

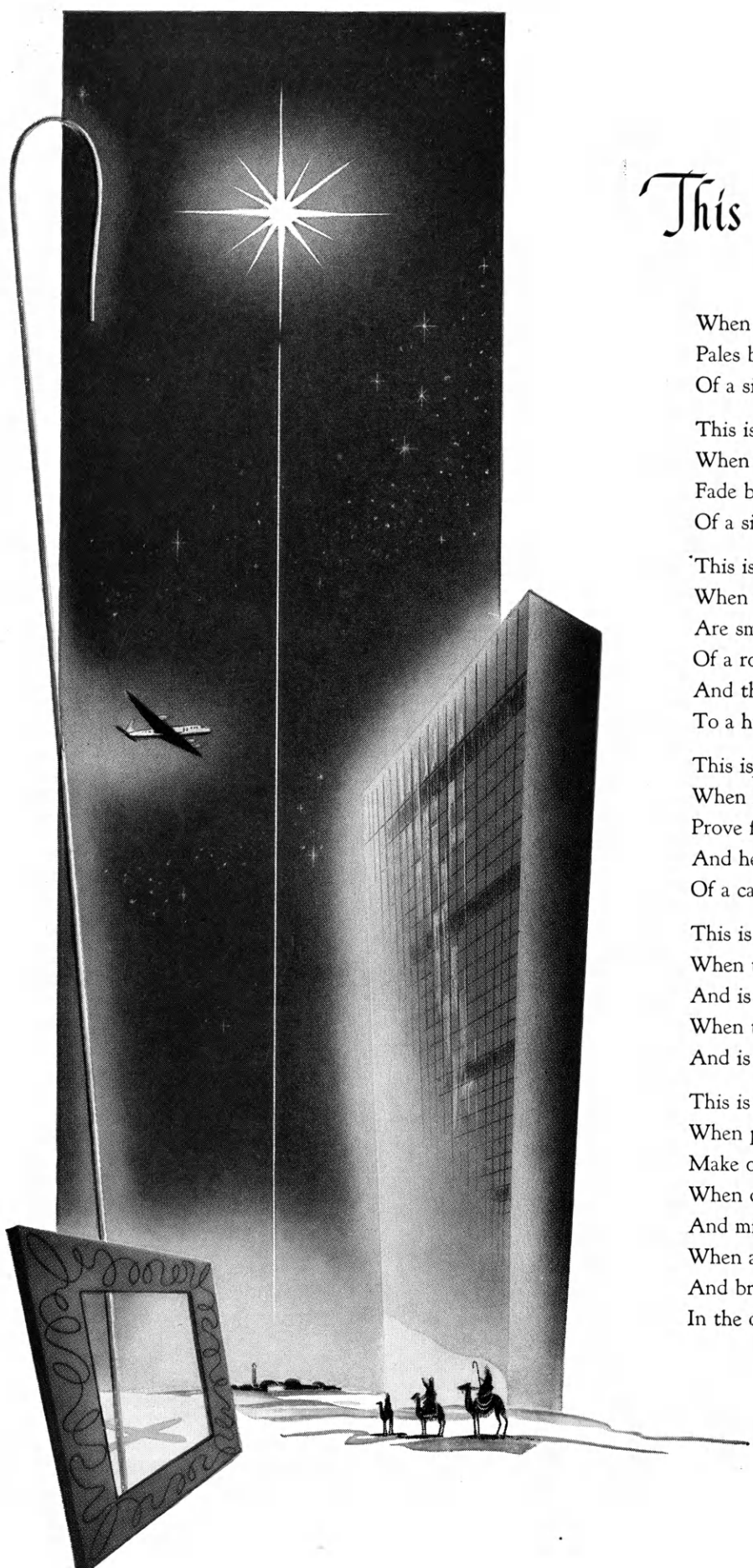
Kansas State College
AG STUDENT

DECEMBER 1956

Vets Keep Animals Healthy

.... page 12





This is the night...

When all our finest art
Pales before the beauty
Of a single shining star.

This is the night
When all of our profoundest symphonies
Fade beneath the swelling
Of a simple angel song.

This is the night
When all the badges of office
Are smothered in the folds
Of a rough-woven tunic,
And the sceptres of power give way
To a humble shepherd's staff.

This is the night
When Man's swiftest wheels and wings
Prove far inadequate,
And he treads, instead, the path
Of a camel caravan.

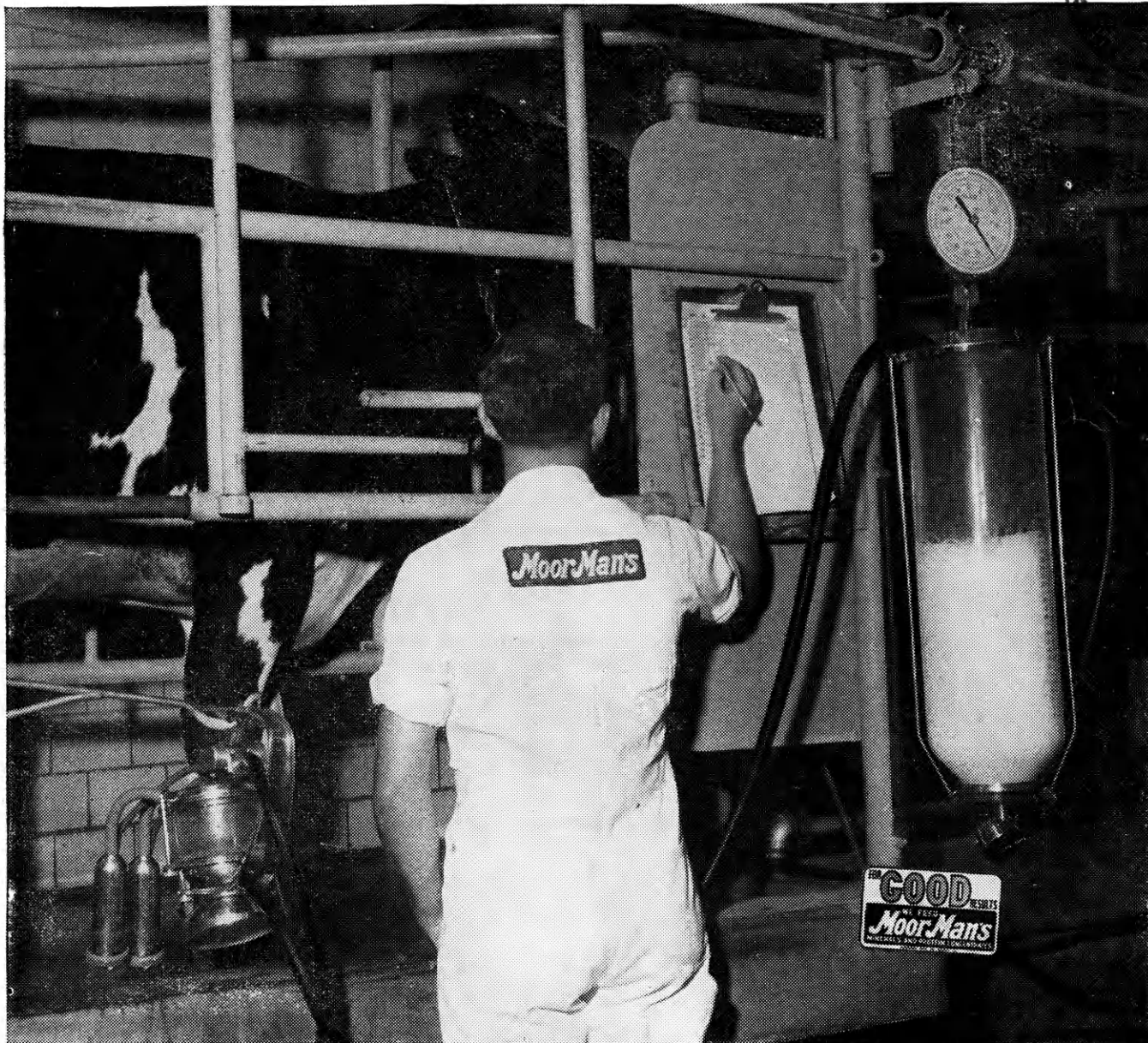
This is the night
When the unkind act is frozen still,
And is buried in the desert sand . . .
When the first sharp word falls soundlessly,
And is swallowed by the desert air.

This is the night
When princes, and kings, and presidents
Make one obeisance . . .
When diplomats forsake finesse
And ministers, their chambers . . .
When a worried world abandons argument,
And breathes its plea for Peace
In the quiet of a stable!

JOHN DEERE
Moline, Illinois



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More milk is a matter of records!

At the Moorman Research Farm the sharp pencil of the milker also plays a part in the development of feeds that will help increase milk flow—and likewise increase dairymen's profits.

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Only by that same careful record keeping—balancing feed costs against milk and butterfat pro-

duction—can America's dairymen determine which cows are producers and which are loafers, which to cull and which to keep. They can also determine which feed is most profitable!!! We urge every dairymen, where possible, to belong to his DHIA—and to keep an accurate record of his feed costs as well as milk production.

