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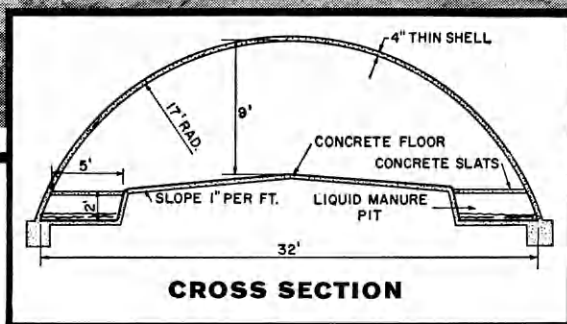
DECEMBER 1963

KANSAS STATE UNIVERSITY
HG STUDENT

KANSAS
3

The Wonder of Christmas page 6

! Engineering makes it possible !



Concrete thin-shell hog house under construction showing (left to right) plywood forms, polystyrene insulation and reinforcing bars.

New low-cost hog building achieved with thin-shell concrete

One of the latest developments in the farm building field is this thin-shell hog house built recently at Cozad, Nebraska. This 32- x 60-ft. structure has a 300-head capacity, and cost just \$2.50 per sq. ft. including concrete floor and slats.

The shell is only 4 inches thick—reinforced with steel and insulated with expanded polystyrene. The end panels are precast tilt-up concrete. For future expansion, they can be removed or left in place as partitions. The interior

combines a concrete floor with precast concrete slats over liquid manure pits, as shown in the cross section.

Engineering design and development are today providing more and more ways in which versatile concrete helps improve modern farm operations. To be of maximum help to farmers, keep up to date on the latest concrete construction methods in your area. And watch for more of these reports on the latest advances in concrete farm structures.

Portland Cement Association

811 Home Savings Building, Kansas City, Missouri 64106

An organization to improve and extend the uses of concrete

KANSAS STATE UNIVERSITY AG STUDENT

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December 1963

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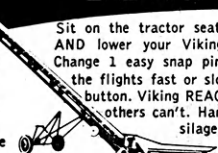
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Dr. Harold Jones
Director of Extension

Director Explains New Extension Policies

by Harold Jones

OF INTEREST to all students in agriculture and to people associated with agriculture is the recent decision by the Board of Regents which implements the Eurich Report recommendations for extension work in Kansas. The Board of Regents has appointed an Extension Commission composed of President of Kansas State University, James A. McCain, Chairman; Chancellor W. Clarke Wescoe of Kansas University, Vice-Chairman; and President Leonard H. Axe of Pittsburg. The Commission will be responsible for the administrative control and coordination of Extension activities of the state institutions of higher education in Kansas.

Will Appoint State Director of Extension

The Commission is to appoint a full-time State Director of Extension, who will assign to each institution the extension programs for which it is to be responsible. He will identify the extension programs and courses needed in the state, eliminate duplication, supervise budget preparation for General Extension, publish all catalogues for General Extension programs, and bring together University General Extension, radio and television activities.

The Board of Regents has determined that all correspondence study work in extension will be housed at Kansas University. All evening college classes as they are now defined will become the responsibility of the individual departments, at each of the universities. Off-

campus extension classes for credit will be arranged by the State Director with the college or university best equipped to give such classes. The State Director will also work with the Cooperative Extension Service in Agriculture and Home Economics to make these two services coordinate as effectively as possible.

Other policies announced by the Director of Cooperative Extension affect qualifications of graduates of the College of Agriculture desiring county 4-H club agent or county agricultural agent positions. Individuals qualifying for these positions must be accepted for the Graduate School by the head of the department in which they receive their undergraduate major and by the extension service for extension education.

To Have Junior Assistant Program

As a final item, we are announcing the beginning of a Junior Assistant Program for county agricultural and county 4-H club agent positions starting in June of 1964. Ten students between their junior and senior year will be given an opportunity to work for two months out in the counties under an experienced county agent. Salary levels will range between \$300 and \$360 per month. Students interested in these positions should see either their department head or Dr. Oscar Norby, state leader of county extension work, in Umberger Hall.

Assignment: make our gasoline make engines run better
while they're still on the drawing board



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One of the key scientists in American Oil's Road Anti-knock Quality Program is Charles Karabell, 31, B.S., Chemical Engineering, PhD, Mechanical Engineering from Purdue University. To say that his job of establishing and predicting fuel characteristics for today's and tomorrow's automobile engines is a challenge, is a vast understatement.

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Eager children wait by the mailbox before Christmas to see what the mailman brings them.

The Wonder of Christmas

by *Thayne Cozart*

IT'S THAT finger-lickin', weight-puttin'-on time of the year again. Farm families across the nation will soon be scootin' up to heaping tables full of delicious home-cooked food.

The smell of roast turkey, chicken, duck, beef or ham cooking keeps the kids' taste buds nervous all morning. "How long before dinner, Grandma?" they keep asking. The men, their appetites whetted by the odor, aren't much better.

Cellars are filled with canned foods, grown in the garden the previous summer. Lockers are stuffed with

meat in preparation for the cold winter. Barns, hay mows, cribs, and bins are filled for the livestock.

The earth is brown; the trees are bare, but the desolation is a beauty in itself. Mornings find the dry grass fuzzy and sparkling with frost. Windowpanes display multiple designs of Jack Frost's creativity. Ponds and lakes glisten with ice and shine

in the bleak winter sun. Frost plumes are blown into the crisp wind from livestock's nostrils.

This is the season of cherub cheeks and red noses. "Bundle up so you won't catch cold" is Mother's watchword. In response, parkas, hoods, scarves, ear muffs and rubber boots are the familiar outdoor attire.

The shaggy cows and calves and the family riding horse look like different breeds from the sleek animals of summer. They carry built-in insulators from the biting cold.

Family Cuts Tree

"Remember that little cedar tree near the pond?" Father says. "We'd better cut it today if Santa is going to have anything to put presents under." After dinner, everyone scrambles into the pickup truck and goes to cut the tree. That evening, amid the pungent odor of cedar, the taste of hot buttered popcorn, and the soft notes of Christmas carols, the family decorates the tree, then stands back to "ooh" and "aah" as the lights are turned on.

Mail time each day finds a little eager beaver waiting beside the mail box to see what presents come. By the time they reach the tree, all packages are well shaken and guesses ventured about their contents. Christmas cards are strung on strings, then displayed above mantels or doorways.

Christmas Arrives

At last! The big day arrives! Little ones awake at five from restless sleep, realize it's Christmas and madly flock downstairs to see what Santa brought them. Squeals of pleasure and peals of laughter ensue as they see their stockings overflowing and find their most dreamed of dream under the tree.

