in ag education at K-State, graduating in 1933. He then went to teach high school agriculture at South Haven, Kansas. In 1938, he moved to Manhattan where he taught at the high school until he came to teach at K-State in 1946. By 1941 he had earned his MS degree in education, and is now a full professor, special-

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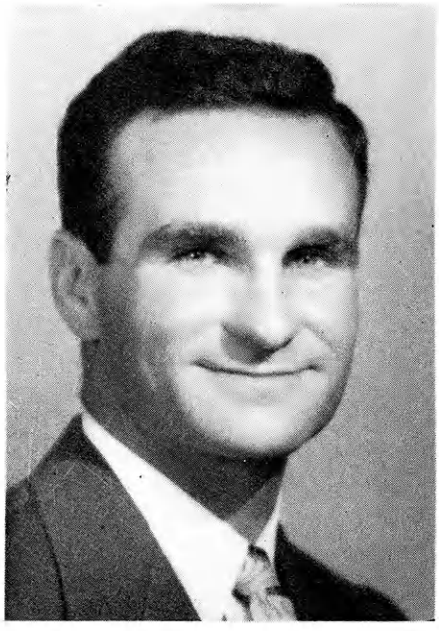

Darold Marlow

A. H. Graduate Tells Of 1st Year's Work

Note: The editor wrote Mr. Marlow asking him to write the Ag Student telling of his experiences out on the job.

Deciding to go back to school was something hard to do, but was certainly one of the best decisions I have ever made.

I transferred to Kansas State from Southwestern at Winfield with one semester credit in June 1947. I majored in Animal Husbandry and graduated in January 1950.

I went into extension work in February, working as an assistant county agent in Butler county. A new soil laboratory had been set up and that was a big issue in Butler county. The four months spent there were very worthwhile and I realized I hadn't absorbed everything put out by the professors at Kansas State. I found there is new material being discovered every day, especially in the field of agronomy, soils, and fertilizers.

The men in the field want things on a down to earth basis and that is what we as extension workers have to learn to do, translate technical terms into useful terms.

I feel all the work in school has been a big help, but it is impossible to keep it all in mind. Actually I wish I had more advanced work in

(Continued on page 17)

He Gets Around

Dean Call Returns to K-State After 15 Months in Philippines

By Dick Nichols

Dean L. E. Call, former Dean of Agriculture, is once more back in Manhattan. He has just returned from a 15-month stay in the Philippine Islands.

Travel abroad, although still fascinating, is certainly not a new experience for the former director of the agricultural experiment station. He was stationed in Europe in 1919 with the Army Educational Corps, and was in charge of farm crops instruction at the American Expeditionary Force University at Beaune, France.

He was later in the Philippines in 1946, this time serving as the chief of an agricultural mission from the USDA. He was here at Kansas State in 1947 and '48, and left in July, 1949, to begin the school term at Silliman University in the Philippines.

The Dean was called to the Philippines this time as a Fulbright visiting professor. Under the Fulbright Act, funds are furnished for the support of scholarships and visiting professorships in countries that were allies of the U. S. during the war. The purpose of Dean Call's work at Silliman University was to promote agricultural development. There he assisted in organizing work in teaching, research, and extension.

Silliman University is a school of 3,500 students, located at Dumagetta, on Negros Island. The school term begins July 1 and closes on April 1 because the hot, dry season runs from April through June. The agriculture is strictly tropical, therefore differing markedly from ours. Corn, however, is the second leading crop for food in the Philippines, with the major food crop being rice. It is common practice to have two corn crops a year, with even an occasional third, since there is a year-round growing season.

Dean Call had no need for winter clothing, since during all of the time he was in the Philippines, the lowest temperature was 72 degrees. The hottest temperature recorded was 97, with a normal of around 80 to 85 degrees. Dean Call said, "When I wanted to dress warmly, I put on a necktie."

Philippine agriculture hits the widest extremes in the world from the standpoint of farm equipment, the Dean declared. While some farms are as completely mechanized as any modern farm, others are operated exclusively with hand tools and hand labor. The future for machinery isn't

(Continued on page 20)

Buffalo power is common in the Philippines. Here, the farmer is preparing land for rice with a type of plow drawn by a water buffalo.

Fellowship Winners Spend Month On Danforth Educational Tour

Outstanding Junior, Frosh Chosen Every Year

By JOHN SCHLENDER

Editor's Note: John Schlender was the winner of this year's junior scholarship and J. Elton Zimmerman was the winner of the freshman scholarship.

"To help students make decisions, to enlarge their horizons, to broaden their contacts, to render guidance and assistance in attaining the four-fold way of living," is the purpose of the Danforth summer fellowship.

Each year a four week scholarship is awarded to a junior and a two-week scholarship to a freshman from the agricultural colleges in the United States and Canada. This year Hawaii was represented for the first time.

The first three days of the fellowship were spent at the Ralston Purina experimental farm in the foothills of the Ozarks near Gray Summit, Mo. On this farm the findings of the research laboratories are tested, records kept, and results tabulated. Out of this experimentation the livestock and poultry feeds manufactured by the company are continually being improved.

The 738 acre farm was started with grade animals and under circumstances to match the average farm. The farm now includes dairy cattle, beef cattle, swine, sheep, goats, chickens, turkeys, ducks, dogs, rabbits, fox, mink, martin, and chinchilla, each in a separate unit. These animals are fed experimental rations sent out by the laboratories in St. Louis under code numbers and unknown to the farm hands. Good breeding, good feeding, good sanitation, and sound management are stressed.

Recreation including softball games, a dip in the Merrimac River and good food and evening snacks coupled with staying in one large room at the farm made conditions ideal for getting closely acquainted with the other Danforth Fellows.

We spent the remainder of the first two weeks back in St. Louis at the Purina Research Laboratory. Lectures were given on minerals, vitamins, proteins, fats, carbohydrates, salesmanship, personal selection, sanitation programs, rations, laboratory techniques, advertising, business organization and management, and a philosophy of living.

Between lectures we visited the analytical, biological, and chemical laboratories of the plant. Also tours of the feed manufacturing part of the company showed us the grain and other ingredients moving from the elevators to the mixers and into the bags which were loaded on cars and trucks on their way to retail feed stores.

Swift and Company of the National Stockyards in East St. Louis was our host one day. We accompanied the buyers in the yards and observed their buying transactions. Then we went into the meat packing plant and followed sheep, swine, and cattle from the pens to where the meat was cut up, packed as smoked bacon, pork, mutton or beef and shipped on trucks and railroad cars to the consumers.

Another day we were the guests

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At Camp Miniwanca, Mich., John Schlender, left, and J. Elton Zimmerman, right, pause with William H. Danforth beneath a sign expressing the key to Mr. Danforth's philosophy. The Kansas State boys were the winners of the annual Danforth Fellowship offered to juniors and freshmen. Schlender won last year while a junior and Zimmerman won the freshman award.

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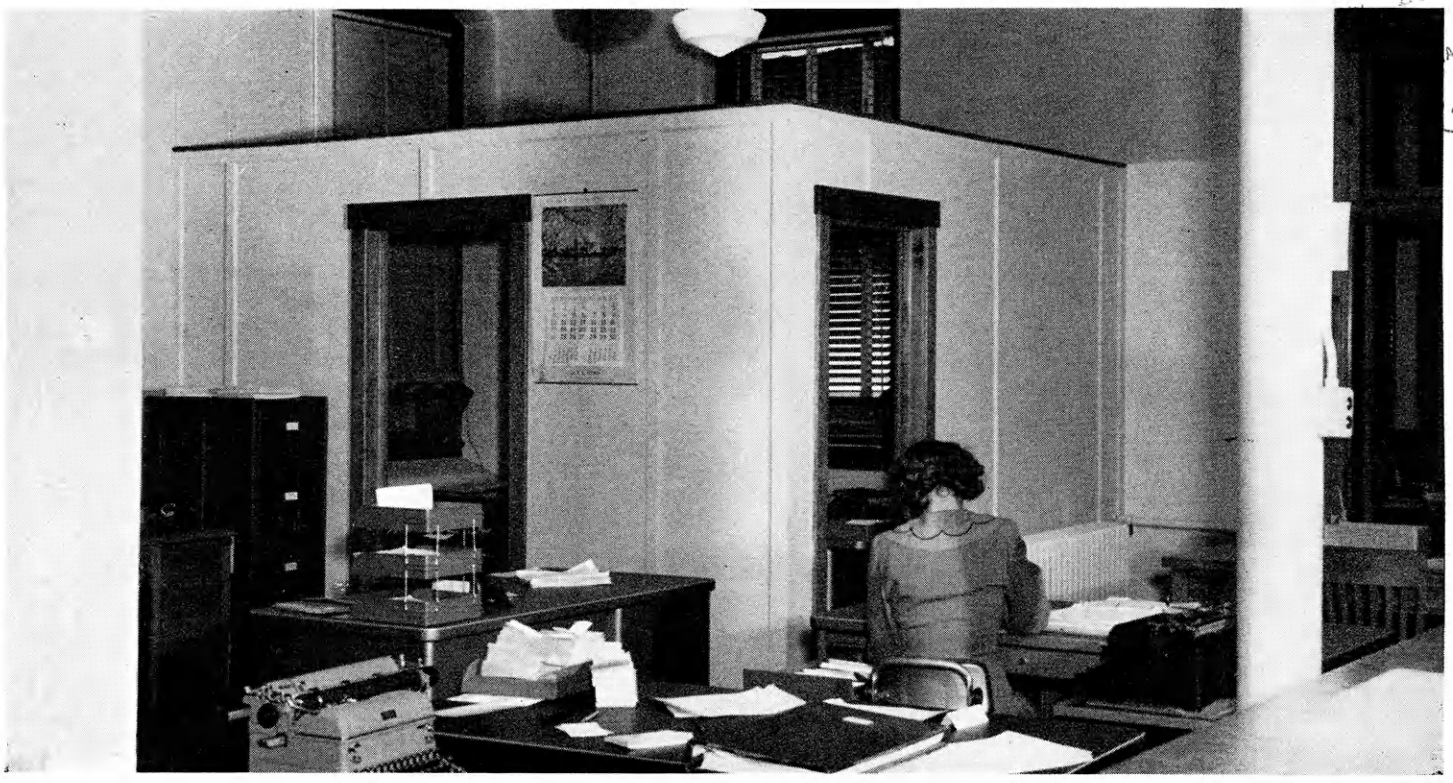


Dean Mullen's new office has been built into a corner of the Ag school administration offices. The dean's new office matches one on the opposite side of the room (to the left of the camera) which houses the Ag Student magazine editorial desks and Prof. Elbert Macy, faculty adviser of the magazine. The new office space was made necessary by the return of Dean Call from the Philippines. Dr. A. D. (Dad) Weber, associate dean of agriculture, had been using the space originally assigned to Dean Call. Now Dad Weber occupies Dean Mullen's former office.

What's Best?

Evaluation Tests by Millers Pick Best Wheat for Bread

By Richard Fleming

Evaluation of several varieties of wheat in regard to their baking, and milling qualities, is the purpose of the research program now being carried on in the Department of Milling Industry at Kansas State college, according to Prof. John A. Johnson. Twenty-five collaborators in Kansas and surrounding states are co-operating in these quality studies.