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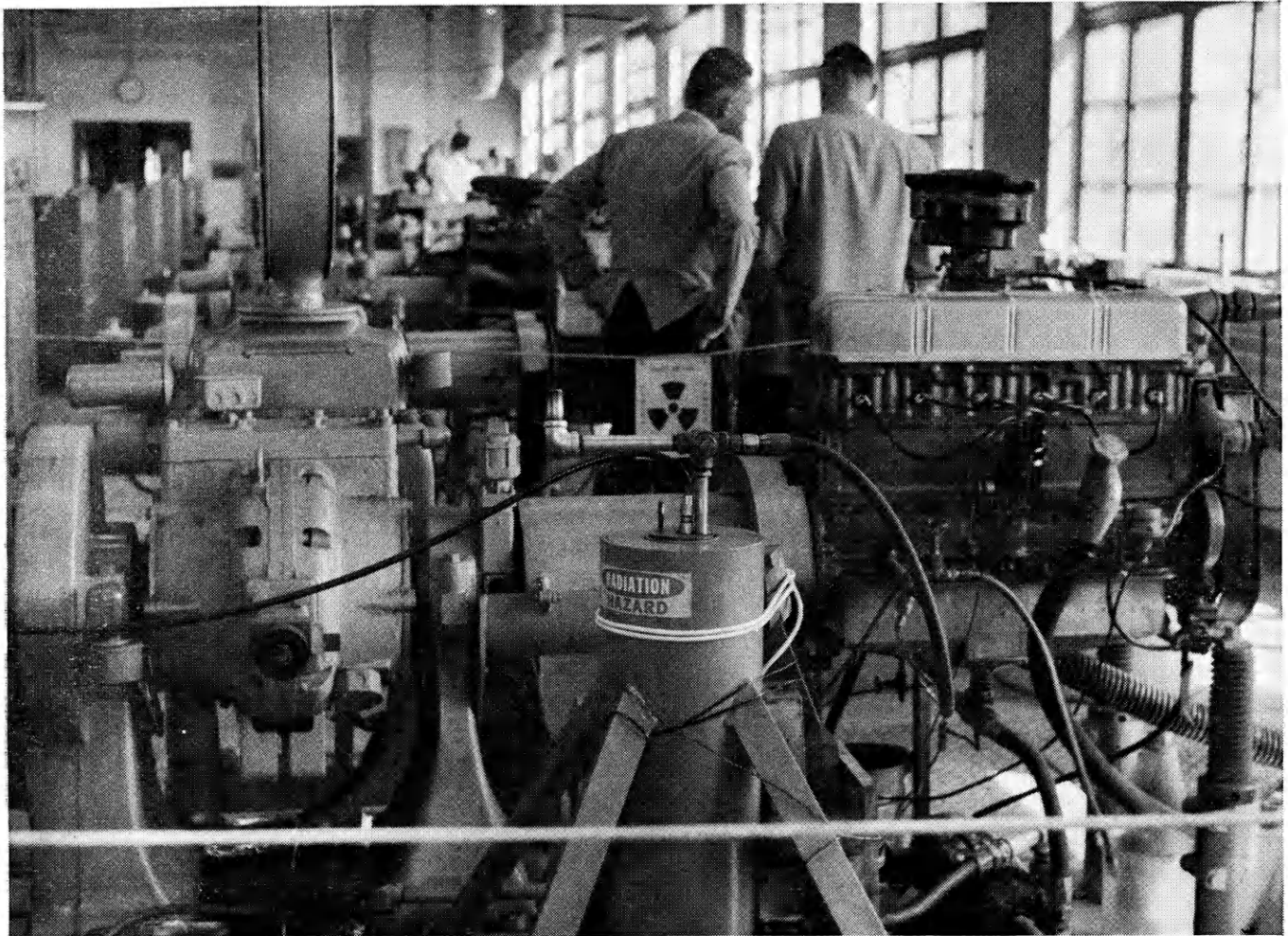
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Mr. Eltinge earned his B.S. in mechanical engineering at Purdue in 1947. He is a member of SAE, Tau Beta Pi, Sigma Tau, and Pi Tau Sigma. Along with the important contributions

he makes to Standard as a regular member of our team, he finds time to attend Illinois Institute of Technology where he recently received his M.S., and takes an active interest in church work

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Standard Oil Company

910 South Michigan Avenue, Chicago, 80 Illinois



Kansas State College AG STUDENT

Vol. XXXIII

December, 1956

No. 2



On the Cover

When illness strikes a family pet, or any farm livestock, the whole family becomes concerned with its welfare. Gretchen, the Eberhart pet in this case, is getting a physical by her owner, Dr. George Eberhart, veterinary professor at Kansas State college, while the rest of the family, Mrs. Eberhart, the two children: Damon and Narcee, look on.

Ag Mag Wins Three Seconds at Chicago

By winning 3 seconds and 1 fourth Kansas Agricultural Student was the only magazine in the nation to place in all divisions judged at the Agricultural College Magazine Association convention in Chicago November 23 and 24.

The K-State magazine placed second to Cornell in general excellence, second to Iowa in presentation of technical material and cover award, and followed Wisconsin, Cornell, and Iowa to win fourth for articles of interest to women.

Staff of this year's winning magazine Clayton Herman, Editor; Ray Lippe, Associate Editor; Phillip Young, Business Manager; and Gary Yeakley, Assistant Business Manager, attended the Chicago convention, accompanied by Lowell Brandner, retiring national chairman.

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The opposite page is our way of saying Merry Christmas to everyone from the Ag Mag staff. →

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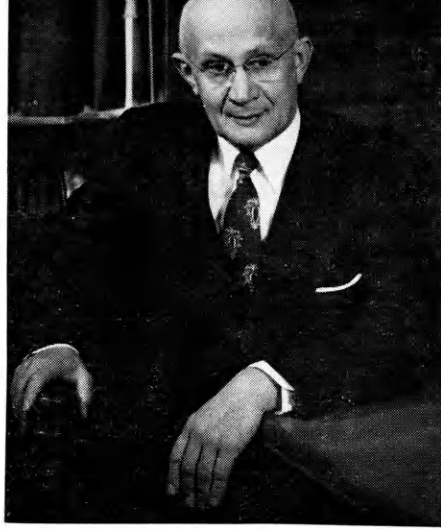
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Merry Christmas

AG



Arthur D. Weber
Dean of Agriculture

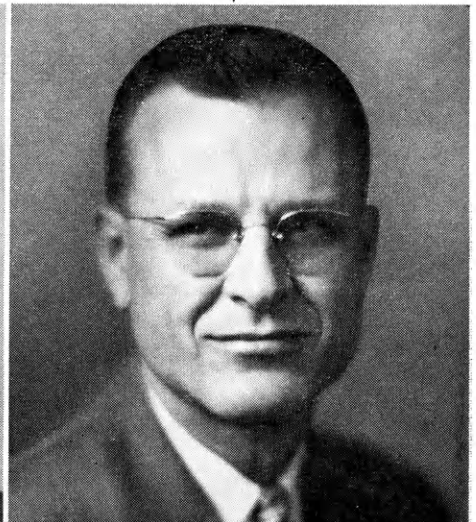
DIRECTORS



Glenn H. Beck, Director,
Agricultural Experiment Station



Harold E. Jones, Director,
Extension Division



C. Peairs Wilson, Director,
School of Agriculture

IF YOU'RE confused about who's what among the big wheels in the School of Agriculture, don't be embarrassed because so's most everyone else. Since November 1955 we have juggled some ag administrative offices and handed out a few new titles. Some of the job titles don't quite fit the job responsibilities.

Arthur D. Weber is the daddy of the whole shebang. His title is Dean of Agriculture. This is misleading because his job calls for more responsibility than *dean* when you compare his position to a position such as Dean of Arts and Sciences or dean of any of the other five schools at K-State. Weber's job is to coordinate not only the academic part of agriculture, as his title would lead you to believe, but also the experiment station and extension service. Maybe he should be called President of Agriculture.

Agriculture is divided into three

branches: Agricultural Experiment Station, Kansas Extension Service, and School of Agriculture. Glenn H. Beck is Director of the Agricultural Experiment Station. His title signifies that appropriately enough. Harold E. Jones is Director of the K-State Extension Division. His title seems clear enough.

C. Peairs Wilson carries the title Director, School of Agriculture. Here is where the rub comes. If you wanted to see the Dean of Agriculture about an academic matter, whom would you go to first?

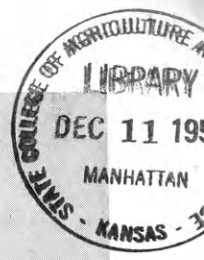
By process of elimination you would probably narrow the choice between Wilson and Weber. Most people on the campus have enough work to keep them busy without having to chauffeur someone around Waters hall to the correct office or explain to him how the administrative set-up functions. If you choose

the wrong one you waste your time as well as the director's or dean's.

