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May 1961

Kansas State University
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KANSAS STATE UNIVERSITY
AG STUDENT

Consider Crop Insurance . . . page 10

Prepare for a *Future in Agriculture* . . .

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Many more graduates will emerge from Waters Hall to reap these benefits. Will you be one of them?

KANSAS STATE UNIVERSITY





KANSAS STATE UNIVERSITY

AG STUDENT

Vol. XXXVII

May 1961

No. 6

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Editorial . . .

THIS COMING July 1, Clyde W. Mullen will retire from his position as assistant dean of agriculture here at K-State. Since 1937 Dean Mullen has served as acting dean of agriculture, experiment station editor, was in charge of distribution of station publications, and faculty sponsor of this magazine—the “Ag Student.”

Dean Mullen was presented a special award in 1955 by the honor society, Gamma Sigma Delta, for his “outstanding service in agriculture,” and for his service to the Kansas chapter of the society. He had been secretary of Gamma Sigma Delta continuously for 18 years until the year 1955. He is also a member of Alpha Zeta and Phi Kappa Phi.

As a student here at K-State, I don't know Dean Mullen because of what he has done in the past or because of all the honors he has received. I know him as a person to whom I can talk if I want to get a load off my chest or as the person to see when I need help with a problem.

I'll remember Dean Mullen as the man who talked to me before I enrolled here at K-State. He helped to convince me that I would be doing the right thing by getting a college education.

I'll always remember Dean Mullen by his words of encouragement—and there were many words of encouragement because I've been in his office many times during my four years here at K-State.

This is the Dean Mullen that the students know.

Three years ago the Ag students presented to him a special plaque showing how they felt about him. I think the message inscribed on the plaque pretty well sums up what we as students would like to tell Dean Mullen now. It reads in part:

To Clyde W. Mullen

“Who has influenced the lives of many thousands of agricultural students at Kansas State College (University);

“Who, by example, has taught many young men to appreciate the simple virtues of honesty, trustworthiness, kindness, politeness, and consideration of other people;

“Who has been constantly ready to give selflessly of his time and talents to help students solve their problems;

“To have touched the lives of so many students is a privilege granted to few men; to have done so with such credit to himself and to his profession is a monument built in the hearts of all of us who knew him.

“In behalf of ourselves and past and future students, we present this plaque as a reminder of our sincere gratitude to him and our high esteem for him.”

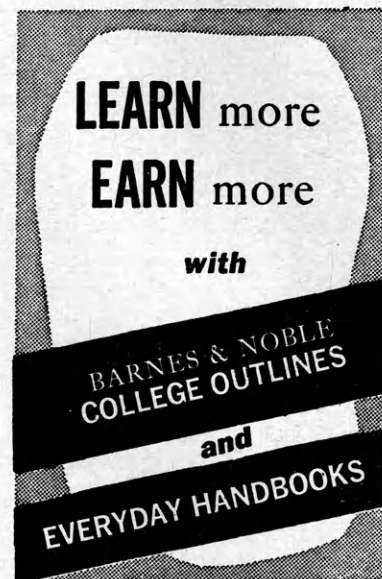
The “Ag Student” staff realizes and appreciates how much Dean Mullen has helped K-State students. We hope that after Dean Mullen retires he will still find time to keep in touch with the University activities and especially the Ag students.

Norman Werner

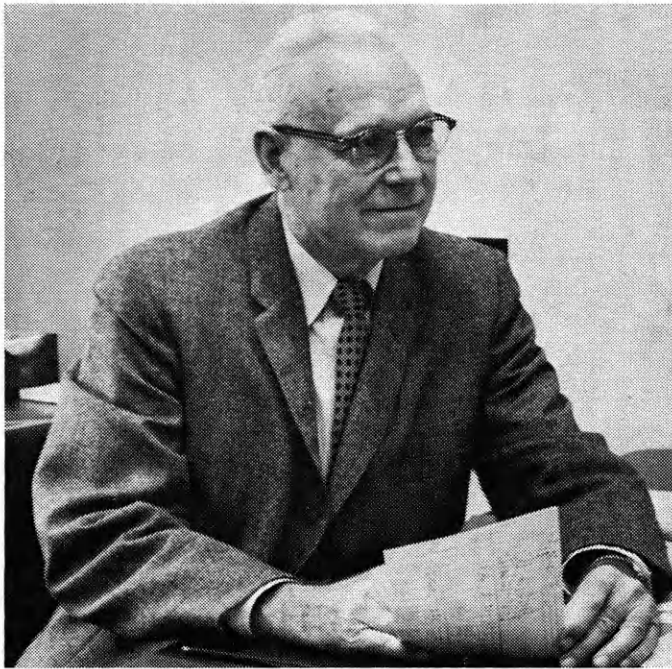


Good Seed Is Good Business

The **K**ansas **C**rop **I**mprovement **A**ssn.
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Clyde W. Mullen, assistant dean of agriculture

POLITICIANS do a "swan song," and old soldiers "just fade away." The editor has asked this retiring assistant dean to do a final Chit Chat, before fading away.

It was Editor Stan Creek who first suggested a Chit Chat column which began in the October issue of the *Ag Student*, 1951. The preceding year, the magazine had carried a column under the heading "Dean Mullen Says." So the metamorphosis has been from "Mullen Says" to "Chit Chat," to oblivion after seven years, and now into orbit again as a sort of prelude to retirement.

Retirement at a time when one is yet in pretty good physical condition is probably a good arrangement. Nice things are sometimes said TO an individual that might otherwise be said ABOUT him. In behalf of fellow compatriots, I suggest this twilight period continue to be observed with appropriate flourishes.

I hope this issue of the *Ag Student* comes into the hands of our seniors in time to remind them to report to the dean's office all of their extra-curricular activities and committee responsibilities that have come their way during their years on the campus.

Through the years, it has been a real inspiration to observe the development of leadership abilities among our boys in the School of Agriculture. The two big events in the *Ag School* each year are the Barnwarmer in the fall and *Ag Science Day* in the spring. These events call for real leadership and initiative on the part of many students. Club activities, judging team competition, work on the "*Ag Student*," and all kinds of committee work give aggressive lads an opportunity to develop the mettle that is in them. The junior and senior years in particular highlight the fellows who will be marked by their instructors, departmental heads, and the dean's office for good recommendations in the years ahead.

The only way graduates can have the full benefit of

Retiring Dean Writes Last 'Chit Chat'

these fine extra-curricular activities, and elections to honor societies is for these things to be recorded on the student's personnel sheet in the dean's office. These sheets are bound and preserved for future reference. Hardly a week passes without a staff member making use of these bound volumes to familiarize himself again with the total record of a given student.

Also, it would be a wonderful thing if, as graduates, our alumni could remember to notify both the dean's office and the alumni office of promotions and changes of address. There are times when a promotion hinges on knowing what advancement an alumnus has made since graduation. Also, it is important to be able to reach the person readily by mail, or possibly by long-distance telephone. These things are more important to graduates than to anyone else.

