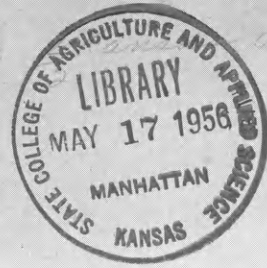
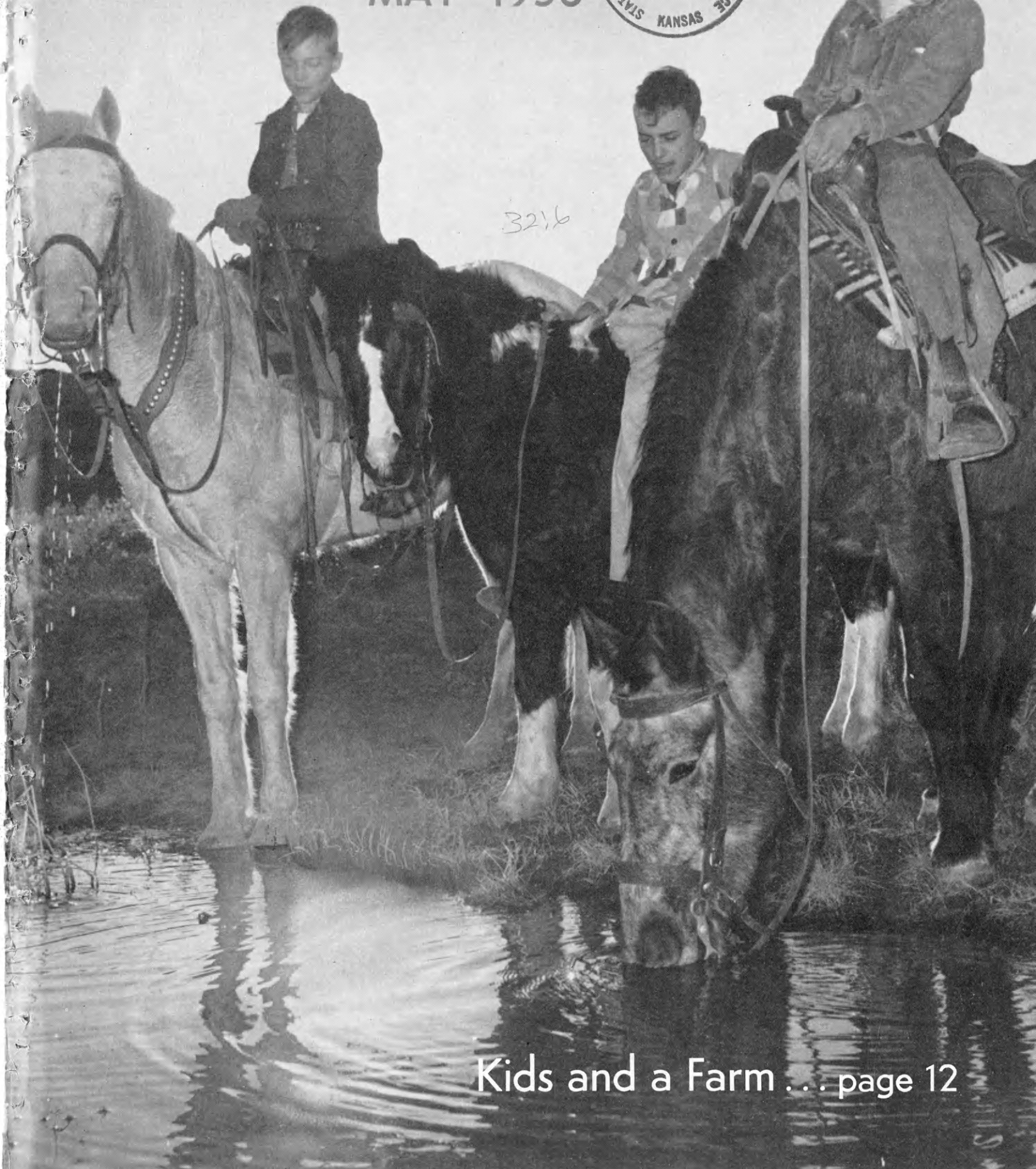