The Department of Milling Industry has carried on extensive experimentation in evaluating various wheat varieties as to their baking, and milling qualities for several years. During the past few years it was realized that these tests were entirely inadequate. New equipment was needed which would provide new tests with greater accuracy, Johnson said.

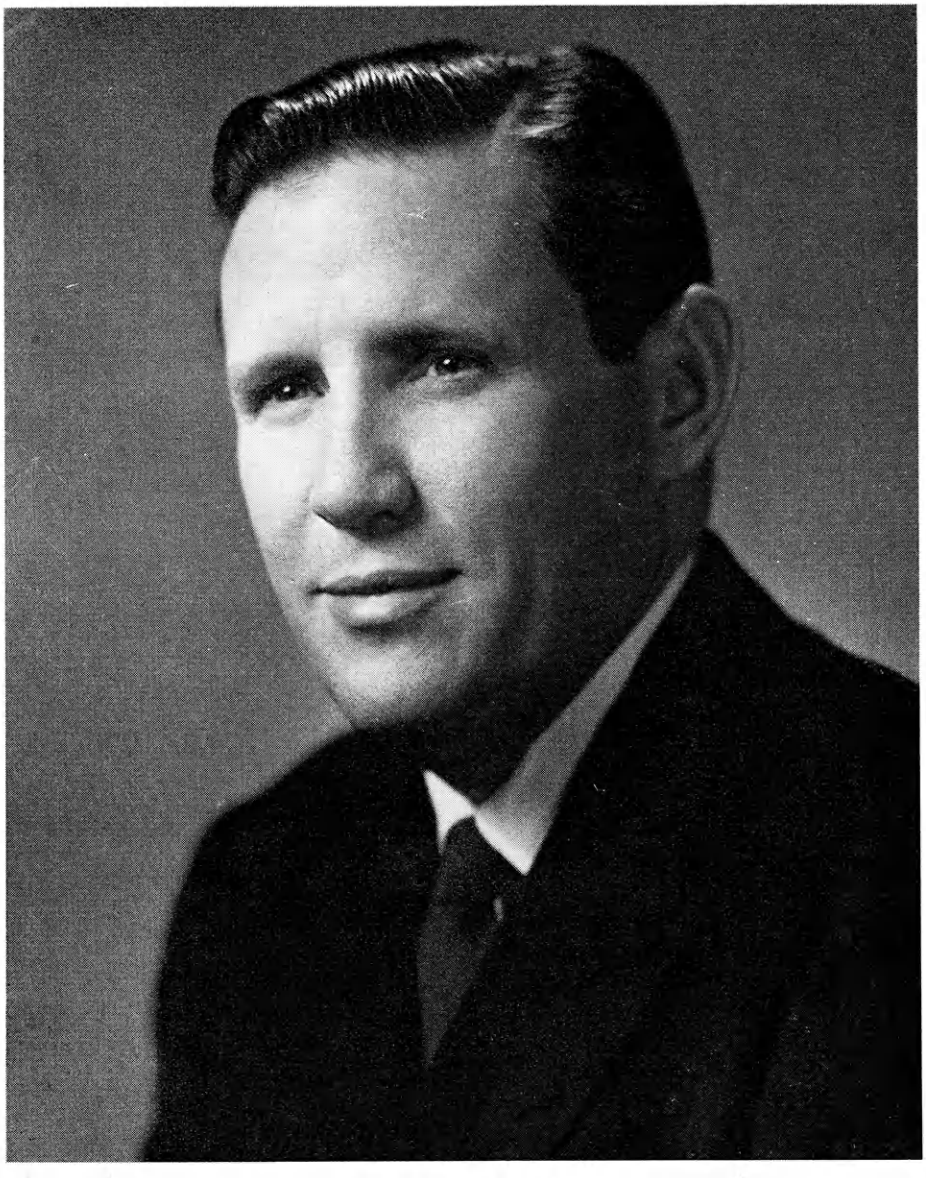
Three years ago this new equipment was installed which revolutionized the entire method of evaluating various wheat varieties. Among the new pieces of equipment is a pilot plant which is used for student and experimental work in testing and evaluating flour.

Four varieties of wheat were sent to the experiment stations at Colby, Fort Hays, and Manhattan this year. These four varieties were Pawnee, Comanche, Chiefkan x Oro-Tenmarq, and Kawvale-Marquillo x Kawvale-Tenmarq, Johnson stated. The four varieties were grown and harvested separately during the 1950 season.

A sample of each variety of wheat was sent to the Department of Milling Industry by each of the three experiment stations, where they were composited by variety. These samples were milled in the college commercial mill. After processing, a sample of each variety was sent to each collaborator in surrounding states. These collaborators used their own tests on each sample to evaluate its baking qualities, according to Johnson.

On October 20 and 21 the Tri-Section meeting of the American Association of Cereal Chemists was held at Kansas State. Millers and bakers throughout this area were also present on October 20 for the Wheat Quality Variety meeting. During the morning of October 20 tests were run on various wheat varieties in the milling industry laboratories. These tests were open for inspection by the visitors, Johnson said. In the afternoon the results of these tests along with the results of tests from various collaborators were discussed.

"We get an idea from the men in the trade as to whether the new crosses will fit into the commercial picture if and when they are released for commercial production," Johnson stated. The results of these tests will be made public as soon as they have been confirmed. As a result the entire industry will benefit from this research program.



President James A. McCain

Succeeds Eisenhower

James A. McCain Takes Over As President of Kansas State

Dr. James A. McCain officially took over his duties as president of Kansas State college on July 1. McCain's appointment was announced in May after several months of speculation as to who would succeed Milton S. Eisenhower.

President McCain comes to Kansas State with many recommendations. He is quite familiar with land-grant colleges, having been on the staff of Colorado A and M for 12 years and having served as president of Montana State university for the past five years.

Since arriving at Kansas State, the President has shown considerable interest in the ag school here on the campus as well as in the agricultural affairs of the state. He has already spoken to several agriculture gatherings. His leadership in the years to come can mean a great deal to the agricultural industry of Kansas.

The School of Agriculture takes this opportunity to welcome you, President McCain, and may your stay here be both enjoyable and profitable.

D. H.

Ag Graduates Enter Unusual Occupations

By JOHN MCBRIDE

In a survey made recently by Prof. George Montgomery, Department of Economics and Sociology, it was found that many K-State grads with majors in agricultural economics and agricultural administration had entered unusual occupations. The survey made included students graduated during the last 28 years, dating back to the class of 1920.

Since 1920, 738 students have graduated with majors in ag administration and ag economics. Since they received their degrees, they have spread out to most of the 48 states and some foreign countries. The foreign countries are Korea, South Africa, India, and Europe.

Professor Montgomery sent out 659 letters and thus far has received replies from over 500 graduates. Twenty-seven letters were returned unclaimed and 21 of the grads are deceased according to word received.

In this survey it was found there were grads in many unusual occupations. This bears out the fact that not all graduates enter the occupation or work which they studied for during their college career.

According to the survey, this is how the occupations exist among this group of alumni: farming has attracted 107; 65 are engaged in teaching and research work as extension specialists in land grant colleges; 29 are county agents, 40 grads are instructing veterans in on-the-job training; 68 are teachers of vocational agriculture; 7 are employed as bankers or cashiers.

Other fields which have attracted grads vary considerably. Three are economists for the Federal Reserve Bank, three are ag economists with the Economic Cooperation Administration in Europe, two are ministers, and two more are studying for the ministry, two are professors of ag economics, one is a lawyer and another is studying law.

One is a director of an agricultural experiment station and two others are assistant directors, another is the secretary of the Kansas State Board

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Dean Mullen Says . . .

Out of 199 students in Freshman Assembly, more than 100 were looking for work at the beginning of the semester. After two weeks, less than half of those seeking employment had found a job.

Scholarships among freshmen in the School of Agriculture are beginning to look fairly imposing since 36 freshmen this fall are enjoying the benefits of a scholarship from one source or another.

There is not the slightest evidence that students in agriculture returned to College in larger numbers in order to escape the possibility of being drafted. Our boys seem to be taking the situation in stride. If they must take their turn in the armed services, they are ready. Until the call comes they are desirous of continuing their education.

There would be greater enthusiasm about going into service if the fighting were closer at hand. Even a rush into service would occur at once if our own shores or territories were threatened; and veterans of World War II quickly would be shoulder to shoulder with their younger brothers if that contingency should come about.

A standing committee for the School of Agriculture now clears all new curriculums. Dr. Franklin Eldridge (Dairy) is chairman. The committee has for some months been considering a three- or four-weeks short course in agriculture. After making its first report to the agricultural faculty, the committee was continued and instructed to determine more

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Abandoned Air Field

Southeast Kansas Now Has Its Own Experiment Station

By JAMES R. CHILCOAT, JR.

The Southeast Kansas Agricultural Research Association saw its dream come true when the 282 acre Mound Valley Branch Experiment Station was formally opened July 12 at Mound Valley. This is the first agricultural research station in Southeast Kansas and is located about 200 miles from any other agricultural research station.

An abandoned air field was obtained by Kansas State college from the federal government for experimental work in 1948. At this time the research association was formed in this area and in less than six months the Kansas legislature had appropriated $105,000 to start work on the station.

The object of the station is to improve methods of both livestock and crop production in Southeast Kansas. By doing this both farmers and business men of the area will benefit.

Research at the experiment station is divided into two phases: (1) Soils and crops which will be under the direction of Dr. H. E. Myers, head of the Kansas State college agronomy department. (2) Dairy cattle research to be directed by Prof. F. W. Atkeson head of the dairy department at the College.

Personnel at the new station are well trained for their positions. Superintendent of the station will be Floyd Davidson, who received his M. S. degree in soils at Kansas State in 1941. Davidson has over 15 years experience in setting up experimental

(Continued on page 24)

Lloyd Jones, station agronomist, puts in grass demonstration plots with a hand planter.

It's a Money-Maker

Tests Show Nitrogen Is Key To Bromegrass Seed, Forage

By KENNETH FROMM

"Nitrogen fertilizer seems to be the key to bromegrass yields in Kansas—both seed and forage," states Kling L. Anderson, professor of agronomy. He is conducting fertilizer experiments on bromegrass forage and seed yields at the agronomy farm.

Two fields are being used for fertilizer test plots. One series of plots is located in a bromegrass field seeded in 1938 on plowed native sod. The other series is in an adjacent field planted in 1946 on depleted crop land. The bromegrass in both fields was seeded the middle of September at the rate of 12 to 15 pounds to the acre.

Fertilizer supplying various amounts of nitrogen up to 200 pounds was applied annually on both series of plots. Half of the plots in each series also received treble superphosphate fertilizer at a rate sufficient to supply 80 pounds of phosphoric acid an acre. The fertilizer was applied in September, November, March, and May to study time of application.

Bromegrass seed and forage yield samples have been taken from 1947 through 1950. Both seed and forage yields were increased by the application of phosphorus used in combination with nitrogen on the depleted crop land. Phosphorus had no measurable effect on the bromegrass sowed following breaking of the sod.