If it were to be done over again, this desk would take the opportunity to recommend to more students in the School of Agriculture that they include among their electives at least one additional course out of the Department of Speech, after having taken the required course in Oral Communication I. The ability to speak in public and on the radio, and to think on one's feet cannot, in these days, be overemphasized. The persons who get ahead and who do the most for their communities are those who are trained in public speaking.

It would be easy to argue against the continuation of English Proficiency tests. But when the record perennially shows approximately 40 percent of our upperclassmen are failing in this important area of communications, there seems to be no other alternative than to continue the tests.

We won't be on the scene another year to listen to the complaints of dripping students who have just been dunked in a horse tank, nor to answer telephone calls from persons who want to know what's going on here. Our last word on this subject would be, if there must be a horse tank, let's be certain of the identification of the lad about to be dunked and never again make the mistake of manhandling any student who is not in the School of Agriculture.

We now retire from the scene of "How come?" "Who told you?" "You can't do that." "Why are you cutting?" "That sub won't do." "Here is your make-up." "How many grandmothers did you have?" "Your uncle died!" "Better marry the girl." "No, no, no."

And without any authority whatever, we hereby excuse all students in the School of Agriculture from *Ag Seminars* for all of 1961-62.

Take a Look at Pelleting and Wafering



by Neil Dowlin

YOU'VE probably heard that pellets and wafers are the best thing in feeding since the scoop shovel. You may have also heard they are rich man's items and are not worth having in the feedlot.

The trend to let machines do the farm chores has hit the feedlot. With the coming of mechanical feeding has come the demand for ways to process and handle grain and hay with labor-saving machines. The engineer's answer to this has been the pellet and the wafer.

Feeding Ease Versus Feed Value

Results of feeding trials are starting to appear, and they're adding fuel to the fire of controversy. The debate seems to be feeding and handling ease versus nutritional performance. Do the advantages outweigh the cost of pellet and wafer prepara-

tion? This is the question that usually comes up in the controversy.

From the feeding and handling standpoint, pellets and wafers save labor and storage space. So far it's difficult to say for sure how pellets and wafers affect the nutrition of animals.

Use Pellets for Creep Feeding

Pellets are popular for creep feeding and can often be delivered in bulk lots and unloaded directly into the feeder. Mixed grain can be put into the same pellet with hay. This cuts out the habit of animals picking out the grain and leaving the hay. The more grain and less roughage beef and dairy cattle eat the more they will be bothered by bloat.

In most cases you can generalize and say that pelleting by itself increases palatability and the amount eaten. How much is eaten depends on the taste of feed and ease of eating rather than stomach capacity. For these reasons livestock will usually eat more low-quality feed when it's

pelleted, which means more gain from low-quality feed.

The process of grinding the feed, making the pellet, and sacking takes specialized machinery. Extremely high pressure is needed to form the pellet and this takes heavy equipment. This kind of machinery is costly because of the high horsepower needed, and its low hourly output.

The more detailed items of the pellet controversy deal with how finely the feed should be ground, and how much moisture to use in forming the pellet. Another question is how much roughage should be put in grain-roughage pellets to get the best gains.

Particle Size Is Important

In beef cattle you get more gain when the grain and hay are ground into a small particle size. Beef cattle are able to convert the smaller size into meat better than coarse sizes. The difference is mostly a chemical change in the metabolism process. Smaller particle size, however, causes a decrease in the butterfat content of milk in dairy cows. For that matter, high-concentrate levels in relation to the roughage level will also cause a slump in butterfat content. The problem seems to be that the concentrate ratio and particle size—among other things— influence whether or not the chemical processes of metabolism cause the food to be used for butterfat or for body flesh.

"As far as we can tell beef and mutton animals can get along with all their roughage in a pellet or wafer," comments Carl S. Menzies, assistant professor of animal husbandry at K-State. "But, if you don't feed some long hay or some silage with the pelleted ration they soon

Pellets are formed from finely ground grain and roughage with this machine. The materials are dampened by steam and forced out the small openings under the man's left hand. The pellets are then cut to the desired length and dried immediately.





Even this new self propelled baler may be obsolete. As the cost gap between pellets and bales continues to narrow, pelleted rations may save you money.

start to eat bedding or to chew fences.”

He recommends the following procedure for lamb pellet feeds. Grind the hay through a one-fourth inch screen and make the pellets in either a three-sixteenths or one-fourth inch diameter. A creep ration pellet should contain about 40 to 50 percent corn or milo and about 50 to 60 percent ground or dehydrated alfalfa hay.

Cost Is a Limiting Factor

Wafering and pelleting operations are limited to large-volume businesses. One of the limiting factors is the cost of the machinery needed to withstand the high pressures of pelleting. Each size pellet is made from a different “die,” which pushes the cost of the equipment even higher. Manufacturers of this equipment are gradually solving these problems. Large amounts of money go into the experimental end of perfecting these specialized machines and then adapting them for commercial use. The result is that it’s quite costly to put your feeds into the pellet or wafer form. Average additional costs are \$8 to \$10 per ton for the complete process.

Wafers are still so new that no one seems to know much about them. They are usually biscuit shaped in a variety of diameters up to four or five inches. The main difference be-

tween wafers and pellets is that the material for wafers isn’t ground before it’s compressed into the finished form. Often the wafer is used with roughage feeds only. The hay, for instance, may be run through the wafer machine at about the same moisture content as when it’s baled. But it takes a lot of power to force the wet hay into the small wafers. No one is really sure what shape the wafer should eventually take on: round, cube, biscuit, or rectangle.

Some machines on the market look much like a hay baler and operate in the field. This seems to be the more practical way to handle wafers because roughage is bulky material. Hauling loose roughage to a mill for processing would defeat much of the purpose of wafering.

Wafers Take Less Storage Space

Wafers need about one-third the room taken by bales, or one-fifth to one-sixth that needed for chopped hay. As an example of their density and compactness, a semi-trailer truck

could hold about 25 tons of wafer hay and a rail car about 50 tons. Here again you stand to save labor in feeding and handling, for you can use elevators much like you do for ear corn. Another money saver is the fact that you don’t have to insure the hay shed for fire damage. The dense and compact wafer wouldn’t be much of a place for fire to spread.

Both pellets and wafers have come a long way the past few years, but they don’t seem to be the best all-around answer to the feeding chore. If you are a commercial feeder they probably will pay off dollar-for-dollar. But feeders who want to use their own forage and grain will probably find the current extra cost not practical.

Pros and Cons of Pelleting

Here are the pellet advantages in a nutshell. You may save up to 10 percent of the feed that would be wasted and gains may be higher with low-quality feed. Ration pellets usually reduce the number of sick animals caused from overeating. You’ll save money for labor and storage. Medicated feeds may be included in the pellet ration. Increased consumption of feed may bring on more gain and do it more efficiently.

The drawbacks seem to be mostly the additional cost of processing. Finely ground feed, whether pelleted or non-pelleted, is more likely to cause bloat than coarse feed. Much work needs to be done to determine the best way to feed concentrate-roughage pellets.

Wafer machines like this are becoming popular. The hay is compressed into round or cube shapes which can be handled with grain elevators. This saves you time and labor.



Plan Now For a Happy Retirement

by Linda Hitchcock

As soon as your children graduate from high school it's time to think about retiring.