Mom basks in the glory of the gifts her family gave her. Teen-agers try but fail to maintain an air of dignity as they open their gifts, finally succumbing to the joy of the moment and crawling under the tree to find another gift. Even Pop, who

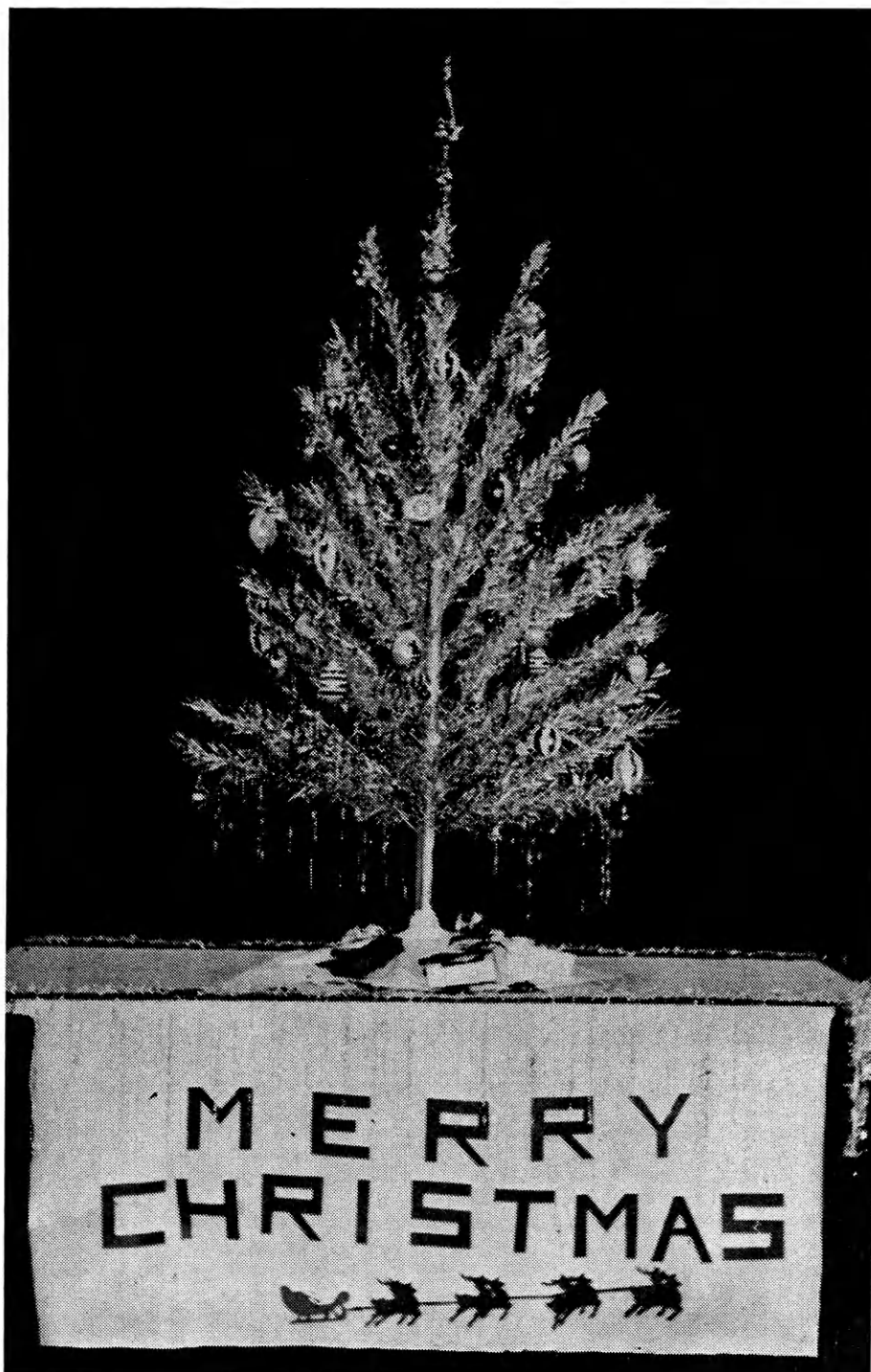
outwardly shows no sign of emotion, secretly glows with the pleasure of seeing his family happy and from the heap of useful gifts he, too, has received.

Eat, Take Life Easy

Around noon, relatives arrive with scads of food, sporting their favorite Christmas gift. Everyone stuffs till he's uncomfortable. After dinner, the women clean up the dishes in the

kitchen; the men sit around the heater and swap stories. The young children play with their toys while the older ones take their new shotguns out for a bout of rabbit hunting.

Evening brings departure for the relatives. The house is quiet. The refrigerator is packed with leftovers. Father goes out to chore; Mom lies down for a nap; the children are tucked out. Christmas is over for another year.



Ornaments, tinsel, and lights sparkle on Christmas trees throughout the country. Presents stack up, waiting to be opened.

K-State Will Give Assistance To New Nigerian University

by John Noland

DURING the early part of the coming year, several Kansas State University professors will take over staff duties at Ahmadu Bello University in Nigeria. Their arrival will be the first step in fulfilling Kansas State's half of a contract with the United States Agency of International Development (AID) in establishing colleges of agriculture and veterinary medicine at the year-old Nigerian university.

The two and one-half million dollar contract, which was officially signed October 1, designates K-State

assistance to Ahmadu Bello University until July 3, 1966. However, K-State officials consider this a long-term, seven- to ten-year project. An initial AID authorization of \$393,488 has been made for operations through next July 31.

Nigeria is a country eager for new ways. Sadly, its people have little technical training in modern technology. Zaria, a large city near Ahmadu Bello University, is partly enclosed by a wall which dates back to the days before Christ. The houses within this wall are mainly mud and

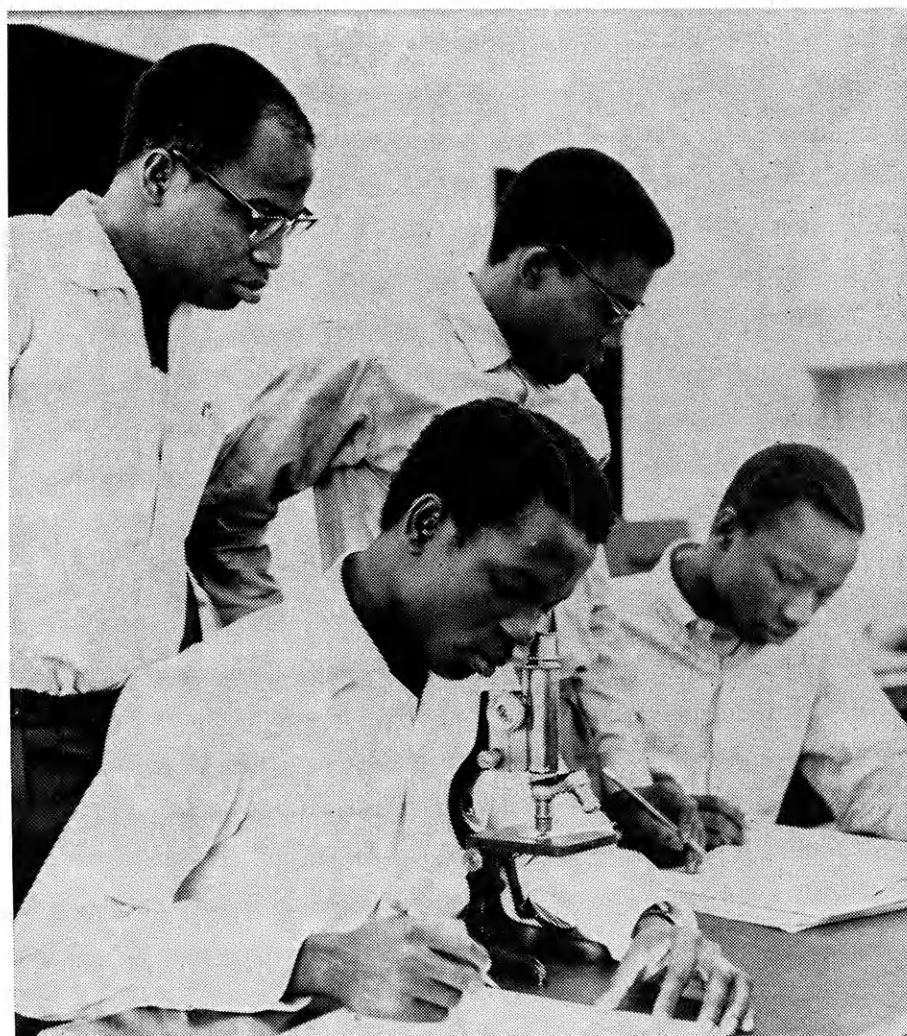
thatch huts. Still, much of Zaria is apartment buildings and modern houses with beautiful gardens.