Nitrogen used annually at the rate of 100 pounds an acre has given the most effective increase in both seed and forage yields. A comparison of unfertilized and fertilized plots showed that the 100 pound applications of nitrogen have increased the yield from 231 pounds of seed an acre to 489 pounds, an increase of 258 pounds of seed from the nitrogen contained in 300 pounds of ammonium nitrate fertilizer. With bromegrass seed selling for $.50 a pound and ammonium nitrate costing about $4 per 100 pounds, a profit of more than $100 an acre would be realized.

Similar tests on bromegrass plots where a more severe "sod bound" condition existed due to nitrogen depletion have shown an even greater increase in seed yields from nitrogen applications. In the 1945-1946 trials

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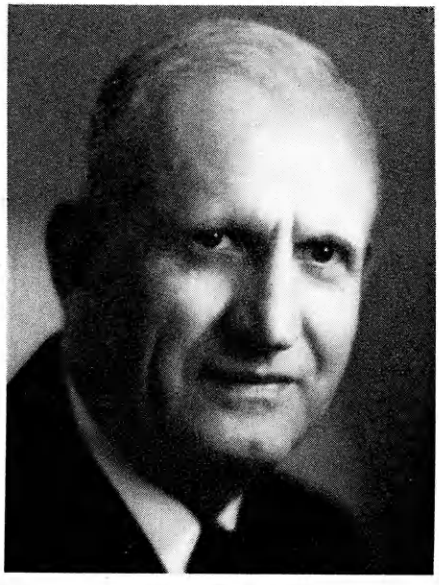
The plot on the left shows what nitrogen can do for bromegrass. It received a 200 pound application of nitrogen in September while the plot on the right was unfertilized.



Prof. A. L. Clapp

Professor Clapp To Judge At Chicago International

Prof. A. L. Clapp, Agronomy, will judge at the International Hay and Grain Show in Chicago for the 16th consecutive year. He will serve as one of the committee of five for small grains and legumes. The committee will judge wheat, oats, rye, barley, field peas, cow peas, alfalfa, sweet clover, white clover, timothy, lespedeza, and flax.

Clapp also will be in charge of selecting judges for the committee on sorghums. He has written men in Oklahoma and Texas to serve on the committee, which generally is composed of judges from these two states and Kansas—the major sorghum area.

The show is November 25 to December 2. Judging is done by a committee rather than by individual judges, with judges chosen generally from the states specializing in those grains.

By October 10, ten students had withdrawn from the School of Agriculture to enter active service. One of the boys was drafted, two enlisted because of draft pressure, four were in the reserves, and one was in the national guard. The other two went in for miscellaneous reasons.

Those who withdrew were Gene Ratcliff, Elvin Cole, Richard Kilgore, Ulysses Mathews, Byron Wood, William Fetter, Pete Hampton, Richard Bohart, Harold Nuss, and Wallace Brown.

STATE COLLEGE OF AGRICULTURE AND
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Fluorescent Dye Can Detect the Weevil In Wheat Kernel

By Richard Fleming

Identification of internal infestation in wheat by the use of a new fluorescent dye has been made possible by research now being carried on in the Department of Milling Industry at Kansas State college, according to Prof. Max Milner.

"Recently, the Department of Milling Industry developed a new fluorescent test for internally infested wheat kernels," Milner explained. The kernels when treated with the fluorescent material did not show any visible effects of the treatment under ordinary light. When these kernels were examined under an ultra-violet light, the gelatinous egg plug on infested kernels fluoresced with an intense yellow color. This intense yellow color identified the infested kernels.

Internal insect infestation of wheat may be caused by grain weevil and the rice weevil, Milner pointed out. The female weevils drill a small hole in the kernel, where they deposit their eggs. The hole is then covered with a gelatinous plug. The egg hatches and the insect larva eats the inside of the kernel as it grows. After a few weeks the insect emerges a full grown weevil. This weevil may lay eggs inside other kernels and increase the infestation.

Internally infested grain is an important problem to farmers in Kansas since they put their freshly harvested grain in storage during warm seasons. This warm weather permits the weevils to reproduce several times before cold weather arrives, Milner stated. Unless the insects are controlled by fumigants the grain quality will be impaired.

A method of recognizing these internally infested kernels is needed so that such lots of grain may be identified and segregated by the millers. If accurate and simple tests can be developed for identifying insect infested grain, they may be incorporated into the Federal Grain Grading Standards.

Fertility Varies Greatly

Soils Lab Runs Many Tests; Helps Farmers Raise Yields

By Don Flory

Kansas State college's soil testing laboratory has run tests on more than 2,500 soil samples since it was organized in April, 1949. These samples were from Kansas farmers desiring information that might help them increase yields.

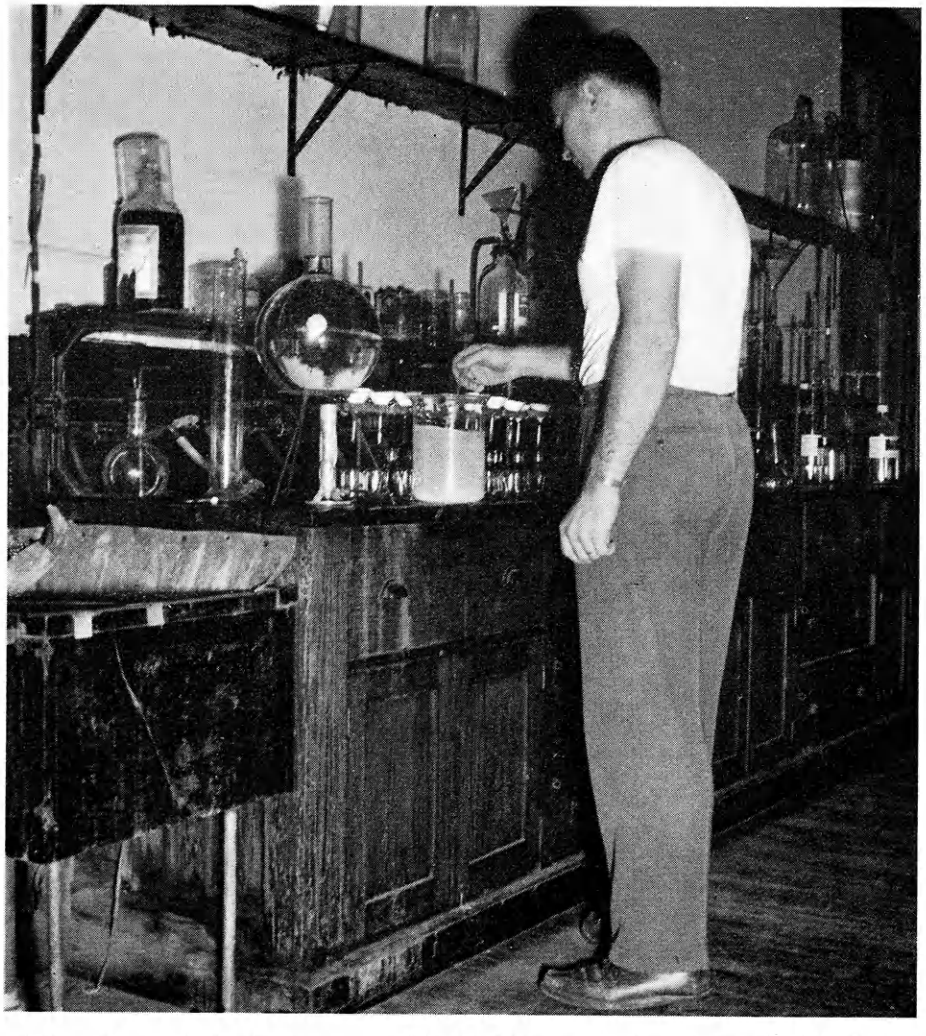
The laboratory, located on the second floor of East Waters hall, is under the direction of Dr. R. V. Olson, professor of soils. George W. Wright is in charge of testing.

According to Dr. Olson, experience and study have shown that soil productivity is determined by many factors. Among the important ones which influence crop yields are drainage, physical condition, salts and alkali, degree of erosion, organic matter content, slope, and content of available nutrients.

Dr. Olson states that the laboratory has designed four soil and water tests which are available to farmers of the state at small cost. In addition, other soil tests are made under special arrangement with the laboratory.

The most popular test is one for general soil fertility which includes analysis for available phosphorus, exchangeable potassium, soil pH lime requirement, and organic matter content. The test is designed to determine if economical crop yield increases can be obtained by using lime and fertilizers and if so, to estimate

(Continued on page 22)



Soil samples sent in by farmers are tested in this laboratory in East Ag. Results help farmers determine how they can increase their crop yields.

Grades Are Important

Dean Throckmorton Welcomes New, Old Aggies to K-State

By R. I. THROCKMORTON
Dean, School of Agriculture

I welcome this opportunity to greet the new students in the School of Agriculture and to say to the returning students that we are delighted to have you with us again and that we

Dean R. I. Throckmorton

hope you will enjoy and make the best possible use of this year.

You new students are embarking upon four important years of wonderful experiences and opportunities. The way in which you take advantage of the experiences and the opportunities offered during your college days will largely determine your future and the kind of a life you will have. These four years are the most important years of your life because during this period you will have an opportunity to lay the foundation of knowledge, habits, attitudes, and thinking on which the rest of your life will be based. Four years is a short time in which to prepare for forty or fifty years of one's life.

The opportunities in agriculture for well trained and mature and balanced thinking young men are almost unlimited. The opportunities are on farms and ranches which have been claiming more than 30 percent of our graduates in recent years. They are in educational work in resident instruction in colleges and high schools and in agricultural extension service. They are in federal work, as with the Department of Agriculture, Department of Interior, and Foreign Agricultural Service. They are in industry, as with farm implement companies, commercial fertilizer companies, meat packing companies, dairy products processing companies, nurseries, fruit companies, insurance companies, farm loan organizations, and many others.

The student should endeavor to acquire the maximum of knowledge in his field of specialization, but while acquiring this knowledge he should also acquire many other attributes; and also while acquiring knowledge in his field, he should learn not only to remember facts but to think. While learning how to make a better living, he should learn how to live a satisfying life. This means developing high ideals, learning to co-operate with others, and developing and practicing a sense of responsibility and leadership. Taking an active part in departmental clubs, school organizations, and all-college organizations and activities will help develop these desirable characteristics.

Some people will tell you that grades in class are not important, but let me tell you emphatically that they are important. They are important not because of the grade alone but because the grade often indicates the ability of the student to discipline himself, to concentrate, and to organize his time to best advantage. The prospective employer usually inquires as to a student's grades, his activities, his character, and his ability to work with others.

You will find it helpful to get well acquainted with and to confer with your instructors, the heads of the departments of the School of Agriculture, and with the staff of the dean's office.

KSC Enrollment In First Downward Trend Since War

By CLINT DAVIES

Enrollment numbers in the School of Agriculture this semester begin to show a downward trend for the first time in the post-war period. Only 327 freshmen have enrolled to replace the 378 seniors who were graduated in 1950 at the three commencement exercises.

Although there was a drop in enrollment this term, it was not so large as was previously anticipated. According to Dean Mullen, assigning students to classes was more difficult at registration time this year, than in previous years, because of the shortage of allotted classes across the campus. He also explained that numbers of students in class sections for freshmen and sophomores are not materially reduced and that many classes in beginning agricultural courses are still too large.

