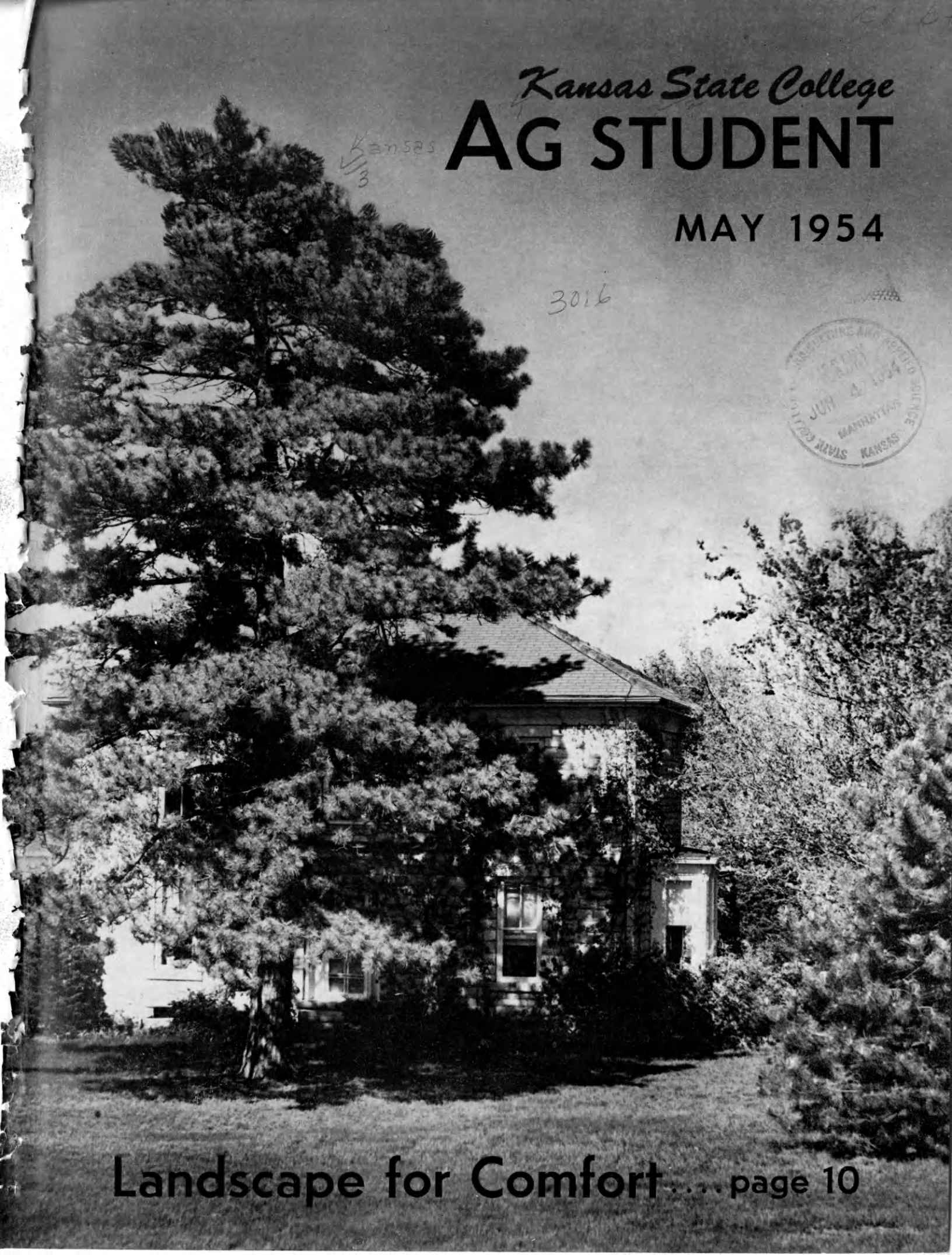

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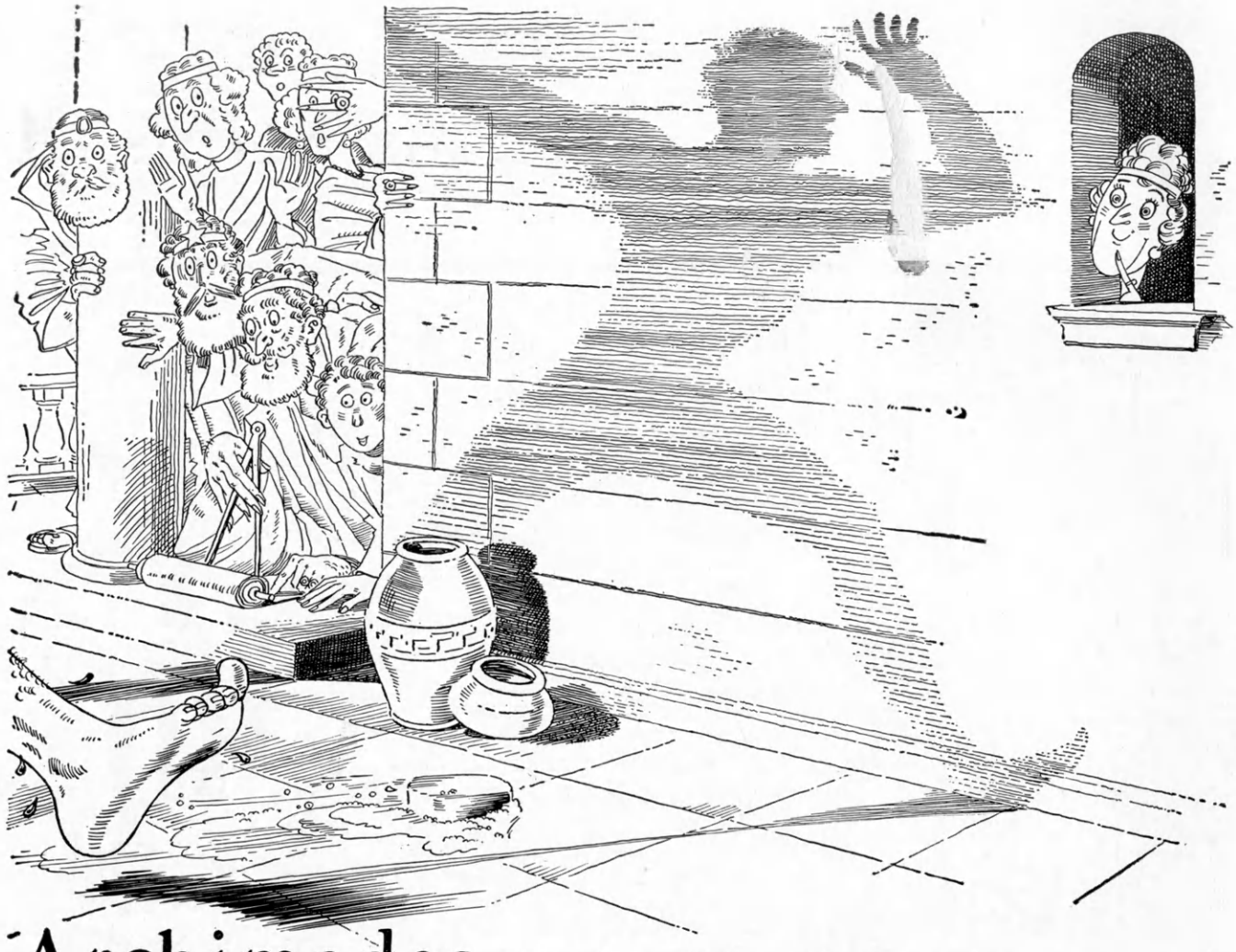
MAY 1954

Landscape for Comfort . . . page 10



Archimedes Had a Word for It . . .

REMEMBER Archimedes?

He was a brilliant scientist and mathematician back in the third century B.C. But for all his contributions to the study of physics and mechanics and for all his inventions and discoveries, Archimedes probably is best remembered for a trip he made—one that ranks in fame with those of Lady Godiva, John Gilpin, and Paul Revere.

That was the day Archimedes, while bathing, was fishing for the soap and came up with his famous theory of liquid displacement, which, in so many words, holds that a body immersed in a liquid gives up, or yields, as much of its own weight as the weight of the displaced liquid. It's said that he became so excited at his discovery that he forsook the tub and, sans so much as a terrycloth towel, raced through the streets, shouting "Eureka! Eureka!"

Now, even in our own radio-active age, Archimedes would be considered quite a "brain," and as such, probably would be the first to point out that his displacement theory applies to each of us in everyday life—that *we get out of life just what we put into it*, no more and no less. He would probably point out the holes in the tempting "the-world-owes-me-a-living" theory, and remind us that we are each charged with certain obligations to God, country and neighbor, and our success depends upon the weight we place on them or how well we fulfill those obligations. He would say that such obligations are all part of the *real cost of living*, and we only get what we pay for.

He might add, too, that when we've accepted his theory and put it in practice, then with him we can shout to the world, "Eureka! Eureka!"

Which is to say, translated from the Greek: "By gum, I've got it!"

JOHN DEERE

JOHN DEERE QUALITY FARM EQUIPMENT

MOLINE, ILLINOIS

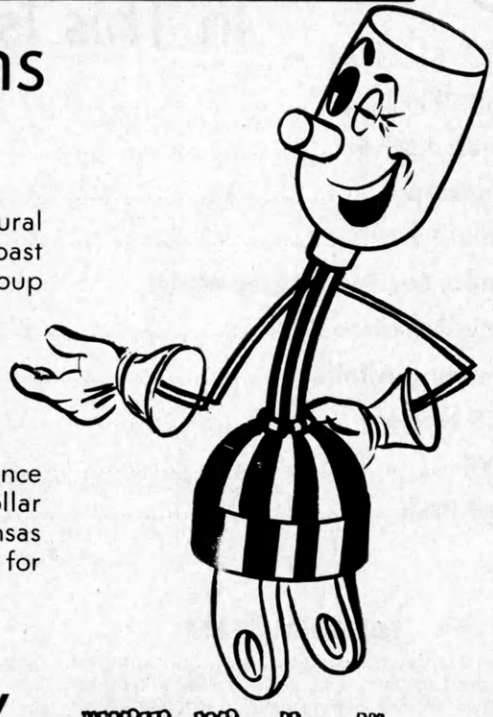
Quality Farm Equipment Since 1837

9 Ou' of 10 Kansas Farms
HAV E ELECTRIC SERVICE

—But How Many Farms ARE ELECTRIFIED?