LET ELDERLY people have their independence as long as possible," advises Miss Tessie Agan, associate professor of family economics at K-State. "Contrary to popular belief, the tendency now is for older persons to live in their own homes and maintain, as well and as long as they can, the independence so dear to them."

Of the population group (persons 65 years of age or older) studied in Kansas 79 percent live in their own homes, 18 percent live in 2-generation families, and 3 percent live in 3-generation families. The 3-generation families consist of the husband and wife, children, and grandparents. Kansas ranks fifth or sixth in the nation as having an older-aged population. More than 11 percent of the Kansas population is over 65.

"As soon as your children graduate from high school and are in college, and when you have reached the prime of life, you should then plan ahead for old age," Miss Agan pointed out. "The older population does not move often. Therefore, they should begin to make their homes comfortable and safe for old age. Then they can enjoy their homes until it becomes absolutely necessary for them to go elsewhere—to a publicly or privately supported old-age or nursing home, or to one of the new housing developments especially designed with elderly people in mind.

Don't Isolate Elderly People

"Older people appreciate nature and suburban living, but usually prefer not to be isolated completely from activity and community life. This is why the new housing developments for elderly people are such a good thing. They provide comfort,

Relaxation is important to elderly people and since they are less active, the room temperature should be more closely regulated. Older people catch colds more easily.



When planning a home for retirement, one thing that is very important is location. All needed facilities should be close by.

safety, and companionship, as they are more or less a 'little city' in themselves. They have a business district as well as a conveniently located residential area." Miss Agan said she was not aware of any such development as yet in Kansas, but they are becoming popular throughout the nation.

Select a Good Location

"It is when you get old that convenience becomes a necessity, safety becomes paramount, and standards for comfort become more exacting," commented Miss Agan. She went on to describe how a house can be made safe and comfortable for old people.

The first thing to consider when planning a home for the retirement years is its location. Transportation, shopping areas, health services, and places of worship should be easily accessible. The neighborhood should be residential in character, but not over-run by children or limited to elderly people. As a person ages, his desire for a calm and quiet atmosphere increases.

Since many broken hips and arms are a result of falls on walks and steps. These surfaces should be rough to prevent sliding. Hand-rails are a must on any stairs or steps. It takes three times as much energy to walk



upstairs than on level ground. So keep this in mind.

Prevent Accidents in the Home

Now let's look at the inside of the house. Smooth, slippery floors are extremely dangerous, and throw rugs—unless securely tacked down—are strictly out. Any obstruction on the floor can cause a fall. Remember, broken bones of an elderly person take many months to mend. Storage

spaces should be easily reached without having to climb on a chair or other object.

"Grab-bars should be mounted on the walls around the bathtub, shower, and near the stool. These are safety items that shouldn't be overlooked," stressed Miss Agan.

Have electrical outlets conveniently located, with no furniture in front of them. Night lights in the bedroom-bathroom area are a safety must.



The older population does not move often so it is important that they consider this when selecting a home in which to live after retirement. Comfort is most important.

Window Area Is Important

Young people like to receive direct sunlight and be able to see outdoors. This is especially important to elderly persons, too. "Window area in each room should be equivalent to at least 10 percent of the floor area, and 20 percent is desirable," she says, "particularly in the living-dining area." Face large windows to the south for the warmth of winter sunshine.

Less active people require more heat for comfort than others and their sensitivity to drafts and cold spots in a room increases as they get older. Likewise, excessive heat and humidity are uncomfortable.

"These are just a few suggestions for making the lives of elderly persons more comfortable," Miss Agan says. "Independence—so very important in later years—can be obtained by careful and early planning."

Make your retirement years truly those "golden years"!



If You Can't Afford Crop Failure

Consider Federal Crop Insurance

by Norman Werner

UNLOAD Bill's machine the next time around. He'll have a tankful. We want to keep those combines moving and get as much wheat off as we can. That storm's going to hit before they need fuel so I'll take the pick-up home and start closing the granaries. It looks like there's going to be a lot of wind in this one—maybe hail. Man, I wish I had my crop insured!"

"O. K., Dad," I yelled as he gunned the pick-up around and headed for home. While I waited for Bill to make a round, I opened the door of the 2-ton truck and gazed out of the cab at the menacing-looking clouds boiling out of the west. It was humid and deathly still. Sharp bolts of lightning were becoming more distinct, and the distant rumbling of thunder gave warning of the approaching storm. The front

was moving in fast. It didn't look good.

Maybe Dad should have insured his wheat against hail damage. But then a while back we were afraid that the drought would end all hopes of getting a crop. Luckily it rained in time. Maybe it won't hail now. Anyway, farming is one big gamble, I thought.

I leaned back, dropped my feet out the door, and began thinking about an article on crop insurance that I had recently read.

You get all risk coverage on your crop. That's the big selling point of the Federal Crop Insurance Corporation's Production Guarantee Plan. It was test written on only a few crops last year, yet policy-holding farmers received payments based on more than 118 different causes of crop loss. Droughts throughout the nation ac-

counted for 2 out of 5 indemnity claims. Other causes ranged from too much moisture, hail, insects, freezes, diseases and wind to earthquakes. Maybe this plan can help take the gamble out of farming, I thought.

There are, however, some things that the policy won't insure against. One is low prices; policies pay off only on low yields or low quality. But crop insurance won't pay an indemnity if the low yield or low quality is the result of poor farming.

Don't Expect a Profit

Don't expect crop insurance to guarantee you a profit. It won't. The top amount of protection you can buy is limited to the approximate cost of producing the crop. If a profit-guaranteeing plan were written, the price tag on it would be way out of reach.

One of the big disadvantages of crop insurance is that, so far, its coverage is restricted to farmers in a limited number of counties, and on a limited number of crops. In Kansas the plan insures wheat production in 101 counties out of the total 105 for pretty good coverage. Wyandotte, Leavenworth, Morton, and Comanche counties are the only 4 not covered because they are not large producers of wheat. But the Production Guarantee Plan insures only 9 counties for corn production, 3 for soybean production, and 1 for sorghum production.

Anyone who has a financial stake in a crop on which protection is of-

Last year policy-holding farmers received payments on more than 118 different causes of crop loss. Droughts within the nation accounted for 2 out of 5 indemnity claims.



nce

ferred is able to insure—owner-operator, landlord or tenant. Once the quantity and quality of production to be guaranteed are declared, you select the number of dollars of insurance protection you want. The premium is set accordingly.

Suppose you want to insure your wheat crop. Federal Crop Insurance will guarantee roughly 10 bushels per acre of No. 3 wheat in your area—enough to approximately equal your production expenses, but obviously not enough to net you a profit. The policy pays off if your average yield or quality is below this guarantee.

The amount of payment depends on the amount of protection you select. You may choose \$5, \$10, \$25, or \$30 per acre.

Following the above example, assume you select \$25 per acre of insurance protection, and instead of the 10 bushels per acre guaranteed your yield is trimmed by hail damage to an average of 5 bushels. That's a 50 percent loss, so your indemnity check is half of \$25 or \$12.50 per acre.