All departments in the School of Agriculture have felt the drop in total numbers to a certain extent. However, the curriculum in soil conservation had the most serious loss with nearly a 50 percent decrease in freshman enrollment. Freshman students in soil conservation number only 14 this year compared to 27 last year. The unfavorable employment situation due to no increases of funds for further advancement in soil conservation work is the reason for this drop, explains Dr. H. E. Myers, head of the soils department.

Only one department in the School of Agriculture showed a noticeable increase in freshman enrollment over last year. The curriculum in agricultural administration is popular with new students, and its freshman total is 47 compared to 36 last year. According to Prof. George Montgomery, head of the Department of Agricultural Economics, the curriculum in agricultural administration is popular because it prepares a student for a wide range of fields. However, other departmental heads point out that the curriculum in agriculture also

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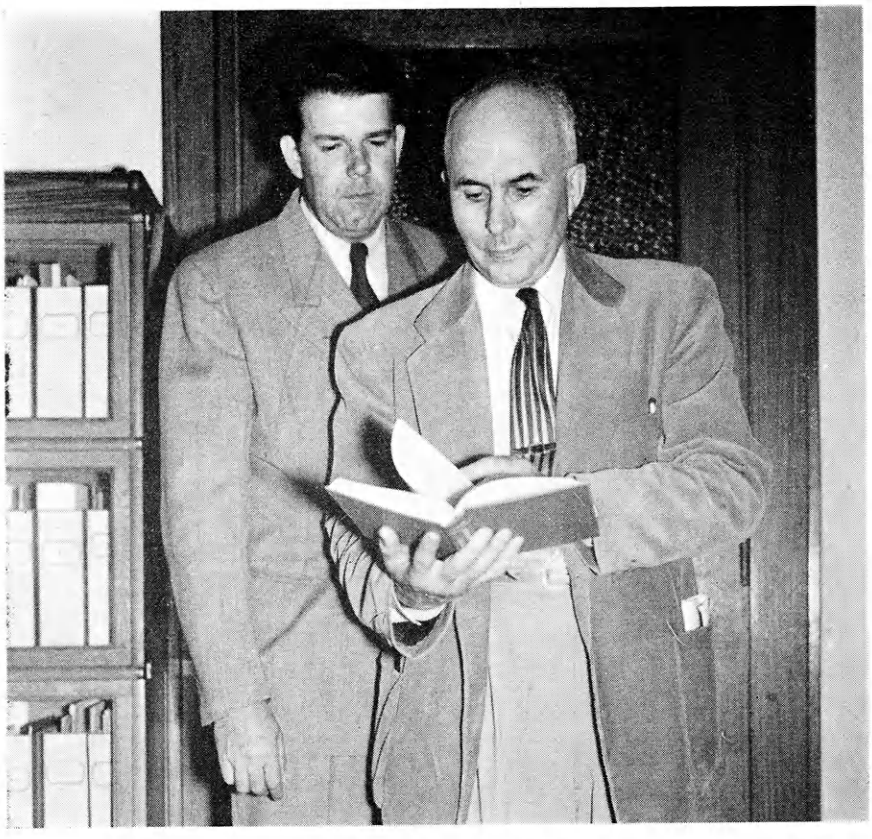


Assoc. Prof. Thomas B. Avery, left, and Dr. L. F. Payne, head of the poultry department, examine a copy of their latest publication—a revision of a poultry guide book. The new work is intended to supplement the "American Standard of Perfection," guide for poultry breeders.

Cockle-doodle-doo!

Revised Edition of Poultry Text Published by K-State Profs

By Silas E. Brandner

Profs. Loyal F. Payne and Thomas B. Avery of the Kansas State College poultry husbandry department, have published a revised version of a poultry guide book. The new book, "International Poultry Guide for Flock Selection," contains comments by 49 poultry authorities. It was released at the International Baby Chick association convention in Minneapolis, Minn., July 18, 1950.

This book is to supplement "The American Standard of Perfection," a guide for producers of fancy poultry. The revised book emphasizes economy in poultry production of standard-bred flocks and discusses cross-bred and in-bred poultry. It directs poultrymen in management and breeding problems.

The national plan for chicken and turkey improvement work is also presented.

New sections in the book cover turkey production, sexing chicks, broilers, crossbreds and inbreds, flock selecting schools, sanitation, causes of diseases, fumigation, culling, selecting breeders for meat and/or egg production and flock management. Many of these points frequently are overlooked by the average poultry raiser, Payne said.

Nine chapters are devoted to breeds of poultry, five to chickens, and four to turkeys.

The 247 page book contains well over one hundred sketches and photographs comparing various faults with desired points.

One chapter is composed of several pages of definitions of terms used in the text. Such words as accessory plumage, distol, in-cross bred, sheen, vigor and scores of others are defined.

The material in this book should prove useful to teachers and students in vocational agriculture, to hatchery operators, and to flock owners throughout the United States who participate in the National Poultry Improvement Plan.

New Milling Process Makes Better Flour

By Richard Fleming

Prebreaking operations in the milling of flour may be more widely used than at present as a result of research by several members of the Department of Milling Industry at Kansas State college, according to Eugene P, Farrell, milling technologist.

Early experiments have shown that flour milled using prebreak operations contained a lower amount of bran fragments. As a result the flour was of much higher quality. The added cost of machinery and operations involved in prebreaking the grain is overcome by a higher quality product, Farrell pointed out.

Four different prebreaking operations were tested as a preliminary operation to the standard milling procedure. Two of these four prebreak tests used a special pair of corrugated rolls at two different settings. The other two tests incorporated two variations of the relatively new impact operations, Farrell stated.

"One of these operations of prebreaking may greatly increase the quality of flour in the future," Farrell continued. As soon as the results have been confirmed by further research, they will be made available to millers.

Other members of the milling department who are also working on the research are Arlin B. Ward, Donald E. Fleming, and Gerald D. Miller.

Dr. John A. Shellenberger, head of the milling industry department, was recently appointed associate editor of section J, Biological Abstracts, which has its headquarters at Pennsylvania State college.

Biological Abstracts is a new technical journal dealing with all phases of the milling industry. Section J of Biological Abstracts deals primarily with cereal food products. Dr. Shellenberger will choose and edit material to be published in this section of the journal.

Civilization is a state of society in which a person who is over ninety has a hope of missing the next war.

K.A.B.S.U. Dedicated Labor D

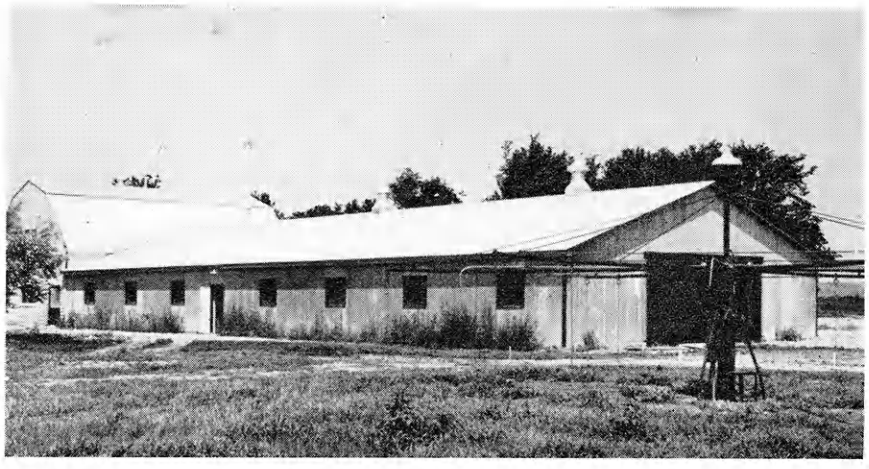
By Gordon Nelson

Labor day, 1950, will be remembered as a red letter day by the dairy industry in Kansas. On this warm summer day, 300 people witnessed the dedication of the state headquarters for the Kansas Artificial Breeding Service Unit, better known as K.A.B.S.U.

Prof. F. W. Atkeson, head of the Department of Dairy Husbandry at Kansas State college, acted as master of ceremonies. He noted that Kansas is a leading dairy state, ranking 12th in total number of cattle. It is a typical butter-producing state, with most of the cattle in herds of less than 10 animals. K.A.B.S.U. has been set up to help these small breeders to produce "typier," as well as more efficient cattle.

James A. McCain, president of Kansas State college, was the first speaker on the program. In his speech the President estimated that K.A.B.S.U. should add more than one-half million dollars a year to the income of Kansas dairy farmers.

R. I. Throckmorton, dean of the School of Agriculture, spoke on the relationship of the dairy industry to declining soil fertility in Kansas. He stressed that an increase in livestock, including dairy cattle, was essential if we are to maintain soil fertility.



The headquarters building was officially dedicated September 4. The building includes the bull barn, laboratory, office, and living quarters for a technician.

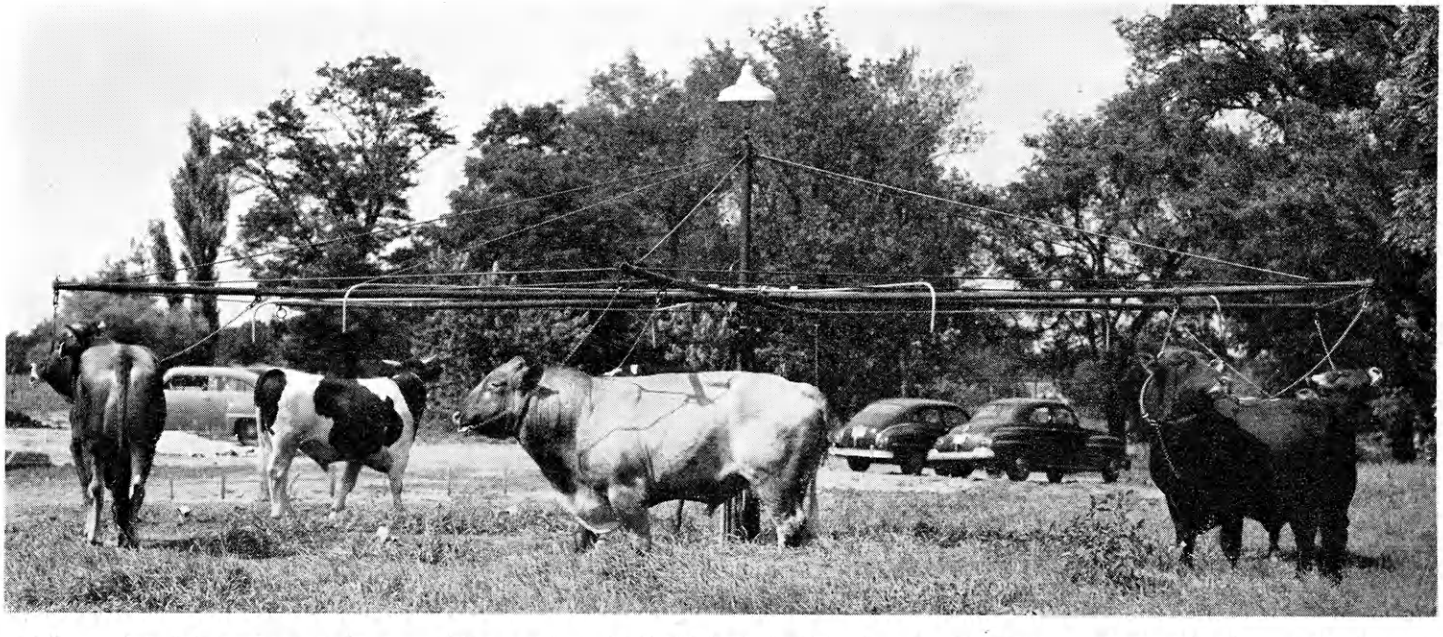
A parade of bulls gave breeders an opportunity to observe each animal in the stud. Dr. F. E. Eldridge, associate professor of dairy husbandry, reported on the breeding and background of each bull as it passed the speakers' stand.