Stretching across the Kansas plains are 52,032 miles of rural electric lines serving 93,594 consumers—all built within the past 14 years by 36 Kansas rural electric cooperatives. As a group these farmer-owned systems comprise the third largest distributors of electric energy in the state.

Although the expansion of electricity has made our farms well lighted and comfortable, yet only a very small percentage utilize this power to increase production, reduce labor, improve quality, save waste. Hence the major importance of rural electric power is yet to develop. A half billion-dollar market for appliances and equipment has been created in Kansas alone! Rise of Kansas rural power creates a vast new field for research and education.



"Willie Wiredhand"

K-State Research Aided by Rural Electric Cooperatives

Through the Committee on Relation of Electricity to Agriculture (CREA) rural electric cooperatives and private power companies support research at Kansas State so that more efficient and effective use of electricity on Kansas farms may come about.

Progress in drying of hay and grains, development of the heat pump system of cooling and warming farm homes, and many other research projects testify to the value of Kansas State research in helping farmers to put power to practical use in their everyday farm operations.

CREA Research

Rural electric cooperatives support CREA research as an important aid to the agricultural economy of Kansas. Already important contributions in the drying of grains and grass are returning dividends from this investment in research.

Training 4-H Leaders

So many farm youth are interested in power on the farm that 4-H clubwork is needing additional leaders for rural electrification projects. Cooperatives are supporting efforts to train these leaders and help the youth of Kansas to a better understanding of electricity.

Helping FFA Programs

New programs are in the making to assist Future Farmers of America to gain a better understanding of practical electricity. Clinics for vocational agriculture teachers are also being developed—all part of a program to keep Kansas among the leading agricultural states.

KEC

Owned by Those We Serve

Kansas Electric Cooperatives

Incorporated 1941

ROOM 406, CRAWFORD BUILDING **TOPEKA, KANSAS**

State Association of Kansas incorporated, tax and interest paying electric cooperatives that came into existence because no one else would furnish farmers electric service.

Kansas State College
AG STUDENT

Vol. XXX May, 1954 No. 6

In This Issue

Published by the Agricultural Association of Kansas State College of Agriculture and Applied Science, Manhattan, Kansas, in October, December, February, March, April, and May. Subscription rates $1.50 a year; 2 years, $2; single copy by mail 30c, at office 20c.

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ON THE COVER

SIMPLICITY and dignity are the keynotes of the landscaping plan for this fine old farm home. A wide expanse of lawn, native trees, and a few shrubs surround the native limestone house, shaded by a towering pine.

The home, as befits an established resident of the community, shows a distinct character and personality. It may be the home is only reflecting the gracious traits of its occupants, Mr. and Mrs. W. C. Griffing, RFD 4, Manhattan.

"We have worked many years to get the results we wanted," said Mr. Griffing. A busy farm couple haven't time for unnecessary frills in a landscaping plan. Plants must be hardy and of a lasting variety. Plenty of lawn is necessary to fit a farm home into its spacious surroundings, but not all farm homes are as fortunate as this one in having such a magnificent pine tree to form the basis for a landscaping design.

Thanks, Aggies; It's a Great School

When it comes time to receive diplomas this spring it will be a pleasure for me to get mine from the School of Agriculture.

I wish to thank all of the fellow Aggies who have helped this girl Aggie feel at home in the Ag School. The Aggies are a very friendly, courteous bunch of students.

The girl Ag student faces a few problems that the male Aggies don't have to worry about. Enrolling, of course, for anyone is quite a headache but after having to assure every semester the ones pulling class cards that I really do want "that Ag course" it gets to be quite a chore. At the beginning of the semester I have walked into the first meeting of a class of fifty Aggies and the instructor begins by asking if I'm in the right class. "You know this class is for Ag students," he says.

For four years at almost every seminar I have had to answer the question, "Are you an Aggie?" before I would be given an attendance slip. Speaking of seminars, I always sort of dread them. It isn't because of the speakers but the jokes they tell. Now, don't get me wrong, I usually enjoy the jokes but I don't especially appreciate the way many heads turn to see how the girls are reacting.

When a boy enrolls in an Ag curriculum it's OK, but when a girl enrolls likewise, many wonder why. I am in the Ag School because I wanted a degree in Horticulture. Before I came to K-State as a freshman I didn't fully realize that Hort was in the Ag School. After finding that it was I became dubious of taking such a curriculum. But now I'm glad that I am in the School of Ag because it has given me the opportunity to get acquainted with truly one of the greatest schools at Kansas State.

—Diane Blackburn Lanigan

PHOTO CREDIT—Bob Ecklund, cover; Floyd Hanna, pages 11, 14, 15; John Sayler, page 12; Agronomy Department, page 16; Dan Henley, page 16; Dick Steffens, pages 18, 20, 22, 24.

THE NEW IDEA MOUNTED CORN PICKER

Summa Cum Laude-*Class* of '54

NEW IDEA FARM EQUIPMENT COMPANY DIVISION AVCO DISTRIBUTING CORPORATION

MAY 1954

Chit Chat

By Clyde W. Mullen, Assistant Dean

COULD IT BE that the requirement of two years of military service will have an effect in subsiding the occasional suggestion of adding an extra year to some of our Kansas State College curriculums?

The minimum period of time between high school graduation and entering upon professional employment or the business of farming or ranching, is now six years, for those who go to college and take their two-year tour in military service.

For some of our curriculums, it already requires eight years, including military service, between high school and professional employment.

To a degree, there is a depressing and discouraging effect upon prospective students who are considering college work and who reflect upon the prospect of six years or more between high school and return to the farm or employment. It would be more discouraging and possibly even somewhat of a deterrent to a college education if there might be added an extra year of college work for graduation, plus two years of military service, making it seven years between freshman enrollment and the green light for personal future planning.

No doubt more complete technical training could be provided in five years, and a more liberal education could be packed into a five-year curriculum, but it might turn out in the years ahead that a lesser number of lads would choose to avail themselves of college training at Kansas State instead of the ever-increasing number we now have reason to anticipate. Is that good?

Study for the Master's degree, following the B.S. and military service, seems to be the good answer for those who feel the need of five years of college education.

Dean Mullen

It is good to observe that every year a greater percent of our students are pressing on, not only for the Master of Science, but also for the Doctor of Philosophy. For the good student who will likely remain in research and education, there are many opportunities to accept fellowships and assistantships and at the same time work toward the Doctor's degree. It is a prudent young man who makes the decision to acquire an advanced education before his personal and family responsibilities become too restraining.

a future with PROMISE for Farm Youth...

Pause a moment as you pass those fields of golden grain and new-mown hay, and let your footsteps wander toward that great oak tree. A craggy old oak, with snaggled, leafless face, it sits silent and proud upon the crest of green-clad hills. And as you pass, the old oak will seem to smile and say: "I, too, was young like you—and I have seen changes come in many things. Many old trees are gone. So are some of the birds that came and nested and sang among my boughs. But in their places have come other birds whose wings are brighter, whose songs more cheery. That is the way you, whose heart and hands are to become proud partners of the soil, will find it. Close to the soil your forefathers loved, you will go hand in hand with industry and science in the search for new tools and better ways to fulfill a promise—the promise of a richer, finer, better life for you, the farmer of tomorrow."

SERVING FARMERS SINCE 1842 . . .

CASE

No blistered hands from scythe or cradle, no hand-bound bundles to haul and flail. From snow-clad mountains, across wide western plains to rolling prairies—wherever grain is grown—there's promise. It's promise for you of an easier, faster, better way to harvest extra bushels of golden grain. A Case Self-Propelled Combine, with power steering, helps to make that promise come true. Its hydraulic speed control lets you slow down, speed up, without stopping or shifting gears. From hydraulic header to Air-Lift Cleaning, it's built better to last longer, in the Case tradition of more than one hundred years. For you, it's just a taste of the promise of a future in farming. J. I. Case Co., Racine, Wis.

Treated Straw *Probably* Safe Stock Feed

By ELAINE OLSON

THE CHEMICAL, commonly called a defolient, used to cure alfalfa seed crops so higher yields may be harvested does not seem to harm livestock that eat the straw, says Prof. Ed Smith of the Animal Husbandry Department.

Cooperative experiments with the Dow Chemical Company of Midland, Michigan, were conducted by Smith, Dr. Draytford Richardson and Dr. Rufus Cox of the Animal Husbandry Department and Prof. L. M. Roderick, Pathology Department, to find if defolient treated hay had any toxic effect on cattle.

Ten Hereford heifer calves from the Brite Ranch of Marfa, Texas, were used for the experiments. Divided into two lots of five head each, the calves received identical rations of soybean oil pellets, ground shelled corn, mineral and salt. One lot was also fed alfalfa straw sprayed with the curing agent; the other, untreated alfalfa hay.

The alfalfa hay used in the feeding tests was obtained from two farms near Manhattan. The treated straw was stemmy but had a good, green color. The untreated hay was not as green but had more leaves. Smith said it was impossible at the time to find more comparable alfalfa for the tests.

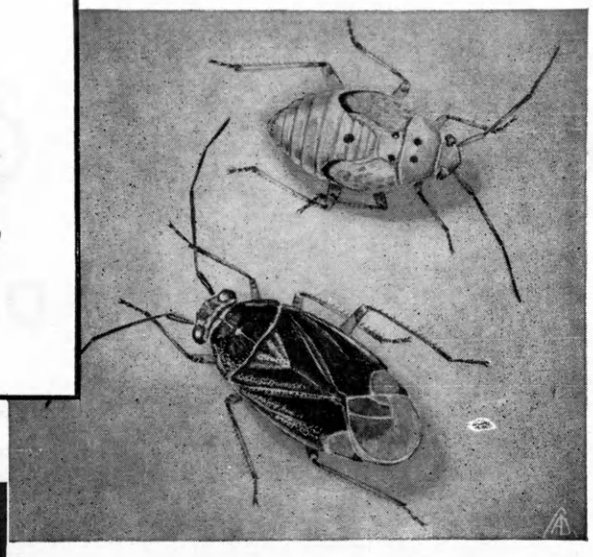
At the end of a 108 day feeding period the animals fed the chemically cured straw were slaughtered to check the effect of the chemical on various body organs, and to test for its presence in the animals' bodies. Various organs were shipped to the Dow Company for analysis. Their report showed no chemical from the alfalfa to be found in the animals.

