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KANSAS STATE UNIVERSITY

# AG STUDENT

APRIL 1963

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# KANSAS STATE UNIVERSITY AG STUDENT



Vol. XXXIX

April 1963

No. 5

100 YEARS OF SERVICE TO KANSAS,  
THE NATION AND THE WORLD

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COVER: Although on-the-farm jobs for agricultural graduates are decreasing, other agriculture-related jobs are plentiful, and await graduating students. Steve Robb, one K-State ag student, who will be graduating soon, plans to return to the farm, and become a leader in his hometown community.

## EDITOR

Gordon Bieberle

## ASSISTANT EDITORS

Thayne Cozart  
Sharon Stauffer

## FACULTY ADVISER

Lowell Brandner

## BUSINESS MANAGER

F. W. Kernohan

## CIRCULATION

George Teagarden  
Stanley Stout

## BUSINESS STAFF

Ervin Reimer  
Larry Scott  
Henry Payne  
Gary Scott  
Richard Teagarden  
John Divine

## STAFF WRITERS

James Brink  
Dan Bonine  
Mary Rendleman  
Richard Wilcke  
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Ann Carlin

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**C. Peairs Wilson**  
Director Ag Experiment Station

## *Experiment Station*

## *Helps Solve*

## *Farmers' Problems*

*by C. Peairs Wilson*

**T**HE Agricultural Experiment Station, as a state agency, has sole legal responsibility for agricultural research in Kansas. Agricultural research includes: soil and water conservation and management; selection, breeding, nutrition and management of field crops, grasses, horticultural crops, forestry trees and ornamental plants; meat animals, dairy animals, poultry and wildlife; protection of crops and livestock from diseases, insects and weeds; technological, engineering and economic aspects of production, marketing, processing and utilization of farm products; home economics, including human nutrition, family living and child development; and economic and community development.

Experiment Station research applies scientific methods and principles to the solution of practical problems. But this does not mean basic research is ignored. In seeking to solve problems it is often necessary to develop new methods and new principles. Agricultural experiment stations do some of the best and most significant basic research. Among basic scientific disciplines supported through experiment station research are chemistry, biochemistry, physics, botany, zoology, anatomy, physiology, pathology, bacteriology, entomology, economics, psychology and sociology.

Agricultural experiment station research has been a wealth-creating activity. Increased efficiency and productivity as a result of research has contributed to the state's economic development. The cost of agricultural research is less than .2 of one per cent of the cash receipts from farm marketings. Some industries invest 10 per cent, or 20 times the proportion, of their gross sales in research.

### **Will Continue To Stress Farm Enterprises**

The experiment station will continue to emphasize major farm enterprises. Wheat accounts for approximately 35 per cent of the cash receipts from farming and will continue to be the principal cash crop. Quality needs to be improved if Kansas is to compete favorably in the domestic and world markets. Pioneer work on developing a process for producing hybrid wheat has been done at the Fort Hays branch of the Kansas Agricultural Experiment Station. No state or nation is ahead of us in this. Hybridization will offer opportunity to incorporate quality characteristics in wheat germ plasm more effectively than in the past. However, the opportunity to expand acreage or to increase the total bushels produced appears to be quite limited.

Beef cattle also produce about 35 per cent of the cash farm income of the state. With our excellent grass resources, abundant production of feed grains, especially grain sorghums, and silage and hay crops, our beef cattle enterprise is a natural.

Swine, dairy and poultry enterprises produce about 17 per cent of the cash farm income of the state. Opportunities to expand these enterprises appear good. Swine, especially, appears in a favorable position.

### Hog Production Likely To Expand

With California now the most populous state in the nation and other southwestern states growing rapidly, Kansas finds herself between this growing consuming market and the traditional source of supply which is the Central Corn Belt. With this locational advantage and little opportunity for swine production to expand in areas between Kansas and California, it appears that hog production is in a position for expansion. With favorable climate and a high feed grain potential, Kansas has the opportunity to compete for the growing western market on much more favorable terms in the future than for the eastern market in the past.

Another opportunity for expansion of the agriculture of Kansas is in the production of specialty crops, especially those under irrigation. Nearly a million acres are now under irrigation. Much of this irrigation development has occurred in the last 10 years. It is not easy to convert from dryland farming to irrigation farming. Farmers in new irrigation areas are gaining experience with new crops and new practices. They are raising less wheat and more feed crops and livestock. They will gradually try such crops as potatoes, lettuce, castor beans, sugar beets, pinto beans, blackeyed peas and melons. New crops call for new practices and new marketing problems. The Agricultural Experiment Sta-

tion has a responsibility and an opportunity to provide more information on irrigation farming.

Water is becoming an increasingly important but scarce resource. As our population grows, we need to give more attention to water for agricultural, municipal, industrial and recreational uses. Water conservation is inextricably tied to soil conservation. Sixty-five per cent of the precipitation in Kansas is lost by evaporation. Another sizeable fraction is used in transpiration by plants—crops, grass, trees, and weeds. If we are to conserve more water for beneficial use it will be water that falls on farms that is lost by evaporation or runoff or that is used in plant transpiration. The benefits to be derived from water research, where water is as important as in Kansas, are tremendous. The agricultural experiment station has a challenge and opportunity to do something about it.

### Kansas Needs Industrial Development

Finally, the Agricultural Experiment Station has contributed to economic development in the state. There is much more opportunity. Kansas has been losing human resources through outmigration of its potential population increase simply because economic opportunities in the non-farm sector have been more attractive outside Kansas than in Kansas. Industrial development is needed. One of many possibilities is to expand the processing of our agricultural products within the state. Research and education can contribute information and organizational ability to businesses and communities that will help them to help themselves in providing investment and employment opportunities in the state.



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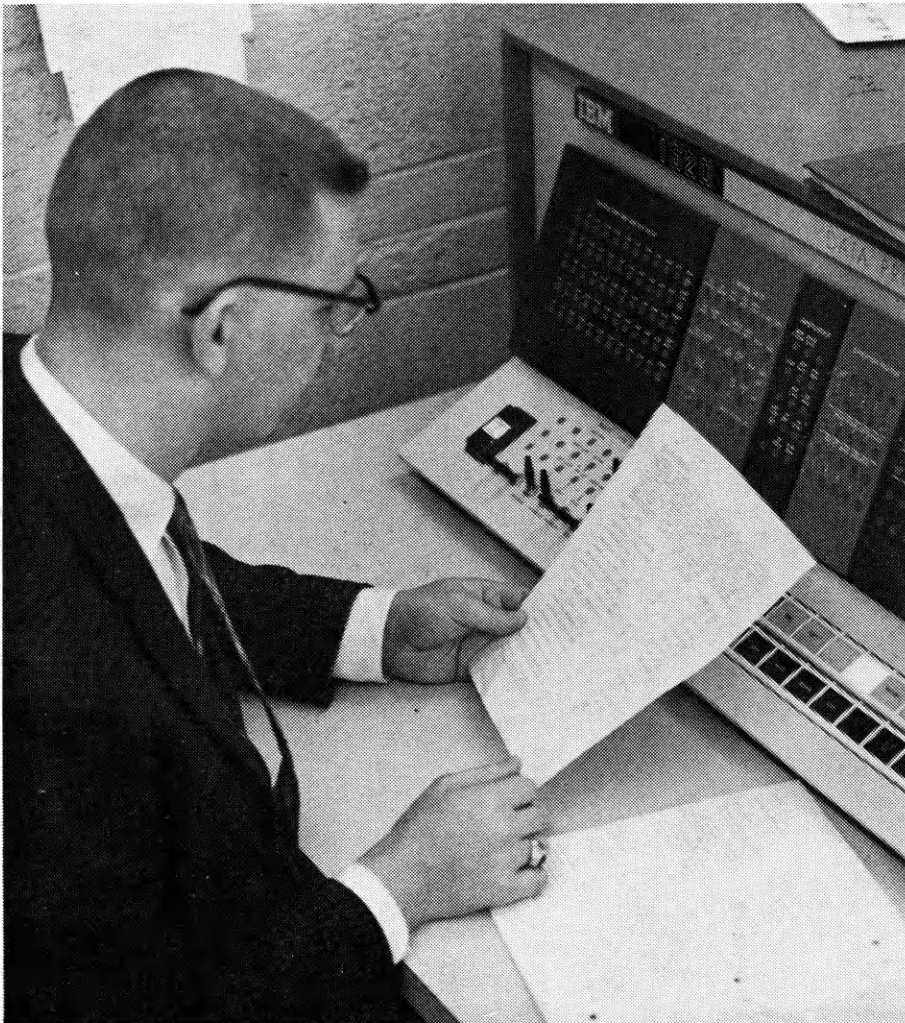
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*With New Bulletins*