Kansas State College
AG STUDENT
MAY 1956

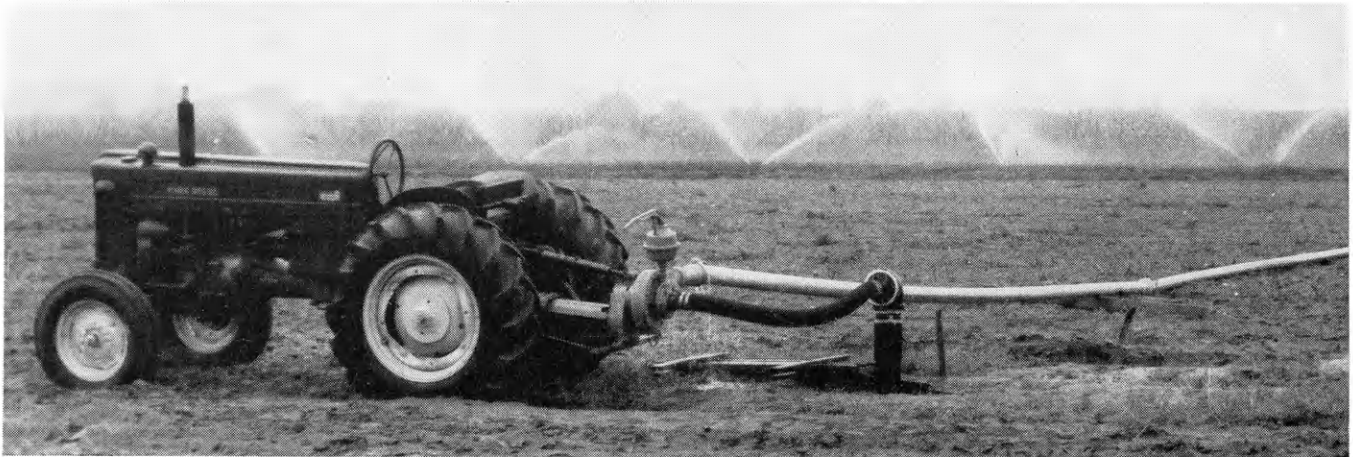


ag student

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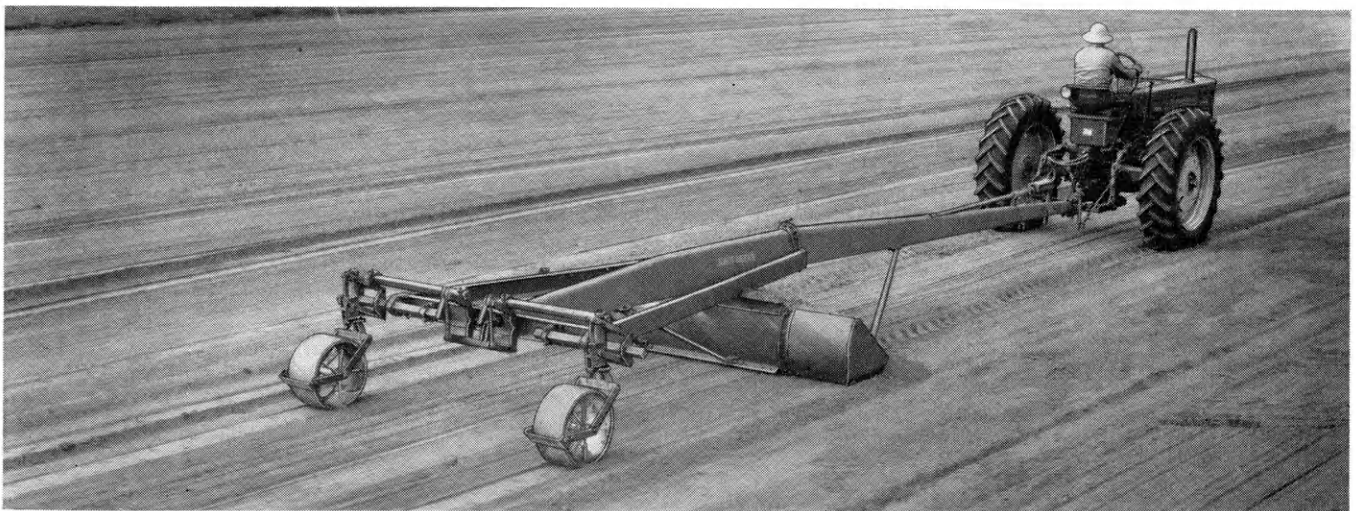
Is This the New Frontier?



BY tradition, irrigation was for the West—for semi-arid plateaus and fertile valleys where spring comes cool and green, then fades and burns beneath the summer sun.

And that's just another tradition that farmers have broken to smithereens. As long ago as

1900, irrigation was being used large-scale by Louisiana rice growers. As time went on, farmers here and there began to pump from streams and ponds and wells until, in recent years, thousands have turned to sprinkling systems—east, north, southeast, and everywhere between.



WHERE there's irrigation, there's the need to level and smooth the land. One engineer summed up the trend this way: Land leveling moves east—to the Corn Belt and the Mississippi delta, to the Carolinas, to New Jersey, and Virginia.

Here then, indeed, is a new frontier—in the extension of irrigation, in the conditioning of land for better use of irrigation water, and in the adaptation of farm equipment to new tasks.

Irrigation engineers offer this word of warning. The newcomers to irrigation, if they are

wise, may well consider this one big lesson from the experience of old-timers in the business: *Irrigation is wonderful, but it's no miracle.* It costs money, and it has its problems—every farmer must learn how best to adapt it to his farm, how to live with it successfully, what equipment is necessary, when to apply water, when not to, and how much.