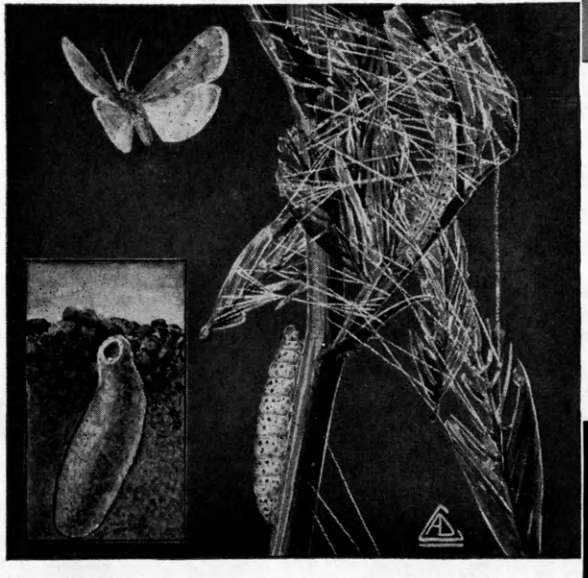
Since the alfalfa fed the two lots was from two sources and might have differed in nutrient content, nothing definite can be reported on rate of gain except that in this case, the calves fed defolient treated straw had gained slightly more at the end of the feeding period than did those fed sun-cured alfalfa hay, Professor Smith said.

This was just a pilot test which had to be discontinued because of lack of funds and should be conducted several years for the complete answer, Smith said. If the succeeding tests would turn out like the first, farmers who are afraid to feed the straw since it might be poisonous would have an additional source of feed.

insects
YOU SHOULD KNOW

How To Identify
These Crop Destroyers





TARNISHED PLANT BUG

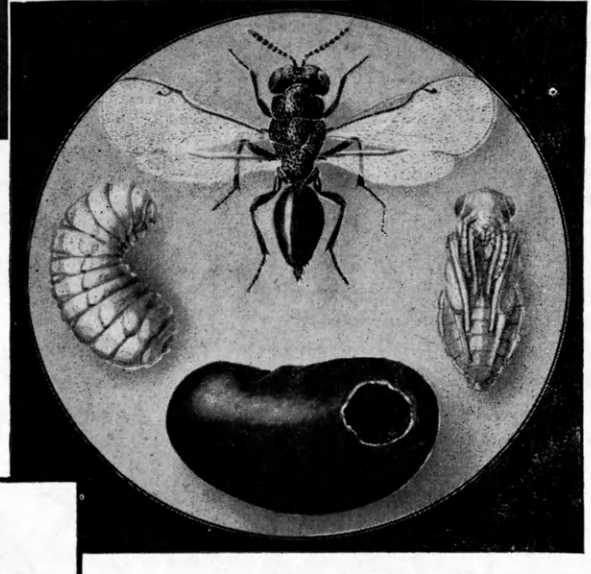
Lygus oblineatus (Say)

A destroyer of seed crops, these insects suck the sap of plants, retarding plant growth. The bug's eggs, laid in the tissues of plants, hatch into small, green, wingless insects. They develop rapidly and take on the mottled brown, black and red appearance of the winged adult. Adults are about ¼ inch in length.

WEBWORMS

Loxostege similalis (Guen.)
and Loxostege commixtalis (Wlkr.)

Caterpillars of these moths web together the tops of plants, leaving only skeletons of leaves and stems. Masses of 40 to 50 overlapping eggs are deposited on the underside of leaves. The eggs hatch within four or five days into caterpillars which feed on the leaf. The insects overwinter as caterpillars, or pupae.



toxaphene
DUSTS • SPRAYS

For full-color booklets showing these and other insects write to Hercules

CLOVER SEED CHALCID

Bruchophagus gibbus (Boh.)

This small, black, wasplike insect may infest as much as 85 per cent of an entire alfalfa crop, often causing losses of 50 pounds or more of seed per acre. The female lays a single egg in newly forming seed. The larva which hatches eats the seed contents within a few days, then pupates within the seed pod. Six generations may appear per season.

HERCULES POWDER COMPANY INCORPORATED Naval Stores Dept., 911 King Street, Wilmington 99, Delaware

NX54-5

Landscape to Control Climate on Farm Grounds

By
DIANE LANIGAN

LISTEN, FARMERS, you can landscape your farm home so the living area will be cooler during the summer and warmer through the winter.

Climate can be controlled to a certain extent by proper landscaping. The K-State Landscape Design curriculum, headed by L. R. Quinlan, won first place last summer in a national contest by constructing a model showing climate control by landscaping.

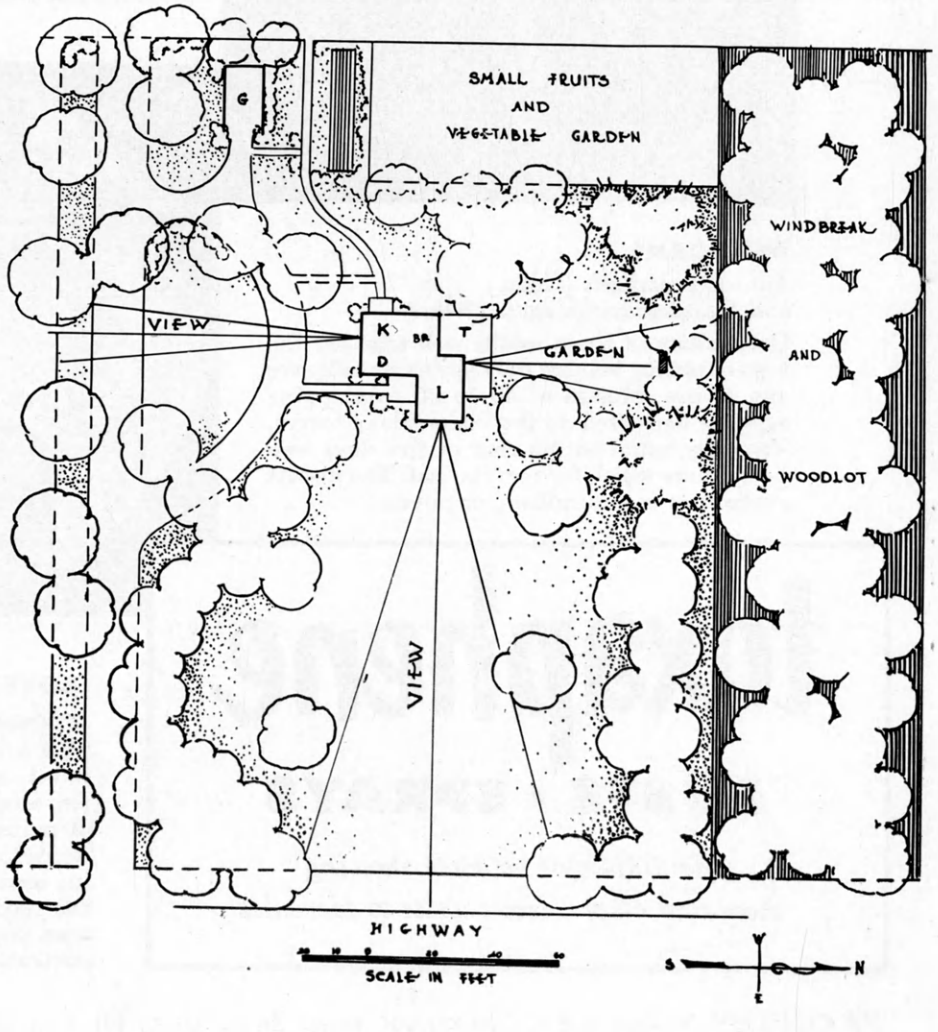
The model was designed for Kansas and the Midwest and contains several features that can be used on your farm home. When landscaping, remember this basic factor: The prevailing winter winds are from the northwest in Kansas and the prevailing summer winds are from the southwest.

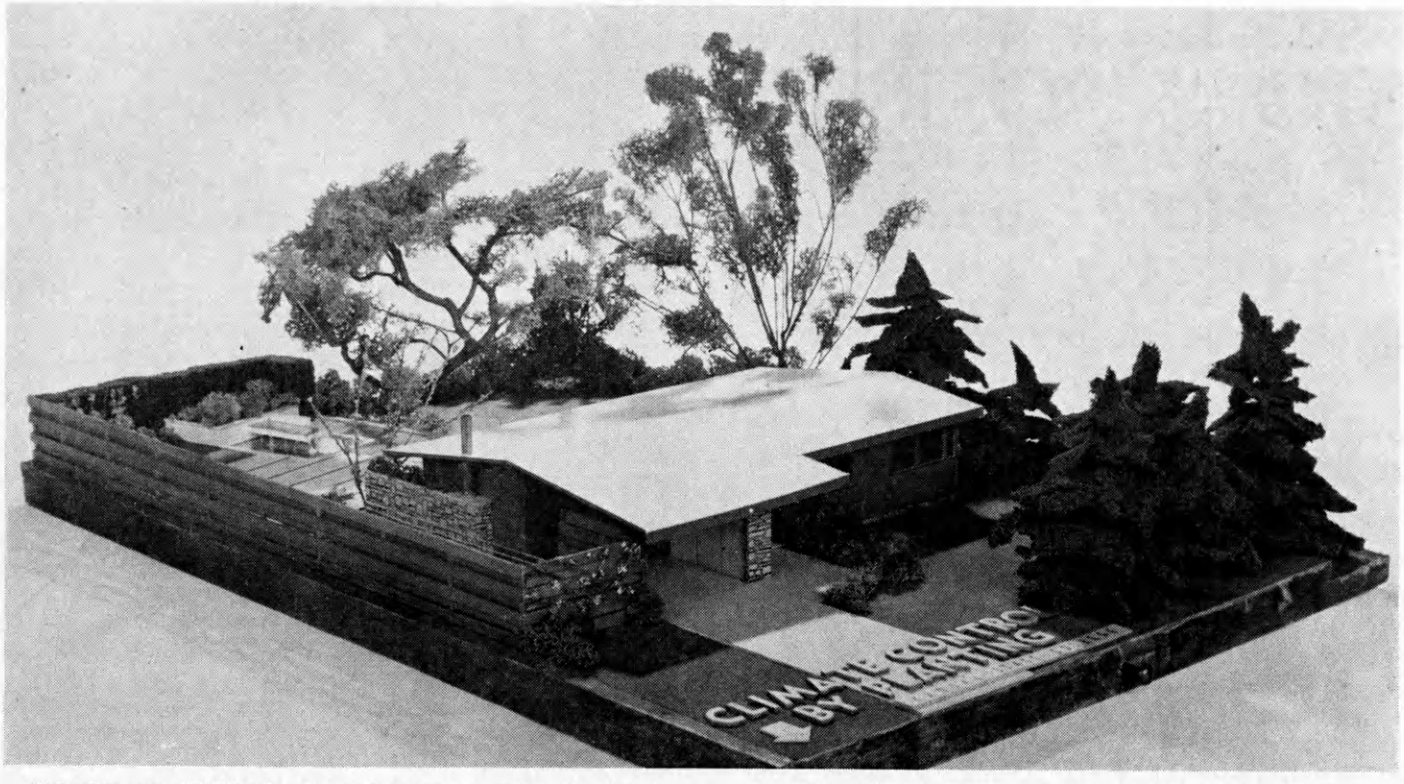
To Make Home Cooler

First, consider how you can landscape to make your home cooler during the summer. Walks and drives are hard surfaced areas which tend to reflect and hold heat. Even after the sun sets these areas remain warm and make living conditions less enjoyable. Locate trees so they will shade all hard surfaced areas as much as possible.