# Farmers Can Predict Long-range Weather

*by Thayne Cozart*



**F**ARMERS depend indirectly upon weather to feed their families and make their livings. Still, today, as in the past, farmers can't control the weather. However, recent weather data predicting long-range weather conditions lets farmers make wiser managerial and operational decisions upon problems influenced by weather.

This type of predicting is called climatological forecasting. It differs from normal synoptic forecasting, which predicts tomorrow's weather from weather observations of today and yesterday, by using past weather records as its basis for prediction.

You must understand climatological predicting before you can use it. First, the predictions are long range and static. Second, they don't indicate daily weather. Instead, they show the possibility of rain, frost, drought or snow at a future date. For instance, climatological predicting will indicate how many years in 10 it will be too wet to harvest wheat near Garden City, or it can predict the chances for two inches of rain during the last week of July in Manhattan.

Dr. L. D. Bark used this 1620 IBM computer to record weather data for his project.



In Kansas, these chances are calculated by studying and processing weather records dating back 50 years. Twenty-four reporting stations throughout the state have recorded daily weather conditions for at least half a century. These stations recorded each day's weather data on IBM cards and filed them at the K-State Agricultural Experiment Station.

### Studied, Analyzed Data

Recently, Dr. L. D. Bark, associate climatologist for the Kansas Agricultural Experiment Station, analyzed these weather data. He studied precipitation predictions, since rain—or lack of it—is a yearly problem for Kansas farmers. Using an IBM computer, Dr. Bark calculated a normal average weekly rainfall for each week of the year at each reporting station. In his new bulletin "Chances for Precipitation in Kansas," which will be released this spring, Bark has listed these normal rainfall amounts and their chances of occurrence.

By referring to the bulletin, you can check rainfall listings from the station nearest you and see the chances of receiving a normal rainfall during a certain future week.

How can you, the farmer, benefit from climatological precipitation predictions? Well, say you are planning to install an irrigation system in your corn field and you wonder whether it will be practical. You check the climatological rainfall bulletin and see that your area receives enough

rain seven or eight years out of ten to grow corn without irrigation. With this information you might hesitate to install the system because your chances are good for growing corn without it. On the other hand, if you find the rainfall in your area is adequate only two or three years out of ten, the irrigation system would be profitable.

Or, suppose you are a hybrid sorghum seed grain producer. You want to establish a farm in Kansas and desire to know the best location. By checking the bulletin, you find several areas where the average weekly rainfall during the summer is best suited to sorghum production. Using this information, you locate your farm in one of those areas.

### Can Predict Frost Dates

Predicting early-fall or late-spring frost dates also falls within the realm of climatological forecasting. In this case, as it is with rain, Kansas weather records were used to gain the results.

"When to Expect Late-spring and Early-fall Freezes in Kansas," another bulletin by Dr. Bark, contains maps of Kansas showing the average date of a specified freeze. However, on an average date the freeze risk is 50 per cent; that is, half the time it will freeze before the average date and half the time it will freeze later. Since very few farming operations can tolerate 50 per cent risks, the bulletin includes computed risks for specific dates and specific temperatures.

Climatological freezing predictions can help you determine planting dates and know the growing period (number of frost-free days) for your area. You can minimize losses caused by freezes after planting and before harvesting by using the maps and tables in the bulletin.

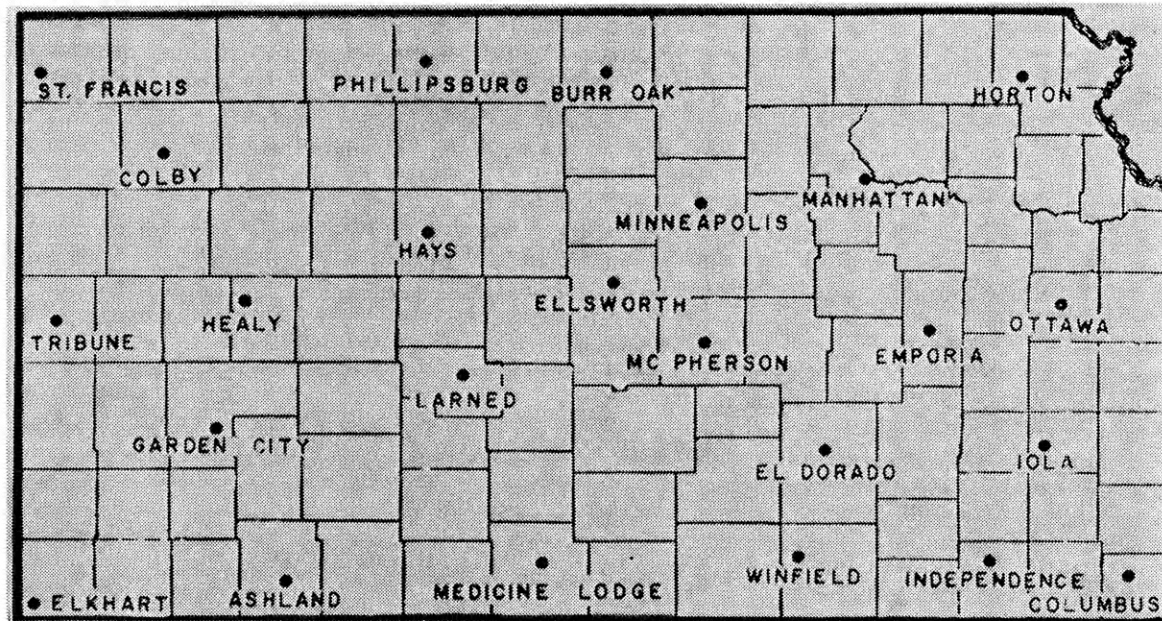
Assume you are a truck farmer near Dodge City and you want to plant tomatoes to get them on the early market. You look at the map and see April 25 is the average last freeze date. If you plant then, risk of a freeze is 50 per cent, but the chart shows that waiting six days will slice the risk to 30 per cent. You'll take this risk, so you plant on May 1.