The program was closed by E. L. Farmer, director of K.A.B.S.U. Mr. Farmer outlined plans for the future, one of which is to be able to supply anyone in the state with semen at any time.

After the addresses, refreshments were served, and the buildings were opened for inspection. The new headquarters building is located one mile west of the campus on the site of old Bluemont college. The building includes a barn that will house 29 bulls, a laboratory completely equipped to care for semen, the headquarters office for K.A.B.S.U., and living quarters for a technician.

Cost of the new unit and equipment was more than $60,000. Add to this the cost of the bulls, labor, and other expenses of starting the program, and the cost rises higher.

K.A.B.S.U. has been set up as a self-supporting organization. A $60,000 grant by the state legislature started the program on its way. From now on it is on its own.



Bulls get their daily workout on this power-driven exerciser. K.A.B.S.U. has bulls of the six major dairy breeds, namely Ayrshire, Brown Swiss, Guernsey, Jersey, Holstein, and Milking Shorthorn.

ay; Progresses Rapidly

STATE COLLEGE OF AGRICULTURE
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Directly connected with the program are Mr. Farmer, a graduate of the University of Missouri and now director of K.A.B.S.U., and A. N. Moeller, fieldman. Mr. Moeller received both his bachelor's and master's degrees from the University of Illinois.

H. W. Mudge, a K-State graduate, '49, in dairy husbandry, is the chief technician and supervisor of the lab and barn. Mr. Mudge took special training in artificial breeding work at Penn State college before returning to Kansas. Three other men work in the barn and lab, and one secretary in the office does the K.A.B.S.U. book work.

Interest in artificial breeding has far exceeded all expectations. Plans originally called for approximately 12,000 cows in the program the first year. In the first six months of operation, K.A.B.S.U. has actually bred 13,000 animals, and Mr. Farmer expects that 42,000 cows will be enrolled by the end of the first year.

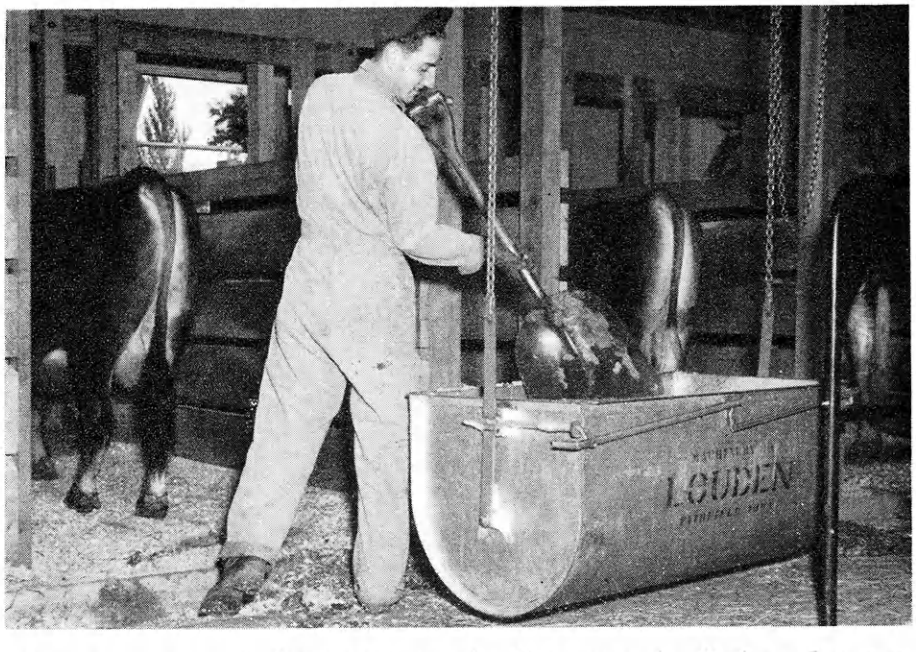
Progress in the field has also improved at a remarkable rate. On March 1, 19 county associations were ready to start breeding cattle.

Four months later, 47 associations bred 2,494 animals for this month with a breeding efficiency of 62 percent (equal to the national average).

A refresher course for inseminators was held in connection with the dedication of the headquartrs in the hope that this average can be maintained or even bettered. Each inseminator had a chance to refresh himself on points he was uncertain of, and talk over problems that had arisen in his association.

The future looks bright for artificial breeding in Kansas. According to Professor Atkeson, only a few units in the country have a setup better than that of Kansas. While Kansas was slow in getting started, he pointed out, it has been able to profit by the experiences and mistakes of others. He feels that today, K.A.-B.S.U. is sound financially as well as working smoothly in the field, and has a better chance of succeeding than have most of the studs started in other states.

E. L. Farmer, director of K.A.B.S.U., catches up on correspondence in between inspection trips to the different county units. Mr. Farmer and A. N. Moeller, fieldman, have been spending much of their time visiting with the inseminators and county directors, helping them solve their problems.



Clean-up operations in the barn are made easier by this manure carrier. Shavings and straw are used for bedding. The entire premise is kept as attractive as possible as visitors are plentiful.

He Gave His All!

Dr. J. T. Willard an Ag Leader For More Than 20 Years

By STAN CREEK

His work and leadership in the field of agriculture is seldom remembered about the late Dr. Julius T. Willard, associated with Kansas State college as student and teacher for 71 years.

Most people, especially students and recent graduates, remember him

Dr. Julius T. Willard

as a kindly, 88 year old college historian who died last July. Others, somewhat older, think of Dr. Willard as a chemist, one who organized and developed chemistry into one of the outstanding and largest departments on the campus. Willard Hall was named after him. Over half of his long years of service to the college was given in the department of chemistry. But he also was an outstanding Kansas agricultural leader.

Indeed, he was director of the Agricultural Experiment station for six years, 1900-1906, and vice-director for another 12 years. At that time, Dean of Agriculture and Director of the Experiment station were not synonymous as they are now. He was chief chemist for the station for an even longer period, beginning in 1897. While holding these college positions, he was appointed chemist for the Kansas Board of Agriculture, a position he held until his retirement.

Dr. Willard thus spent over 20 years working directly with agricultural problems of Kansas and directing research to solve them. He was always in close contact with the Ag school even after promotions shifted his college duties entirely into the sciences.

One of the most remarkable abilities of Dr. Willard was his extreme capacity for work as evidenced by the list of his many offices. He filled 18 different faculty positions during his 67-year teaching career—everything from graduate assistant in chemistry to acting president of the college. He did many at the same time. For instance, in the years he led the experiment station, he also headed the chemistry department, was appointed Dean of General Science, placed in charge of chemistry in the Engineering Experiment station, was chief chemist on the state Board of Agriculture, and was a member and food analyst of the Kansas Board of Health. He also taught some classes during this time.

Speaking at his funeral July 28, Dr. A. A. Holtz, professor of economics and sociology, had this to say about his friend, Dr. Willard:

"In addition to his many responsibilities as a member of the staff, due to his abilities as an organizer and administrator he also remained an active student and researcher. I counted 91 scientific papers, bulletins, and pamphlets of which he was the author or co-author. He was also the author of one textbook which came to have wide usage and was co-author of another textbook which had wide circulation. Among his miscellaneous publications there were two which possibly are better known. One is a History of the Fort Hays Experiment Station and the other is a History of Kansas State College. . . .

"When I asked a member of the college staff who had known him many more years than I had, what he considered the distinguishing trait of Dean Willard, he replied 'his sense of responsibility.' He never shirked

(Continued on page 27)

Experiment Station Releases New Wheat

By IRWIN FRANK

A new variety of wheat that outyields Comanche by one to three bushels an acre in the west half of Kansas has been released by the Kansas State College experiment station. "CI 12133", the new unnamed variety, is more resistant to lodging than Comanche, Tenmarq, and Wichita. It also excels Comanche in resistance to shattering.

It is resistant to stinking smut but is more susceptible to loose smut than either Comanche or Tenmarq. Loose smut carries over from year to year in the seed and cannot be controlled by chemical treatment. Hot water treatments of the seed before planting can control the smut.

Much of the work of developing the variety was done at the Hays station by A. F. Swanson, a graduate of Kansas State college. The original cross was made in the greenhouses of the College.

Seed from the Hays experiment station will be treated and distributed to certified seed producers.

Studies of the effects of rust on the wheat were conducted by C. O. Johnston. Dr. E. H. Hanson worked on the effects of bunt and loose smut and tests on Hessian fly resistance were conducted by Dr. R. H. Painter.

Adaptation tests were conducted at stations and farms all over Kansas to determine whether the new variety is adapted to Kansas farms.

Milling tests were made to find how the quality of the variety rates in relation to other varieties now being grown in Kansas. It was found that the new wheat does not have as much capacity as Tenmarq and Comanche to blend with weaker wheat.

Sweet young wife: "Now over in this corner, we'll have a loveseat—over there, we'll have a loveseat, and here by the fireplace we'll have another loveseat."

Decorator: "My word, do you call this a living room?"

Young wife: "Why of course— If that isn't living, I don't know what is!"

May Bring Income

Photography Interesting Hobby For Anyone in Agriculture

Farmers have many chances to take pictures of livestock. Pictures like this can be taken with inexpensive equipment.

By JOHN SCHESSER

Photography probably serves as a hobby for more people in all walks of life than any other single enterprise. Farmers and others dealing directly with agriculture have a wonderful opportunity to pursue this venture both as a hobby and as a business venture because of their natural day-to-day environment.

The first question an amateur always asks is "Isn't all that equipment expensive?" Photographic equipment need be no more expensive than the individual desires. On one extreme is a box camera, film developing tank, small contact printer, chemicals and paper. This represents an investment of approximately $20. On the other extreme is a press camera or high-speed miniature camera, elaborate developing and printing equipment and a specially constructed darkroom. This represents an investment of about $1,000.

It would be advisable for the beginner to settle for the $20 outfit. Far less is lost in case he lost interest or for some other reason decided to abandon his project. However, the best reason for getting a cheap outfit is that the beginner can do just as well with it until he learns more about photography.

It takes very little skill to be an amateur photographer. The simple box camera of today is a mechanical-chemical machine that merely needs to be aimed and with a flick of the finger, the picture is taken.