Appraisements Are Used

Your policy will call for a slightly higher indemnity if the damaged crop is harvested than if it's unharvested, because of the additional harvesting costs. If the crop is too badly damaged, however, you don't have to harvest it. Instead, you may have the Federal Crop Insurance adjuster appraise what's left. Your payoff will still be determined by the above



Too much rain can do as much damage as a drought. Crop insurance, however, insures your crop against low yields and low quality from planting time until after harvest.

method. But instead of knowing for sure how many bushels per acre there are left (by actually combining the crop) you will have to use the adjuster's estimated figure.

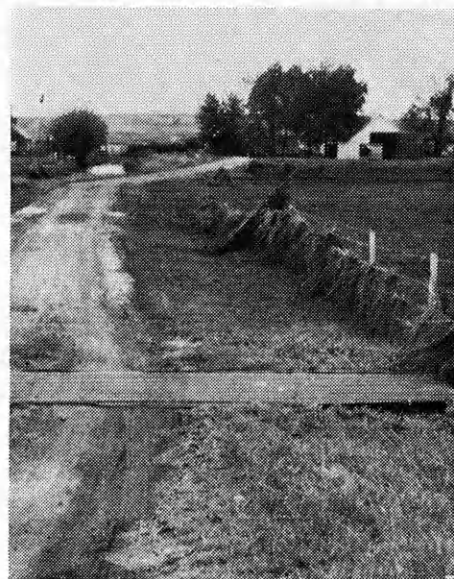
Policies Cover Low Quality

What if the yield is up to or above your guarantee, but the quality isn't? For example, you harvest 25 bushels of wheat per acre, well above the 10-bushel guarantee, but because of streak mosaic it doesn't meet the No. 3 grade requirements. Your payment is then calculated on a price basis.

Suppose your mosaic-damaged wheat sells for only 40 cents a bushel locally while No. 3 wheat commands 5 times that amount or \$2 a bushel. In such an instance your 25-bushel average is figured as being equal in value to only one-fifth as much—5 bushels—of No. 3 wheat. Since your guarantee was 10 bushels per acre you are paid on the basis of a 50 percent loss, the same as though you would have harvested only 5 bushels per acre.

Premiums are higher for some crops than for others, and they're higher in some counties than others. The reason is that the cost of crop insurance is tied directly to local crop risks. The higher the risk of losing a crop the higher the premium.

Average premium rates in Kansas



If a crop is too badly damaged you don't have to harvest it. Instead you may have an adjuster estimate your indemnity claim.

run about \$12.50 for every \$100 of protection. But because of differences in local risk areas, Western Kansas farmers can expect to pay about \$23 for every \$100 of protection while Eastern Kansas farmers pay approximately \$8 for every \$100 of insurance coverage.

Who really comes out ahead on crop insurance—farmers or the Federal Crop Insurance Corporation? It looks like they're both breaking about even. The National Agricultural Research, Inc., figures, showed that the Federal Crop Insurance Corporation

has returned to policyholders more than 97 cents of every premium dollar. The Federal Crop Insurance Corporation has been operating in Kansas for 23 years. It collected \$33½ million and paid out as much by the end of 1960.

You Can Reduce Premium Costs

If you're thinking about buying Federal Crop Insurance you can cut premium costs. You save 20 percent or more automatically. That's because the premiums you pay for crop insurance are fully tax deductible. The net cost to you is 80 percent (or less) of the regular premium, depending on your tax bracket.

You can pocket a 5 percent discount by paying your premium early. The deadline to collect the discount is within 30 days after planting. Equally important, premiums not paid by a deadline date following harvest are automatically upped 10 percent.

If you carry crop insurance for three consecutive years without a loss you can collect an additional 5 percent discount. And the longer there's no loss the bigger the discount. After 4 years it's 10 percent, 5 years it's 15 percent, 6 years 20 percent, and after 7 years 25 percent.

Use Insurance for Collateral

Crop insurance can pay off indirectly at least, even if you don't suffer a crop loss, as a top-notch collateral when you need credit. It's a convenient and effective way of assuring the lender that even if the crop he has loaned on should fail he will be paid. This certainty may open the door to credit that might not otherwise be available.

"Is crop insurance a good buy?" I said half aloud to myself as I pulled my feet back into the truck and slammed the door shut. Since it's going to take a sizable chunk of cash, a person better think it over before he scribes his name across the dotted line, I decided as I watched Bill swing the combine around the last corner at the far end of the field.

You can't buy crop insurance with the idea that you're going to "make money" on the deal. For every farmer that, over the long run, has collected more than he's paid in, others have collected less, I thought.

Crop insurance is simply a way of spreading the risks of farming over a



Since it's going to take a sizable amount of cash a person better sit down and think it over before he decides to buy crop insurance. You won't "make money" on the deal. At best you can only expect to receive enough cash to cover your production expenses.

number of crops, a period of years, and among many farmers. You can't get around this. Crop insurance won't turn a bad year into a profitable one. At best it's a way to break even when disaster hits. It's no substitute for a good crop.

Another thing — you can't just wait for a bad year and expect to get Federal Crop Insurance. In a year when the odds at the outset are stacked against growing a normal crop the Federal Crop Insurance Corporation, operating under a congressional mandate to pay its own way, may decline to make additional policies available. It will stick with its regular policyholders, however, even when crop prospects are poor.

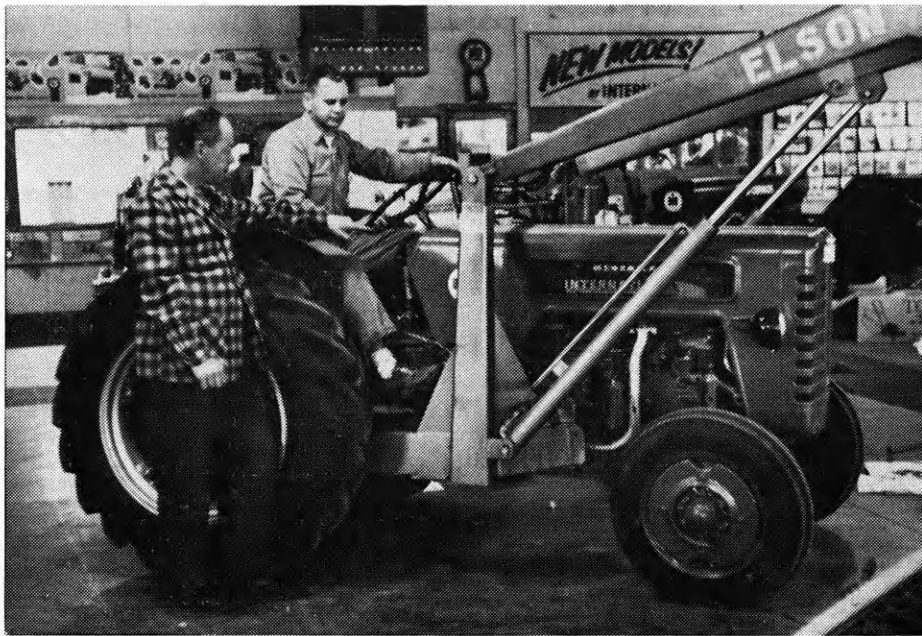
Consider Crop Risks

It seems to me if you are in a solid financial position to shoulder the risks yourself, and if your luck turns out to be no worse than the average, then you probably don't need crop insurance. But according to statistics presented by the National Agricultural Research, Inc., the risks are pretty big.