Wilson has a position comparable to dean. You might not have guessed that from his title. A better title for him might be Academic Dean of Agriculture. Now you are probably wondering where Clyde W. Mullen fits. He is Assistant Dean of Agriculture and is Wilson's assistant, even though Wilson is a director. We're confused, too, about a dean being a director's assistant.

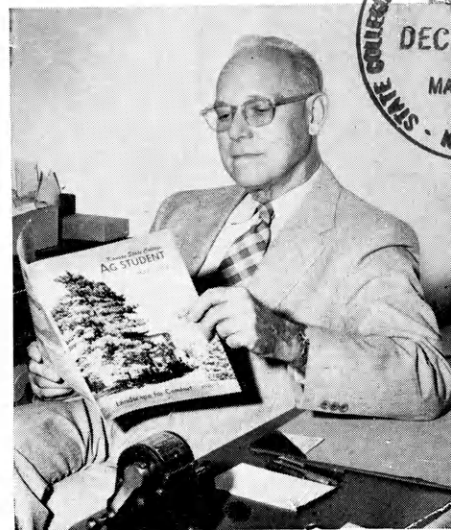
If you can think of Weber as being the President of Agriculture and Beck, Jones, and Wilson as heads of three cabinets you have it straight. Remember that Wilson runs the academic end of agriculture and is the one with whom most of you ag students will be concerned. Of course, as in any other chain of command, take your problems to his assistant's office (Assistant Dean Mullen) first.

—Clayton Herman.



Chit Chat

By Clyde W. Mullen, Assistant Dean



Dean Mullen

CONGRATULATIONS again to the committees that adapted a rowdy pre-barnwarmer week to become a constructive, exciting, enjoyable Ag Week. As a first-time venture, it was well done. Everyone was disappointed that Walter Martin, president of the Ag Association, could not return for the fall semester. However, his vice-president, Virgil Norton, took over in good shape and with the assistance of Ray Zimmerman and Paul Faidley and a dozen other faithful and hard-working committee chairmen, all events of the week were well synchronized, including the crowning event of the evening when gracious Connie Morgan was crowned Queen of Ag Week. And, the names of her beautiful princesses must not be forgotten: Lee Lutz, Karen Hampton, Carol Miller, and Pat Vopat.

One of the most commendable things that happened in connection with Ag Week was when a dean addressed the students in his school and suggested that there be no interference or conflicts between the students of his school and the students in the School of Agriculture. Result: Not a single inter-school ruffle or tussle—and no sensational news copy for the press; no duckings of reporters. Wonderful coverage and support from the Collegian.

Twenty-three students contributed \$1.18 toward a two-year subscription for LIFE, to be placed on the tables in the Aggie reading room. A special rate of \$7 for two years to an educational institution seemed too good a bargain to pass up.

Who can think of some way to im-

prove the general quality of the reading material on the shelves in WA 137? How about each club subscribing for a top-notch magazine in the name of Ag Reading Room?

It was a brand new freshman who was surprised to learn that he did not have to meet his first class until 8 o'clock. And that inspired the thought: Perhaps it would be a good idea to begin classes at 7 a.m., to help meet the room-shortage that looms as our enrollment keeps increasing more rapidly than class-room facilities are added.

Total enrollment in our School of Agriculture is up. Total enrollment of freshmen is down. Account for that? Well, transfer students and returning students of former years help to account for part of it. Across the country, freshman enrollments in agriculture are showing a slight decrease.

It was our own secretary who fell victim to the recent Manhattan power failure that paralyzed all electric clocks for an hour sometime during the night as the result of a soldier slamming his car into a power line. All electric clocks started running after being stopped for an hour. All clocks in the Decker home are electric. All alarms sounded an hour late. All members of the D. family got up an hour late, had breakfast an hour late, and arrived at work an hour late.

We yet have an old-fashioned spring clock on our mantel and its reliable gong keeps us in stride with the passing of time.

Dr. Roger Smith, long-time head

of the department of Entomology, now officed at Center Ag 217, has a bouquet of fresh flowers on his desk of mornings, almost the year around. He's proud of them, as well he should be. If you are going down the second-floor hall some morning, take time to peek into his office. It is an inspiration to know that someone, even during our recent hot, dry season, has been able to "green hand" his flowering plants through to this late date in November.

We keep reading in the papers about nice things that are happening to our students in the School of Agriculture as they are elected to responsible positions, become committee chairmen, make a judging team and attain other distinctions. These are the sort of extra-curricular activities that are recorded on our student record sheets, one sheet for each student. It is the responsibility of students to come by our office and fill out a card listing all of their extra-curricular activities. It is a good thing to keep these reports up to date. Mrs. Weisbender has a blank card ready for YOU.

Pre-enrollment procedures are going to be a bit complicated the first time. Students will need to read instructions carefully and then follow through, step by step.

Important: No student having a failing grade at mid-semester will be eligible to pre-enroll! There's an incentive!



Prof. Paul Sanford, poultry husbandry, weighs a chicken to test feed palatability.

Palatability Tests

Tell Which Grains Are Tasty to Chickens

by Dale Dickson

PALATABILITY of poultry feed influenced by different grains in a ration has been studied by Dr. Paul E. Sanford, nutrition specialist, of the Kansas State College poultry department.

"These tests were controlled to provide accurate data necessary to prove that the test results are of value," stated Dr. Sanford.

Straight-run, first-generation offspring were used in the tests from a cross of New Hampshire males with K-State strain of White Rocks. The tests were conducted in standard pen-type poultry brooding houses at the College. In the first three experiments all test birds were kept in one house to insure identical environments for all. Birds were supplied at all times with feed and fresh clean water.

In a test of palatability of various cereal grains in chicken broiler mash a variety of five cereal grains were involved: oats, corn, wheat, milo, and barley. In this test 150 day-old chicks were brooded with an electric brooder and reared in a pen type house, a brooder house divided into pens. This was necessary for identical conditions

for all chicks. Five feeders were placed in the pen. Each feeder contained a different cereal grain for 60 percent of an all-mash ration.

All rations were adjusted to 20 percent protein and 5 percent fiber to comply with the rigid controls employed. Feeders were rotated daily in a criss-cross, zig-zag manner to eliminate preference due to light, heat, nearness to drinking fountain, or any other factor that might tend to instinctively draw chicks to a certain area. This test covered a period of eight weeks.

Chicks Preferred Corn

Of the five cereal grains tested, chicks preferred corn as the first choice followed in order by milo, wheat, barley, and oats. Milo and wheat ranked very close in preference, while barley and oats rated very low in total consumption as compared to the other three cereal grains used.

A test of sorghum grain preference lasted nine weeks to determine influence, if any, that various varieties of sorghum grains might have on palatability of poultry broiler feed.

All rations used were identical, except that nine different varieties of sorghum grains were ingredients in nine separate rations. The sorghum grain used in each ration constituted 60 percent of the mash ration. Certified seed was used in all rations to insure that each variety was a pure representation of the sorghum. An all-mash ration was fed chicks up to four weeks of age and mash and grain were fed free choice from four to nine weeks of age.

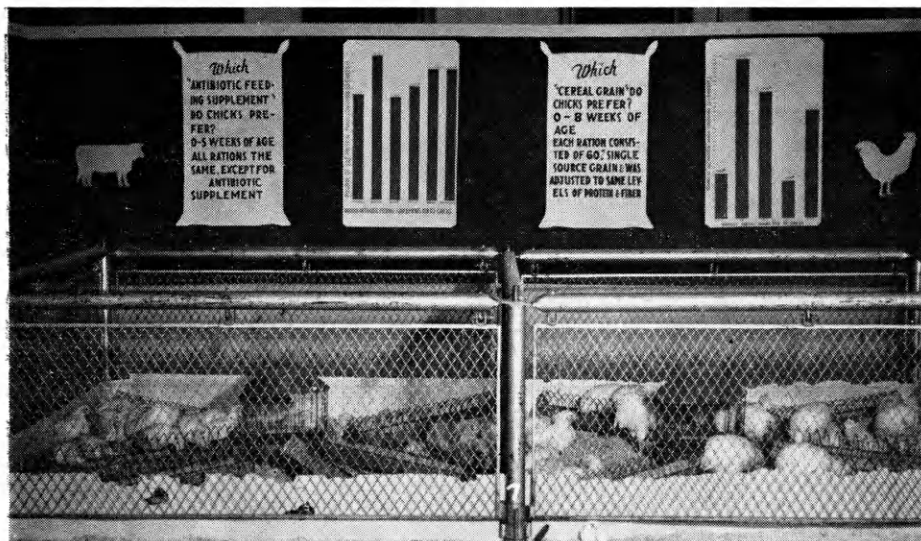
In this test 180 chicks were brooded with an electric brooder and reared in a pen type brooder house. During the first four weeks nine feeders were used. Eighteen feeders were used during the four to nine weeks feeding. Each feeder contained a separate variety of sorghum grain as a mash and as a whole grain. Feeders were rotated daily in a criss-cross, zig-zag manner to eliminate preference due to heat, light, or location of drinking water.