The greatest skill necessary—one that can be developed with practice—is the ability to recognize a good picture possibility. There are potential pictures in everything a farmer does. Some very good pictures have been made of a new litter of pigs, a new calf and its mother, various farm machinery operations, landscapes, cloud formations, floods, new farm practices, trips to the stockyards and literally thousands of other commonplace events.

It must be remembered that commonplace events are just commonplace events unless composition, angle of view or some other techniques are used to give it some interest. Composition means the manner in which the elements within the picture are arranged to create effect and balance. Although this sounds technical, it is not very hard to learn. The important thing to do is eliminate anything that detracts from the picture and include everything necessary to tell a simple picture-story.

Many amateurs do not quite rate as "successful" amateurs. They take good pictures and do an excellent job of processing. However, they have no further use for them. To be a success, the pictures must serve a purpose. They can be bound in attractive albums for personal pleasure or they can be sold and become an additional source of income.

A good way to sell pictures is to submit them to editors after finding out in advance the type and size that different publications use.

There are many places to obtain photographic literature and information. The photographic manufacturing companies have various instruction booklets and leaflets. Some of them are free and others are for sale. On the newsstand one can buy magazines devoted specifically to photography and others with special sections for photographers.

Grad Tells About Work

(Continued from page 5)

farm management as this field is very large and one of the most important factors on our farms today.

After I spent four months in Butler county I went to Montgomery county to help out for two and one-half months. The same problems are there in a general way. The farms as a rule are smaller and more diversified but soil fertility, conservation and management are big problems and is a full time job for any teacher trying to help out in some way.

While in these counties I spent a great deal of time testing soil, putting out variety and fertilizer plots, planning tours and taking pictures that will be used as a method of instruction.

I have been hired recently in Wabaunsee county as county agricultural agent and find that my duties will be very similar to the ones I have experienced in the other counties while working as an assistant.

Kansas seems to be small because I am running into old Grads ever so often and it is always good to see them.

Sincerely yours,
Darold Marlow

Marriage is just like sitting in a bath tub. After you get used to it, it isn't so hot.

K-State Wins Honors At American Royal

Kansas State was named the champion college at the American Royal this year. This rating was based both on student judging teams and on animals shown.

The livestock judging team, under Coach Don Good, placed third in competition with 23 other livestock judging teams from all over the nation. The meats judging team, coached by Ed Margerum, placed fourth in a field of 14. Coach T. D. Bell's wool judging team won third place. This is the first year that Kansas State has had a wool judging team.

Livestock owned by Kansas State college really stole the show. In the swine division, K-State had the following winners: champion Duroc barrow, champion pen of Duroc barrows, first place barrow in two different weight classes, first place pen of three barrows in 180 to 220 pound class, first place pen of five Durocs, get of one sire, champion pen of Poland China barrows, first place Poland China pens in two different weight classes, first place Poland China pen of five, get of one sire, and individual first place winners in two different weight classes.

In the cattle show, KSC Blackwell was the champion Angus steer and KSC Champ was reserve champion of the Hereford steers. KSC Champ took first in the senior calves class.

Some of the other animals won lower placings, too numerous to mention.

Although no Kansas State sheep were first place winners, they were consistent runner-ups. The College had winners in the Southdown, Rambouillet, Shropshire, and Hampshire breeds.

Faculty that judged at the American Royal included Dr. A. D. Weber, Dr. Rufus Cox, Prof. D. L. Mackintosh and Prof. C. E. Aubel.

Let the farmer forevermore be honored in his calling, for they who labor in the earth are the chosen people of God.—JEFFERSON.

The farmers are the founders of civilization and prosperity.

—DANIEL WEBSTER.

Keep Campus Beautiful

Hort Department Keeps Busy Doing a Wide Variety of Tasks

By PETE DOROGOKUPETZ

Teaching students is not the only function of the horticulture department at Kansas State. Careful landscape planning and design and constant maintenance of the College grounds by the department has caused the campus to be considered as one of the ten most beautiful in the country.

Upkeep of the campus is made increasingly difficult by some unthoughtful people. Besides the usual jobs of mowing, removing vines, trimming and pruning, there are the ever-present problems of new paths being blazed across lawns and cars parking in the wrong places, hitting trees and ruining shrubbery. There is also a great deal of work involved in hiding the evidence of construction damage to trees and lawns.

"Better removal of weeds has been suggested by the student council, but unfortunately," says Prof. Ray Keen of the horticulture department, "it cannot always be done so easily because the poisons can also kill the shrubbery." There are actually no perfect weed control poisons in existence. Certain chemicals must be used at certain times of the year to be effective. "Spraying poisons on weeds or hormones on grass might ruin the experiments being conducted in the horticulture greenhouses by wind transporting the spray materials or fumes," concluded Professor Keen.

Many of the experiments were ruined this past summer. An unusually heavy hailstorm on July 1 destroyed 14,000 panes of glass in the greenhouses. Uncontrolled temperatures, humidity, falling glass, etc., caused abandonment of many experiments.

The tomato experiments on vitamin C were a complete loss and other plants such as the cacti, succulents and banana stems, cut by falling glass, were ruined by rot. A particularly good collection of begonias was ruined by glass and sun scald. In the conservatory, where palms and other decorations used for commencement exercises are grown, it will take two years to fully recover from the hailstorm damage.

Kansas State's new fieldhouse presents an unusual problem in landscape planning and design because of its huge size. Prof. L. R. Quinlan, landscape designer, will rely mainly on trees to obtain the best effect. The entrances will be especially emphasized by the use of shrubs. On the shady north side of the fieldhouse, broad leaf evergreens will be planted and coniferous evergreens will be used on the east side.

Another landscape problem confronts Professor Quinlan in the new Classroom building and the connecting link for East and West Waters Halls. "They are being built with a modern touch, a departure from the character of the older buildings on the campus," says Professor Quinlan, "and our problem will be to try to keep the new plantings in harmony with the rest of the landscape." Landscape design for the new girls' dorms will be correlated to include the three buildings as one unit.

In the teaching function, the horticulture department has made bench areas available in the greenhouses for students enrolled in horticulture. This will enable a freshman, for example, to start a project and be able to continue it and others up through his senior year. Seeing and studying the complete life cycles of various plants will supplement his lectures.

The average bench area will be about twenty feet but "there are no definite limitations for the student if his ability, initiative and time warrant it," says Prof. John S. Coryell.

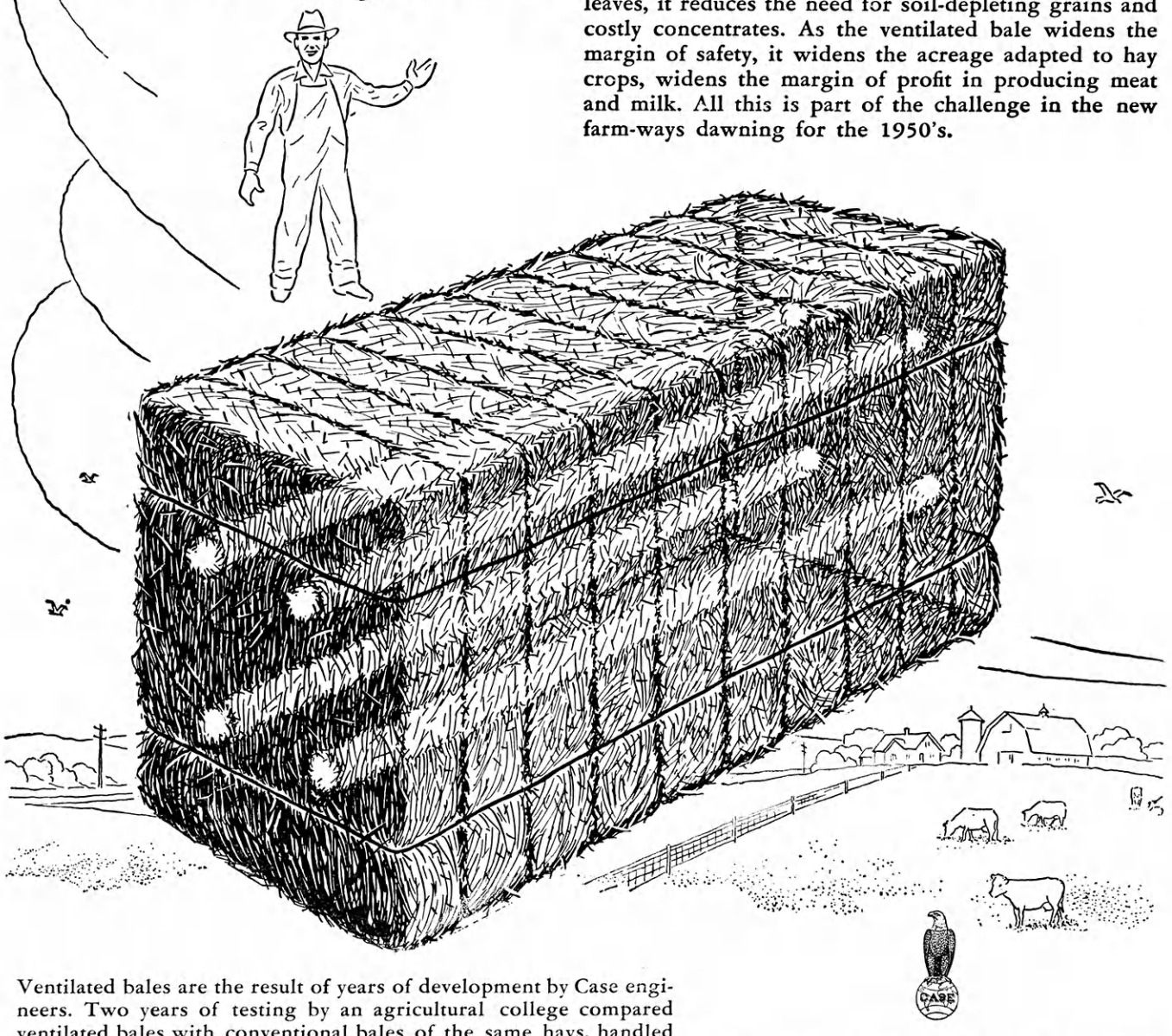
Professor Coryell got the idea for student operated bench areas from two students last year. Working on their own, one student produced blooms on hardy chrysanthemums for Mother's Day last year and the other student had 100 lilies in bloom for Easter. Professor Coryell expects about 35 students to be eventually participating in this new method of self-instruction.

New Challenge to Farming in the 1950's

●Here are four empty holes, full of promise to widen the horizons of grassland farming. They challenge you ...the leaders of tomorrow's agriculture...to find in their four-fold void the vision of soils guarded from erosion, water resources conserved, livestock husbandry given a lift, farming made more prosperous.

With these air tunnels through the dense center of the bale, final curing in storage is faster, more nearly uniform clear through the bale. It widens the margin of safety, reduces the possibility of mold in the bale center, gives greater assurance of bright, sweet hay with full measure of nutrients, vitamins and minerals.

When hay is cut at the peak of protein content and baled before exposure invites leaching, bleaching and loss of leaves, it reduces the need for soil-depleting grains and costly concentrates. As the ventilated bale widens the margin of safety, it widens the acreage adapted to hay crops, widens the margin of profit in producing meat and milk. All this is part of the challenge in the new farm-ways dawning for the 1950's.