Hot summer temperatures around the farm home can be reduced by a well-established lawn. Grass will not hold the heat or radiate it back to the

A FARMSTEAD PLANNED for beauty as well as utility. The windbreak and woodlot along the north protect the home from cold winter winds and provide shelter for songbirds. Large lawns look nice and tend to cool hot summer winds before they reach the house.





THE K-STATE MODEL showing climate control by planting in the Midwest was made by landscape students under the supervision of L. R. Quinlan, in charge of Landscape Design. The model won first in the national contest with eight schools.

K-STATE MODEL WINS NATIONAL CONTEST

house as does bare ground or paved area. Grass absorbs the sun's rays and kills glare. And, its cool, green color is restful to the eyes.

A well watered lawn can act as a water evaporation cooler. When there is ample moisture in the soil, some of it will be released from the lawn by evaporation, causing decided drops in temperature by cooling the warm air that moves across the lawn.

A certain amount of noise and dust will be absorbed by a thick carpet of grass if it is kept at a height of 1½ to 2 inches.

Plant Many Trees

Plant deciduous trees in the southwest corner of the yard. Trees that cast shade on the house are very beneficial in making a home cool in summer. Needs of air conditioning will be less or may be eliminated. Yet, in winter when the leaves are gone the sun's rays will be permitted to warm the home and yard.

So, forget the summer for awhile and look at other ways a home can be made warmer in the winter by proper landscaping. A heavy planting of evergreen trees located at the northwest corner of the yard will protect the house from cold winter winds. It is impossible to stop a winter wind completely, but the branches and twigs slow its speed and cause it to drop its snow load by acting as a natural snow fence.

Reduce Fuel Bill

With a lower wind velocity around the house, the fuel bill will reduce, yet you will still have a warm, comfortable home. The evergreens will prevent snow from piling up in the driveway and on sidewalks, too.

Use groups of plantings to form enclosures around the house and yard rather than using walls or solid fences, then the cold air can escape more easily and spring frosts will do less damage.

The contest won by the model made in Quinlan's Landscape Design II class was sponsored by the American Association of Nurserymen and was open to all schools of landscape and architecture in the United States. Eight schools entered.

To enter the contest, a plan had to be made of a house and the surrounding landscaped area showing how good planting could control climate. Then, a model of the house and landscaping was made. The model, along with a written explanation of how the design utilized climate control in the plantings, was sent to New York for the contest. Two members of the class that designed the model last semester are in school this spring. They are Carroll Morgenson and Verne Schmidt, both seniors in Landscape Design.

Quinlan on TV

Professor Quinlan spoke on climate control in landscaping at the National Shade Tree Conference in Chicago this year and used the model to illustrate his talk. He talked on the same subject at the Western Nurserymen's Association meeting in Kansas City and presented a thirteen minute telecast over an Omaha station to explain the model.

STONE POSTS

Mark Pioneer's Efforts On Treeless Plains

By
JOHN SAYLER

IN THE UNMEASURABLE past, sedimentary rock formed on the bottom of many seas that repeatedly covered Kansas. According to Joseph R. Chelikowsky, professor of geology and geography at K-State, a certain layer of the rock, geologically called Greenhorn limestone, formed approximately 100 million years ago.

Although inferior to the limestone found near Manhattan and used on the K-State campus, a purpose was found for the top layer of Greenhorn by the settlers in the Pawnee Valley in Western Kansas. Lacking wood, houses and barns were constructed from this layer of stone, named Pfiefer limestone, and the layers of limestone, often found in streaks studding from hillsides, were broken into strips and used for fence posts.

These stone fence posts, monuments to the ingenuity of early settlers on the treeless plains, still stand as marks of the pioneers' first efforts to fence in the vast prairies.

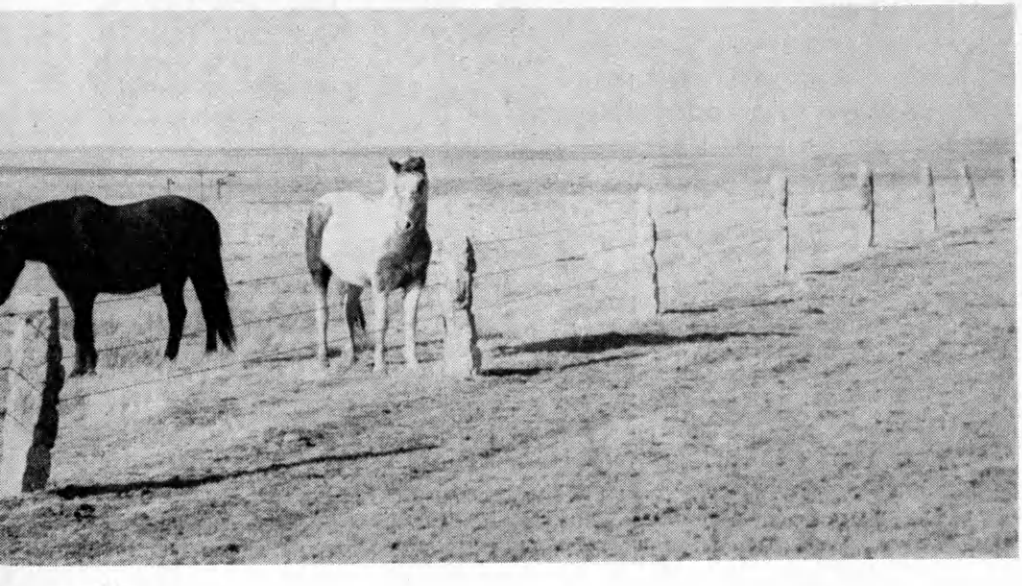
Wood is fast replacing many of the old stone posts, but says T. G. Frusher, Hodgeman County pioneer, "A stone post is twice as good as a wooden one. Getting it to the fence line is what separates the men from the boys and the stone from the wood.

"When we came to Kansas in 1878, there were miles of unbroken prairies. No roads were running east and west between here and Dodge City and the only big trail I can remember was the one between Fort Dodge and Fort Hays. We couldn't see a tree for miles and we needed posts. Barbed wire needed support. By 1880 we had begun to use stone to fence in pastures."

Mr. Frusher said his first memory of the greenish-yellow stone was when his older brothers started building a cattle corral with it. It was then he got his start in the art of stone work. Since, Mr. Frusher and his brothers have put in approximately 3,000 stone posts to support the 30 or 40 miles of fence on his cattle ranch. He has also used stone to construct most of the buildings on his place.

PASTIME FOR A RETIRED rancher, chiseling archways out of native stone. T. G. Frusher says it is easy to do if you know how.

STONE POSTS like these were used all over the Midwest before wooden ones were available, and they outlasted many wood posts. In some areas they still add natural beauty to the criss-cross prairies and tourists have thought them freaks of nature.



Removes Stone from Soil

To get the stone, Mr. Frusher first had to remove a layer of dirt. Then he located the seams (straight, parallel cracks running through the rock) in the 8 to 14 inch stone layer. Holes were drilled every few inches in a straight line parallel to the seams and about 12 inches from them. Wedges driven into the holes cracked away 12 inch strips which were broken into 6 foot posts, each weighing from 300 to 500 pounds. Then they were loaded on a wagon and hauled to the fence line, set upright and the wire tied to them. Some tourists have thought these fence lines to be freaks of nature, Frusher said.

In retirement, Mr. Frusher keeps his stone working skill in shape by making stone archways and by keeping his fences in repair. He is also completing the stone corral his brother started in 1880.

Using brains instead of brawn, the 76 year old man has made younger men look foolish when it came to handling the huge pieces of rock.

Parent-Son Farm Agreement...

What every dad and son should remember when farm operation is to be shared

By GARY NEILAN

"WELL, SON, now that you're 16, Ma and I feel you're old enough to have something of your own—so we're giving you old Bessie's heifer calf." This statement could have been made on nearly any American farm some twenty-five years ago. When Grandpop gave away Bessie's prize offspring, he thought he had established his son in farming. Maybe old Grandpop was on the right track, he was just "riding the wrong train." The calf was Junior's to feed and care for, but when it went to market, it somehow changed possession and the money was put in the family savings stuffed under the mattress.

Today such practices are becoming extinct due to establishment of systematic father-son partnerships. These partnerships provide the farm boy with an enterprise for which he can receive some compensation for his efforts. This type of program is one of the important factors in the development of our modern agricultural industry.

Can't Buy Son a Farm

At the present time, the average American farmer can't afford to go out and purchase a farm for his son when he graduates from high school. Likewise the boy does not have the money and equipment needed to establish himself in farming. This gives him a choice of staying on the farm, or going to college to acquire more technical knowledge. If he does decide to remain on the farm, the chances are that through father-son partnerships he has already become partly established in the business. Through participation in FFA and similar organizations, he has had the opportunity to map out a plan with his Dad in which they share their investments.

Just how do these partnership agreements function, and what must they include to be successful? The main purpose of a partnership is to allow the son to obtain some managerial experience and own one or more productive enterprises of his own before he buys a farm of his own, or takes complete control of the home farm. Thus, the young man can profit from his father's advice; he can get started in farming at a much younger age; he retains his interest in farming; and he is in a position to take over the farm at a later date without seriously affecting its operation.

Stock-Shares for Livestock

One of the most popular types of parent-son agreements is the stock-share method of dividing investments, expenses, and receipts. The stock-share partnership is not intended for farming where wheat, fruit growing, truck farming, or other crops are the chief enterprises. It contemplates livestock farming and should not be expected to satisfy where livestock is not the chief farm enterprise. If the son lacks capital, he may give his father a promissory note and pay interest for his share of the investment.