At completion of this test various sorghum grains ranked in preference as follows: K 44-14 first, followed in order by Midland, Westland, Martin, Pink Kafir, Plainsman, K-60, Atlas, and Hegari.

A feeding test was conducted to study the influence, if any, that various antibiotic feeding supplements might contain on the palatability of poultry broiler mash.

All rations were identical in composition, except for the type of antibiotic supplement used. For this test 150 chicks were brooded with an electric brooder and reared in the pen type brooder house. Each of six feeders placed in the pen contained a different antibiotic-supplemented feed or the non-supplemented control ration. Daily rotation was practiced

Graphs show which feed chicks preferred in palatability experiments at Kansas State.



and the feeders were never in the same position oftener than once in six days.

Six Rations Used

A total of six rations were used in this experiment. All rations were identical except for four different antibiotic supplements used. One ration was used as a control ration and contained no antibiotic. Another one of the rations was a combination of penicillin and bacitracin. Antibiotics used were: aureomycin, bacitracin, penicillin, and terramycin.

Level of antibiotic used was that recommended by various companies, which amounted to four grams per ton for penicillin and 10 grams per ton for the other antibiotics.

At the close of a five-weeks test period results showed that the chicks preferred the ration containing aureomycin over each of the other antibiotics. The ration containing terramycin and the ration containing the penicillin-bacitracin combination tied for second and third place, respectively, in preference, followed by penicillin, bacitracin, and the control ration, which contained no antibiotic supplement.

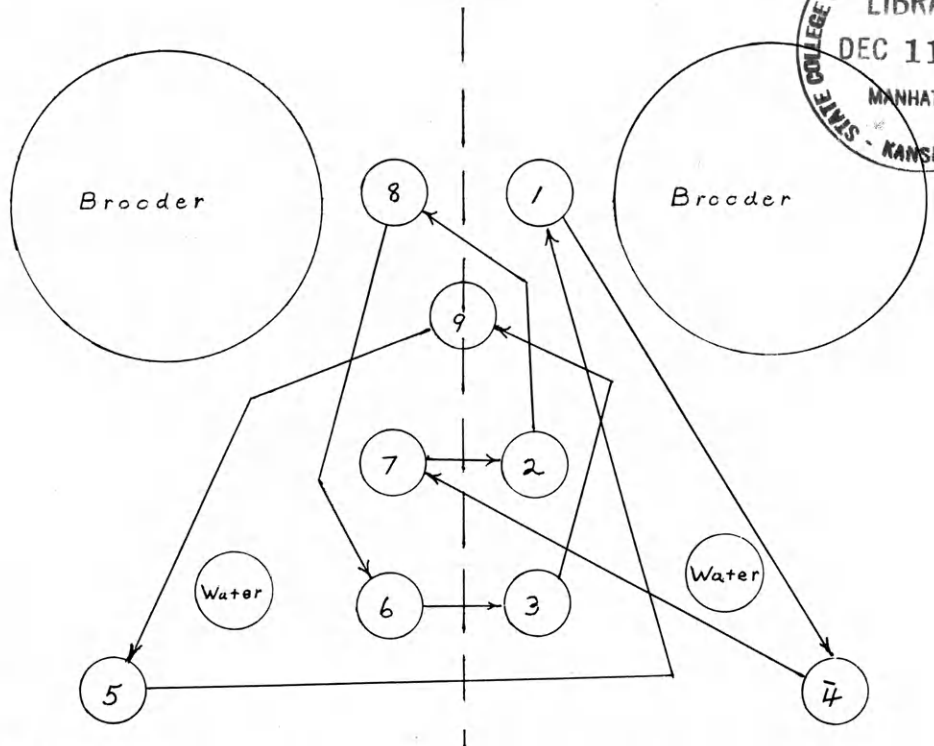
Purpose of a palatability feeding experiment was to obtain a sign of preference, if any, in a commercial feed prepared in three different forms.

Physical forms of poultry feed as pellets, mash, and granules from six commercial feed companies were used in the test. In each case the manufacturer of each feed was not known, thus each brand of feed was given a number to be used for reference.

Crossbred Chicks Tested

Straight-run crossbred chicks (New Hampshire males x K-State strain White Rocks) were used in the test. Four lots of chicks were used in this test, which covered a period of eight weeks.

Lot 1 was fed six different brands of feed in the form of mash, each of which was in a separate feeder. Lot 2 received the same brands of feed in the form of granules and lot 3 received the six different brands in the form of pellets. Lot 4 was given a combination of pellets, granules, and mash representing each of the six



Circles represent feeders with arrows showing rotation of feeders practiced in palatability tests. Feeders were never in the same position more often than once in 6 days.

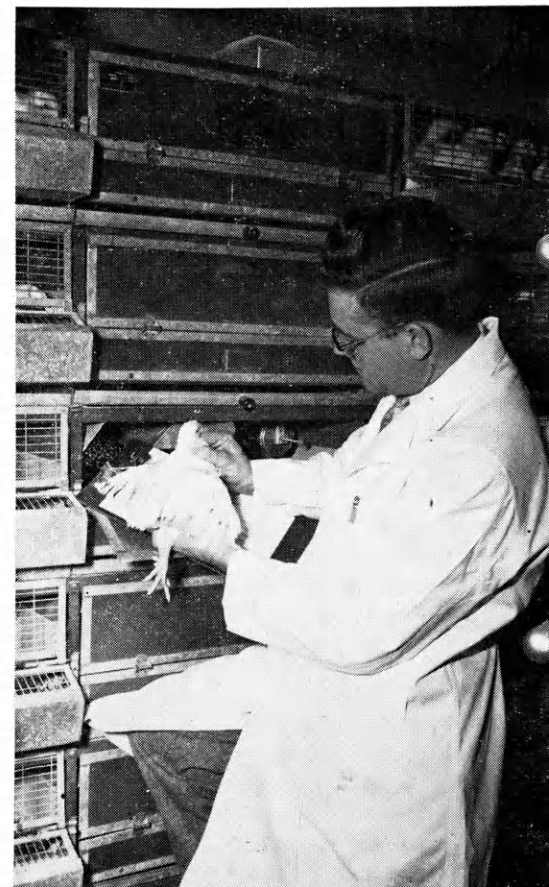
brands. This gave lot 4 a selection of six brands in three forms or a total of 18 different feeders from which to select feed. The feeders were rotated daily into different positions as in the preceding tests.

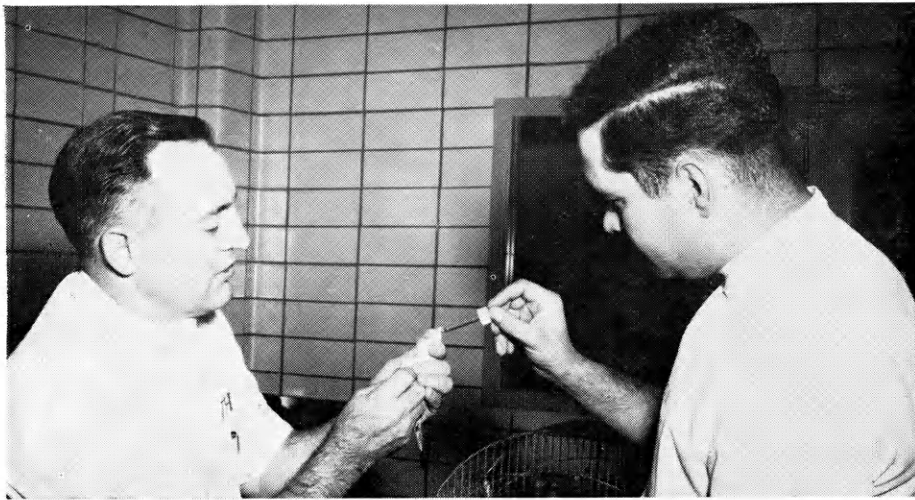
From the calculated data it was found that the difference in amounts of feed consumed of each particular brand was according to the form presented to the chicks. Consumption of each brand either dropped or raised, depending upon the form in which it was presented, with the exception of No. 1, which remained fairly stable as the preference in the granule form, pellet form, and in the combination lot where 18 selections of feed were available.

Reasons for this variation in consumption preference within and between brands may be accounted for in fineness or coarseness of milling, water content, amount of dust, method of preparation, quality of ingredients, and the type of ingredients.

In conclusion no one company was outstanding. The above mentioned factors caused wide variation in palatability in each of the three forms that the feeds were presented.

Dr. Paul E. Sanford checks the condition of a chick during a nutrition experiment.





Dr. George Eberhart, veterinary professor of surgery and medicine, and Olen Stauffer, Veterinary Medicine junior, feed a parakeet, too weak to eat by itself, with eye-dropper.

AN ESSENTIAL part of the agriculture of the United States are the doctors of veterinary medicine. They save the farmers of the United States millions of dollars each year in specific, measurable cases. Many more thousands of dollars are saved in rather intangible ways such as the providing of vaccines to protect herds from disease, etc.