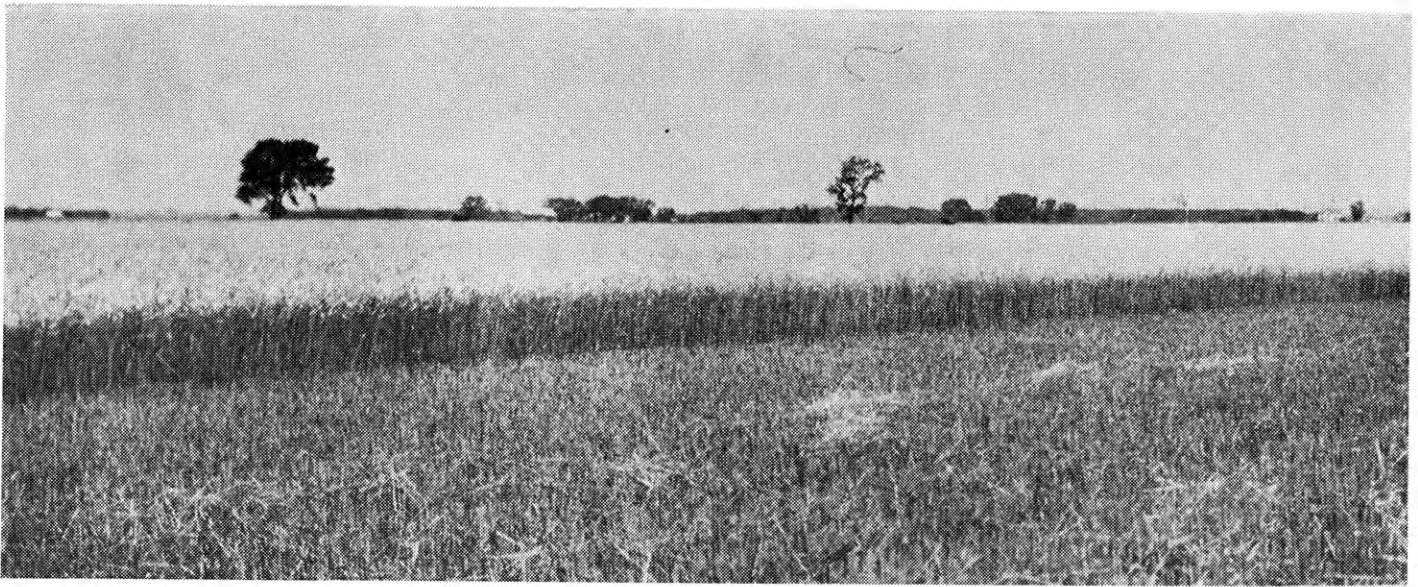
Suppose you want to plant soybeans on ground that you just harvested for wheat. You want to know the risk of a fall freeze that will injure the beans before they mature. By knowing the length of the growing season for your variety of soybeans, you can determine the chance of the freeze.

### New System Has Limits

Climatological weather predicting can help you make important decisions. However, if you use this aid, realize its limitations. "Predictions based on climatological data refer to the chance of success over a long period. Each year the probability of success, or failure, is the same, regardless of what happened in previous years," according to the freeze bulletin.

These 24 weather reporting stations provided data for Dr. Bark's climatological weather forecasting project.





Wheat cut from this field and others in Kansas might be used for making paper, should the new industry be introduced in the state.

*New Process —*

# Paper Could Contain Wheat

*by Lloyd Moden*

**K**ANSAS industrial and agricultural leaders are excited about starting a paper-making industry in the state. Farm leaders are interested because paper mills would buy their timber and wheat—that's right, wheat!

Wheat grain and wood can be combined now to produce paper pulp. Northern Utilization and Development Laboratory of Peoria, Ill., has found that 44 per cent of the pulp mixture can be starch, wheat flour, or whole ground grain. The new process uses low-grade or inferior species of trees such as cottonwood or elm.

Paper made from the wheat-wood process is superior to that made entirely from wood. Wheat grain added to the pulp increases wet strength nine times and improves folding endurance three times.

Before more paper mills are built in Kansas (there is one at Hutchin-

son), researchers must find out if Kansas has enough timber to support the industry. In 1957, the Kansas extension service at Kansas State University conducted a timber survey in 22 southeastern Kansas counties. Results showed there is enough annual growth to support two medium-sized pulp mills. Last year a more complete forest inventory was started by the extension service.

Harold Gallaher, state extension forester at Kansas State, says five or six years are needed to complete the inventory. He also says additional funds of \$46,000 would speed up the project four or five years. Private interests won't consent to building new paper mills in Kansas until the survey confirms an adequate timber supply.

## **Other States Want Industry Too**

Kansas has wheat, timber, and desire for the new industry, but so do other states. To complicate the matter, research by Northern Utilization Development Laboratory indicates

other grains, including corn, can be used in the new process.

Although competition is keen, the estimated increased demand for paper products would permit expansion of the industry. According to figures released by the United States Department of Agriculture, Americans use 450 pounds of pulp per person each year. That amount will probably increase 50 per cent within 15 years.

## **Paper-making Future Is Bright**

To meet pulp production needs by 1975, the nation will need 270 more pulp mills of 300-ton-per-day capacity or their equivalent. The pulp mill at Hutchinson is medium sized and produces 150 tons per day. Increased consumption, combined with a growing population, brightens the paper-making future.

A top-notch job of selling is needed before the paper industry can get rolling in Kansas. Kansans have done a good job promoting the state as "the Wheat State." Many non-Kansans believe the state is entirely flat,



covered with wheat and grass. Selling Kansas as a timber state could be a tough job.

Convincing the big mills to use the new wheat-wood process poses another problem. Gallaher says many of them have their own timber stands and may not want to use wheat, a material they would have to buy. And too, the cost of using the new process has not yet been fixed. But, supporters of the idea are confident the cost will be competitive with using all wood.

### Would Create New Jobs, Markets

State leaders are supporting expansion of the pulp industry in Kansas, since it would create new jobs, provide a market for several hundred thousand cords of wood, and reduce the wheat surplus. A medium-sized mill produces about 60,000 tons of pulp worth \$10 million annually. Such a mill provides jobs for about 500 persons, including labor and management personnel, technicians and supporting wood producers, and has an annual payroll of about \$2 million.

Farmers could supply commercial wood, since Kansas has no national forests. If the paper industry adopts this new process, 200 million bushels of wheat might be used annually. That nearly would consume Kansas' annual wheat crop.



A paper-making industry in the state would provide a market for timber cut from Kansas woodlots, too.

# Peace Corps May Hold Opportunity for You

by Sharon Stauffer

**I**N AN effort to fight poverty, hunger, ignorance and disease, the United States Government established the Peace Corps. It tried something new in this program and instead of just sending money to underdeveloped countries, it sent men and women to educate and minister to the people.

The program has been astoundingly successful, but the need for volunteers continues. One of the intensive areas of need is agriculture.

Why would you want to enter the Peace Corps? What could it do for you? What would you do in serving?

### Peace Corps Needs You

The Peace Corps can help you become acquainted with new cultures—learn new languages, customs, and traditions of people in other countries. Through close work, volunteers can come to a better understanding of their fellow man.