If, on the other hand, the son can assume one-half of all the investments, excluding land, buildings, etc., and contribute one-half of the expenses, a fairly simple agreement can be worked out with the son receiving one-fourth of the total farm income. If the son furnishes nothing more than labor, a plan should be made whereby he can receive a share of the farm profit proportionate to the value of his labor. For example, if the total expenses for operating the farm for a year are $20,000, the total income, $25,000, and the value of the student's labor $4,000, the boy would receive one-fifth of the net income, or $1,000. Thus, when the value of the son's labor is equal to 20 percent of the total operating cost, he receives 20 percent of the net farm income.

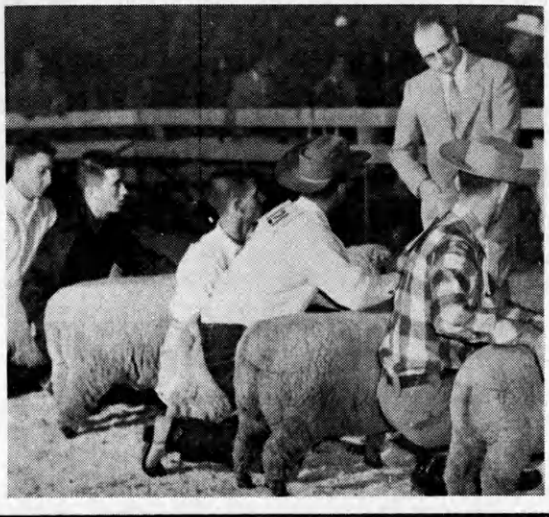
Wages Plus Management

Another partnership is the labor-management type. In this agreement, the son receives wages for his labor and managerial contributions. This type of partnership usually develops into a personal property partnership as the boy obtains more experience and a higher financial standing. In the personal property partnership, the boy actually owns part of the farm property, and is in charge of labor and managerial duties. Under such conditions, he usually receives a small wage, and a portion of the total farm profit.

There are certain factors, however, which must be included in any type of agreement if it is to be successful. The son must be interested in farming. The father and son must be able to get along together. They must keep an accurate set of farm accounts. And above all, the agreement must be written in a detailed manner.

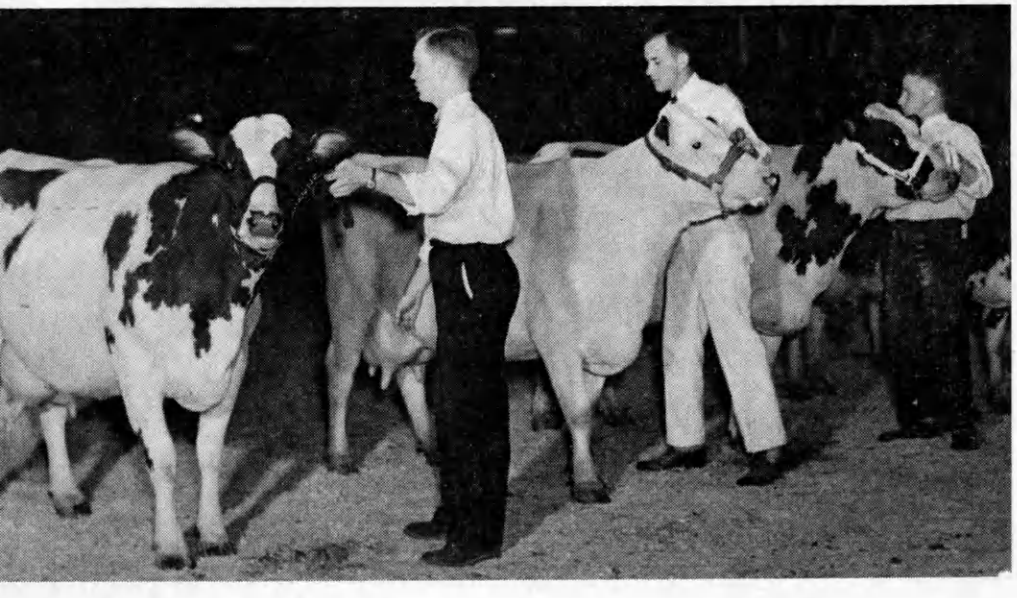
With a little care in the selection of the type of agreement, and some time spent planning out the various details, almost any father can provide his son with an opportunity to establish himself in farming at an early age.

MILLICENT SCHULTZ proved boys aren't the only grand champions. Every 21 or so years, a girl wins, this time in Dairy. Robert Quanz, on right, holds the steer he showed to win the Block and Bridle championship. A. G. Pickett, center, presented trophies.



ALL EYES on the judge, or one eye on him and one on the animal, is not a sure way to win ribbons, but, showmen agree, it helps.

MANY DIFFERENT showing techniques can be seen at a stock show. The ones used on the cow at the left paid off. That man won.



26th

ANOTHER SUCCESSFUL Little Royal has joined the many successes of former years. Approximately 5,000 people turned out to see the first girl grand champion in 21 years, as Millicent Schultz won the first place trophy in the Dairy division. Robert Quanz, an Ag freshman, was the grand champion showman in the Block and Bridle division.

The fieldhouse was gaily decorated for the event. Little Royal flags were draped from the balconies and U.N. flags formed a backdrop for the judges' stand and bandstand. The arena floor, covered with white sawdust, was surrounded by a white fence. The centerpiece was a Hereford head in color on a green background, all of dyed sawdust.

Slim Smith, of Perry-McGlone Ranch, led the grand entry riding Poco Champ, one of the ranch's top quarterhorses. He was followed by the Adams Dairy's famed six pony hitch. These two attractions were later the features of the evening's special entertainment. The parade of contestants with their entries followed into the ring and all remained in place while the Clay Center high school band played the National Anthem.

Four rings kept the show moving at a rapid pace, and there were no lulls in the evening's events. Following the judging of the first eight classes, the six pony hitch entertained the audience with a fine display of speed and maneuverability for such a combination. The unusual, almost pink, coloring of the ponies drew many comments from the crowd, and their fine performance was well received.

Before the judging of the grand champions, Slim Smith and Poco Champ thrilled the crowd with a cutting horse exhibition. A temporary pen had been placed in the arena and six steers were put into it. Slim

Successful

Little American Royal

By
BILL BERGMAN
and
BOB ECKLUND

demonstrated the Champ's ability by separating single steers from the group and controlling them riding with and without a bridle.

Six judges were used in this year's Little Royal, all prominent men in their fields. Jack Graham, a former K-Stater, now associated with the Quentin-Kubin Dairy Farm at Hutchinson, was judge of the Holstein and Jersey classes.

Millicent Schultz, HDA So, was champion showman in the Jersey class. George Atkeson, DH So, was the reserve champion in this class. Alan Phillips, Ag Fr, was champion in the Holstein class and Luther Van Lee, AEd Fr, was the reserve champion.

G. Fred Williams, prominent Ayrshire breeder of Hutchinson, was judge of the Ayrshire and Guernsey classes.

Albert Smith, DH Jr, was champion in the Ayrshire class. Walter Schoen, AH Jr, was the reserve champion.

Arinetta Bolton, HDA Jr, was champion in the Guernsey class; Bill Bergman, DM Jr, was reserve champion.

Walter Lewis, another former Kansas State student, and now a co-owner of the Alfalfa Lawns farm near Larned, judged the Beef classes.

Robert Quanz, Ag Fr, was champion in the Beef class; Bill Root, AH Fr, was the reserve champion.

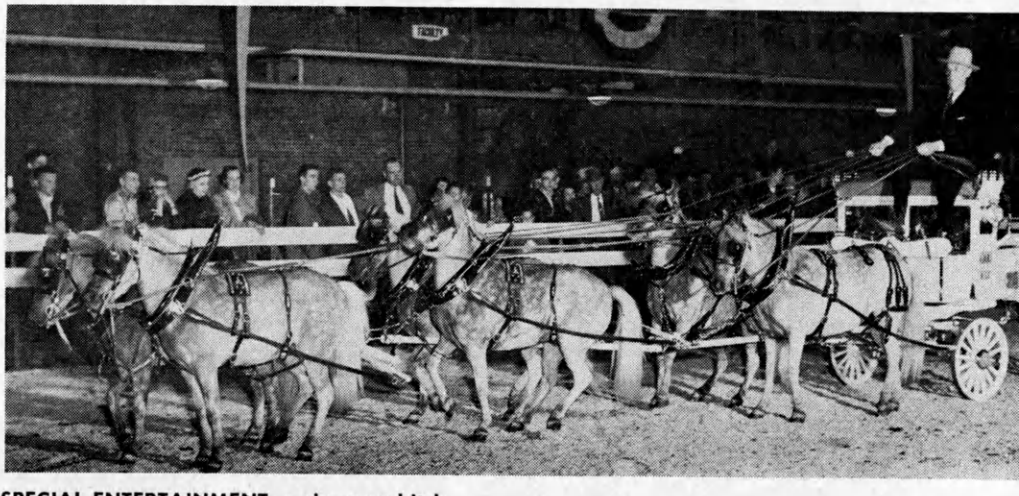
Herman Popp, Haven, one of the state's leading breeders and exhibitors of Duroc hogs, was judge of the hog classes.

Ernest Heitschmidt, Ag So, was champion hog showman. Jerry Draney, AA So, was the reserve champion.

Roy Freeland, secretary of the Kansas State Board of Agriculture, judged the sheep. Freeland is another of the Kansas State graduates back for the Little Royal this year.

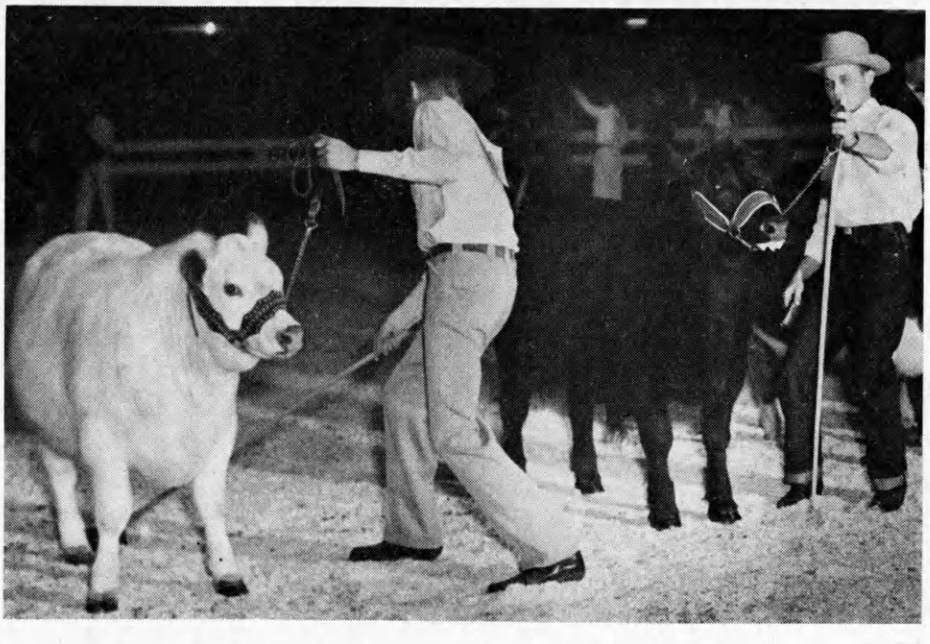
George Atkeson, DH So, was champion in the sheep class. George is the only student this year to enter in two classes, and won first in one and was

(Continued on page 26)



SPECIAL ENTERTAINMENT, a six-pony hitch pauses momentarily after high-speed performance between sections of contest.