In 1959 13 million acres of planted crops were abandoned before harvest. And 1959 was no fluke year. Even in 1958 when yield averages reached an all-time high, some 10 million planted acres failed to produce a crop. This doesn't take into account the millions of acres that, although harvested, produced low yields or low quality.

Before you decide to foot these risks on your own, figuring you may come out as well in the long run without crop insurance, remember long-run profits won't pay those short-term bills. With today's steep production expenses it's hard for the best-heeled farmer to survive a solid run of bad luck.

The roar of Bill's combine broke my line of thought. I started the truck and waited for Bill to turn the corner before driving alongside. It was thundering louder now, and along the horizon I could see puffs of brown dust silhouetted against the black clouds. I figured Bill would be able to make one more round before the storm broke loose. I too hoped it wouldn't hail. One thing, I thought, it's too late to insure now.



Two and three plow diesel powered tractors are being sold on the theory of lower fuel costs. But remember that you have to pay more for a tractor that burns cheaper fuel.

to work with. Most of them now are direct start and aren't any harder to start than a gas-operating tractor. One company estimates that nearly 40 percent of the tractors being sold are diesel.

In the big tractor field this isn't hard to see, because the more efficient big motors are diesel. A diesel motor really comes into its own when the motor runs for hours under a load. This is when a diesel motor is efficient. Operating temperature is up where it should be, and the motor is under a load at all times.

Keep Diesel Fuel Clean

George Larson, head of Agricultural Engineering at K-State, has this advice to farmers who have or are thinking about getting a diesel tractor. "Make sure that you are buying clean high-grade diesel fuel, and keep it clean." Larson says that farmers should be especially careful to keep the fuel clean, or they are headed for trouble.

"Another thing that's vitally important on a diesel engine is the air cleaner," said Larson, "especially since a diesel motor pulls the same amount of air at an idle as it does under full load."

Overhauling Costs Run High

One more thing you should consider is that while under good conditions a diesel motor will run longer than a gasoline motor before needing an overhaul. But when it does need overhauling it will cost more. Also, it will take more than a "shade tree" mechanic to overhaul a diesel motor. Injector pumps are precision equipment, and most farmers don't have the tools to work on them.

Remember, the diesel motor will need an oil change more often, and will require a premium grade of motor oil. This will boost operating costs a little.

True, when you think of big tractors it is natural to think of diesels, but at the present time it would be wise to think things over carefully before buying a small (two- or three-plow) diesel tractor. Make sure you will actually save the money you think you might.

Small Diesels

Lower Fuel Costs Aren't Everything

by Arnold Good

WHY shouldn't I buy a small diesel tractor, when diesel fuel costs only 15 cents a gallon, and gas costs 22 cents.

Is this what your cost-conscious mind has been thinking? If so, let's look at the pros and cons of owning a small diesel tractor. Let's take a look at this economy feature. Depending on what make you buy, the selling price of a two or three-plow diesel tractor will run from \$300 to \$600 more than a gasoline tractor the same size. Now if you want to save this much on fuel bills you've got a lot of tractor driving to do. The fuel consumption on these small tractors will range between one and two gallons an hour. Fuel consumption on a gasoline tractor of the same size will run about the same. So, you save only

the difference in price between diesel fuel and gas, which is about seven cents an hour.

Statistics prove that the average tractor in Kansas runs about 700 hours a year. Let's use this as a base figure. A small tractor is more likely to be used as a utility tractor and will run fewer hours in a year's time. So let's say that you run the small tractor only 500 hours a year.

You see, your saving has been exactly \$35, which doesn't amount to very much. Another thing to consider is the fact that the diesel is not at all adapted to short running periods. When a diesel runs for a short time, and the operating temperature doesn't get up where it should be, repair bills are just ahead. Cold operating temperatures play havoc with injector nozzles. They foul up and burn up. The engine just doesn't have the power it should.

Diesel tractors are becoming more popular today as they become easier

During the Summer Rush

Prepare 'Hasty' 'Tasty' Meals



Summertime poses a problem for some homemakers, but not for the wise one who has some basic main dishes in the freezer. Spaghetti is a natural for the thaw and serve meal.

You can prepare quick, hearty menus in a short time with little effort.

by Doris Imhof

BUSY HOMEMAKER!! How many times have you been right in the midst of some big job and glancing at the clock you suddenly realize it is only a few minutes until time for lunch or dinner? Soon those hungry men will be in to eat, or the children will be home from school and you have nothing prepared for them to eat.

Then is when you need some easy, quick, hearty, and economical spring and summer menu ideas. Decide on the main dish, and you are well on your way to having your meal problem solved. The main dish is the hub around which the rest of the meal is built and usually constitutes a large

proportion of the protein, as well as the cost of the meal.

You are, for sure, a wise homemaker if you have thought ahead to the harvest season by preparing frozen foods which you can serve in a matter of minutes. Cakes, pies, cookies, precooked meats, casseroles, and bread are nice to keep in the freezer all year 'round for quick family meals or unexpected company.

Then there comes the day when you simply haven't had time to freeze foods and you don't have a thing prepared.

Planned Menus Save Time

Here are some menus which are hearty for working men or growing children, economical, and can be prepared in a short time with very little effort. The best way to save time is to prepare *first* the portion of the meal which takes the longest to cook. Then while it cooks you can go ahead and prepare the rest of the meal.

MENUS

Spaghetti Casserole with
Tomato Sauce and Cheese
Buttered Carrots
Tossed Salad
Whole Wheat Bread
Butter or Margarine
Canned Plums
Milk

Broiled Hamburger Steak
Steamed New Potatoes with
Parsley Butter
Buttered Spinach
Sliced Tomatoes
Toasted Buns Butter or Margarine
Ice Cream

Cheese Charlotte*
Beets in Lemon Sauce
Baked Potatoes
Lettuce Wedges with French Dressing
Pineapple Chunks
Peanut Butter Cookies
Milk

* Recipe for CHEESE CHARLOTTE

7 slices white bread
1 bouillon cube
1/2 c. boiling water
3 T. butter or margarine
3 eggs
1 T. flour
1/4 c. instant dry milk
1/2 lb. (2 1/2 c.) grated Cheddar cheese
Dash salt
Dash nutmeg
3/4 c. (6 oz.) evaporated milk

Start your oven at 350° F. or moderate and get out a 1 1/2-qt. casserole or baking dish. Cut 4 slices of bread into little cubes and soak in mixture of bouillon cube and 1/2 c. boiling water.

Work butter or margarine in a mixing bowl until soft. Then stir in egg yolks, one at a time, flour and instant dry milk smoothly. Add soaked bread cubes, cheese, salt, nutmeg, 1/2 c. evaporated milk and mix well. Beat egg whites until they hold a shape and then stir into cheese mixture gently.