Through help from the United States, Nigeria hopes to modernize. Education, the forerunner of knowledge, will be the first step in this direction. It is K-State's duty to supply the knowledge and foresight needed to establish colleges of agriculture and veterinary medicine at Ahmadu Bello so Nigerians can gain information in these fields. The final goal is for Nigerians to one day take over full administration and duties of these colleges for themselves.

The contract with AID is outlined to fulfill these requirements. It has three chief objectives which are: (1) To provide technical advice and assistance in the establishment of the colleges of agriculture and veterinary medicine; (2) to achieve co-ordination of agriculture, extension and instruction; (3) to train Nigerians to assume major roles in these colleges as soon as possible.

Must Supply Equipment

"This contract calls for an action program," Dr. Vernon C. Larson, campus co-ordinator of the Nigerian project, explained. "It will involve doing rather than advising. Our people must recruit the faculty, erect the buildings for the two colleges and supply them with equipment, but they must still be realistic and buy equipment which the people of this new country can afford and are skilled enough to operate. The program which we establish must be something the Nigerians can handle



Nigerian students at K-State peer into a microscope, studying minute plant forms.

In a botany lab, these Nigerian students observe some Kansas wheat. Knowledge and procedures learned at K-State will help them to be leaders when they return home.

technically and financially when they take over in seven to ten years."

It is partly because of the second point in the three-part contract—to achieve co-ordination of agriculture, extension and instruction—that AID turned to K-State for assistance. The co-ordination of these three is the forte of the land-grant institution when executed correctly, as has been done at K-State.

Larson explained that when any new country is formed, it invariably looks to the United States' overabundance in agriculture and asks why. "Many people credit the land-grant university's three-pronged program of research, extension and teaching with this overabundance," he continued. "The Nigerians realize it is an excellent system and are eager to capitalize on it. We also feel it can be adopted successfully in Nigeria."

Similar to K-State

At present, Nigerian research and extension programs are separated. The "marrying" of these programs in a set-up similar to that of land-grant institutions will be an important part of K-State's assignment.

A research station near Ahmadu Bello is to be absorbed into the College of Agriculture. Farms and experiment stations will be planned, equipped and put into operation and an extension program, presently run by the Nigerian government, is also to be linked with the new agricultural college.

"The absorption of the extension program into the university may be a slow process," Larson said. "In Nigeria, extension agents also act as law officers and enforce laws passed by the Ministry of Agriculture. They act as food law enforcement inspectors, meat inspectors and so on. This complicates the farmer-extension agent relationship."

Can Overcome Problems

Larson said there would be other small problems, but he feels the program has a good chance to survive. "Nigeria wants us," he said. "They wanted us last year but details in Washington held us up."

The Nigerians are making an ef-



fort to obtain trained men in agriculture and veterinary medicine. Thirteen students are currently studying in these fields at K-State. They include one veterinary student, three pre-veterinary students, and nine students in animal sciences. However, most of them aren't from the North region where Ahmadu Bello University is located and cannot be heavily counted on to help the K-State effort. There are approximately 120 Nigerians studying in the agriculture and veterinary medicine fields in the United States, so Dr. Larson felt Nigerian assistance should be present at Ahmadu Bello in the near future.

Beck to Select New Dean

Much of the responsibility for K-State's part in the project will fall upon the person selected to serve as chief of party or dean of agriculture at Ahmadu Bello University. Dr. Glenn Beck, dean of agriculture at Kansas State, will select the man to fill this position.

Other personnel will be named following the dean's selection. An administrative assistant and a dean of veterinary medicine are scheduled to arrive in Nigeria next spring. Department heads of agronomy, animal industries, extension education and farm management in the College of

Agriculture will arrive during the 1964-65 year. Four department heads in veterinary medicine are also slated to arrive in Nigeria sometime next year. A veterinary librarian and various consultants will also travel to Ahmadu Bello University in the future.

Topography Like Kansas

The professors who travel to Nigeria from Kansas will find the area around Ahmadu Bello like their home state. The university is located on a rolling plain much like the Kansas prairies. The temperature is akin to Kansas temperature, but more enjoyable. Average temperatures in Nigeria range between 60 and 100 degrees. This similarity in climate and topography is another reason K-State was chosen by AID to lay the foundations for the two Nigerian colleges. It gives Kansas professors a head start in understanding Nigeria's agricultural problems.

The faculty and staff members will live in a compound built especially for Ahmadu Bello teachers and administrators and their families.

"Our people will have some problems, especially creature comforts and education for their children, but if it weren't for the problems involved the Nigerians wouldn't need us," Larson remarked.

Construction Has Begun

Agricultural Hall

by Darrell Garner

ON THE gently rolling hills of Wyandotte County, Kansas, a multi-million dollar memorial is beginning to rise in tribute to American agriculture. This shrine is the Agricultural Hall of Fame and National Center, designed to focus national attention on the role of agriculture in America's past, present and future. The Center is to be a year-round facility for displaying agriculture and related industry.

Congress Granted Charter

The idea for the shrine originated as a dream of some of the outstanding leaders in agriculture as a memorial to the accomplishments of the agriculture industry, its members, scientists, and leaders. In 1960, the 86th Congress granted the Center a federal charter, and with the selection of Kansas City as a site the idea began to grow. Today the dream is maturing into reality as funds from the voluntary subscriptions of individuals, organizations, and industries enable work to begin on the first part of the project.

First Hall Started

On October 17, bids were accepted for the first building, and the winning bid was about \$200,000. When the entire site is completely developed, it is expected to cost in the neighborhood of five million dollars. The First

Hall will be the first building of a group of basic units located around a central mall. Its construction will allow for additions and expansion later.

The First Hall will contain an exhibit hall, entrance lobby, orientation room, reception room, business office, and administrative office. Uses of the building will include review of the total plan in the orientation area, office space, and early sections of the product displays, library, and museum. Later plans for the building include recognition of men in the field of agriculture and related industry, whose contributions to American agriculture have been great.