But above all, the Peace Corps provides a place to serve. People who are tired of just talking about promoting world peace can do something about it. Regardless of your background, the Peace Corps can find a place for you. There is an urgent need for those who have either layman or instructional talent.

Perhaps you have a high school education, have lived on a farm and are well acquainted with the actual work involved in operating a farm. The Peace Corps can use your services. Or if you have attended college, you may use your knowledge by teaching on secondary or university levels.

You might pick up a shovel and show native workers in southern Asia how to dig a ditch the easiest way, build a bridge of handmade brick in

Colombia, organize 4-H Clubs in Chile, or operate a mechanized farm in the Near East.

Ag volunteers plant, cultivate, and fertilize fruit trees; teach crop rotation; set up farm machinery shops; and construct farm buildings.

The Peace Corps will discover and develop your talents and enable you to acquire new skills.

To qualify for service in the Peace Corps, you must be an American citizen at least 18 years old. No maximum age limit has been set. Married persons are accepted when both husband and wife can serve. Volunteers must be in excellent physical and mental health, be emotionally stable, and be upright in personal conduct.

Should you apply for service in the Peace Corps, following initial acceptance, you would be sent to a center to train for your particular work. There you would learn the language and the culture of the country in which you will serve.

### Must Still Serve in Military

Service in the Peace Corps costs the volunteer nothing. During training, all travel, books, food, housing, medical care and incidentals are provided.

In the field, you would live moderately, on a level neither above nor below that of the natives. The allowance is sufficient to maintain health and permit effective work.

Following service, you would receive a readjustment allowance of \$75 for each month of service. During the usual two-year term, you would be allowed 30 days leave plus a small sum for travel away from your home station.

The Peace Corps does not substitute for military service. However, the volunteer may get a deferment for his period of service. After Peace Corps service, further deferment may be given in consideration for activities of national interest.

# Unlimited Opportunities Await Ag Graduates

by Ann Carlin

**U**NLIMITED opportunities await graduates in the various fields of agriculture. Many students want to further their education and plan to obtain additional degrees. Still others plan to go back to the farm after they graduate.

At least five outstanding students in different areas of agriculture at K-State will be among future successful leaders in their fields. Their goals and achievements might offer encouragement and ideals for anyone who plans a career in agriculture.

Receiving a bachelor's degree will be just a beginning for Lawrence Schrader, an agronomy senior from Lancaster. Lawrence will start working toward his MS and PhD degrees at the University of Illinois in June.

Because Lawrence has studied intensively and has written papers on agronomy, he may substitute his work for a master's thesis, and begin work on his PhD.

Specializing in crop physiology and biochemistry, Lawrence plans to teach and work in research when he completes his PhD. His advice to undergraduates planning to work for advanced degrees is to take as many basic courses as possible in math and science during their undergraduate study. "Many graduates have to take

those courses without credit while working on their master's," Lawrence said.

Lawrence, a member of FarmHouse social fraternity, has worked with one of his instructors, Dr. Ernest Mader, on a soybean research project. "Work of this type is very beneficial while going to school," Lawrence commented. "It's important to become acquainted with the practical areas of your study."

## Schrader Has 3.75 Grade Average

Lawrence was recently initiated into Sigma Xi, a national honorary for faculty members and students who have excelled in a research area.

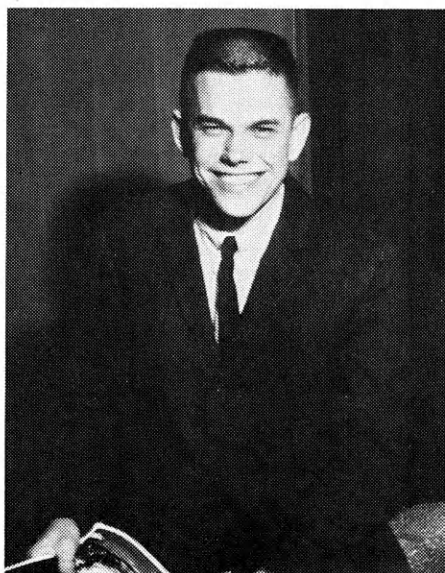
Still maintaining a 3.75 cumulative grade average (4.0 equals A), he has taken time for several extracurricular activities. He was president of the Agronomy Club (Klod and Kernel) for two years, and has participated in the Ag Association and Ag Council. He was also a member of Collegiate 4-H, FFA, and Varsity Men's Glee Club.

Last summer Lawrence won the national agronomy speech contest at Cornell University. This year he is national president of the student subdivision of the American Society of Agronomy.

His leadership qualities and high grades have brought him many honors. He is one of 13 senior men in Blue Key honorary at K-State. He is a member of Phi Kappa Phi, national scholastic honorary; Alpha Zeta, honorary for vet and ag students; Phi Eta Sigma, freshmen



Charles Sauder



Jim Kientz

# Graduates

men's scholastic honorary; and Scabard and Blade, military honorary. He is also in the Ag Honors Program.

## Sauder Must Make Decision

Charles "Chuck" Sauder, a feed technology senior from Tremont, Ill., is in the midst of deciding what he will do after graduating. Having been offered two assistantships—one at Michigan State, the other at the University of Illinois—and two good jobs, he must decide where the greatest opportunities lie.

Chuck, who is concentrating on the engineering phase of feed technology, had no problems in selecting a university for his undergraduate study, since Kansas State is the only school offering a degree in feed technology.

"There is room for advancement in the field of production and management for students with one degree," Chuck commented, "but, if you want to go on into research, or into top management, a second degree would be almost imperative."

Dr. Harry Pfost, Chuck's college advisor, has encouraged him to further his study and has helped him choose elective courses that would be beneficial towards work on a master's degree. Chuck is working with Dr. Pfost on a special research problem—adding glue to feed to improve pellet durability.

Chuck, who has a 3.70 cumulative grade average, is a member of Phi Eta Sigma, Alpha Mu (milling honorary) and Phi Kappa Phi. He received a Gamma Sigma Delta feed technology award.

Chuck is a member of the Milling Association and Ag Council at K-State. He is editor of the Alpha Mu newsletter, too.

After much initiative and determination, Bob Ireland is now in Hyderabad, India, studying agricultural economics. Bob became interested in studying in the Far East after he heard Dr. George Montgomery, former head of the economics and sociology department at K-State, speak last fall on his research study in India. Bob left for Hyderabad March 1.

## Ireland Plans for Peace Corps

Bob, from Valley Center, will not be officially enrolled at Osmania University in Hyderabad, but will be working for 14 hours of credit by independent study through the Honors Program at K-State. He will complete his bachelor's degree after returning to K-State in September, writing various reports, and taking tests on his research work. He is specializing in economic development—birth control and family planning.

Bob, who has a 3.50 cumulative grade average, has applied for the Peace Corps and plans to observe Peace Corps projects during the summer.

After two years in the Peace Corps, Bob plans to do graduate work, possibly at Iowa State. His goal for the future is to work in international economics with the Department of Agriculture or State Department. He feels that type of work will require additional degrees. "I haven't wasted my four years at K-State, but feel I'm just getting a start in what I want to learn and achieve," Bob commented.

Bob's interests at K-State range from debate to wrestling. He is a member of Alpha Zeta, Phi Kappa Phi, and FarmHouse. He also has been active in KSU's Model Congress.