ANIMALS CAN'T SEEM to understand they look better if they stand straight. Have to get them all set before the judge comes by.



A Creeper

in your pasture

By DAN HENLEY

HERE'S AN ALFALFA that may fit in your native and tame grass pastures. It's Canadian Creeping Alfalfa and though it usually grows too close to the ground to be of much value itself as cattle pasture, it can supply nitrogen for lush grass which in turn puts the finish on cattle.

The first plants of this unusual type of alfalfa, which spreads by roots like bindweed, were sent to K-State by Dr. Heinrich at the Swift Current Experiment Station, Saskatchewan, in 1951. C. O. Grandfield, USDA agronomist, set out the first plants on the College agronomy farm and on the Soil Conservation Service nursery near Manhattan that spring.

Creeping alfalfa, according to the Canadians, is a hybrid of Ladak and Siberian, both cold resistant and capable of surviving dry conditions. So far, all of the 12 original strains sent from Canada have lived through Kansas weather conditions, but only three strains spread well here.

Those strains that do spread really live up to their name, however. Since 1951 when the individual plants were set 4 feet apart in the test plots, numerous new plants have popped up, some several feet from the parent, until the plots now are solid stands of alfalfa.

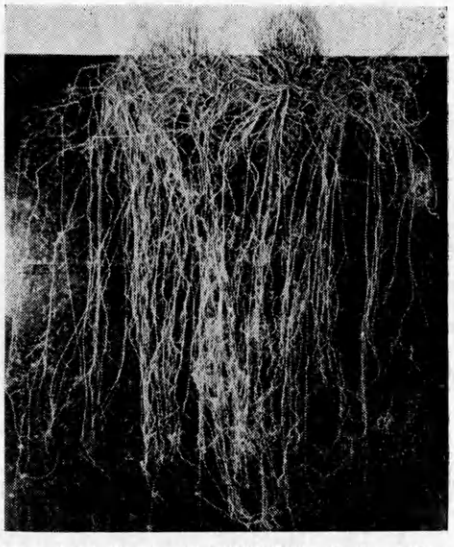
Grandfield and Charles Alexander, graduate assistant, are trying to find if this alfalfa is really what they hope it is, a legume that will survive and spread in pastures to supply nitrogen for the grass. It may be able to live in a heavily grazed pasture where other legumes fail because it spreads by roots, thus new plants are always coming up; and because it grows prostrate so a cow can't eat it without scooping up a mouthful of dirt.

Farmers would be disappointed if they tried to grow creeping alfalfa for hay, Grandfield said, especially after the first cutting which grows the tallest, because of its characteristic of growing close to the ground. And in the hot, dry summer, it would be of little value since it becomes nearly dormant, like many other drouth resistant plants.

TOO EARLY IN THE SEASON to see much in the creeping alfalfa plots at the old SCS nursery, but C. O. Grandfield, alfalfa specialist for USDA, checks for new plants coming up in a thick test plot that once was individual plants set in rows several feet apart.

Grandfield said this type of alfalfa should not be confused with another creeping type now attracting widespread interest. This other type, with common names of Rhizoma, Nomad and Sevelra, spreads by rhizomes or underground stems much like buffalo grass or Bermuda grass. K-State has plots of this alfalfa also, but work with it is an entirely different problem.

Canadian Creeping Alfalfa differs physically from common alfalfa in that the main roots are more branching and usually do not go as deep. New plants spread by side roots that branch from the main roots 3 to 6 inches below the surface. Most strains of creeping alfalfa have yellow flowers and are finer stemmed than common alfalfa.



BRANCHING ROOT SYSTEM of Canadian Creeping alfalfa. No prominent tap root is evident; fine roots spread in all directions.

From the two best spreading strains, 2,000 cuttings were made this spring and have been sent to the Garden City Branch Station where they will be grown for seed production. The seed harvested there will then be sowed in grass pastures as a further check on practical value of this alfalfa.

Part of Alexander's work is to cross the three best strains with the best Kansas varieties. He has already produced seedlings from these crosses and is setting them out this spring. He wants to find out if the creeping trait will combine with the high hay and seed yield of common alfalfa. With this type of cross, which would be used mainly in grass mixtures, less seed would be needed per acre because of its rapid spreading.

PROGRESS AND SCIENCE GO HAND IN HAND

OUR recently published annual report to stockholders tells more than the financial story of the progress of Standard Oil and its subsidiary companies in 1953. Its facts and figures also reflect the achievements of engineers and chemists.

For example, the report points out that:

More new and improved products were introduced by our company last year than in any other year since World War II.

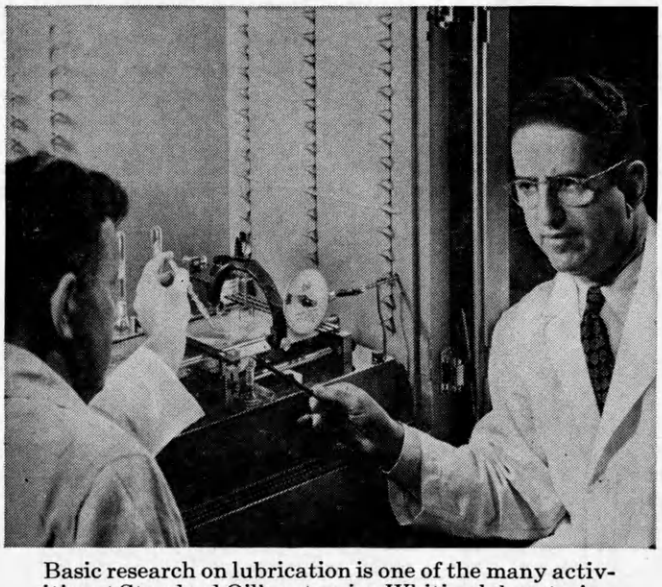
Our scientists developed the Ultraforming process, a new and better catalytic reforming method for improving the quality of the straight-run portions of gasoline.

Three new research laboratories were completed.

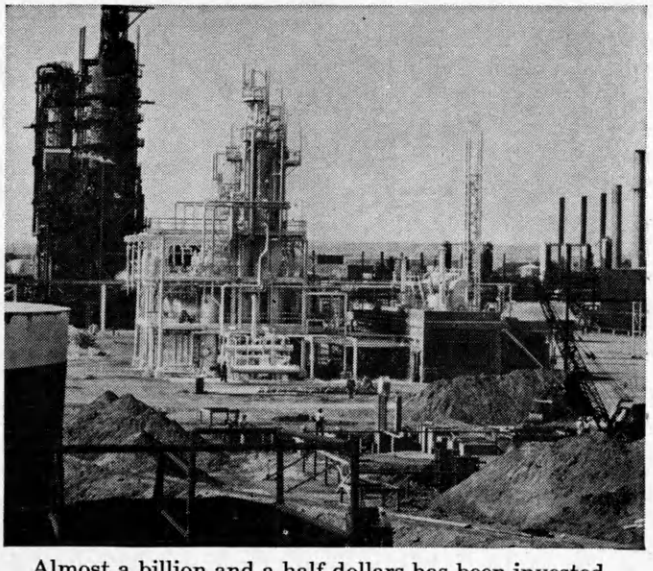
More than $200 million was invested last year in new and improved facilities. (This year and next we expect to invest a total of about half a billion dollars.)

This continuing program of physical expansion and product development at Standard Oil provides many opportunities for engineers and chemists. Men with technical and scientific training have found great personal and professional satisfaction in our steady industrial advance.

Nearly a quarter of a billion dollars will be invested during 1954 and 1955 in development of new crude oil production and reserves.



Basic research on lubrication is one of the many activities at Standard Oil's extensive Whiting laboratories.



Almost a billion and a half dollars has been invested in expansion and improvement of facilities since 1945.

Standard Oil Company

910 South Michigan Avenue,
Chicago 80, Illinois

STANDARD

A REMINDER of the 19 years the Soil Conservation Service nursery occupied the Ashland Bottoms farm. K-State Agronomy and Horticulture Departments now control it; continue research.

SCS Nursery to College

After 19 Years

By BILL CHISHAM

REMOVAL OF THE LAST of a million tree seedlings marked the end of an era at the Soil Conservation Service nursery located in the Ashland bottoms between Manhattan and Junction City. Since 1935, when the nursery was opened, an average of between 3 and 4 million seedlings has left the nursery each year to aid in soil conservation work.

After the last of this year's crop was distributed to district conservation agents, the nursery was taken over by Kansas State College to be used for grass seed production and for test work. No more trees will be raised. Final closing of the SCS operation is being conducted by Don Atkins, an agronomist with the SCS. Atkins' work has been mainly with grasses and legumes in the past, and he expects to continue this work in Kansas after he leaves here.

Atkins estimated that about half of the tree seedlings will go to SCS districts in Kansas. Nebraska and South Dakota will receive about one fourth each, with small amounts going to North Dakota and Wyoming. Most of the seedlings are used for shelter belt planting.

Favorites with planters, Atkins said, are the Eastern Cedar, the Rocky Mountain Cedar, Western Yellow Pine, Arbor Vitae, and the Russian Olive. In general, the trees are not available commercially in the small sizes. The trees are of the type known as conifers, and hold their foliage, even in freezing weather.

To form a windbreak, 3 to 6 rows of the trees must be planted from 12 to 16 feet apart, creating a need for many trees at a low cost the farmer can afford, Atkins stated. To meet this need, the SCS has raised trees that are not commercially available.

Atkins allotted trees to each district, and a local SCS agent distributed them to cooperating farmers or landowners who requested them. A small handling charge of 1 or 2 cents a tree was made, he said.