To Have Agricultural Library

Other buildings to be constructed will include a Hall of States in which the various states will represent by display its major forms of agriculture. The memorial calls for a Hall of Industry exhibiting products of far-flung agriculture-related industries including farm implements, agricultural chemicals, packing, dairy, grain and milling industries, seed and horticultural development, transportation and food processing. The library and museum originally housed in the First Hall will be moved into a new building. It is hoped that in time the library will become the largest agricultural history library in the

world as well as provide material for research and education. The museum will trace agricultural progress, development, equipment, and methods in America.

Later construction includes plans for an auditorium seating 600 or more persons and an amphitheatre with space for thousands of spectators. The stage of the amphitheatre will be equipped with ramps and other equipment so it can be easily converted for livestock shows. There



An architect's

of Fame

will also be an exhibit of modern farm machinery, along with soil conservation demonstrations. Another place of interest will be a livestock exhibit showing how we developed livestock, from the bony Texas Longhorns to the modern walking meat makers of today's farmers and ranchers.

Will Have Indian Village

Since many of our food crops have developed through the efforts of the

American Indians, a village will be built in their honor. An Early American Village including a village school, a blacksmith shop, and a village store will be part of an exhibit of the history of rural America.

Near Heart of America

All these exhibits and facilities will be of little use unless people can see and use them. However, this factor has not been overlooked, since from the very beginning the Hall of Fame

has been planned so it is near the heart of America. With major interstate highways nearing completion and with air and rail transportation from all directions, the Kansas City area is not merely a geographical hub, but one readily within reach of citizens of all fifty states. As a "living" display of an industry which as a whole forms over 40% of the national economy, the Agricultural Hall of Fame and National Center will soon be a center of exhibits, tours, lectures, research, recreation, and recognition. Its possibilities are tremendous!

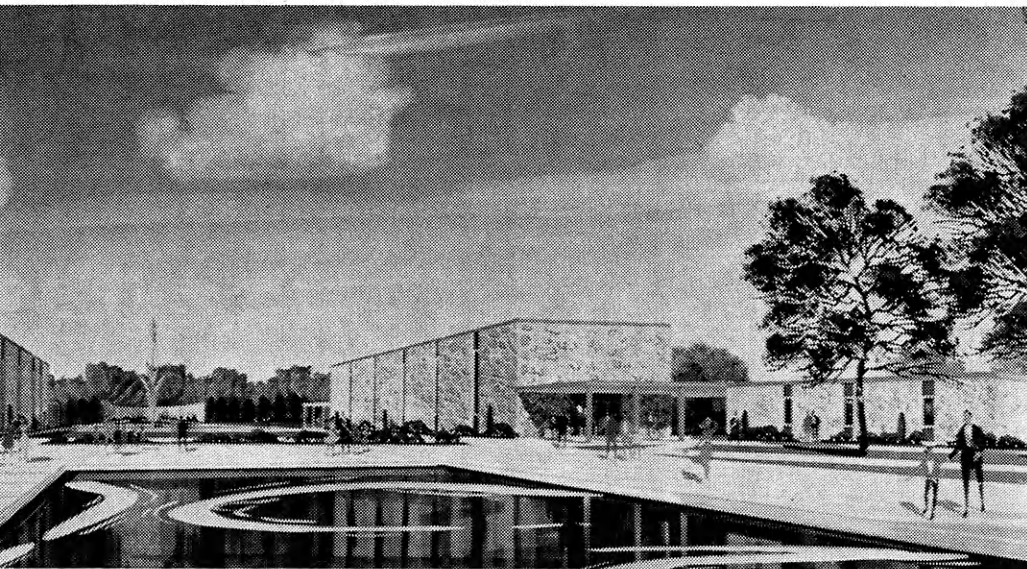
Will Bring in \$27 Million

Hall of Fame committee officials have estimated that when finished the Agricultural Hall of Fame will draw 27 million dollars a year into heart of America cash drawers. Visitors to the Center must eat, sleep, buy gasoline, and they will do it in the surrounding area, thus boosting its economy tremendously—all this from an original gross investment of five million dollars of which much was donated by farmers and others in agriculturally related fields.

The Agricultural Hall of Fame will present a challenge to those individuals and industries in the agricultural field. Perhaps more important, it will be a place for people from both city and country to come together in the museums and exhibits, finding a better understanding of the victories, problems, and challenges of American agriculture.

Endorsed by Presidents

The Board of Governors of the Hall includes such prominent Kansans as Glenn H. Beck, Kansas State University dean of agriculture; Roy Freeland, Secretary State Board of Agriculture; Harry Darby, Clifford R. Hope, and Alf Landon. The Agricultural Hall of Fame and National Center has been endorsed by the late President John F. Kennedy as well as former Presidents Herbert C. Hoover, Harry S. Truman, and Dwight D. Eisenhower. The Hall has a fitting place in America and according to former President Herbert Hoover, "The farmers, who in fact pioneered American civilization in its march westward from the Atlantic shore, certainly deserve this tribute."



ing shows the central mall of the Agricultural Hall of Fame.

Save Your Back!

Let Machines Feed Your Cattle



Self-unloading wagons reduce backbreaking labor to a minimum. Feed mixed in a batch system can easily be moved to bunks.

by James Krehbiel

AS ALL cattlemen know, it takes a tremendous amount of lifting, pushing, carrying or conveying of materials when feeding cattle for market. The amount of water, grain, hay, silage and manure used by each 100 head of feeder steers totals over 2,000 tons per year, according to research results at Kansas State University.

Progressive cattlemen, recognizing the high labor requirements for feed-

ing cattle, are turning to mechanization or automation to reduce operating costs. Mechanization is the use of machines to replace physical labor; automation is automatically controlled use of machines and equipment to replace physical labor and shorten man-hours.

Presents Many Questions

Cattlemen who would like to reduce their beef production costs are faced with questions like: Which system of feeding is most economical, both from the standpoint of feeds used and of equipment used? Can I utilize my present buildings in their present location? Should I move

them, or is it better to "start from scratch" and develop a system into which I can grow during the next few years? Should I use a low-capacity automatic system or should I use a high-capacity manually controlled batch system?

These questions are pertinent, natural and logical, but the answers vary for each cattleman and his particular farmstead and building arrangement.

When developing any system, cattlemen should remember four basic, often repeated principles:

- (1) Don't move materials unnecessarily; or move them as little as possible.

- (2) Condense materials or change their form. Use free-flowing shelled corn, for example, rather than hard-to-move ear corn.
- (3) Handle large amounts, especially when material must be moved any significant distance.
- (4) Make materials flow continuously whenever possible.

When anticipating a new handling system, cattlemen or farmers should take inventory of their present livestock, usable buildings and equipment, grain and forage production ability, managerial ability, available labor, capital, and credit. They should have a general plan for their overall feeding operation and for its expansion. This plan should consider factors such as optimum size, rate of growth in terms of livestock units and physical plant capacity, future labor requirements, present and anticipated space requirements for grains, forage and animals, projected capital requirements, enterprise returns and other management considerations.