## Kientz Plans for More Study

Specializing in another area of agriculture is Jim Kientz, a horticulture major from Wamego. Having been reared on a farm, Jim has always been interested in raising vegetable crops. He plans to continue his study of plant physiology.

A member of a K-State family (his brother and both parents received their degrees at Kansas State), Jim

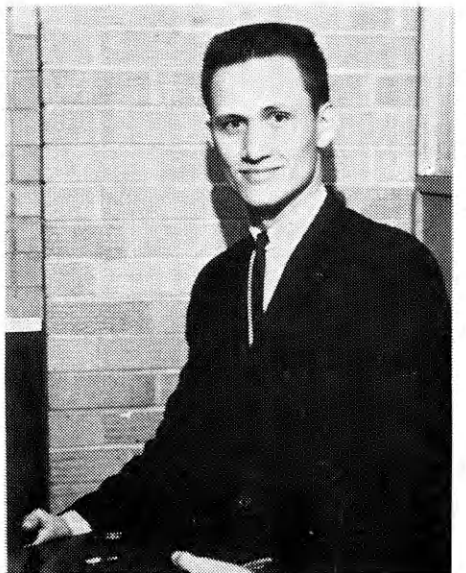
(continued on page 17)



Steve Robb



Bob Ireland



Lawrence Schrader



*Population Increases*

# Conservationists Foresee Kansas Deer Hunting Season



The Whitetail deer is the most plentiful species in Kansas.

*by John Wiechman*

**D**EER are damaging crops in many Kansas counties. Wheat, hay, corn and grain sorghums are the crops they damage most. Damage has been generally slight, however. Nemaha, Brown and Doniphan are among counties that have reported crop damage. Deer are frequently sighted along highways and country roads. An increase in deer population seems unusual because Kansas is not considered a big game state.

Since the end of World War II, deer have become re-established in Kansas. Better farming practices and better deer habitat are the main reasons for the population rise. Increases in woody growth along streams and flood plains have helped provide food

and cover for deer. Migrating of deer and stocking by the Kansas Forestry, Fish and Game Commission have provided a good foundation. Protected by law enforcement and public cooperation, deer have multiplied rapidly. In 1961, the population increased an estimated 18 per cent or approximately 10,600 deer.

The Kansas Legislature passed a bill this year proclaiming deer and antelope as big game animals. The bill also authorized the Kansas Forestry, Fish and Game Commission to establish a deer hunting season. Before that can be done, however, researchers need to determine the number of deer in Kansas and the conditions affecting them. They'll have to determine when deer may be hunted in limited numbers without jeopardizing the future supply. After a season has been established, hunters will have to buy a \$25 hunting permit. They'll have to tag all the deer they kill, too.

### Herds Harvestable by 1965

"If present trends continue, Kansas deer herds will reach harvestable proportions in five to ten years," says a report published in 1959 by the Kansas Academy of Science. However, Dave Coleman, chief of the game division of the Kansas Forestry, Fish and Game Commission, says he thinks there might be a limited season in 1965. That would be a short season with low kill numbers and maybe a restriction on sex.

Major concentrations of deer are in the northeast, southeast and northwest sections of Kansas. Some central, southern and southwestern counties have reported a few deer. Deer stay in a general area of the state, but browse from county to county in that area.

Most deer in Kansas are Whitetail; however, there are some Mule deer in western counties. The Whitetail gets its name from the white under side of its long, bushy tail, which it carries aloft when disturbed. Antlers of the Whitetail are low and compact. Antlers of the Mule deer are high and project upward and forward. The tail of the Mule deer is short and white except for a black tip. Noticing the tail is the easiest way to distinguish between the two species.

Dr. O. W. Tiemeier, associate professor of zoology at Kansas State University, says a pair of deer will pro-

duce at least one offspring each year; and if they are doing well, they will often have twins.

Many farmers are against opening a deer hunting season, because of possible danger to their cattle and property. However, their attitudes will probably change if deer populations increase to the point of nuisance. If deer increase at the present rate, they will definitely become a problem within a few years. An open season will probably restrict hunting to areas with heavy deer population.

### Forecasts Hunting Details

"A bow season will probably be opened before a gun season," says Dr. Tiemeier, "or at least, there will be a longer bow than gun season." In any case, regulations will limit the caliber of gun used. The best suggestion yet is to use a shotgun with a slug instead of buckshot. If deer

go unchecked, they could destroy their habitat, and eventually themselves.

### Need Public Education First

Before an effective deer season can be opened, a program of public information and education must be carried out. Such a program would be essential for good deer management. When the time comes, the Forestry, Fish and Game Commission will probably activate it through radio, television and other news media.

Careful management of a harvestable deer population could bring many economic and recreational benefits to Kansas. Deer hunters who previously had to travel long distances to hunt could pursue their sport in Kansas. Those who can't afford the traveling expense could also enjoy big game hunting.



The Mule deer is usually found in western Kansas counties.



Farm arc welding can save you money and time when breakdowns occur.

## Mend Machinery, Toys —

# Learn Arc Welding

by *Richard Wilcke*

**R**UN DOWN to the neighbor and see if you can get another side-delivery rake."

"Call Bill and ask him if he's using all his wagons."

Does this sound familiar? If it does, you probably know the handicap of having machinery break down when you need it most. Harvesting, plowing and cultivating are all governed by the weather. A breakdown when you're busy in the field is costly.

More and more farmers are finding it pays to know how to arc weld. You can easily save the price of a welding machine if you have one handy when machinery breakdowns come at critical times. You can repair, maintain and even construct farm machinery easily and quickly with an arc welder.

High school vocational agriculture farm mechanics shops are rarely without arc welders. Many farmers realize arc welding is something they should know. Vocational agriculture students are learning how to weld. Young farmers are learning the skill, too.

### Popularity Increased After WW II

Arc welding popularity increased during World War II. It was very hard to get new machinery or parts for old machinery. Many small-town repair shops were closed or contracted to do military work. At that time, Rural War Production Training programs were started to give farmers special training. More than 430,000 farmers took part in these machinery repair activities, learning to prolong the usefulness of their machinery.

After the war many farmers bought their own welding machines and continued to repair their own

machinery. They had seen the results—savings both in time and money—of arc welding on the farm. Many who learned welding in war production plants helped teach adult classes after the war. Those men, if you ask them now, say any farmer who doesn't have facilities to do his own welding is overlooking an opportunity to cut farm expenses.

### Repairs Machinery, Toys

One farmer remarked recently that hardly a day goes by during the summer months when he doesn't use his welder. He repairs not only machinery, but everything from his car to his children's metal toys. He pointed out that since his welder is portable he often repairs machinery still hitched to his tractors.

Are you convinced that knowing how to arc weld could be an asset? We'll assume that you are. Now you



probably want to know which machine to buy for general farm use.

First, decide whether you want an AC or DC welder. The most popular farm welder is the AC limited-input rig, which is electrically powered. This welder is as portable as your extension cord is long. Many farmers, however, prefer DC self-powered rigs.

The need for a welder which could be used on a farm with insufficient power for the industrial-type AC welder prompted the design of a limited-input machine. This machine,

manufactured according to specifications of the National Electrical Manufacturers Association, has been accepted by vocational agriculture teachers and farmers as the most versatile welder. This type usually has a 180-ampere output.