Dr. Eberhart, assistant professor of surgery in the Department of Surgery and Medicine, and co-chairman of the publicity committee of the Kansas Veterinary Medical Association, points out that without the work of veterinarians, so much disease would be prevalent that the high cost of the animals surviving would virtually force the United States into a vegetarian nation.

Veterinarians occupy a prominent position in the scene of public health. Dr. Eberhart states that every taxpayer helps pay the salary of several hundred veterinarians who are employed as official meat inspectors. Every pound of meat handled by meat-packing plants that ship meat interstate is examined by these inspectors. A large number of veterinarians are also employed by state public health agencies. The Kansas State Board of Health has a veterinarian as one of its members.

Vets Pave Way

Much of the experimental work in surgery and therapeutics by doctors of veterinary medicine paves the way for their use in humans. For instance, much of the work on the Salk polio vaccine was done by veterinarians.

An outstanding example of the excellent work in the veterinary medical field was the control of the dreaded hoof-and-mouth disease, the most contagious of all diseases to humans or farm animals. Through constant cooperation and continuous effort by the United States and Mexican veterinarians, this disease has been kept confined to Mexico.

A field as highly technical as this one requires, of course, a good deal of preparation. At Kansas State college, entry into the School of Veterinary Medicine is preceded by two years of pre-veterinary work. Upon completion of this work, only the top applicants are admitted. This fall, 70 stu-

dents entered veterinary training. These were picked from a group of about 400 applicants on the basis of scholarship, physical fitness, and general aptitude. Veterinary students undergo four years of intensive training, consisting in some semesters of between 40 and 50 hours of class and laboratory work a week.

Must Pass Exam

Upon receiving their degree of Doctor of Veterinary Medicine (D.V.M.) the new doctors must pass a rigid examination in the state in which they plan to practice. Many of the graduates go directly into the Armed Forces where they often be-



Dogs are not only precious pets but they are valuable helpers of stockmen. Keith Huff (left) and Jim Boyd, Veterinary Medicine seniors, performing a surgical on this dog.

It's Up to the Vet

To Doctor Sick Livestock

by Arnold Appleby

come members of the Army or Air Force Veterinary Corps.

After their military service is completed, veterinarians go into many different jobs. Some work as U.S. government employees in the Public Health Service or agricultural research service, many take state and local government jobs, but most of them start planning for private practice of their own. A common practice of beginning veterinarians in this area is to work for an established, reputable practitioner as a form of internship. Later these young doctors probably will set up a practice of their own. In the last few years, around 79 percent of the students graduating from Kansas State college went into general practice.

Plans a Rural Practice

Walter Ogborn, VM Jr from Iola, plans to go into general rural practice as soon as he does a stretch in the Armed Forces. Kansas State's Veterinary school has plenty of space and facilities, but lack of finances for a larger staff is one of the biggest problems, Ogborn thinks. Like a majority of the veterinary students, he has a farm background, is interested in animals, and started planning a career in veterinary medicine when he was beginning high school.

Practicing with an older veterinarian for six months or a year is one of the best ways to get started toward a practice of your own, says Warren Nichols, VM Jr from Alton. Quite a few students do this before they enter the Armed Forces. Nichols figures that the average freshman or sopho-

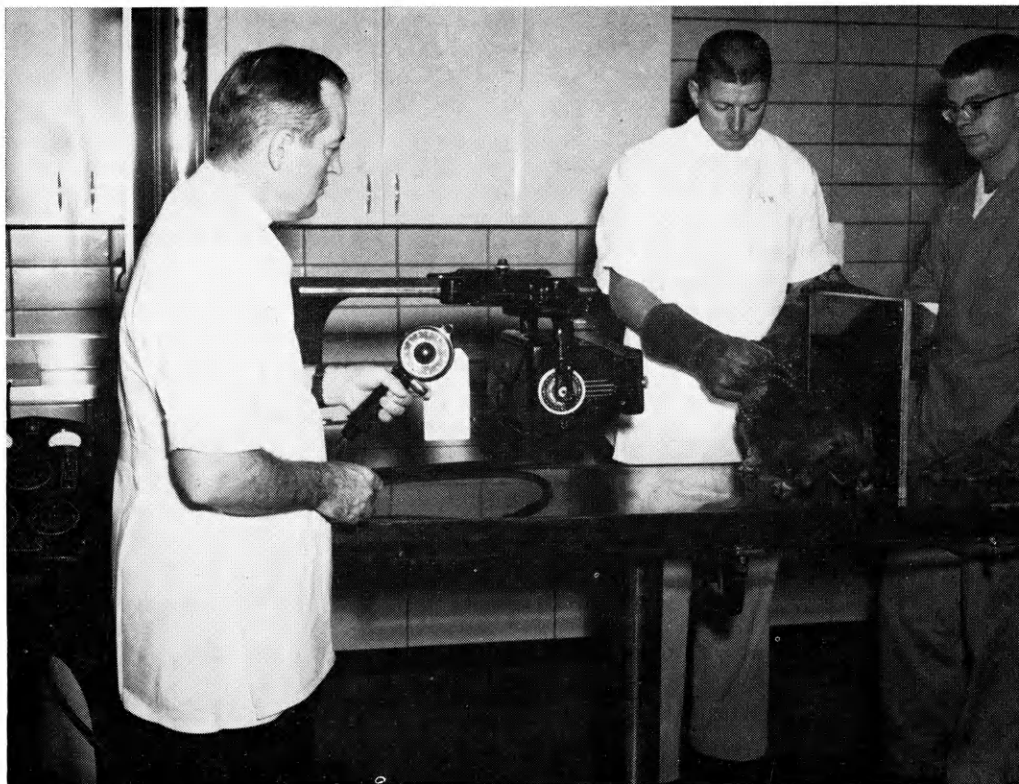
more student spends about 35 to 40 hours in class each week. Veterinary medicine is difficult, but very interesting, he said.

Farm Vet Is Familiar

The veterinarian most familiar to Kansas farm people, the general farm practitioner, is a valuable asset to any community. He not only treats diseased animals, but he also works with the county agent and other ag-

ricultural leaders to help inform the farmers on proper prevention and control of diseases, many of them communicable to man. In this way he plays a prominent role in helping control human disease in his community in addition to his regular job.

It is becoming increasingly evident that the "horse doctor" of yesterday has disappeared, and in his place stands a highly trained doctor to safeguard the nation's animal population.



Animal doctors must x-ray to be sure of their diagnosis prescribing treatment. Dr. Eberhart supervises Jay Rush (in white) and Richard Kohlschreiber, vet medicine seniors.

Scales

vs.

Show

Ring

by Joe Horton



Show rings still have their place as media for breeders and feeders to show skill in fitting and showing livestock but scales have the final word on pounds of meat produced.

TODAY'S farmers are faced with a problem of how to profitably produce and market livestock. During the last five years we have had a drop in cattle prices, a drought, and a rising cost of production.

Most of you remember when in 1953 prices of livestock, especially cattle, dropped so sharply. Many farmers got rid of their livestock then but many held for higher prices. Higher prices have been slow to come.

For years, and for many years to come, we have had county fairs, state fairs, and national livestock shows where livestock are picked and judged in a show ring. Judges look for conformation of body, type, amounts of meat and fat in desirable and undesirable places, and how an animal shows itself.

Judging is valuable because we need these characteristics and more in a good animal. How fast did the animal make its gain and how much feed did it eat to make its gain? The only way a farmer can accurately measure these two factors is to weigh the animal and the feed it eats. Scales are

necessary equipment to tell how efficiently an animal is gaining.

With cost of feed higher and prices of cattle lower your animals have to make efficient gains. It is not impossible for a steer to gain 1.8 pounds a day. With gains like this you can raise cattle profitably.

Farmers Have Sold Herds

With the tightening up of the cattle business many farmers have sold commercial cow herds which produced his feeder stock. Stockmen have gone to a deferred feeding system. Deferred system is where a farmer buys young stock and grows and fattens them.

Stockers, generally grass-fat steers, are bought at weights of 400 pounds during October. Animals are wintered in a feed lot on a sustaining ration. In early summer the stock are put on pasture and left for the summer. Late in the summer or early fall they are fed grain to hit a November market.

A deferred program eliminates cost of keeping the cattle and feeding them through the second winter.

Short feed, a consequence of drought, makes it even more expensive to winter stock on boughten roughage.

Another factor to be considered in buying feeders is that you can select the kind of cattle you buy. You take a chance when raising your calves that you will get a few poor ones. You can buy only steers and don't have to take any heifers with them. Your cow herd will drop about 50 percent heifers, which don't make as popular feeders as steers.

The fattened steers can be marketed at 800 to 1,000 pounds. This is another reason why scales are handy. You can weigh the steers to tell how they are doing and when they reach market weight.

Study Markets

When you get ready to sell your cattle study the market in advance to see how the price is going. You may be able to get a few extra dollars if you keep your eye on the market. Weighing the animals lets you know when they are ready to sell.