Two Types of Systems

The feed preparation or processing center usually is either the batch-type or the continuous flow type. For smaller farms, the latter system is probably more desirable because it handles small quantities faster. But for larger operations involving many different ingredients, different materials, different size particles and minute quantities of trace minerals, the batch system is considered best by both cattlemen and university personnel.

Mixer Governs Quantity

Size of a "batch" is governed by the size of mixer used. For most batch-feed-handling systems, mixing involves the following operations in this approximate sequence:

- (1) A specific amount of each ingredient is drawn from storage and independently weighed.
- (2) The grain is crushed or ground. (Ingredients are first reduced in size, then mixed.)
- (3) Materials are placed in the mixer.

Screw augers move feed from automatic mixers right to the bunks. They bypass one additional handling, thus saving labor.

- (4) After mixing, ration moves to storage or feed bunks by truck.

Automatic continuous-flow systems make feeding easier and let the operator be less a laborer and more a manager. In this system automatic signaling devices take over the job of maintaining accuracy and feed quality in the ration. The farmer can use his time for other work and management decisions.

Feed Flows Continuously

By using proper equipment and controls, feed can be made to flow continuously from storage to feed bunk, thus reducing labor costs.

These steps are associated with continuous-flow feed-handling systems:

- (1) Ingredients are automatically and simultaneously proportioned, usually with volumetric measuring devices.
- (2) Ingredients are mixed first, then crushed or ground.
- (3) Electrical controls are interlocked for sequence starting and stopping of components to assure proper ration control.
- (4) Feed flows continuously with little or no attention from storage to feed bunks.

Where it is impractical to make all feed flow continuously and automatically from storage to feedlot, it is desirable to automatically process the ration, then store the mixed feed in

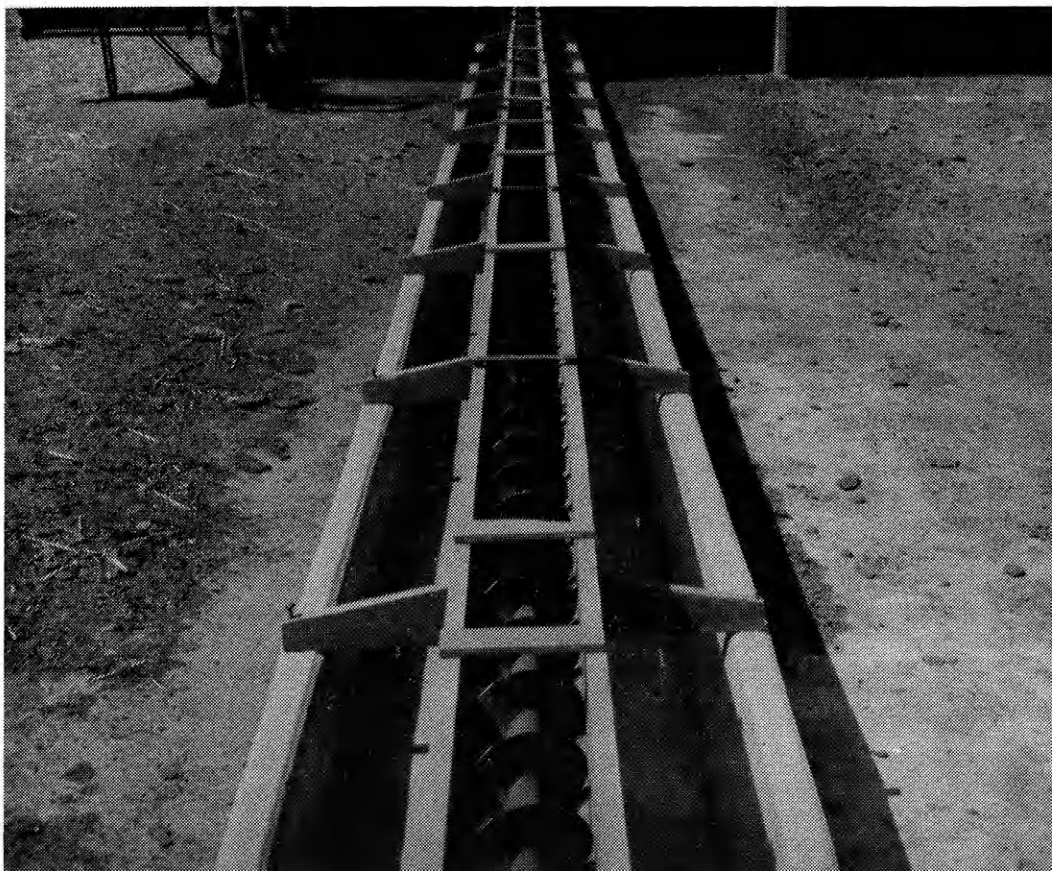
temporary bins from which it can later be moved to scattered feedlots in large quantities.

The vertical bucket elevator is the most efficient method of lifting feed or grain. It doesn't crack grain and it is self-cleaning. High capacities are obtained with very little power. For capacities of about 1,000 bushels per hour or less, the initial cost of a steel-housed bucket elevator is higher than a vertical screw conveyor of similar capacity; however, the vertical screw requires much more power than the elevator. Vertical screw conveyors are not self-cleaning, have a higher maintenance cost, and a shorter life expectancy. They should have a short pitch flighting if they are used.

Use Gravity, If Possible

Removal of feeds from storage can be facilitated by the design of the storage structure. While construction of overhead bins and hopper-bottom tanks is more costly than ground-level storage, advantage should be taken of gravity flow for self-unloading whenever economically possible.

When an over-all plan has been developed, proper detailed engineering and installation can be made, keeping in mind that the hardest, most time-consuming jobs should be mechanized first.



Give 'Umph' to Your Income With a Profitable Sideline

by Lloyd Moden

NEEED some extra cash? Sure! Who couldn't use added income? Almost everyone has been in a pinch when a little added income would have been a lifesaver. Every farmer should take inventory of his possibilities to add extra income to his farming enterprise.

Part-time Employment

Of course the most reliable and steady income is part-time or seasonal employment in the local factory or driving a school bus during the school year. Thousands of Kansas farmers meet their financial obligations with these jobs. You say you can't spare the time for steady employment? There are many possibilities to make extra money right on your farm, though they may not seem obvious at first.

One possibility is marketing the wood products on your farm. Hedge posts in eastern Kansas or catalpa posts in central Kansas, cut in the winter during spare time, are in high demand. Many farms have small waste areas, such as sandy blow spots or rocky spots that could be planted to hedge or catalpa. Highway con-

tractors say they buy treated pine posts from the South because there are not enough hedge posts available at the right time here, but would consider buying hedge posts if they were available. "An untreated hedge post lasts as long as a treated pine post," says Prof. Paul L. Roth, research forester at Kansas State University. Of course many farmers use the posts on their own farms, or use them as "trading stock."

Other possibilities include selling oak for the cooperage industry and for veneer, and other woods for charcoal and hickory chips and fireplace wood. "There is a very good likelihood of a pulp mill being built on the Missouri River east of Kansas City in the near future," said Roth. This mill would use a lot of Kansas elm, hackberry, and other cheap-grade wood.