The DC welder has been popular for years. It is usually powered by a generator which is run by a two-cylinder, air-cooled engine. The most popular DC welder is rated at about 180 amperes output. It is usually mounted on a light two-wheel trailer and is portable.

## Laugh Awhile —

Prof: Give me the chemical formula for water.

Aggie: H I J K L M N O.

Prof: Are you trying to be funny, young man?

Aggie: No. That's what you said in lecture, "Water is H to O."

Lecturer: If I've talked too long, it's because I forgot my watch, and there's no clock on the wall.

Aggie: There's a calendar behind you!

The judge peered down suspiciously at the coed seated in the witness chair.

"Haven't you already appeared as a witness in this suit?" demanded the judge.

"In this old thing?" the coed asked. "Heavens no! The other was a navy blue sheath."

A veterinarian was instructing a farmer how to administer medicine to a horse.

"Simply place this powder in a gas pipe about two feet long, put one end of it well back into the horse's mouth and blow the powder down his throat."

Shortly thereafter, the farmer came running into the veterinarian's office with a sick look on his face.

"What's the matter?" asked the vet.

"The horse blew first!" the farmer groaned.

Scowling, the ROTC sergeant bellowed, "What's the idea of breaking your rifle over the corporal's head?"

"It was an accident, sir," the basic cadet replied.

"What do you mean, an accident?"

"I had no idea the gun would break, sir."

"What I mean is," explained the insurance salesman to the farmer, "how would your wife carry on if you should die?"

"Well," the farmer answered, "I don't reckon that's any concern o' mine—so long as she behaves herself while I'm alive."

"Are you the man who saved my son from drowning?" cried the excited woman.

"Yes," was the modest reply.

"Well, where's his cap?"

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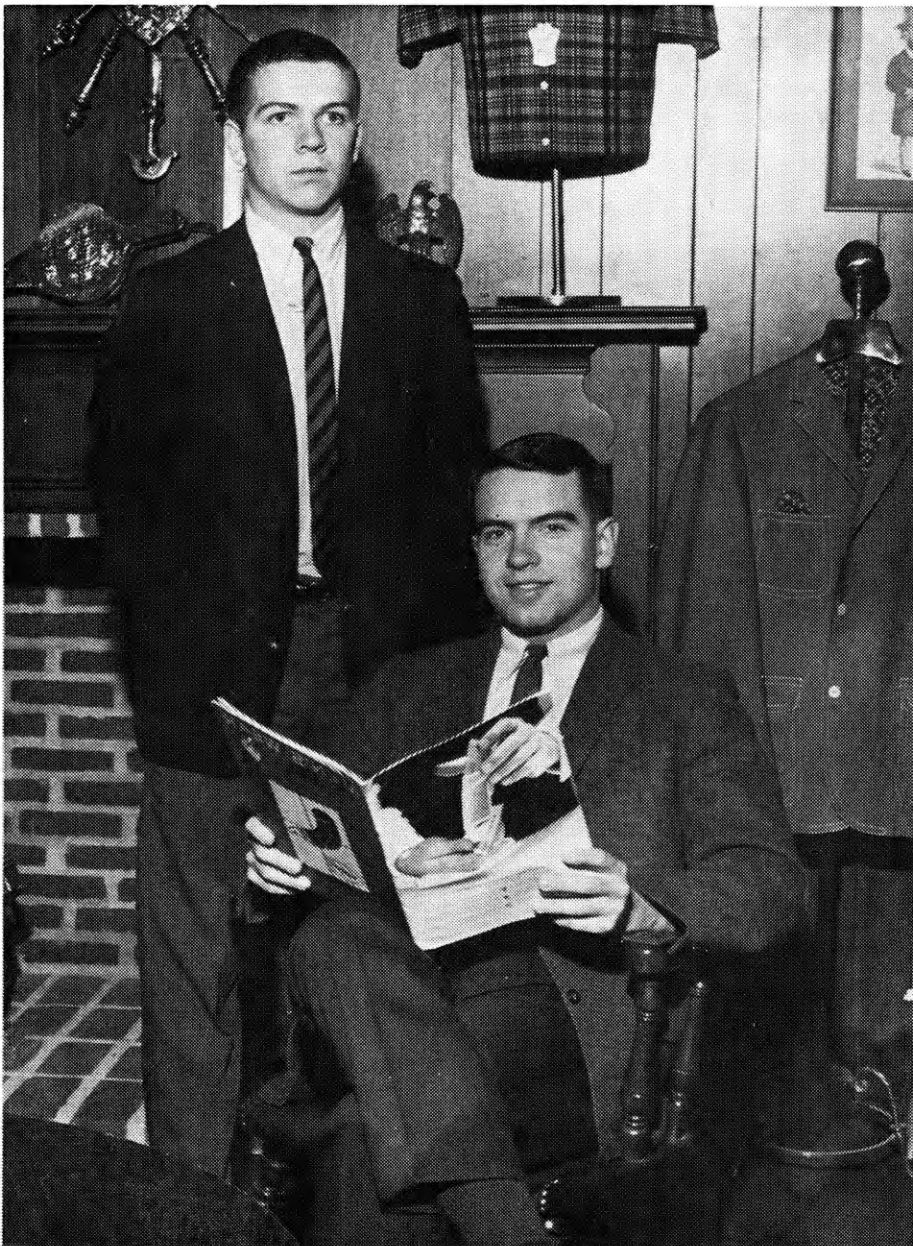
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# Stay Away from Fads

by Mary Rendleman



Modeling sport clothes which will be fashionable this spring are Dennis O'Hara (left) wearing a Navy blazer and striped shirt, and Gene Nedwed, wearing a herringbone coat with button-down collar shirt. Notice the denim suit at the right.

**W**OULD you like to be one of the best-dressed, best-groomed men on campus this spring?

Really, it won't be difficult. First, be neat—but not beat. Don't throw last year's shirts and slacks out the window—get them out; be sure they're clean and pressed. This will start you on your way to a well-groomed appearance.

When choosing additions to your spring wardrobe, try to stay away from fads. Clothes that are stylish this year will probably be suitable next year, too. Fads seldom last from one season to another.

Slacks with no belt loops are probably problems to you because the waistbands roll down; they don't hold a press, and they wear out quickly, too. This spring, belt loops are back on slacks.

Bone or off-white slacks will match just about any sport shirt in your wardrobe. These are made of ever-popular cotton chino or cotton-dacron poplin. Because they are cotton, they are easy for you men away from home to take care of.

If you want to be fashionable, wear shirts with button-down collars. Dress shirts now come in stripings. The stripes are narrow and from a distance are indistinguishable. Red, olive green, or blue stripings in shirts give you a dressed-up, neat appearance.

Madras is becoming popular in sport shirts. It is a multi-colored plaid pattern. Not only is it used in

shirts, but also in sport coats. Madras is practical because the colors blend so well with plain-colored slacks.

Pull-over sport shirts that button only halfway down the front are not so popular with college men this year. Knit shirts are still fashionable. Cardigan knits are even more so because they can be worn as jackets.

### Jackets Most Popular

The trend this spring is for everything to be worn as a jacket. Blazers will be worn more with casual dress than with dress shirts and ties. Sport coats will be worn as jackets over casual dress, too.

Last year's bermudas are still good. Don't be without them for classroom wear on warm spring days. Madras or plain colors are in style.