The primary purpose of the shelter belts, according to Atkins, is to provide control of wind erosion, with the added incidental factors of providing shelter for small animals.

Atkins termed the results of the tree planting quite beneficial on a long range basis. About 75 or 80 percent of the trees planted survive. The best area for the trees, in the sense of good growth, is in the sandy soil of South Central Kansas. He said that the lower moisture content of the soil in Western Kansas and the

Only a few trees and shrubs remain at the old SCS nursery where several million seedlings were produced each year. The lilacs shown here will be replaced by corn, or perhaps alfalfa, but established grass plots will be sustained by the College.

Work Continued By Agronomy, Hort Departments

heavy soil of Eastern Kansas affect the results of the plantings adversely.

Now that the SCS has started the work, it is hoped by the service that commercial growers will carry on, Atkins said. If the commercial growers can do as good a job as the SCS nursery has for almost 20 years, much of the worry about wind erosion should be relieved in the future.

The College took over the nursery when the Soil Conservation Service moved out in April, leaving only a few trees as reminders of their long occupancy. Dr. R. V. Olson, head of the Agronomy Department, explained how the College came into possession of the nursery, the 11 buildings and equipment included in the acquisition.

Congress Says No Nurseries

Under an act of the last Congress, he said, the SCS is to operate no nurseries. This is partly as an economy measure, and also prevents federal competition with private business. The act did not give authorization to sell the land, nor did it provide specific disposition of the property. A policy was formulated that allows the various nurseries operated by the service to be used by colleges that have proper need. Kansas State, by this process, acquired a 10-year lease on the 180-acre nursery.

Under the agreement, the College, in exchange for use of the land, will participate in production of seed for the SCS grass and legume program, on the site, and will conduct research studies on breeding, development and management of soil conservation grass and legumes.

As a result, Dr. Olson said, all tree production is out, although a few trees are still to be removed, but the grass work is being continued by the College. Alfalfa research and work on corn hybrids will also be done at the nursery.

The farm will be jointly operated by the Agronomy and Horticulture Departments. A section of the area has been allotted to the Botany and Plant Pathology Department for study of plant diseases, Dr. Olson said.

The agronomy plots will occupy the north side of the site while the Hort Department plantings will be on the south. Dr. W. F. Pickett, head of the Horticulture Department, said his department plans to use about 25 acres of the nursery. They will run experiments on small fruits and vegetables. Some work with strawberries, brambles, and ornamental stock will also be done.

No formal opening ceremonies were held when the nursery changed hands. SCS moved out, and the College moved in.

Two-Way Road To World Peace with IFYE

By INDAR MALHOTRA

TOWARD THE END of World War II, 4-H Clubs and other rural youth organizations all over the country found that a frequent topic of discussion whenever they gathered together was, "What can we do to make sure it doesn't happen again?"

The young men and women of rural America decided a better understanding between rural people around the world would be the best contribution they could make to ensure world peace. The Cooperative Extension Service was approached with the idea and the necessary support was received to transform the idea into the International Farm Youth Exchange program.

IFYE is a two-way road to world understanding. In exchange for the visits of Kansas youths in other countries, foreign youths visit Kansas farm families, live and work on their farms, and learn more about Kansas agriculture and life.

This year eleven "Grass Roots Ambassadors" from Kansas have been chosen to live and work in foreign countries under the IFYE program.

The director of the Agricultural Extension Service in the state nominates the delegates to represent his state. Applications are secured from and submitted through the county extension agent. A state IFYE committee selects the state candidates and submits its choices to the National 4-H Club Foundation where final selection and placement are made.

Any rural young person can apply for a trip to another country as a "Grass Roots Ambassador" if he or she is: 20 to 30 years old, a high school graduate, of mature personality, from a farm and knows its life and work, experienced in rural youth organizations, eager to understand other people, able to speak the language if going to a non-English speaking country or willing to learn the language.

AT AN IFYE ORIENTATION are this year's delegates: Alan Phillips (standing, left) of Manhattan, going to Norway; Darrell Esslinger, Virgil, to India; John Oltjen, Robinson, to Australia; Nancy West, Nekoma, to Denmark; Arleta Rusk, Wellington, to Finland; and Luella Cox, Assaria, to Sweden. Mary Alice Todd (seated, left) of Rexford is to visit Ireland; Carolyn Anderson, Dodge City, to France; Jean Sims, Oakley, to Belgium; Caroline Wilbur, Lawrence, to The Netherlands; and Donna Childs, Belleville, to Australia. Miss Cox is a student at Lindsborg; Miss Rusk, a nurse at Wellington; and Esslinger operates a farm in Greenwood County. All others are students at Kansas State this year.

The cost of IFYE is met by voluntary contributions to the National 4-H Club Foundation and to state IFYE funds through the state extension service. No government money is used. Those who contribute to this program are local, county and state 4-H Club organizations, young men's and women's groups, business concerns, farm organizations, farm women's clubs, service clubs, cooperatives and individuals. On the average, $1,400 is spent to arrange a two-way exchange of delegates.

In the spirit of IFYE, delegates are accepted as members of their foreign families, for mutual respect and admiration must begin at the family level. IFYE's have discovered that people all over the world have somewhat the same goals for security, peace and happiness whether they live on a 20,000 acre sheep ranch in Australia, a rocky, barren farm within the Arctic Circle or in extreme poverty in the rural villages of Greece. These 4-H delegates have corrected many wrong impressions which their host families had about Americans.

The program was started in 1948 and Armin Samuelson of Topeka was the first Kansan to make a trip. He visited Sweden. By the end of 1952, 23 Kansas boys and girls had become "Grass Roots Ambassadors" in 17 countries and 26 foreign exchangees from 17 countries had visited in Kansas. In 1953, 12 Kansas youths visited other countries.

One of the things an IFYE must do before making a trip is learn some of the language. He must know enough of the language to at least say common statements and, more important, to understand his hosts. Selection of proper clothes for the trip is a problem. They must be proper for the climate and weather to be encountered and considerate of the type of clothing worn by other people. Then there are other problems: getting passports, health certificates and identification papers; and purchasing souvenirs that can be given to the host families.

The IFYE program is not a "joy ride." It is downright hard work, a challenge to the stamina and wisdom of American youth. They perform hard physical labor alongside their foreign families and, on returning home, spend several months telling the story of their experiences and observations to groups and individuals all over Kansas.

Could Be a Hard Year

For Turf Plots

By PAUL VOHS JR.

LET NATURE MAKE the final decision could be the attitude of the Horticulture Department toward their turf plots north of the drill field on the College campus.

They have decided not to water the plots by artificial means, in order to simulate actual conditions found in parks, cemeteries and golf course fairways, according to Dr. W. F. Pickett, head of the Hort Department and secretary-treasurer of the Central Plains Turf Foundation.

The grass plots, established in 1951 by the Hort Department in cooperation with the Central Plains Turf Foundation and the U.S. Golf Association, have been irrigated to get them firmly established. Now that the plots are growing well, the water is going to be cut off.

In addition, a program calling for nitrogenous fertilizer will be started with varying amounts applied to two sections of the plots while a third section will receive no fertilizer.

Some objectives of the study are to find hardy types of grasses that will do well without an artificial water supply; the best mixtures of grasses to give a continuous green color in the spring, summer and early fall; and the optimum length to mow the grasses.

Fifteen kinds of grasses and 10 mixtures are being tested. The plots are divided into three sections and each section subdivided into 25 divisions so each section contains all varieties and mixtures. The sections also are divided into thirds and each third is cut at a different height, either ½, 1½ or 3 inches.

A warm season grass and a cool season grass were placed in each mixture in the hope that when the cool season grass died back in the summer heat the other grass would fill in the gaps, thus maintaining the green color throughout the growing season. Examples of such a combination are Marian bluegrass and U-3 Bermuda grass, or Marian bluegrass and Zoysia buffalo grass, Pickett explained. These three grasses are new varieties being tested.

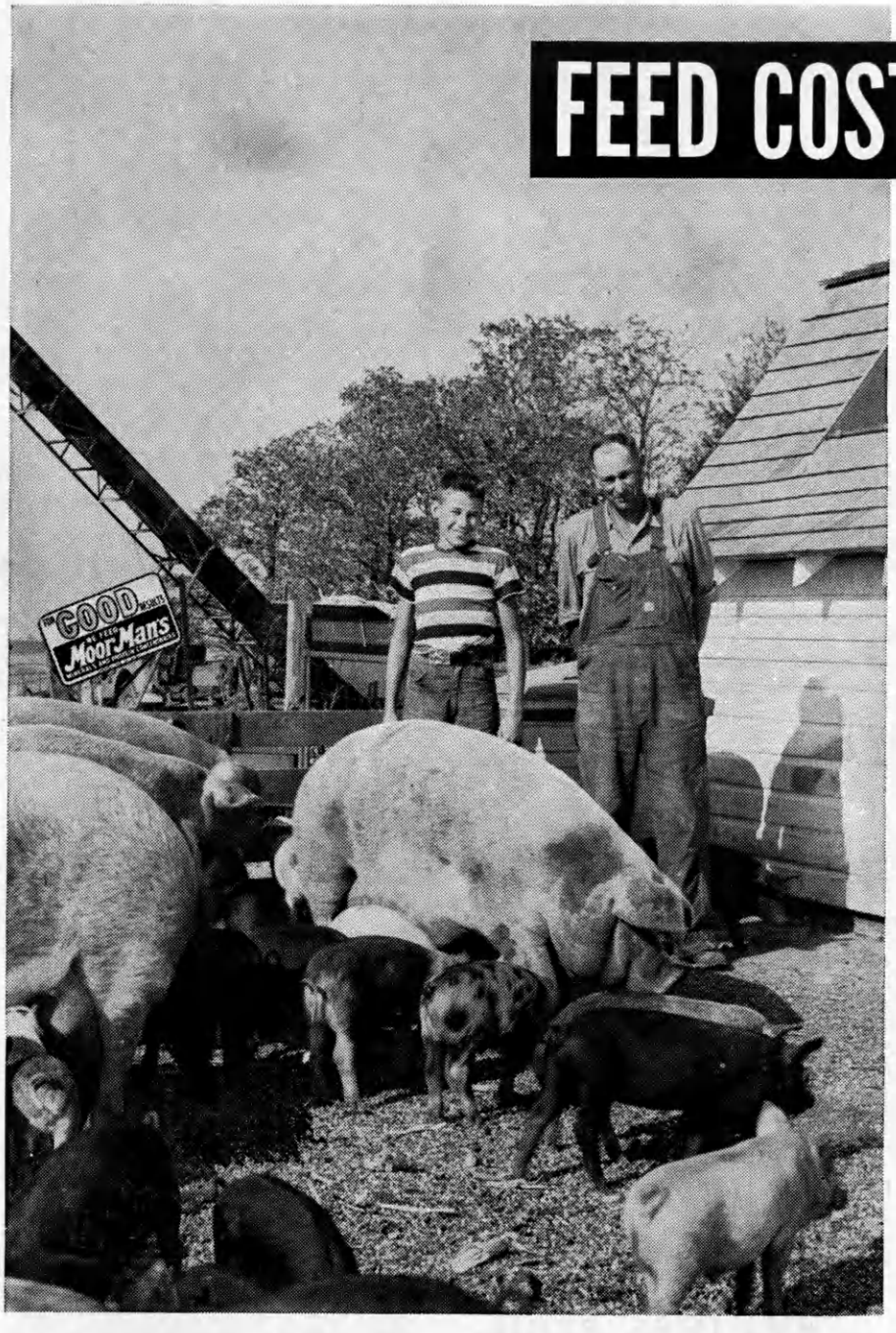
The men in charge of the project are going to be watching the weather very closely this summer and hoping there is enough moisture to keep the plots alive, Pickett said. This might be the critical year for the plots.