Christmas Trees Have Market

Roth said there is a good demand for Kansas-grown Christmas trees. Now, only five per cent of the Christmas trees bought by Kansans are Kansas-grown. Consumer studies by K-State researchers show ten per cent of Kansans buy pine Christmas trees, but over a third of the buyers indicated they would buy pine trees if they could buy them cheaper. Pines grow well in central and eastern Kansas, according to Roth. Kansas could

grow trees cheaper because large transportation costs aren't prohibitive, he said. Kansas has a \$25 million forestry industry per year in the rough form. Still, less than ten per cent of our wood crop is managed, said Roth. "With proper management and handling, we could triple output."

Beekeeping Shows Profit

Have you considered beekeeping? Many farmers have a small apiary; some keep bees for their full-time occupation. Beekeeping makes a good hobby and shows a profit besides. "Beekeeping is the only hobby I know of which pays for itself the same year you begin," declares Prof. Norbert M. Kauffeld, apiculturist at Kansas State University. Kauffeld keeps 20 colonies of bees of his own to pay for his vacation each summer. A complete hive with bees costs about \$35 and a good colony will gross \$15 to \$25 per year, he said. You may either find your own market or sell the honey to wholesale dealers. Beeswax sold from each hive pays for its upkeep. Extensive honey production is practiced in the eastern half of Kansas and in western Kansas where sweetclovers and alfalfa are grown. You may obtain a bulletin, "Bee Culture in Kansas," by writing to the Agricultural Experiment Station, Kansas State University, Manhattan.



Pine Christmas tree production is a good way to supplement your income. It takes only a few acres and a little time to produce a good, healthy stock each year.

Many farmers find it profitable to grow small truck gardens. Excellent markets exist for fresh vegetables, especially if you live near a large city. Kansas has a potential gross income from 25,000 irrigated acres of vegetables in southwest Kansas of nearly \$14 million, estimates Prof. Raymond W. Gieseman, K-State agricultural economist, who conducted a survey of six southwestern counties. According to him, the main vegetables that could be grown are tomatoes, lettuce, onions, cantaloupes, cabbage, carrots, cucumbers and honeydews. "Vegetable crops needn't take land from regular crops but can use land between normal cultivation, or land where government regulations prohibit other crops," says Gieseman. "For instance, you can grow a wheat-lettuce-wheat rotation on your irrigated land every two years."

Nurseries Have Low Acreage

Another supplemental enterprise, requiring low acreage, is nursery stock. With Kansas cities swiftly expanding their territory, landscaping tree stock farmers should enjoy a demanding and profitable market. Hundreds of trees can be grown on only a few acres. Contracts with

building contractors are usually necessary to channel your trees to market.

Kansas recently embarked upon an extensive program to attract tourists. It is just beginning to get in full swing and Kansas farmers can help harvest this flow of tourists by selling services instead of goods.

For instance, one farmer a few miles from a well-traveled highway advertised that he operated a bridle path for riding horses, an old-fashioned mill pond swimming pool, and a farm restaurant. Soon, tourists began to visit his place and now he has a profitable sideline business.

Lease Hunting Privileges

Farmers with brushy land suitable for upland game birds and small game can capitalize on the zest city people have for hunting by leasing hunting privileges to them. Also, farmers with large, well-stocked ponds or lakes can lease fishing privileges.

One final way to get additional income is to lease land to motel, restaurant, or service station companies if you live along a well-traveled route. This practice insures a moderate monthly income.

Ag College Briefs



Ag Student Wins

The Kansas State University Agricultural Student magazine placed in the top three in all four judging categories at the annual convention of the Agricultural College Magazine Association in Chicago during Thanksgiving vacation.

The Ag Student won a large plaque for first place in the general excellence contest. It also won a certificate for second place in the cover contest. It placed second in the layout and design competition and finished third in the presentation of technical material.

Five K-Staters attended the convention. They are Thayne Cozart, this year's editor; Lionel Chambers, business manager; Paul Deets, Darrell Garner, and Lloyd Moden, staff writers.

Last year's editors of the magazines which were judged were Linda Kernohan and Gordon Bieberle.

Livestock Places High

Livestock shown by Kansas State University at the American Royal this year rated high among animals exhibited.

Top showing was made by the grand championship pen of three Hereford bulls exhibited by K-State. The winning pen beat out exhibitors from 14 states.

In the pen of three Angus bulls the K-State entry rated the reserve championship.

Kilgore Wins Contest

Gary Lynn Kilgore, agronomy senior from Mullinville, won the national speech contest held in connection with meetings of the American Society of Agronomy in Denver.

Kilgore, who is president of Klod and Kernel this year, was required to speak on one of three topics drawn at 1 o'clock. He prepared his speech that afternoon and gave it that evening. The topic he selected was, "American Agriculture, a Government-Regulated Agriculture?"

He won a gold medal and \$100 for first place.

Two-Way Radios

Have Varied Uses

by Dan Marrs

FARMING emergencies take lives, inflict injuries, and cost money. Many modern farmers are finding that the best way to cope with these emergencies and alleviate the accompanying losses is to use two-way radios on their farms.

Two-way radios are one or more

mobile units and/or a base station by which communication can take place without the use of wires.

Save Time and Money

They are rapidly becoming useful and important in farming. They will become more useful in the future as farmers and ranchers see their advantages. Primary advantage of a two-way radio is the saving of time and money.

The farms of today are becoming larger and more spread out. Rapid and accurate communication between these scattered elements means dollars in the farmer's pocket. A farmer renting land ten miles from his other fields or from his home, by the use of two-way radios, can have constant contact with his home or other fields. If he has trouble and needs help he can call home and have help before he could possibly drive home, get help, and then drive back to the field.

If he breaks his tractor and has to go for repairs, by calling different dealers and making sure they have the parts before he makes the trip, the farmer saves time and gasoline. As more dealers become equipped with two-way radios, the greater this advantage will become for the farmer and businessman alike.