Cut remaining slices of bread into strips or points, dip into remaining 1/4 c. evaporated milk (diluted with 1 T. water) and arrange around edge of baking dish. Pour cheese combination into center of dish and bake 30 to 35 min. Serves 4.

(Continued on Page 18)

Plan Carefully for Attractive, Efficient Farmsteads

You'll save time and money if you put your building ideas on paper before you start to build.

by *Claudette McInnis*

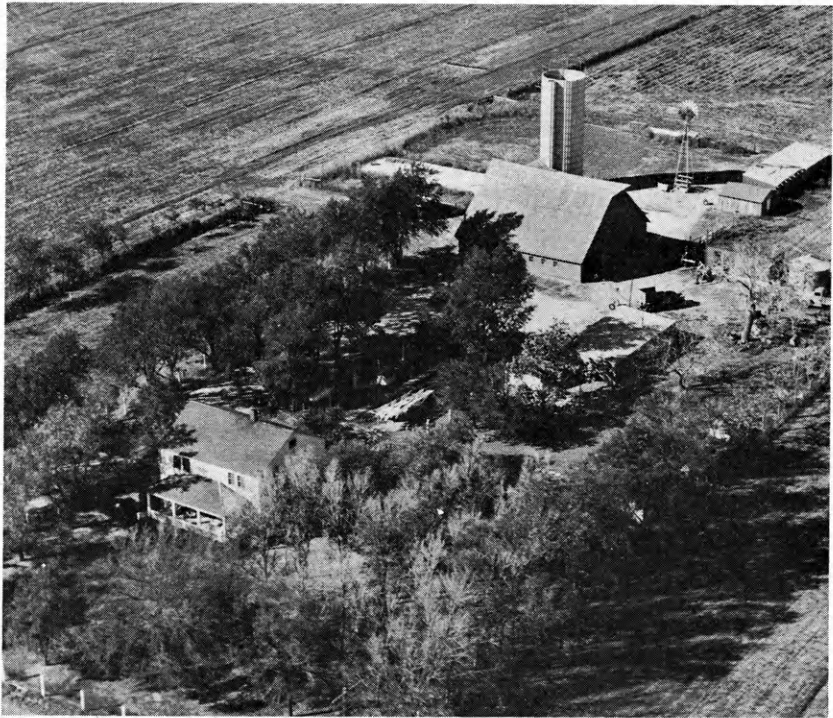
WHETHER you are planning to change an old farmstead or build a new one, you will save time and money by making your plans on paper. Efficient, economical, attractive farmsteads don't just happen. They require careful planning. Don't plan your farmstead the piece-meal way, but make your layout satisfy future needs.

The hub of your farm business is the farmstead. It is made up of the house and the surrounding area including livestock shelters, grain and machinery storage, gardens, lawns, orchards, windbreaks, and lots or corrals.

First Select a Proper Site

When you begin planning a farmstead, the first thing to do is to select a site. It should be centrally located on the farm and have access to an all-weather road. This site must have adequate drainage. Precaution must be taken not to build on a flood plain. Drainage from the livestock area must be away from the house and yard. Therefore the house and lawn should be located on high ground.

The water supply is also an important factor in selecting your site.



Planning is very important in developing a farmstead, because at the present cost of putting up buildings and fences you cannot afford to do it over again.

Your well should be located 50 feet or more from the barn lots and 100 feet from other sources of pollution. Place the well on high ground to avoid surface contamination and build a sanitary cap over the well to keep out surface water. An elevated tank, hillside reservoir, or automatic pressure system may be used to force water into the house and to poultry and livestock.

A Service Area Is Convenient

Locate farm buildings at the edge of a central court or service area, which should be 80 to 100 feet wide. In this area you should have access to all farm buildings, and be able to go to the buildings from the house without having to open gates. The area in the open court provides work space, trees for shade and beauty, and

enables you to chore with a minimum of walking.

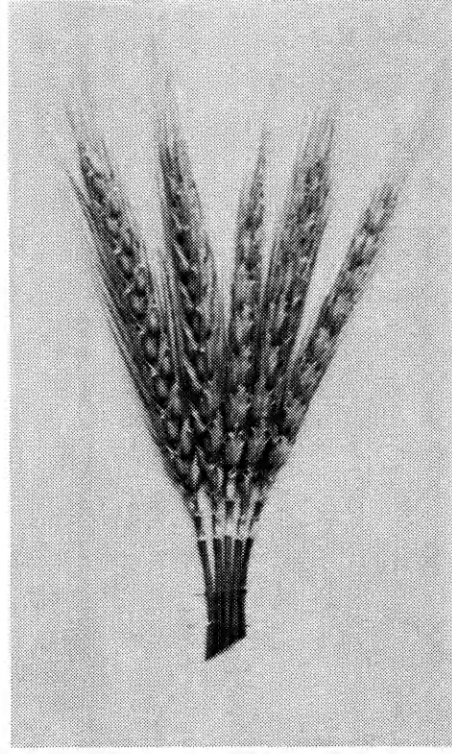
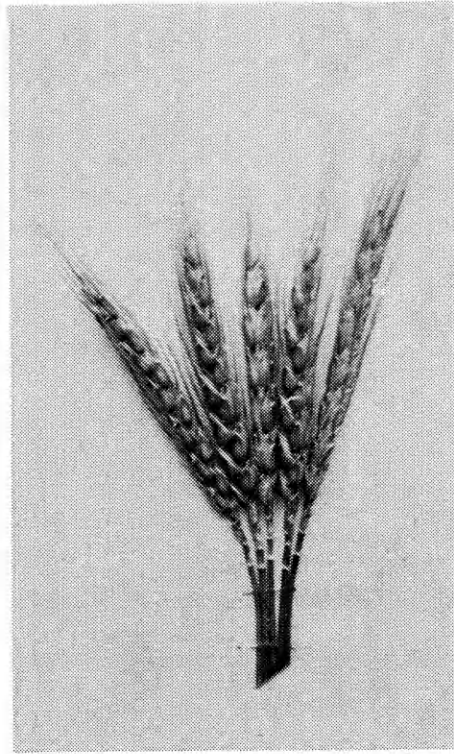
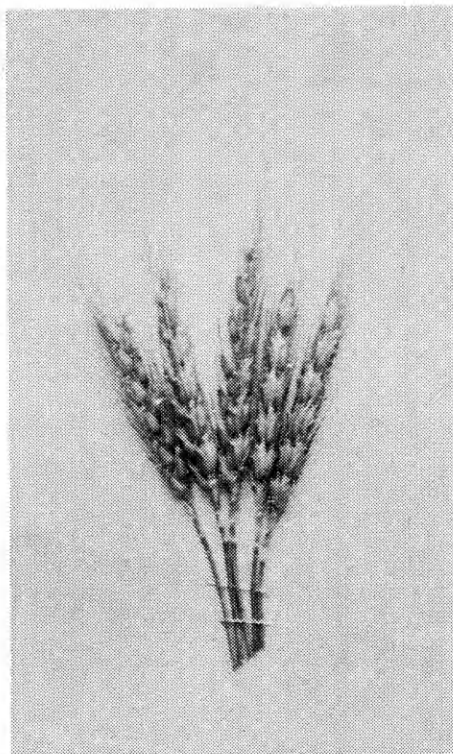
You will want to surface the much-traveled portions of the court with oil, gravel, or concrete to provide a hard surface for moving trucks and machinery. Stock guards may be used in fences between the court and fields to permit passage of tractors and other machines without opening gates. A gate at the side of the stock guard enables you to drive livestock from one area to another.