Suits are basically plain this spring. Grey or olive suits, made of dacron and wool, will make you a well-dressed man at any spring social event. Blue cord suits are making a comeback. These suits were the rage several years ago and now top the list because they are practical.

Tan poplin suits are also practical. Denim suits, lending that sporty, carefree look to your appearance, are fashionable, too. These basically plain suits will be an asset to your wardrobe after graduation, as well as during your stay at K-State.

Make sure your shoes are neat and polished. This will accent your well-pressed clothes. This spring, loafers are in style again. The most practical colors besides black are dark brown and cherry brown that will go with almost anything in your wardrobe.

This year, there's something new in swimwear. Instead of small, medium and large sizes, some swimming trunks will be sold according to waist size. They are made of a cotton twill in various colors and patterns.

### Dry Cleaning Saves Clothes

Dry-cleaning will keep your non-washable clothes from giving you that shabby appearance. Don't hang suit coats and other coats on wire hangers. Hang them on wide wooden hangers. Hang suit pants full length, if possible. Don't worry about cotton slacks; you can easily wash and press them yourself.

Build your wardrobe, not on the basis of fads, but on the basis of what is practical, what you can afford and what appears neat.

## Unlimited

(continued from page 11)

will remain here for his MS. After he completes two years of military service, he plans to study for his PhD at some university in the South or on the West Coast that has a reputable horticulture department.

Jim, who has a 3.20 cumulative grade average, feels that with a bachelor's degree there are two major employment areas for students specializing in vegetable crops—salesmen and farm managers. With more extended study, the opportunities would lie in chemical weed and insect control.

Jim is a member of Alpha Zeta, Scabbard and Blade, and FarmHouse. He is also a two-miler on the varsity track team and a member of the cross country squad.

### Robb Will Return to Farm

Steve Robb, a dairy science senior, is one of the few ag students who will be returning to the farm after he receives his degree next January and completes two years in the military. Steve plans to eventually take over his father's dairy farm near Lawrence.

"The best avenue of approach for a graduate who must make his own start in farming would be to work into the business through a management position in some large farm program. Then by building a reputation of his own, it wouldn't be as hard," Steve suggests.

A member of FarmHouse fraternity, Steve has been a K-State fan as long as he can remember. "With the good caliber of students and high quality of instructors at K-State, no one could convince me I didn't make the right choice by coming here," Steve said.

A sports enthusiast, Steve has participated in many intramural events and was on the freshman track team.

Many activities make Steve one of the busiest 'Staters on campus. He is treasurer of Blue Key and chancellor of Alpha Zeta. He also has been president of Collegiate 4-H and this year is editor of the "4-H in Review" magazine.

Steve's dairy judging coach and advisor, Dr. G. B. Marion, has been one of the greatest influences to him in offering guidance and personal interest.

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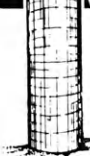


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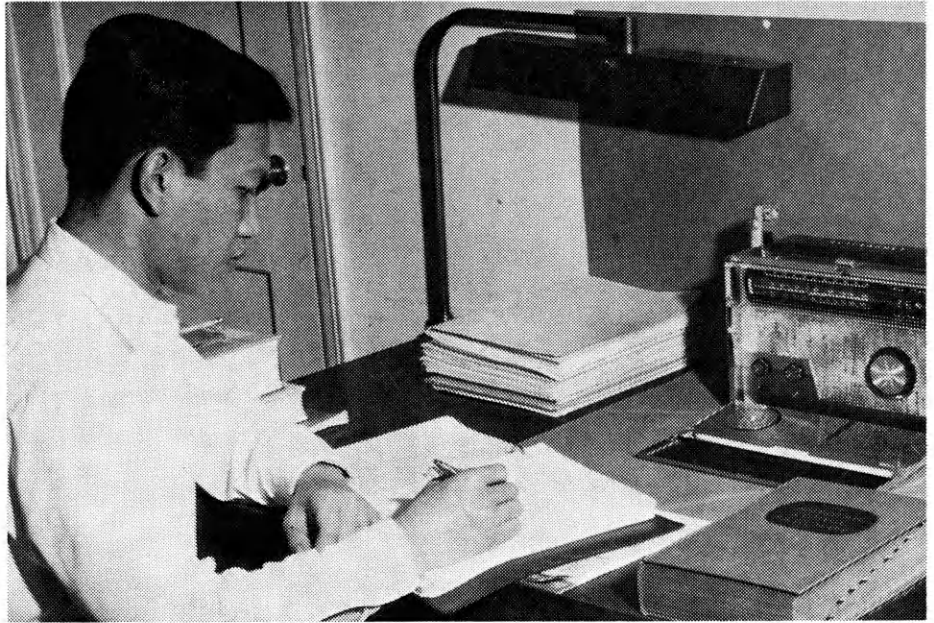


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Keng Kang, a sophomore from Cambodia, plans to graduate from K-State in 1965.



# Language Barrier Confronts Cambodian

by James Brink

**K**ANSAS State University has approximately 275 visiting foreign students on its campus this year. Changes confronting these students are often overlooked by other students. Keng Kang (pronounced Kong), an animal husbandry sophomore from Cambodia, explained some of the problems he encountered after coming to the United States. He also compared his country with the United States.

## Cambodian Geography

Cambodia, a country of the Indo-Chinese peninsula, is bounded on the northeast by Laos, on the east and southeast by southern Vietnam, on the south by the Gulf of Siam and on the west and north by Thailand. It comprises an area of 69,866 square miles, and has a population of about 3,800,000.

Besides rice, the chief crops in Kang's home land are maize, rubber

and cotton. Other crops include pepper, sugar, tobacco, coffee, tea and silk. Great quantities of timber are cut in Cambodian forests, too.

Kang is studying at K-State because the International Corporation Administration (ICA) agreed to allow qualified students to study in the United States. The ICA feels Kansas State is one of the best agricultural schools in the United States.

Keng arrived in the United States in September 1960. He could speak no English then. The first month, he attended Washington University in Washington, D.C., where he received an intensive course in English. In addition to his native language and English, Keng speaks French. In Cambodia, he completed six years of elementary school and then received a bachelor's degree from the secondary school. The bachelor's degree is equivalent to a high school diploma in the United States.

Keng feels the enrollment procedure at Kansas State is easy. "You simply wait until it is time for you to enroll," he said. "Excluding required courses, a student may take

anything he wishes. That is good because students can pursue their interests."

Keng has found students and instructors very helpful and agreeable. His biggest problem is understanding instructors who lecture fairly fast. As a result, he feels many of his notes are insufficient. Not understanding slang is another handicap. In class and out, slang seems to limit him from understanding his instructors and his textbooks. "Sometimes I read a lesson two or three times and feel like I don't understand it yet," he said.

## Lab Courses Are Helpful

Laboratory classes are very helpful to Keng. In Cambodia most experiments and exercises are done only by the instructor because of limited facilities. The lab courses at K-State give Keng a chance to experiment, work problems and observe the results of his own work. Going through the actual procedures and calculating results have helped him understand the significance and use of methods of analysis.

In Cambodia students and instructors ride bicycles or walk to classes. At Kansas State Keng walks to class. Keng feels students should walk at least part of the time.

Keng says there are no student governing bodies in the secondary schools in Cambodia. He feels the student council and governing body at K-State are helpful because they express and discuss student problems with the faculty.