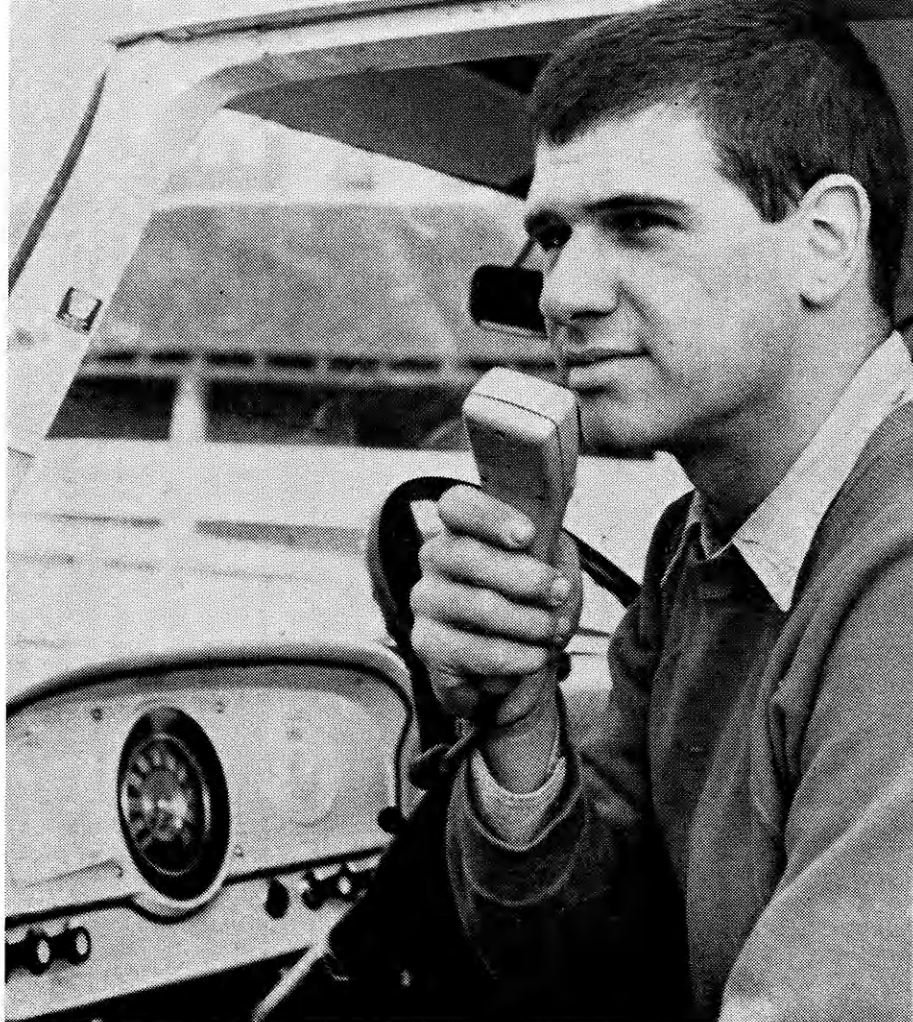
Useful During Harvest

Harvest time offers many possibilities for using two-way radios. By installing walkie-talkies on the combines, the operators can have constant contact with truck drivers or repair trucks. If the bin becomes full at the opposite end of the field from the truck, he can talk to the driver and tell him to come. If the combine breaks down and the repair truck is in another field, he can still call for help.

When harvest first starts, sometimes the farmer is in doubt whether the moisture content of his wheat is too high for storage. Time can be

Someone should remain at the home base at all times to receive messages from the mobile radio unit.





The operator of the mobile unit can correspond with the home base or another mobile unit. Citizen band sets can easily reach ten to fifteen miles.

come very important during harvest, especially if a storm is forecast. If a farmer takes a sample of wheat and it checks out dry enough, he can tell his combine operators to start cutting even before he leaves the elevator. This time advantage could save many bushels of wheat if the storm did happen to hit.

Used to Hunt Coyotes

Two-way radios are also used to hunt coyotes. This could be classified as both a pleasure and a necessity. Farmers in areas where coyotes are plentiful install the radios in their cars or trucks and organize hunting parties. When a farmer spots a coyote, he calls others to come or tells them the animal's location and direction.

Another important use for two-way radios is as a safety or aid assistant. Lives are saved because persons in need or trouble can call for help. A farmer in Wisconsin owes his life to the use of his radio. On a cold and snowy night he was looking

for some livestock that had strayed. He got stuck in the drifts and could not get out, so he called for help. If he had not been able to contact help, he might have frozen.

Saved Injured Farmer

Another farmer was working on his corn picker. He became entangled and was seriously injured. He collapsed just after reaching his pickup and radioing for help.

Two-way radios are an aid to find children or livestock which are lost. By forming hunting parties, looking in different areas, and keeping in contact with each other, searchers can cover more land more thoroughly.

If a cow gets sick or injured and needs attention immediately, a farmer can radio his veterinarian directly. By bypassing the telephone and the vet's office enough time might be saved to prevent the cow's death and subsequent money loss.

Primary disadvantage of a two-way radio set-up is the cost of equipment needed. Single sender-receiver

Yuk It Up!



She: "The man I marry must have enormous courage."

He: "Oh, you are not so bad as all that."

He: "I've never said hasty things that I've regretted later."

She: "Well, what does that make you?"

He: "A bachelor."

Most financial problems are simple—just a shortage of money.

Aggie: "Can I give you a lift, honey?"

Blonde: "No! I'm just walking home from one now."

A hobby is something you get goofy about to keep from going nuts about things in general.

A lot of people are not afraid of hard work—they don't know what it is.

Bill: "Your son who went to Texas must have made a fortune. What's he worth now?"

Hill: "Well, six months ago, the Texas authorities were offering \$1,000 for him."

"Are you doing anything on Sunday evening?" the handsome boss asked his secretary.

"Oh, no, I haven't a thing planned," she gushed hopefully.

"Well, then," he snapped, "see if you can't get here on time Monday morning."

units range from \$100 to \$175 for a citizen's band set, which reaches approximately 15 miles. Farmers, wanting to transmit farther, can buy a business band unit for approximately \$150 to \$225.

K-State Offers Short Course For Farmers

by Paul Deets

TODAY'S young farmer, in the course of his career in agriculture, will manage a business earning a gross income of from \$250,000 to well over a million dollars in the next 30 to 40 years, predicts Wilton B. Thomas, extension agricultural economist at Kansas State University.

Only those farmers who manage well will secure an adequate net income from these large gross businesses. To help young Kansas farmers improve their present and future farm business operations, and to teach them more about the increasing technical aspects of farm operation, K-State is offering a new "Short Course for Young Farmers" next semester.

Provides University Training

"The purpose of this new short course is to provide university-level training in the management and operation of a farm business to young farmers who for any reason feel they cannot participate in the regular four-year course in agriculture," says Dr. Glenn H. Beck, dean of the College of Agriculture at KSU. It will be held on campus to provide access to University facilities, including laboratories, library, and the combined resident and Extension facilities.

Young farmers—high school graduates who have not reached their thirty-first birthday—are invited to take advantage of this course. It will be directed to those young farmers now actively farming or having a farming opportunity.

Applicants over 31 years old or those not having a high school diploma may also apply. Their application will be considered on an individual basis.

The agricultural training, first of its kind in Kansas in recent years, will be given in an eight-week short course at K-State beginning January 27 and ending March 20, 1964. It

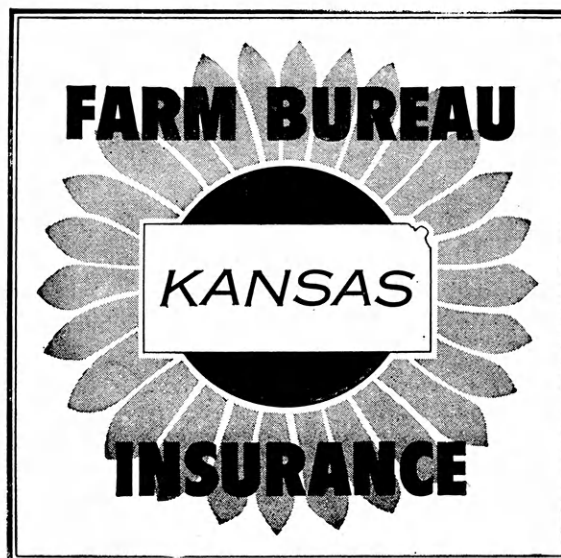
will be sponsored by the Extension Service, College of Agriculture, and the Agricultural Experiment Station at K-State. Applications are due on or before January 6, 1964. A member of the short course staff will plan to visit the home farm of each applicant to explain details of the program and to review his farming operation.