Properly Locate Your House

The house needs careful consideration in farmstead planning. It should be located at least 100 feet from the public road and should be the first building you see when approaching the farmstead. The work area of the

(Continued on Page 18)

Soil Testing Is The Key to Profitable Fertilization



Here is what nitrogen will do for wheat. From the left, the heads show, no nitrogen, 50 lb/acre nitrogen, and 100 lb/acre nitrogen.

by *Don Haberer*

WOULD YOU like to increase your corn yield on that east forty? Perhaps this year your wheat doesn't look as good as your neighbor's across the fence. Of course, he fertilized last fall.

"Sure," you say, "I'd like to increase my yields but how do I know whether I need fertilizer and how much should I put on?"

"A sound basis for efficient fertilizing on your farm is a thorough soil-testing program," explains Dr. Floyd W. Smith, professor of agronomy at K-State. "Accurate soil tests enable the farmer to determine what plant nutrients need to be added to grow various crops."

Except for the extreme southeast corner of Kansas, the main soil deficiencies are nitrogen and phosphorus. Potassium, more commonly known as potash, may be deficient in southeast Kansas soils. Fertilizing

will generally produce the best results where soil fertility has been depleted by continuous cropping of corn and other small grains.

What crops should you fertilize this time of the year, and what plans can you make for the coming months?

Corn and Sorghums Need Nitrogen

A logical place to start is with the corn or sorghum that you have just planted or will plant in the next few weeks. Corn and sorghums usually respond best to nitrogen and are not likely to show much response to phosphorus or potassium. Ammonium nitrate, which contains 33.5% nitrogen, applied at the rate of 120 to 240 pounds per acre should do the job under most conditions. If the corn is to be grown under irrigation, the equivalent of 120 to 160 pounds of actual nitrogen will give best yields. For sorghums under irrigation, 60 to 80 pounds of actual ni-

trogen should be sufficient. Nitrogen fertilizer can be either broadcast, deep placed at planting, or side dressed at first or second cultivation. Fertilizer should be placed near, but not in direct contact with the seed, or the stand will be reduced.

Soybeans are another crop which can be fertilized. However, response to fertilizers by soybeans has been scattered and recommendations are made for low fertility soils such as are found in southeast Kansas. Broadcasting and plowing under 200 pounds of 0-20-0 during May give best results in this area.

Fertilization of alfalfa in Kansas is restricted to phosphorus, in most cases, with some potassium being used in southeast Kansas. Also important in alfalfa growing is the practice of liming acid soils, since this legume prefers slightly acid to alkaline soils. Phosphorus should be drilled or broadcast just before seeding at a rate of 40 pounds of actual phosphorus per acre. If both potassium



Wheat is the biggest user of fertilizer in Kansas. It can either be drilled with the seed or top dressed with rigs like this.

and phosphorus are required, 200 pounds per acre of 0-20-20 should prove adequate. Top dressing of old stands of alfalfa can be done at any time, but a fall or winter application is best. This allows time for the roots of the plant to come in contact with the fertilizer for best growth of each cutting the next season. Similar results will be obtained with other legumes.

Wheat Responds to Fertilizers

Wheat, the principal cash crop in Kansas, commands the most widespread use of fertilizer. Sixty to 150 pounds per acre of ammonium nitrate or its equivalent drilled with the seed or top dressed before March 15 will meet nitrogen requirements. If phosphorus is needed, 30 to 110 pounds of actual phosphorus applied at planting time should be an ample amount.

Other winter cereals such as barley require essentially the same applications as wheat. When top dressing these small grains, be sure that the vegetation is dry, or serious burning of the foliage may result.

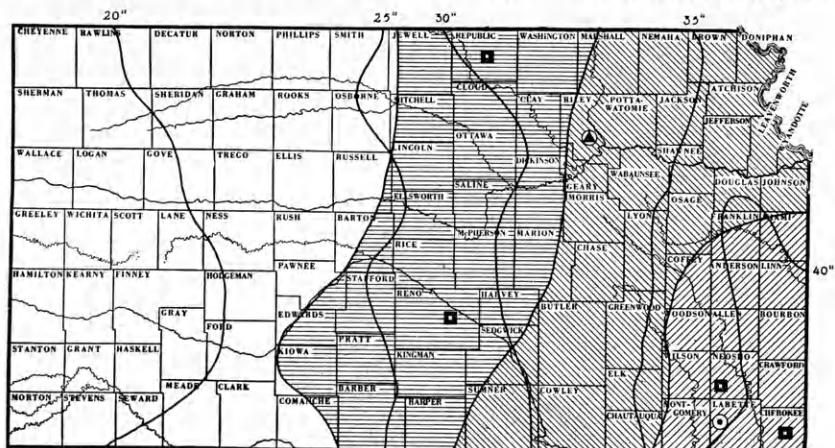
What type of fertilizer is best—dry or liquid, mixed fertilizer or one supplying a single plant nutrient?

Consider Convenience and Cost

"The type of fertilizer to use depends on the convenience and cost as they relate to each individual farmer's situation," Dr. Smith points out. "So far as results are concerned, one type will do just as good a job as another if each is applied under similar condi-



Alfalfa prefers slightly acid or alkaline soils, so application of lime is very important if your soil is acid. Note the difference between the alfalfa on the left which grew on limed soil and that on the right where no lime was applied.



Soils which are acidic enough to require liming are found in Southeastern Kansas. The area is shown on this map inside the curved line which cuts the Southeast corner of the state. The area is made up of about 15 counties.

tions and the amount of actual plant nutrients is the same."

Naturally, fertilization does not insure overnight success. Normal weather conditions in Kansas are too varied and undependable for maximum yields every year.

Will it pay you to fertilize? You probably won't know for sure until you try. However, you must consider the value of the individual crop and decide whether it will pay the cost of the fertilizer and increase profits through increased yields.



When planning a farmstead, work on the principle of fencing livestock into areas, not out of areas such as the yard or lawn. Pigs or chickens running loose cause trouble.

Farmstead Planning

(Continued from Page 15)

house should be arranged where the housewife has a clear view of the driveway and all farm buildings.

Many front doors are unused in farm homes because they can't be approached from the driveway. For best results the front door should be directly off the drive. Plan to have a parking area next to the drive, with plenty of room for trucks and machinery to pass parked automobiles.

Plan your driveway to run along one side of the lawn. It should be 12 to 18 feet wide, but be sure you allow 30 feet between fences or plantings for movement of wide machines.

Problems of exposure and ventilation can generally be solved through the design of the house. The convenience of getting to the drive and farm buildings should not be sacrificed to gain the advantages of breeze and sunlight. Many people think the house must face the road, but this isn't true. The house should be built for convenience.

Plan an Outdoor Service Area

Provide for an outdoor household service area in your plans. This should include space for clothesline, fuel storage, and a storm shelter if desired. All these should be located near the service (rear) entrance of the house.