PRESIDENT McCAIN was initiated into Alpha Zeta, honorary agriculture fraternity, this year as an associate member. Here are the 24 initiates who attended the annual banquet: (Back row, left to right) Vaden Davis, Ray Gieseman, Harry Blanchard, Jim Simper, Lloyd Christie, Don Vell; (third row) Ron Parks, Milton Wendland, Harold Burre, Donald Hunt, R. R. "Phil" Robertson, Charles McCullough, Bob Ecklund; (second row) Gerald Meyer, Dick Baker, Norman Elliott, Danforth Taylor, Charles Paul, Dan Henley; (first row) Calvin Drake, Mark Drake, Dr. McCain, Warren Prawl, Joe Landholm.

FEED COST WAS $9.87

PER 100 LBS. PORK WITH MOORMAN'S

—says Krene Klink



"I've never fed anything that gets my pigs off to such a fast start as MoorMan's Mintrate* for Pigs and my own corn," says Krene Klink, Mitchell Co., Iowa.

"We saved 168 of the pigs our 20 sows farrowed last March and brought them along to an average of 207 lbs. market weight at 5 to 6 months at a total out-of-pocket cost for feed of $947.65—or $5.64 per hog.

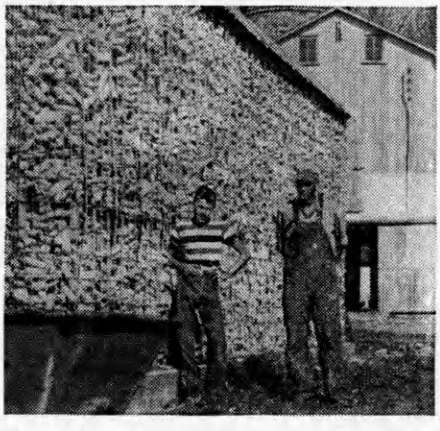
"Here's how we figured out costs: MoorMan's Mintrate for Pigs . . $455.00—MoorMan's Mintrate for Hogs . . . $404.55—MoorMan's Easy-Way*Wormer . . . $49.00—200 lbs. rolled oats . . . $11.20—600 lbs. soy bean meal . . . $27.90—1740 bu. corn at $1.43 . . . $2488.20. That's a total feed cost of $3435.85 or $20.45 per pig.

"That makes our total feed cost 9.87 cents a pound to produce 34,776 lbs. of pork. That's equal to almost exactly 100 pounds of pork for every 5 bu. of corn—and at that rate I figured gave us a return of $4.28 a bu. on the corn we fed this bunch of pigs.

"I'd say these pigs averaged a little better than 100 lbs. each at 90 days, when we switched over from Mintrate for Pigs to Mintrate for Hogs. I'm certain that the fast start they got on Pig Mintrate did a lot to help us get such good gains at such a low production cost."

Like Krene Klink you, too, can spend less and have more pork if you feed the MoorMan way. The great protein, mineral, vitamin and antibiotic combination in MoorMan's Mintrate for Growing Pigs pushes pigs along faster—helps them get more feed value from your own good corn. Thousands of good hog raisers like Mr. Klink will tell you that, with Mintrate as their only concentrate they easily convert 5 bushels of corn into 100 pounds of pork. For greater profits from pork this year see your MoorMan Man. Or if a MoorMan Man is not available, write, wire or phone Moorman Mfg. Co., Dept. O4-4, Quincy, Ill.

Mrs. Klink and daughter Dorothy are "poultry bosses" on the Klink farm, which is a real family operation. Their 300 MoorMan-fed pullets, in early October, were producing at a 70% rate.



Mr. Klink and son Larry are proud of their corn crop as well as their hogs. The corn in this crib is from a crop running 80 bu. to the acre—said to be 20 bu. over the county average.

MoorMan's *

(Since 1885)

*Trademark Reg. U. S. Pat. Off.

MAKERS OF VITAMINIZED PROTEIN AND MINERAL CONCENTRATES FARMERS NEED, BUT CANNOT RAISE OR PROCESS ON THE FARM

DICK PICKETT (seated, left) will head the Ag Association next year. Dale Fooshee (left) will be vice-president; Eldon B. Johnson, treasurer; Mark Drake, assistant Barnwarmer manager; Leonard Slyter, Barnwarmer manager; and George Atkeson, secretary.

Court Garden Behind Waters Hall

A small dust bowl north of Waters Hall is being changed into a landscaped court garden. The small area between West Waters and the Middle Wing is being landscaped by Hort students under the supervision of L. R. Quinlan, head of Landscape Design.

Since the garden is in a shady area many broad-leaf evergreens will be planted. Some evergreens, a Hoppi crab and redbuds have already been set out.

When completed, the court will have a small paved terrace, possibly with two concrete benches, depending on funds available. The plan also calls for flowers, mostly hardy perennials, and grass.

The garden will not be finished this spring as the lawn is to be planted this fall and the terracing done a year later.

Students now helping to set out trees and shrubs are Byron Wood, Blair Adams, George Eib and Carroll Morgenson. The planting plan is a project of Professor Quinlan's landscape design class.

Hear about the sultan who kept his harem three miles from where he lived? Every day he sent his manservant to get him a girl. The sultan lived to be 87, but the servant died when he was only 30.

Moral: It's not the women that kill you; it's the running after them.

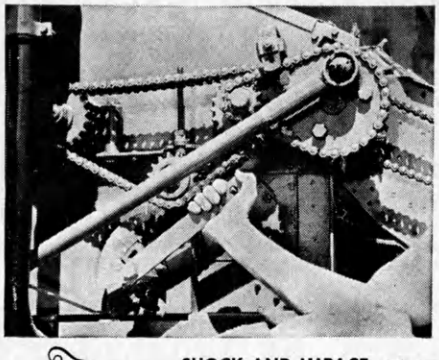
If all the automobiles in the world were placed end to end, some darn fool would try to pass them.

Is there ONE chain that's best for your drive or conveying job?

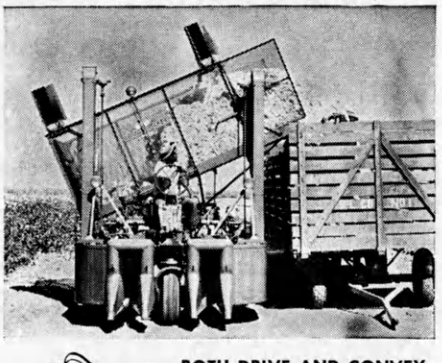
LOW COST PLUS HIGH STRENGTH is achieved on this self-propelled combine with Link-Belt double-pitch roller chain drives.

YES! And you'll find the answer in LINK-BELT's complete chain line . . . a size and type for every job

LIGHTWEIGHT, ECONOMICAL Steel Link-Belt is used to elevate ears of corn on portable elevator.



SHOCK AND IMPACT are no hazard for Link-Belt roller chain. This combine also uses Link-Belt augers.



BOTH DRIVE AND CONVEYING functions are performed on this cotton picker by Steel Link-Belt and Link-Belt roller chain and sprockets.

Follow the example of more than 400 farm machinery manufacturers--for your complete drive and conveying chain needs, rely on . . .

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CHAINS and SPROCKETS

LINK-BELT COMPANY: Executive Offices, 307 N. Michigan Ave., Chicago 1. To Serve Industry There Are Link-Belt Plants, Sales Offices, Stock Carrying Factory Branch Stores and Distributors in All Principal Cities. Export Offices: New York 7; Canada, Scarboro (Toronto 13); Australia, Marrickville, N.S.W.; South Africa, Springs. Representatives Throughout the World.

Little Royal

(Continued from page 15)

reserve champion in the other. Weldon Russell, AH Jr, was reserve champion in the sheep class.

Slim Smith judged the horses in addition to furnishing a part of the feature entertainment for the evening.

Eldon B. Johnson, AH Jr, was champion in showing horses; Wade Castonguay, AEd Fr, was reserve champion.

The grand champions in the two divisions were selected from the class champions and were chosen by a vote of all the judges in their division.

A large number of F.F.A. and 4-H club members attended the Little Royal this year. Four registered gilts were awarded as door prizes to members of these two groups. Two went to individual 4-H club members and two to F.F.A. chapters.

Ray Hawkinson of the Merrymac 4-H club, Marshall county, and Richard Jahnke of the Happy-Go-Lucky 4-H club, Riley county, were the individual winners of gilts. Harveyville and Paola were the F.F.A. chapters winning gilts at the show.

Ray Sis, VM Fr, of Belleville acted as Master of Ceremonies for the Little Royal this year. Ray is an AH graduate and has been reserve champion showman in the Block and Bridle division in two previous shows.

Trophies this year were donated by the American Royal Association in Kansas City, the Kansas City Stockyards Company, and the Kansas City (Missouri) Chamber of Commerce.

Early Sunday morning after the show, members of the Dairy club and the Block and Bridle club were out in force to clean up the fieldhouse. By 10 a.m. the big arena showed no signs of the show so recently held there and the club members were enjoying refreshments. Another Little Royal had gone into the history books and the clubs were planning for next year.

A young man staring into the mirror one morning, and noting his bloodshot eyes, decided never to go into a bar again. "That television," he muttered, "is ruining my eyes."

Headline in a local newspaper—"Father of Ten Children Shot—Mistaken for Rabbit."