Ventilated bales are the result of years of development by Case engineers. Two years of testing by an agricultural college compared ventilated bales with conventional bales of the same hays, handled and stored the same. Professional graders found the hay in ventilated bales of consistently higher average quality. All Case Slicer-Balers are now built with Bale Ventilator. It also is available for installation on machines in use. J. I. Case Co., Racine, Wis.

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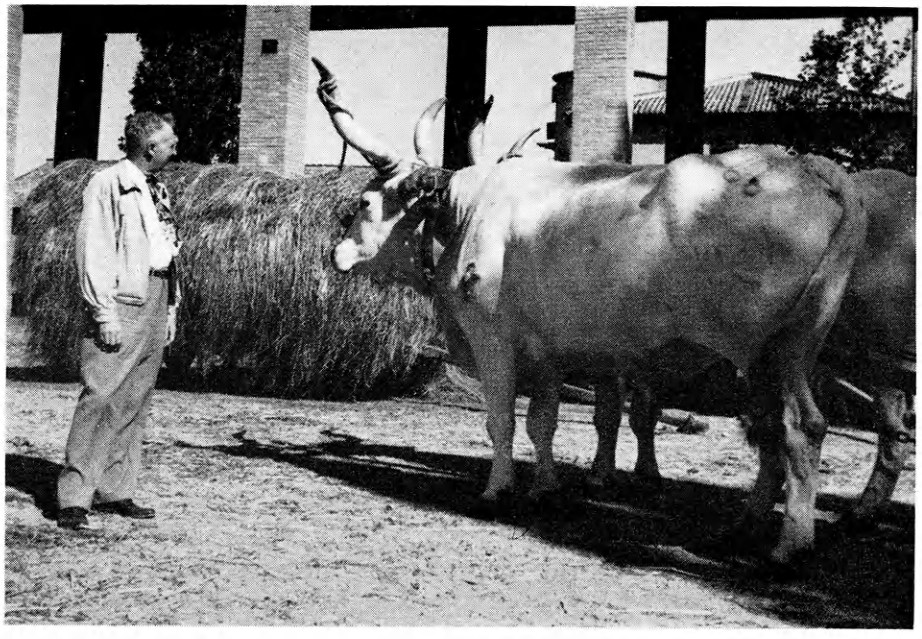

Dean Call looks over a team of work oxen on an Italian farm near Rome. Ralph Germann, K-State grad of 1931 who is now ECA consultant on agriculture to the Italian government, took Dean Call on a tour of farms and snapped this picture.

Dean Call Returns

(Continued from page 5)

too promising, since the petroleum needs of the country have to be imported. The labor supply is extremely plentiful, and the natives seem to be satisfied to continue to work the land the way it has been worked for generations.

The economy of the Philippines is based upon agriculture. Before the war, the country depended upon exportation of four products to support the economy. These were sugar, copra, abaca, and tobacco. Copra is dried coconuts, from which coconut oil is made. Abaca is manila hemp, which is superior to all other ropes for use in and around salt water. During the war, these industries were almost completely destroyed, but now the rebuilding process is forging ahead rapidly, and the Philippines are coming close to getting completely back on their feet, Call said.

On the way home, Dean and Mrs. Call completed their trip by traveling around the world by air, rail, and ship. They went first to Hong Kong. There they saw the seriousness of the foreign situation first hand as they saw Chinese Communist troops encamped on the edge of the reservation.

They next went to Siam, India, Egypt, and then to Europe, where they were delegates from Kansas State college to the 7th International Botanical Congress at Stockholm, Sweden. Throughout the journey, Dean Call visited agricultural colleges, met old friends and Kansas State grads, and enjoyed sightseeing.

Dean and Mrs. Call returned to the U. S. on August 7 aboard the S. S. Stockholm. They returned to Manhattan on September 8 in time to get back for the fall semester at K-State.

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Kugler Authors Book

(Continued from page 4)

izing in teacher training and farm mechanics. Professor Kugler was able to keep up on the latest welding developments while he was in Manhattan, and is proud to note that Manhattan was one of the first in the state to have an electric welder in the vocational ag shop.

The evolution of welding in relation to farming operations has been very rapid. It was a little over ten years ago that the first welders were placed in the vocational ag shops in high schools, and since the termination of World War II, the number of welders found on farms has increased tremendously. At the same time, most of the literature and lessons on welding technique applied mainly to commercial and industrial applications.

So in 1947, the Lincoln Foundation circulated a questionnaire among vocational ag instructors and teacher-trainers. The chief purpose of the questionnaire was to find out if the teachers thought adequate training aids and literature were available for training farmers and farmer students.

In response to this questionnaire, Professor Kugler expressed an opinion that there was no such material on the market and submitted a rough outline as to what he thought a welding textbook for farm training should contain. Some eight months later he received a telephone call from the secretary of the Foundation, and it was during this conversation that a meeting was scheduled so that arrangements could be made for Kugler to write the book.

To begin the operation, a board of editors and associate editors was selected. Kugler prepared an outline and submitted it to each of them for suggestions and approval. In the fall of 1948 he started writing the book, and the first edition came off the presses in May of this year.

Professor Kugler's knowledge of teaching and farm instructional procedures has made him well known in farm agricultural colleges throughout the nation. He spent last summer as a visiting professor on the farm campus of the University of Minnesota, where he taught a class of vocational agriculture teachers in the methods of developing a high school program to meet the needs of a local area.

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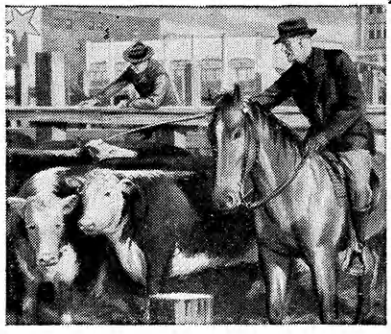

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Lab Tests Soils

(Continued from page 11)

the amount of each to be used.

Another test is the one for salts and alkali to determine if crop yields are being impaired by excessive amounts of these in the soil. Results of this test serve as a basis for suggesting methods of improving the salt or alkali condition if present.

A test to determine the advisability of irrigating is becoming more popular. This shows if salt, alkali, and soil drainage problems will present themselves when the soil is put under irrigation.

The last regular test is for irrigation water quality which determines if water from a source can be safely used for irrigation without causing troublesome accumulations of salts or alkali in the irrigated soil.

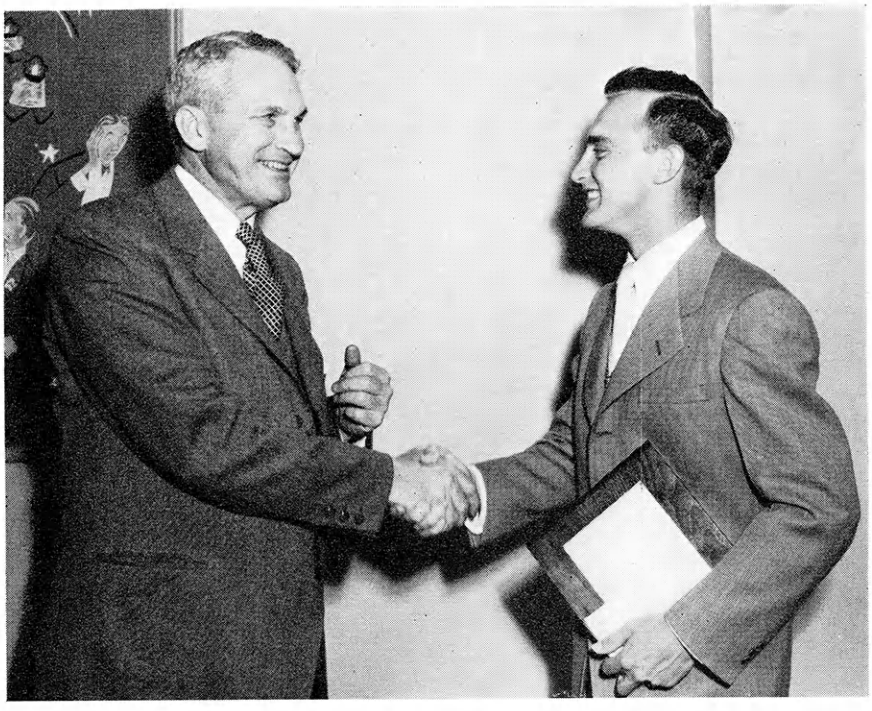
All samples received are first allowed to dry, if wet. Grinding, the next step, is done in the sub-basement of East Waters hall. Farmers send from one to ten samples at a time.

Some samples are received from people living in towns who desire information on lawn and garden soils. Results of the test are mailed 10 to 14 days after samples are received.

Analysis of results of the general fertility tests shows that a wide variety of soil conditions exist in Kansas. All 29 samples tested from Anderson county had 0 to 50 pounds available phosphorus per acre, while 34 of the 39 samples from Barton county had more than a 100 pounds available. Most of the soils tested had over 200 pounds of exchangeable potassium while very few contained 3.1 percent or more organic matter. Tests on 31 Osage county soils showed 21 needed over 4,000 pounds lime per acre, while only 1 of 45 samples from Sedgwick county needed that amount.

Eleven county soil testing laboratories are now in operation over Kansas. The laboratories are operated by county agents and are inspected periodically by a college representative. The purchase of test equipment was financed by local funds and each laboratory runs 300 to 700 general soil fertility tests a year. Counties in which laboratories are located include Brown, Nemaha, Wyandotte, Morris, Dickinson, Mitchell, Butler, Cowley, Bourbon, Crawford and Labette.

Lewis Eggenberger, Berryton, Wins Sears-Roebuck $250 Scholarship



F. B. McConnell, left, president of Sears-Roebuck, congratulates Lewis Eggenberger, K-State junior in Ag Education, for winning the $250 Sears-Roebuck Agricultural Foundation scholarship. This picture was made in Chicago last May when Eggenberger, accompanied by Dean Mullen, made the trip to the Windy City.

Scholarship, personality, leadership, business ability, and thrift were the bases on which Lewis Eggenberger of Berryton won a $250 Sears-Roebuck Agricultural Foundation scholarship last May. Lewis, who was in competition with 46 other state winners, won one of the three awards given. He is a junior in Agricultural Education at Kansas State.

Lewis completed high school with a B average and has made an even better record in college. His grade average for the first three semesters was 2.62. He received freshman Phi Kappa Phi recognition.

Lewis took a leading part in high school activities. He also drove a school bus during his senior year, carrying 25 people over a 35 mile route. He was an active member of the 4-H and the FFA.

In college, Lewis has won the freshman and sophomore Sears awards. He is a member of the ag education club, dairy club, and Collegiate 4-H.

The scholarship was presented to Lewis in Chicago last May. He was accompanied to Chicago by Dean Mullen.

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Southeast Station

(Continued from page 9)

plots. Lloyd Jones who received his M. S. degree from Kansas State in February is station agronomist. Jones will have charge of all crops, including pasture programs for this area. In charge of the dairy section of the station will be James E. Knox who will receive his M. S. degree in dairying at K-State this winter. There are also two civil service employees, Jack Irwin and Kenneth Billingsly, at the station. A wash house has been converted to an office and will serve in that capacity until a new building can be constructed.