Using scales applies not only to

(Continued on page 20)

Magnets in Cows' Stomachs Help Prevent HARDWARE DISEASE

by Walter Lewis

HARDWARE disease" is a disease of cattle resulting from irritation or perforation of the reticulum, or second stomach, by a sharp object.

It occurs when livestock are fed roughage and grain containing wire or nails. These foreign materials are usually included in the feed accidentally. Often they are picked up where old buildings and fences have been torn down.

The disease is more common among mature cattle, and is seldom noted in calves. This is due to a difference in eating habits. Young calves pick over their feed more carefully.

It is hard to diagnose hardware disease because symptoms are the same as many digestive disturbances. If neglected, affected animals may die.

Cuts into Stomach

Operations to remove pieces of hardware from cattle are performed by the Veterinary department here at Kansas State college nearly every week. In performing the operation, a veterinarian makes an incision through the stomach wall and removes the foreign object. By moving a small bar magnet around in the stomach he takes out any other metal objects that might be in the stomach.

Most animals recover satisfactorily after the operation. Almost everything imaginable has been recovered, ranging from pocket knives to tacks.

Best way to reduce trouble from hardware disease is to keep hardware out of an animal's stomach. One way recommended by the K-State Veterinary department is to attach a magnet to the hopper of feed grinders. Use bolts in constructing feed bunks. Nails often work loose and are easily picked up by an animal eating from a bunk.

A two and one-half inch bar magnet placed in a cow's stomach by way

of the mouth is a new method of trying to reduce trouble from hardware disease.

In California a group of 42 heifers have now carried magnets for a year and a half. These heifers have been fed rations supposedly free from metal. During the first six months of the investigation 2 of the original 42 heifers needed operations.

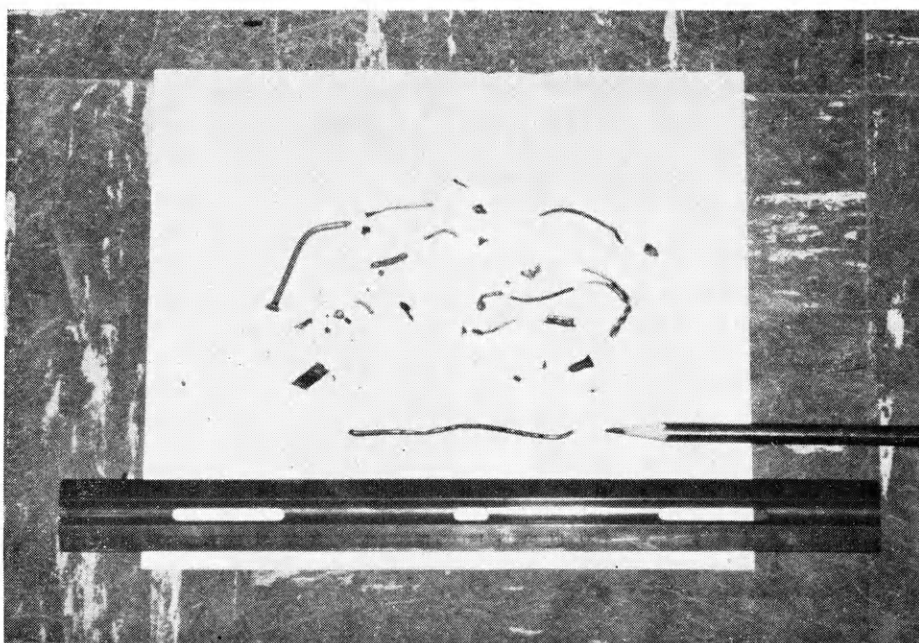
In the next ten months only one operation was required. In her case no metal was sticking the stomach wall, but the magnet and foreign material it had collected were so heavy that they were irritating the floor of her stomach. After removal of the magnet the heifer made satisfactory recovery.

Of more than 2,000 heifers which wore magnets only 22, or about 1 percent, have needed an operation during twelve months.

Main trouble caused by hardware in cattle occurs when metal punctures the stomach wall and moves through into the heart or lungs. As long as it is attached to the magnet and remains in the stomach it does not seem to bother the animal, except when it causes irritation.

In a majority of animals it was found that the injury was not caused by wire penetrating the stomach wall but by irritation. Magnets used were two and one-half inches long and in some cases wire longer than the magnet caused the trouble. In one case a five-inch piece of wire was found. Operation on one heifer revealed 19 assorted pieces of metal attached to the magnet.

Magnets don't completely eliminate hardware trouble. However, they tend to reduce many severe cases.



Many cows are lost each year, when articles such as these accumulate in their stomachs.

FARM WILDLIFE

Eat Crop Enemies

by Dave Templeton

A FAVORABLE balance of wildlife on a Kansas farm is important. Wild animals eat enemies of farm crops. Farmers can provide cover, food, and shelter for wildlife if they will use proper conservation methods.

Several conservation methods are listed in USDA bulletin 2035. The bulletin suggests that cover be provided for wildlife through such devices as shelterbelts and windbreaks, ponds, fence rows and hedges, and wildlife borders.

A shelterbelt will provide homes for insect-eating birds, as robins and meadowlarks, while windbreaks provide good protection for game birds such as pheasants. With a little time and planning, and several days work, a good shelterbelt may be set up. It will not only be useful for wildlife, but it will protect farm buildings.

Farm ponds, along with recreational value, provide water for wildlife. Other purposes of a pond may be flood control, livestock water supply, fire protection, or fish production. Ponds are usually located in small valleys. A good place is in a meadow where it can't fill with silt. Most farm ponds should be fenced to prevent livestock contamination. Ponds have many recreational values, such as fishing, hunting, trapping, and swimming.

Multiflora rose is becoming popular as a growing fence. It not only provides protection for wildlife, but it cuts down on the expense of fencing. Studies show that woody fence rows harbor fewer harmful and more beneficial kinds of wildlife. This type of fence row should be planted on boundary lines that will not be changed, as between cropland and pasture, or along property lines.

Two types of wildlife borders are those made up of grasses and legumes, and those of shrubs. These borders are used to control erosion and are

often established around waterways, or gullies; along farm roads; above diversion dikes; where cropland is next to woodland; and along streams or ditches. Both types of wildlife borders are beneficial to wildlife by providing either food or cover—sometimes both.

Food, water, and cover are three essentials for wildlife existence. Factors that hold down wildlife population include: diseases, man's activities, weather conditions, shelter, and food.

Managing land to meet wildlife requirements is a necessary concern of all farmers. Land used for cropland, pasture, and woodland may produce wildlife as a secondary crop. USDA bulletin 2035 gives information to improve wildlife conditions on the farm.

Manage Cropland

Cropland management practices helpful to useful wildlife include:

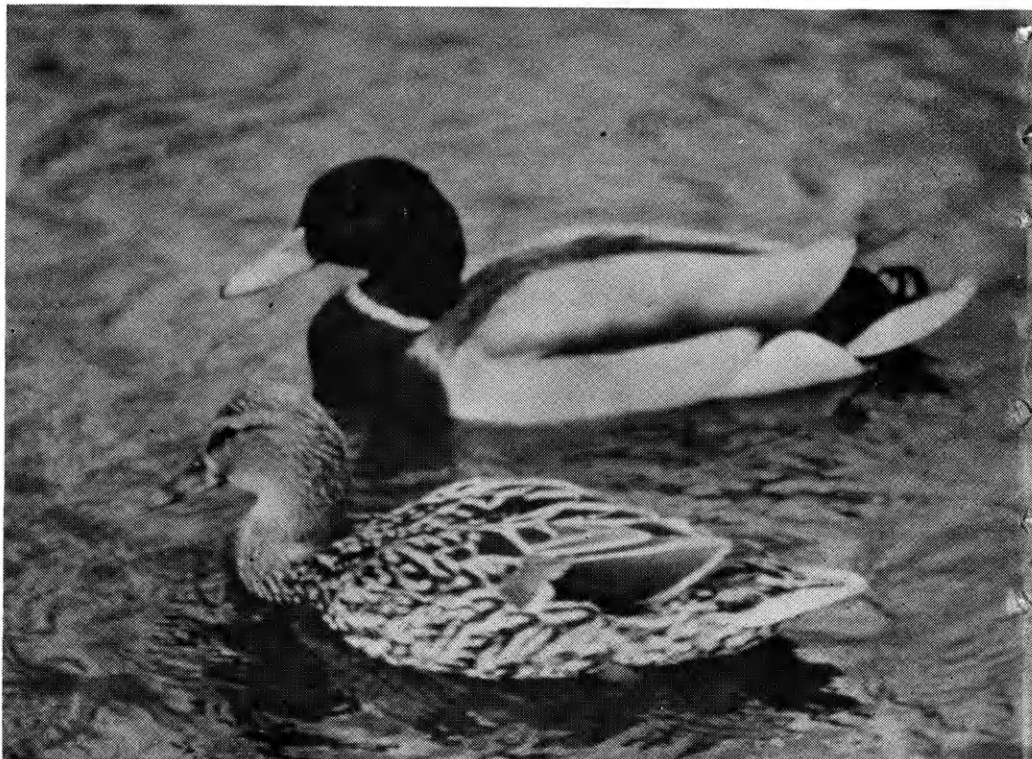
crop rotations that include grass-legume meadow, liming and fertilizing, strip cropping, use of cover crops, stubble-mulch tillage, delaying mowing of watercourses and headlands until after grain harvest, spring plowing, leaving one-eighth to one-fourth acre of grain standing next to good cover, and spreading manure near cover in winter. Practices harmful to wildlife include burning, clean fall plowing, early mowing of watercourses and headlands, and indiscriminate use of insecticides and weed killers.