Keng has attended summer school and he plans to receive his degree in 1965 or 1966. After he graduates, he plans to return to Cambodia and work as an agricultural supervisor for the government.

Overall, Keng is satisfied with the school procedures and system at Kansas State. He believes that as time passes and he masters English, he will be able to comprehend more of what goes on around him. He also feels he will be able to formulate more valuable opinions. "I am very glad I came to the United States and to Kansas State," Keng concluded.

## K-State To Host FFA Convention

Vocational agriculture groups from Kansas high schools will meet for a state conference on K-State's campus April 28, 29 and 30.

This will be the fortieth annual meeting in which high school boys will compete in agricultural and farm mechanics contests. To be held in conjunction with the judging activities will be the state Future Farmers of America (FFA) conference.

Several of the agriculture departments and curriculum clubs will sponsor and conduct contests and present awards to winners.

Prof. Thomas Avery, head of the Department of Poultry Science, is coordinating the efforts of staff members in planning the conference.

Several KSU freshmen in agriculture will conduct the FFA meeting. They include Arlen Etling, education, vice president; Don Ferguson, engineering, secretary; Dennie Dechert, economics, treasurer; Robert MacArthur, pre-veterinary medicine, reporter; and Gary Creager, engineering, sentinel.

# Written Leases Give Security To Tenants, Landlords

by Dan Bonine

**S**IXTY per cent of Kansas farmers rent part or all the land they farm. If you are among them you need to know the rules governing conflicts arising from working relationships between landlords and tenants.

Although there are not sufficient laws to guide you in making farm lease agreements, legislatures and courts have established rules to follow in dealing with problems of leasing land.

A recent Kansas Agricultural Experiment Station circular, "Kansas Laws for Farm Landlords and Tenants," points out many problems which are covered by Kansas statutes. It discusses other possible problems which are not covered by the statutes. "The uncertainty in Kansas laws gives both landlords and tenants good reason to provide for improvements in a written lease and in renewed leases," the circular says.

Most leases are oral and often don't cover the possible conflicts in tenant-landlord agreements. Many written leases don't cover all possible problems. Research is influencing production decisions on the farm. Methods of farming are rapidly changing along with agricultural technology. These changes create new problems for landlords and tenants.

### Difference Not Distinct

Is your arrangement a partnership or a lease? A partnership may exist even though you don't realize it. How can you tell? The distinction between partnerships and leases is not sharp. A partnership, however, is likely to exist if both landlord and tenant pay management and production costs and share the profit. It's a "lease" that provides for sharing production costs and sharing ownership

of equipment. In a partnership, the landlord helps decide which crops to grow and when to sell them.

You may have a lease agreement which isn't complicated by improvements or a livestock enterprise. In that case, you might properly choose to have an oral lease. Your willingness to accept an oral lease may express your confidence in the other party.

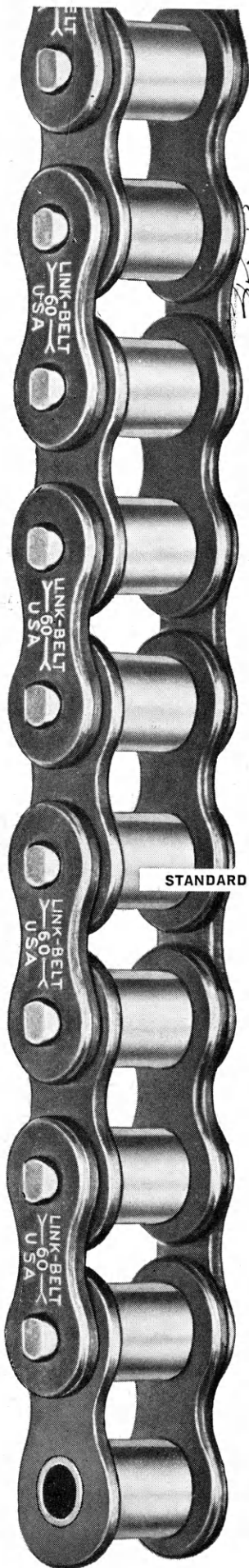
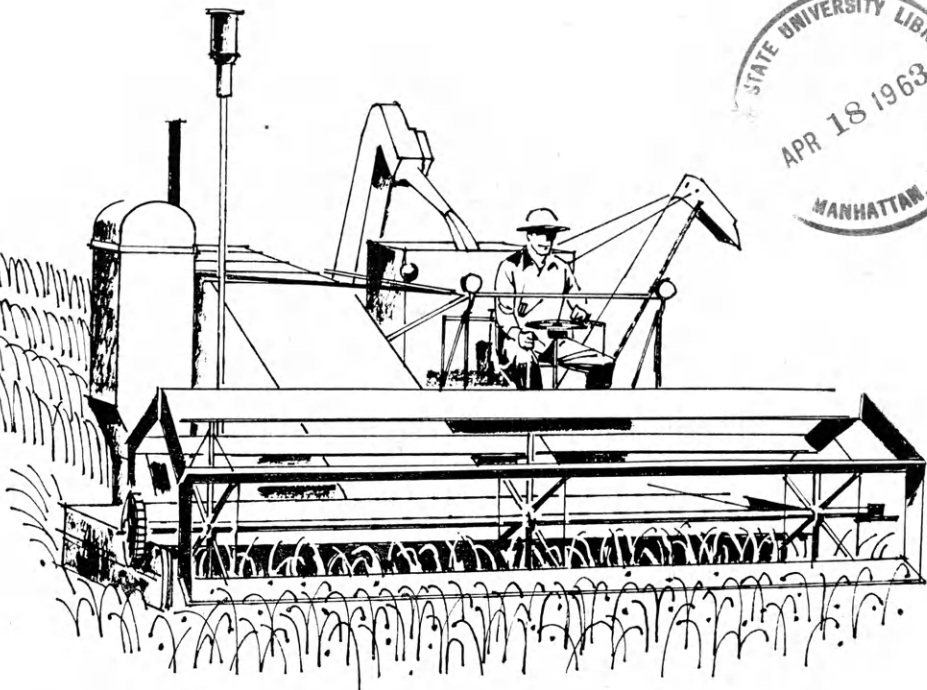
However, provisions for the use of fertilizer, crop rotation, conservation, weed-insect-disease control and other production factors may create special problems on your farm. Include them in a written agreement between the operator and the owner.

### Written Agreement Is Safer

A written agreement accurately reflects the resource productivity of each contributor in dividing the income. According to Wilfred H. Pine, economist, Kansas Agricultural Experiment Station, "The best way to encourage maximum net returns is to share income according to contributions and costs of each party."

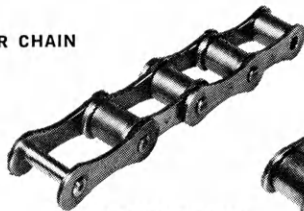
Farm lease agreements bring together land (and buildings) of one person and labor, machinery and other resources of another person to make profit for both. If the landlord and tenant can estimate the value of their contributions to the farm business, and arrive at an agreement, they should specify that agreement in the written lease.

Oral leases for longer than one year are void. Written leases can last for any length of time. Farm tenants who remain, with the consent of the landlord, after a lease expires, normally are tenants from year to year. Legal security of the tenant depends almost entirely upon the specifications in the written lease. Long-term leases or annual leases with automatic renewal provisions give the tenant sufficient security to use the farm resources in the most productive manner.



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


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