Many of the experiments with crops in Southeast Kansas have been carried on individual farms. Some of these have led to improved practices for the area. Agronomist Jones has about 1,000 top crosses and inbred lines of corn. Tame and native grasses are being grown with legumes. The grasses include cool season varieties like brome, red top, timothy, and orchard grass. Each of these grasses will be grown with three different legumes: alfalfa, alsike clover, and Korean lespedeza. Each cool season grass will also be planted in a separate plot with no legume and will be given a treatment of 50 pounds of nitrogen.

The barn has been remodeled and is now ready for dairy experiments. Three groups of 10 cows each will be used for the first dairy experiments at the station. Each group of cows will consist of five Holsteins and five Jerseys. The first group of cows will be fed only feeds grown locally on non-fertilized land. The second group will be fed feeds shipped in from districts where there are no mineral deficiencies. The last group will be fed the same as group one, supplemented with phosphorus.

The information obtained from these studies will provide a basis for feeding other classes of livestock. The research program is designed to furnish information which can be used to strengthen all phases of agriculture in Southeast Kansas.

Agriculture for an honorable and high-minded man, is the best of all occupations or arts by which men procure the means of living.

—XENOPHON.

Enrollment Goes Down

(Continued from page 12)

prepares graduates for a great variety of positions.

This year's agricultural student total is 1,102. This is the second straight year that total numbers have decreased from the all-time high of 1,368 students in the fall of 1948. There are still nearly twice as many students in the Ag school when compared to the pre-war level of 616 students in 1941. Enrollment in the last 10 years has been very unstable for the all-time low of 58 agricultural students was in 1944 and there were only 137 in school in 1945. According to Dean Mullen there is expected to be a further decrease in enrollment in the next two or three years, however year to year fluctuations are expected to be more even.

A doctor was visiting a mental institution. Walking around the grounds, he noticed an inmate perched on a branch of a tree.

"Who are you?" the doctor asked.

"Tweet, tweet," the inmate replied. "One beautiful spring evening my father and mother went for a lark, and I'm the lark—tweet, tweet."

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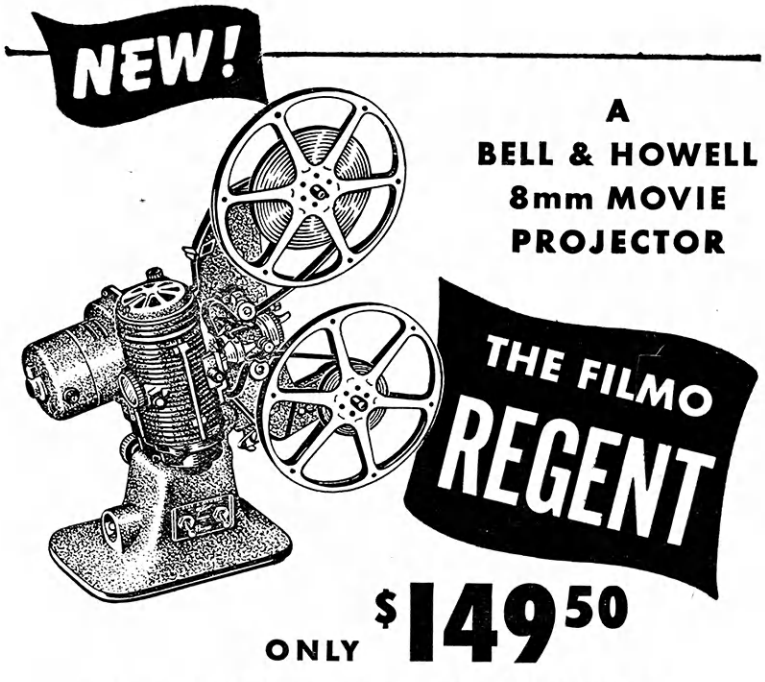
Scholarship Awards Given To Three Milling Students

By Dick Fleming

"It is not the scholarship but what the scholarship represents that is important," R. I. Throckmorton, dean of the School of Agriculture, said in a speech at the annual Alpha Mu smoker at the Community House September 28. "Winning a scholarship means hard work, budgeting of one's time, and daily class attendance," Dean Throckmorton stated.

Several scholarship awards were made at the meeting. Evert Benes was awarded a medal by Alpha Mu for having the highest freshman grade average in the milling industry department. The International Institute of Milling Technology scholarship was awarded to Ronald Watson, and Lewis Atkinson won the Fulton Bag company scholarship.

The frost is God's plow which he drives through every inch of ground in the world, opening each clod, and pulverizing the whole.—Fuller.



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Dean Mullen Says

(Continued from page 9)

definitely the potential demand for such a short course.

A feature of the Summer School catalogue for 1951 will be that the day and hour classes to be taught will show in the catalogue. This will enable a prospective summer school student to determine what combination of courses he can take and be assured of being able to schedule the courses before he pulls up stakes for the summer and heads for the KSC campus.

This year there will be enrolled in advanced ROTC a total of 34,500 in universities and colleges across the country. This is an increase of some 9,000 over a year ago. Apparently the Department of Defense has a high regard for the leadership qualities of ROTC officers.

The count of veterans in Freshman Assembly has dropped this fall to only seven. This compares with approximately one-fourth freshman veterans a year ago.

The number of automobiles on the campus does not seem to decline with the disappearance of veterans from the college roster. One-third of the freshmen in agriculture are driving automobiles. And they aren't jalopies, either. These boys need to have good automobiles so that they can drive home over week ends to look after the planting of those half-sections of wheat or that feed lot of good beef cattle.

A little girl on the bus was twisting and squirming in her seat. Finally the mother led the child up front and whispered to the driver. The driver stopped the bus near some shrubbery. Mother and daughter quickly disappeared from sight. A few minutes later the child ran back ahead of mamma, boarded the bus, and in a loud voice announced, "Mamma did too!"

"I see you are not a gentleman," hissed the woman on the street corner as the wind swept her skirts over head.

"No," he smiled, "and I see you aren't either."

Danforth Scholarship

(Continued from page 6)

of the Gardner Advertising Agency where we watched a request for an advertisement grow from an idea to a full page spread in a well read magazine.

One morning we visited the floor of the St. Louis Merchants' Exchange where the methods of cash and future trading were studied.

All of our time in St. Louis was not spent in business. We went on sight seeing tours of the city to such historic spots as the old court house where the Dred Scott decision was made.

Enroute to the second half of our Fellowship at Camp Miniwanca we Danforth Fellows stopped in Chicago and spent several hours sight seeing.

Camp Miniwanca is located on the eastern shore of Lake Michigan. One of the more memorable parts of the camp was the early morning dip in the "icy" waters of the lake.

One of the first men we met after our arrival was William H. Danforth, the one responsible for the Fellowship. His motto of "my own self at my very best, all the time," is constantly his goal. When he says "I dare you to think tall, smile tall, stand tall, and live tall," you know he means it.

Instructors such as Dr. T. Z. Koo of China, Lift week speaker at K-State last year, and Dr. Hutchins, former president of Berea College, taught classes in philosophy, ethics, and leadership. In Mr. Danforth's own class "Life's Essentials," we had the opportunity to hear some of America's successful business men speak.

Similar to the four-point program back on the Purina Research Farm, the theme of the camp was based on four-fold development—religious, social, physical, and mental. In addition to the fine lectures the camp had a complete sports program. After playing softball, volleyball, and tennis, and swimming and sailing in the afternoon, the evenings found us climbing to the top of an enormous sand dune for a vesper service as the sun slipped out of sight over Lake Michigan.

The Danforth Fellowship was only a short month, but that month afforded us the opportunity of enjoying the finest of fellowship with young men from colleges all over the United States and several foreign countries.

Juniors and freshmen of Kansas State College, in keeping with Mr. Danforth's idea, I dare you to be the 1951 Danforth Fellowship winners.

Dr. J. T. Willard

(Continued from page 16)

responsibility and once he had accepted responsibility he gave it his full mental and physical energy until he had carried the responsibility to its culmination. . . .

"As a personal contribution I would make these statements: He was one who gave his best and expected the best from others. He was an exacting and hard, but brilliant teacher. He could be very hard with a student who he thought was lazy, a slacker, or not giving his best; but he could be very generous with praise and assistance to the student who he thought was doing his best. He was loyal to his friends and charitable to his critics. . . .

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The Last Word

Another Year . . . Another Staff . . . Same Old Gaff!

Another year has rolled around and this is another first issue put out by a relatively "green" staff. We are not making any major changes in the magazine as we think last year's editor did a fine job.

However, we do want to explain a couple of new features we have added. We think you will like the column which will be done every issue by Assistant Dean Mullen. When talking to him about doing it, we told him he could use about anything he thought interesting. As he probably has contact with more ag students than anyone else, he will undoubtedly have some choice bits to offer.

We also thought students would like to hear how graduates who have gone out into the field are getting along. Therefore we will try to have one or two letters an issue from grads working at different jobs.

When we took over the job of putting out this paper, we vowed that we would always get the magazine out on time. Well, it just doesn't happen that easy. There is always something coming up somewhere that we haven't counted on. The college press, which does our printing, has already lost two key men to the armed forces. However, we will still do our best, so please bear with us if the magazine does appear late.

We would also appreciate suggestions about the magazine from anyone who receives it, whether they be faculty, students, county agents, vocational ag teachers, or grads. We publish this magazine to inform and to entertain you. So you see, it is only through your suggestions and comments we will be able to see if we are accomplishing our purpose.

May this be a good year for the Ag students at Kansas State. D. H.

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Nitrogen Increases Yields

(Continued from page 10)

on the W. S. Morgan farm at Zeandale, Kansas, the unfertilized portions of a field produced less than 50 pounds of seed per acre. On plots where nitrogen was applied at the 100 pound rate, the yield was greater than 500 pounds an acre.

There has been no great difference between spring and fall applications. However, extremely late spring applications have failed to increase seed production. Fall treatments have increased the yield of fall pasturage but have given spring growth of a slightly lower protein content than have the early spring applications.

In 1946 there were less than 200,000 acres of bromegrass in Kansas. By 1949 there were 321,000 acres producing 1,750,000 pounds of seed; "yet bromegrass seed was scarcer than I have ever seen it," Professor Anderson said.

The Soil Conservation Service would like to see 500,000 acres in grass waterways to permit an adequate terracing program. Bromegrass can play an important part in these grass rehabilitation programs, and high seed yields are to be desired.

"We are interested in finding if yields can be maintained at the present level indefinitely," said Professor Anderson, "and if and when a phosphorus deficiency will develop. The present experiments will be continued as long as it is considered necessary."

Unusual Occupations

(Continued from page 8)

of Agriculture, one is assistant director of information in the U. S. Department of Agriculture, four are economists with the Bureau of Reclamation, five are with the Division of Farm Research of the Farm Credit Association, and another has attained the rank of inspector general in the army.

Some others are: biological chemist, manager of Farm Bureau Insurance Co., pasteurization plant manager, manufacturer of sprinkler and irrigation equipment, furniture and appliance dealer, superintendent of schools, sale barn operator, grain dealer, wholesale lumber dealer, professor of parasitology, county judge, farm machinery dealer, and several are feed manufacturers.