Vegetable gardens, small fruit areas, poultry yards, or grass lots should be located next to the home grounds.

The garage should be close to the house or may even be attached to it. Insurance companies no longer charge

a higher rate for fire protection in such cases.

The septic tank may be located as close as 10 feet to the house. It must be at least 50 feet from the well, and the disposal field down hill at least 100 feet from the well. Grass is the best coverage over the drainage tile, but be sure you leave a minimum of 50 feet between the drainage field and trees. This prevents the outlets from becoming clogged with roots.

Electricity is the cheapest and best source of power for your farmstead. Plan for the future by wiring your farmstead for maximum use of electric service. Install wiring and circuits with sufficient capacity to operate additional appliances and motors that you may wish to use at a later date.

For a more attractive farmstead you may not want to put a fence around the lawn or along the drive. It is better to fence chickens and livestock in pens than to try to fence them out of your yard. You must give careful thought to the location of gates. A small by-pass will save frequent handling of heavy gates in doing chores.

If you are planning a farmstead and need help, it is readily available through your county agent, or through the state extension engineers.

Five steps a day equal a mile a year. So you should carefully plan your farmstead to save steps.

There's a story of the two privates who were puzzled over a dead animal they had found by the roadside.

"It has two stripes," said one.

"That settles it," said the other, "it's either a skunk or a corporal."

Summer Meals

(Continued from Page 14)

Bacon and Cheese Pie*

Relish Plate

(tomato, cucumber, radish, carrot, etc.)

Fresh Fruit

Milk

* Recipe for BACON AND CHEESE PIE

Pastry shell for 9-inch

6 slices bacon

1 medium onion

1 c. grated Cheddar

4 eggs

1 c. milk

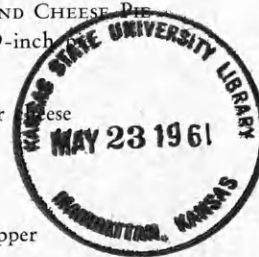
½ c. sour cream

1 t. salt

Dash cayenne pepper

Dash pepper

Dash nutmeg



Pork and beans may be prepared in a variety of ways to make a quick and tasty dish. A speedy bean pie is made by using a shell of lunch meat, filling of beans, and Cheddar cheese for the topping. Ground beef, tomato paste, beans, and chili are often combined, heated, and served on toasted buns as Mexican Burgers.

In planning and preparing your family's meals you need to make sure they are well balanced and nutritious, as well as attractive.

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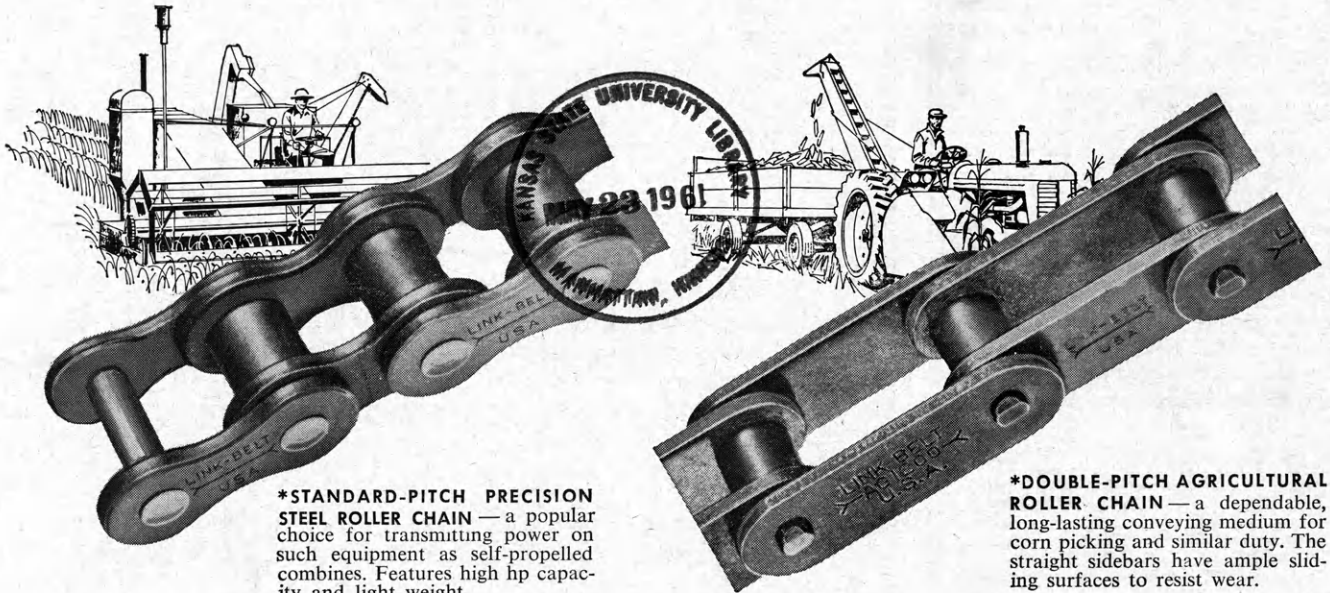
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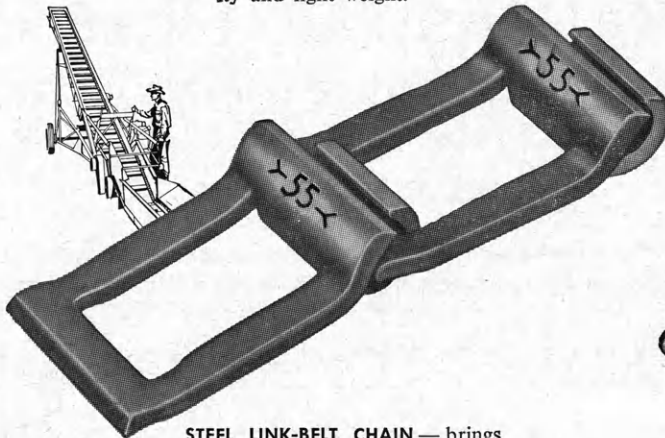
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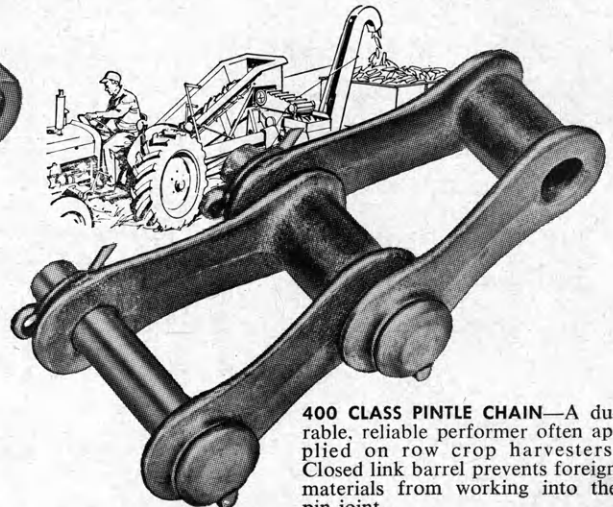


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