Five topics important to the successful management of a farm business will be covered in the course. They are "Management of the Farm Business," "Plant Sciences," "Animal

Sciences," "Agricultural Engineering" and "Expanding Leadership Potential."

Cost Between \$300 and \$350

Thomas estimates the course will cost each student between \$300 and \$350 including books, enrollment fees, board and room. Additional information on the course is available from county agents, vocational agriculture teachers and Thomas at the agricultural economics department at K-State.



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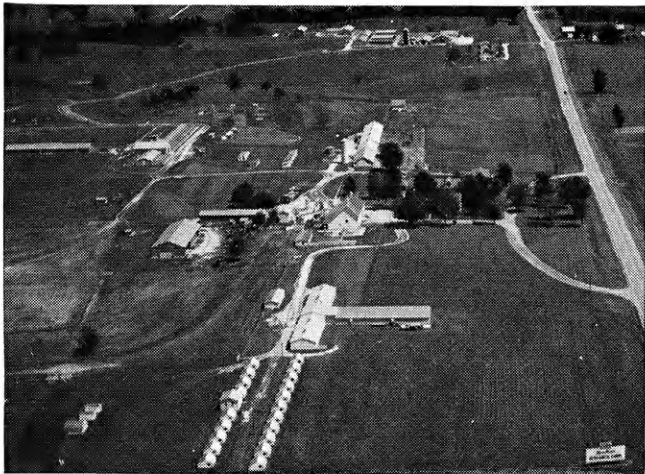
Insurance Companies

HOME OFFICE

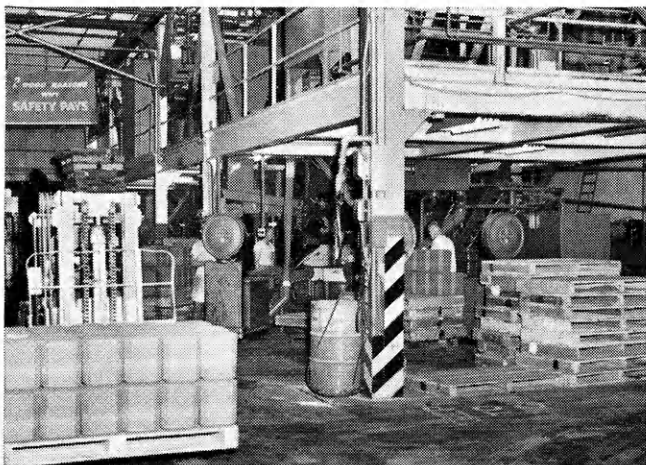
MANHATTAN, KANSAS

Here's why more and more stockmen are switching to MoorMan's

Feeding MoorMan's with grain and roughage makes sense to an increasing number of stockmen. And growth in *numbers of livestock* fed MoorMan's is even greater than this tonnage chart indicates—because each ton of MoorMan's concentrated concentrates balances and fortifies more farm-grown feeds than most ordinary feeds or supplements.



MoorMan Products are research-proven three ways by more than 75 skilled research workers: Through development and quality control; in exhaustive tests on this or one of our other two Research Farms, totalling 1,280 acres; and in Field Research on hundreds of working farms and ranches in various parts of the nation.

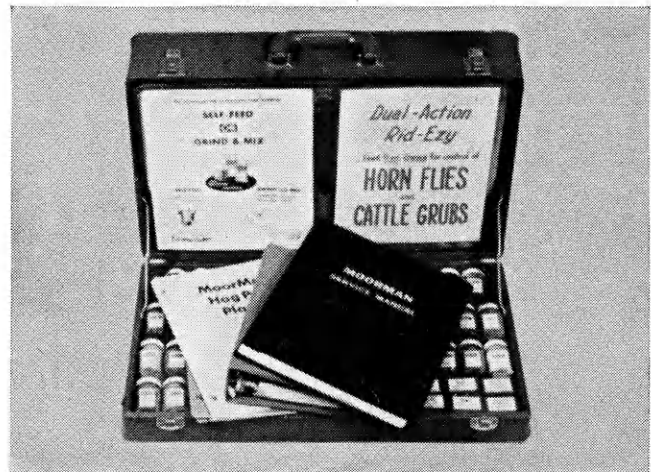


Typical of MoorMan leadership was first-in-the-industry development 11 years ago of protein-mineral-vitamin blocks for self-feeding to cattle on grass or roughage. Gigantic presses like this turn out 10 *different* Mintrate* Blocks to fit varying pasture or roughage conditions. More than 18,000,000 Mintrate Blocks fed successfully.

Last 6 years
(1957-62)
compared to
previous 6 years
(1951-56)...

MoorMan's sales tonnage up 83.9%

Feed industry sales tonnage up 28.7%



This is the "store" from which stockmen select MoorMan products to fill their feeding needs. More than 2,000 local MoorMan Men take it direct to farms and ranches—along with helpful information from our Research and Service Departments based on MoorMan's 78 years of experience and know-how.

It's the livestock payoff that counts most:

The most important reason for the growing switch to MoorMan's is the results users get—in good feeding results and low total feed cost to produce meat, milk and eggs.

Good feeding results come from the quality proteins, minerals, vitamins and other working ingredients in MoorMan's to help livestock convert grain and roughage efficiently.

Low *total* feed cost is enjoyed by MoorMan users because Mintrates are *concentrated* concentrates of essential nutrients built to work *with* grain and roughage, not replace them.

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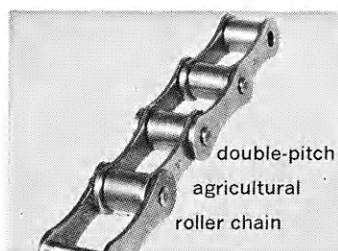
and conveyor chains, chain attachments and sprockets. Also "bonus" services: application counsel, field analysis, laboratory service and others. These services multiply the value of Link-Belt chains, but not the price!

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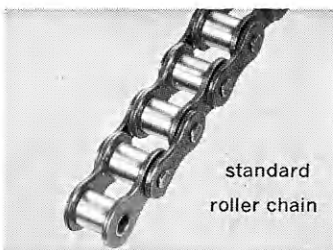
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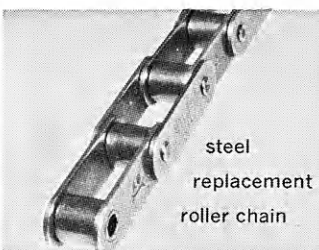
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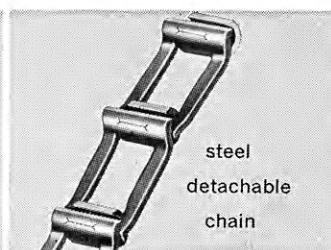
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