Pasture land management practices helpful to useful wildlife are grazing within carrying capacity of the pasture, liming and fertilizing, reseeding or renovating. Practices harmful to wildlife include burning, grazing too heavily, and clean mowing early in the season.

Woodland management practices useful to wildlife include: protection from fire and grazing, selective cutting in small woodlands, leaving two den trees per acre when cutting timber, piling brush near the edge of the woods, leaving fallen hollow logs, clear-cutting of small areas in large woodlands. Harmful practices are burning, grazing, clear-cutting of large areas, and cutting out all den trees.

A well-balanced wildlife program along with a good farming program can result in many hours of enjoyable recreation and a good return for one's money.

These wild mallards are probably very thankful that some farmer has provided them a resting place. Farm ponds are often a life-saver for these weary travelers of the air.



Watch Out for Beetles in Basements

by Paul Bocquin

HOME owners who don't want their basements to become a beetle hatchery this winter should examine cut ends of their firewood before storage and leave the beetle-infested pieces with oval-shaped tunnels outdoors.

William Gibson, K-State entomology graduate student, reports that long-horned beetles are attacking many drought-weakened trees around northeastern Kansas. Among their favorite desserts are elms and poplars.

About half the species attack weakened trees. In Manhattan, *Saperda tridentata* or elm borers lay their eggs under bark of elms. The young hatch and girdle the tree. "The cottonwood borer treats the poplar in the same manner and is responsible for dead tops which are evident in infested trees," Gibson said.

The other half of the species are more beneficial. They live in decayed wood and weeds, including poison ivy. "States in the lumbering business suffer most heavily but no Kansan likes to lose a shade tree out of his front yard," Gibson pointed out.

Long-horned beetles are often easy to identify. Their bodies are long and cylinder-shaped. As their name implies, their threadlike antennae are usually as long or sometimes twice as long as their bodies. Color is often dark brown but may be a mixture of red, yellow, black, or almost any color of the rainbow. They make a peculiar squeak by rubbing together their first and second body segments.

Gibson has collected long-horned beetles over a widespread area of Kansas. He plans to publish a catalog of the Kansas species within a few years.



Although they aren't old enough to go to college, Jennifer Kay Rutz and Pamela Jean King can at least enjoy the College's ice cream served at the newly remodeled dairy bar.

FACE-LIFTED

DAIRY BAR

Offers Food for Between-Class Breaks

by Gary Yeakley

NEW counters and stools were installed in the dairy bar this fall and the interior was redecorated. The bar, located on the ground floor of west Waters hall, has counters of the latest style, with resistant, Formica tops. Stools will now seat 22.

Remodeling included laying asphalt tile on the floor and repainting the walls. Plans for installing fluorescent lights have been made, according to W. H. Martin, professor of dairy husbandry.

Wash sinks, a new soda fountain, a Sweden freezer, and a soft ice cream maker were installed to use in dairy merchandising studies.

Dairy sales counter, known on the campus as the dairy bar, was set up in 1924 as an outlet for products from teaching research and dairy manufacturing. The counter, operated by the dairy department, was

not set up for a snack bar, Professor Martin emphasized.

The sales counter offers almost any product connected with practical teaching of dairy manufacturing retail. An assortment of ice cream, sherbet, cheese, milk, cream, butter, ice cream sandwiches, cottage cheese, malts, shakes, and the latest addition, chocolate sundaes, pass over the counter six days a week.

Ruth Booton, full-time waitress, manages the dairy counter with Nancy Bohn as part-time waitress. Student help is needed through rush periods.

The counter largely serves students and faculty during between-class breaks; however, anyone may purchase dairy products.

"Chocolate is the most popular flavor," Mrs. Booton said. "Malts and ice cream have been the largest sellers this fall."



Plans for
Christmas
Foods
Bring Happy Memories

by Carol Ward

HOSPITALITY is the byword during Christmas holidays. As families and friends gather together to share fun and food, the traditional holiday meals again take the spotlight.

Whether the main Christmas day feast is sumptuous or simple, it's a special occasion for everyone from baby to grandpa.

What to serve for the big "family feast" is often a matter of tradition. One family may serve roast goose at Christmas, and claim that "it just wouldn't seem like Christmas if we served anything else." Another family may feel the same way about roast turkey or baked ham.

Foods that accompany these time-honored main dishes often have their beginnings in medieval Christmas feasts or even earlier. For example, steamed plum pudding with hard sauce was a part of many Christmas banquets in the Middle Ages.

Christmas Is Feast Time

Even before the birth of Christ, the time of the year in which Christmas occurs was a time of festivity. The ancient Roman festival of Saturnalia was similarly a time of feasts and joy.

After the birth and growth of Christianity, different national groups came to use certain foods at Christmas meals. Swedish Christmas cookies, English Yorkshire or plum puddings, and Norwegian lutefisk are all associated with Christmas.

Roast goose, roast turkey, and

baked ham traditionally share the spotlight in the United States. Who doesn't remember Christmas on the farm, with all the aunts and uncles and grandparents and cousins gathered around a groaning table holding all three meats. Of course the Christmas bird was stuffed with a special dressing—whether it was a sage, cornbread, or chestnut dressing; somehow to this day it's the only kind which seems right.

Food for Thought

Hot biscuits, cranberry sauce, mince pie, fruit cake—all bring happy memories of good times and old friends. There were candied sweet potatoes, steamed plum pudding, and Christmas cookies. Afterwards, around the fireplace popcorn was popped for stringing the tree, and everyone enjoyed a rich, creamy glass of egg-nog.

Even though the family group which shares Christmas dinner is usually smaller now, many families still serve all the dishes that they have enjoyed year after year in connection with Christmas. Other groups settle for a simple dinner with just one or two of the traditional dishes.

If turkey is to be star of the meal, a 16- to 20-pound bird is less expensive pound for pound, even for a small family, if freezer space is available. By freezing the left-over meat until the family is again hungry for turkey, the usual order of after-Christmas left-overs—"cold slices,

pickings, casserole, hash, and finally soup"—can be avoided. Before buying, though, check to make sure that the oven and roasting pan are big enough to hold the turkey.

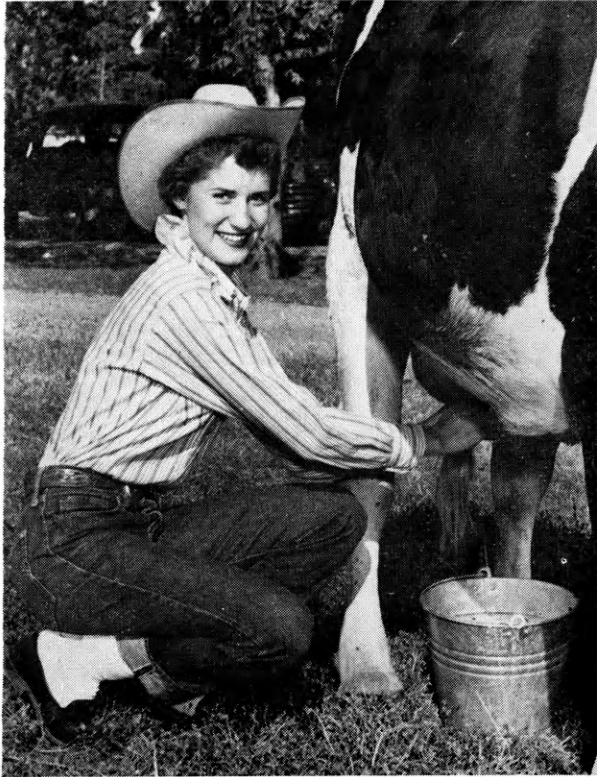
If you can't freeze left-overs, perhaps a smaller turkey, a goose, a roasting chicken, guinea hens, or ham will be more suitable. Served on a table festive with pine cones and candles, these, too, can convey a feeling of Christmas.

With many families, a Christmas morning breakfast is a time-honored custom. Over and over again, a family serves dishes which to them signify Christmas.

Ham and hominy for breakfast, or codfish balls and gravy may be "the Christmas breakfast" for families with a New England background. Southerners may insist on sausage and hot biscuits for this special breakfast. Midwesterners may delight in ham, eggs, hot cakes, and hot black coffee. Whatever the usual meal, it starts family members to reminisce of past Christmases.

Enjoy Christmas Eve

Other families have their special holiday meal on Christmas eve. Some people of Scandinavian descent gather at lodges and churches to enjoy heaping plates of quivering lutefisk made from dried cod soaked to moistness. People with mid-European background prepare the old-country carp dinners served on Christmas eve. Those with a strong Italian ancestry



Connie Morgan, HE Fr, was crowned Ag School Queen. Here, Connie is proving that she really can milk a cow.

Barnwarmer Queen . . .

Connie Morgan, from Goodland, is reigning as Ag School Queen throughout the current school year. She competed for her title against five other girls: Lee Lutz, Elementary Education freshman from Wichita; Karen Hampton, Speech freshman from Pratt; Carol Miller, Elementary Education senior from Wichita; and Pat Vopat, Child Welfare freshman from Luray.

The five finalists were chosen by popular vote of the Ag students at Ag Seminar from 17 women representing organized houses at K-State. Candidates were judged on basis of personal appearance, personality, and character.

Students attending the Barnwarmer dance in the main ballroom of the student union, October 6, elected Queen Connie. The queen has a complimentary ticket to all department or co-educational banquets in the Ag School.

Connie is not the first queen in the family, as her mother, Isabel Porter, was Barnwarmer Queen in 1931.

will be looking forward to a traditional evening supper of fried or marinated eels.

Christmas eve is a good time to have a family together: singing carols, popping popcorn, and just plain having fun together. It's a time of neighborliness, a time to say, "Drop in and see our tree." It's a time to tell the old familiar Christmas stories to the family and friends gathered around the fireplace, to serve egg-nog and Christmas cookies to tired tree trimmers, to hold open house. What better way is there to greet your friends as they come in from the cold, snowy out-of-doors than with hot

spiced punch and a sliver of rich fruit cake.

Christmas is a time to share with others. Santa Claus is always pictured as a smiling old fellow because he makes others happy.

You can share the holiday spirit with gifts of homemade food. Dark, mellow fruit cakes packed in decorated tins, gay bonnet-boxes of decorated Christmas cookies, gaily painted cans of homemade plum pudding, or small boxes of old-fashioned fudge—these are gifts that people can't buy, that can come only from you. It's a perfect way to say "Merry Christmas."

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Scales vs. Show Ring

(Continued from page 14)

cattle but also to hogs. In the last few years there has been a change in hog production. Hog raisers are changing from a chubby lard type to a meat type hog. Lard hogs were kept for a long time to put on more lard. Now hogs are sold when six months old weighing 180 to 200 pounds. How do you tell when you have a 180-pound hog? Weigh it.

As with cattle, the show ring still holds some advantages for hog raisers. With the meat type you want a longer hog, one with less back fat and more meat. Judges can see these factors in a hog. You can, too, but there is nothing like a set of scales to tell you when your hogs are ready to sell.



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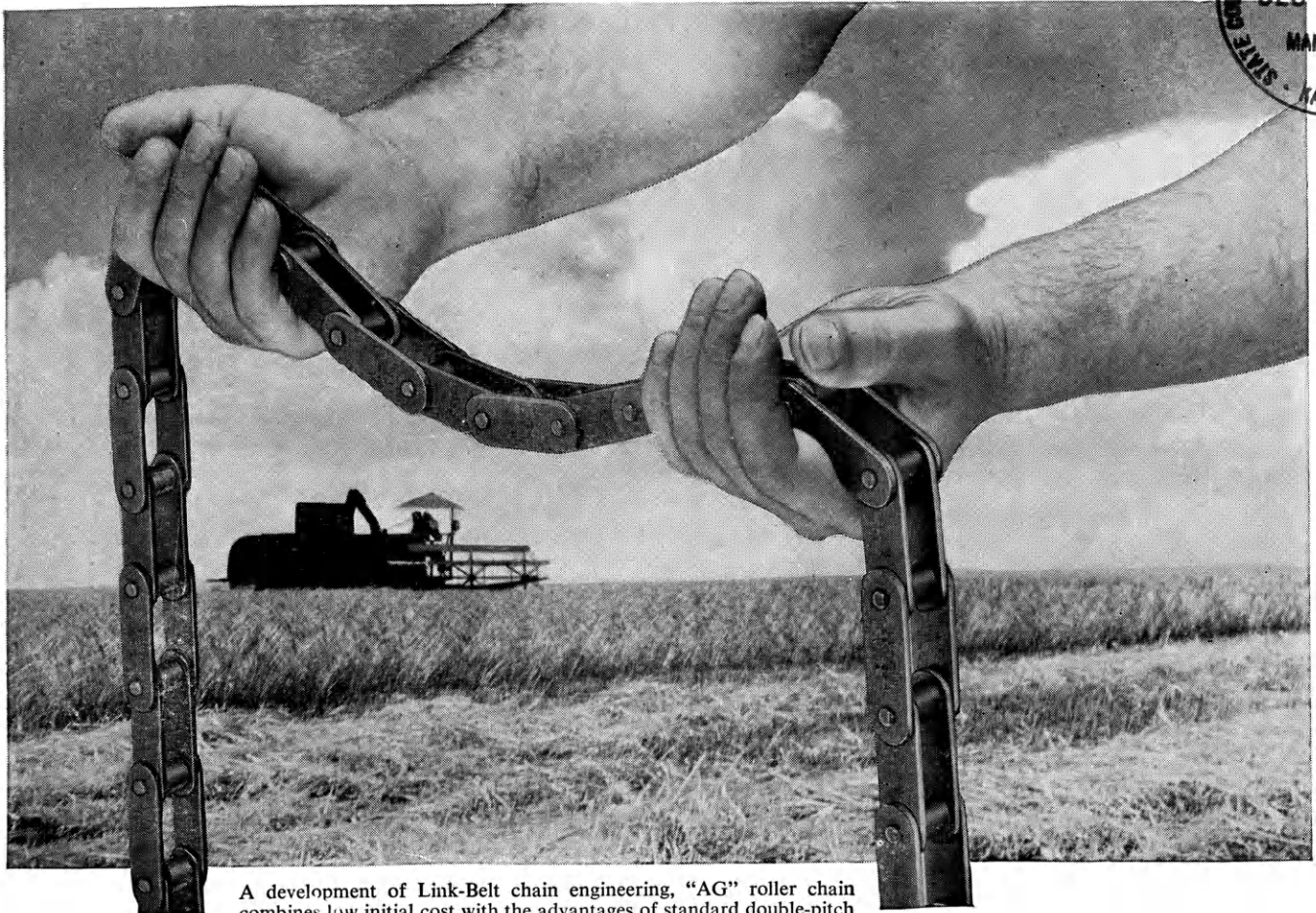
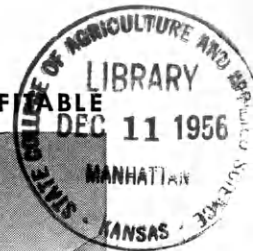
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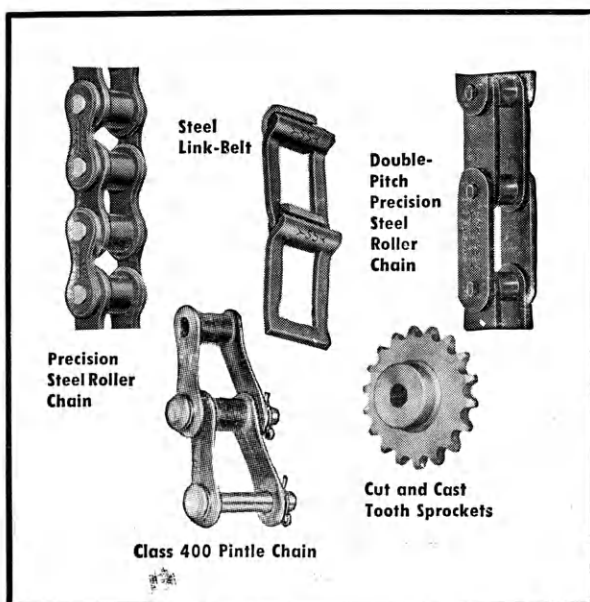
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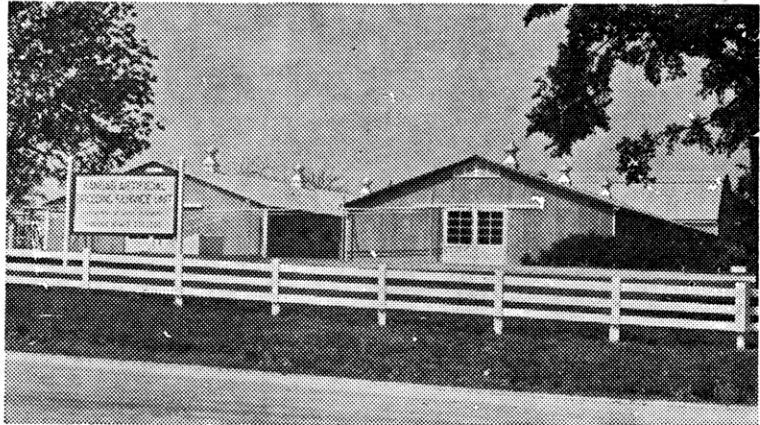
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