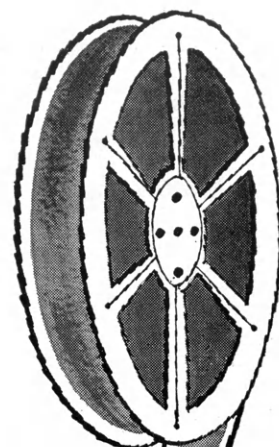
To the men who are diligent and patient enough to find the answers to such questions, irrigation does offer tremendous possibilities. History proves that.



JOHN DEERE • Moline, Illinois

Motion Pictures on Insect Control Available for Showing on Campus

As part of its educational program, Hercules Powder Company—makers of toxaphene for agricultural insecticides—has produced the following informative motion pictures. They are available on loan for use by Agricultural College classes. Arrangements should be made by your instructor, giving titles desired and three alternate dates on which your class could see them.



THE ALFALFA WEEVIL AND ITS CONTROL

Shows life cycle, damage, and control methods. (12 minutes)

COTTON INSECTS AND THEIR CONTROL

Interviews with successful growers, close-ups of common insects. (40 minutes)

CUTWORM CONTROL

Habits, damage done, and recommended controls. 12 minutes)

THE POLLINATION OF ALFALFA

Close-ups of bees, showing importance of protecting these beneficial insects. (25 minutes)

THE SPITTLEBUG AND ITS CONTROL

Interviews with farmers and other authorities on control of this damaging insect. (14 minutes)

DESIGN FOR A LABORATORY

A visit to the Hercules Powder Company's Agricultural Chemicals Laboratory. (11 minutes)

LOW-VOLUME SPRAYING

How to mix insecticides and adjust sprayer for efficient application. (14 minutes)

(All films are 16 mm. in sound and color.)

Educational Booklets and Slides Also Available.

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Kansas State College AG STUDENT

Vol. XXXII

May 1956

No. 6

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Dear High School Graduate,
Graduation from high school is one of your major accomplishments. Congratulations. Let high school graduation be only a milestone in your education, not the end.

After 12 years of schooling you may feel you have had enough. Big pay in factories, construction, or just the thought of education may lure you away from another classroom.

A person's expected life-span is continually increasing. You are going to need a college education to prepare you for your life in society. Don't let anyone talk you out of it. Four more years to be spent in school may seem like a long time but it is only a small portion of the time you will have for earning a living.

No matter what occupation or career you choose for your life's work, you will do better if you get a college education first. Even if you plan to farm, get an ag degree first.

If you have a farm or small town background you will like the friendly atmosphere at Kansas State. Here you will meet many more students with similar interests and background to make you feel at home.

See you at K-State next year,

CLAYTON HERMAN

ON
THE
COVER



A rural scene with three boys and three horses typically portrays the life of children given an opportunity to grow up on a farm. In leisure hours a farm youngster, boy or girl, may become acquainted with Mother Nature. A farm furnishes an outlet for a child's energy to help save embarrassment of juvenile delinquency.

On the left is Bill Schultz, son of Mr. and Mrs. Ernest Schultz, Brookville; his brother, Wayne, on the right; and Larry Kumle, son of Mr. and Mrs. LaVerne Kumle, Marquette, in the center. The photo was taken in Horse Thief canyon near Kanopolis.

PHOTO CREDITS: Gary Haynes, Cover; Lynn Perkins, 8; James Myers, 10, 11; Robert Ecklund, 12, 12, 13; Charles Hall, 14, 15, 15; K-State Horticulture Dept., 16, 17; J. R. McLeland, 18, 19.

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"My only cash outlay was \$3.04 per 100 lbs. of pork"

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"Take the pigs you see in this picture. They averaged 217 pounds when we put them on the market at 5½ months. The corn and oats they ate were raised here on the place. The only cash I put out was for Mintrate—and that came to only

\$3.04 for every 100 pounds of pork I sold."

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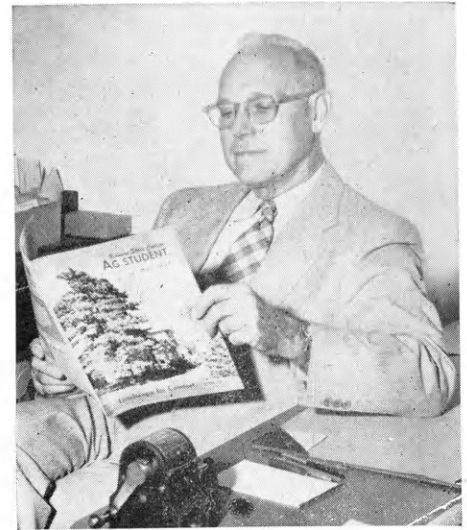
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Chit Chat

By Clyde W. Mullen, Assistant Dean



Dean Mullen

ALWAYS, there is a thrill of deep satisfaction on election day for the Agricultural Association when juniors and seniors and even sophomores get to their feet before the microphone in the Auditorium and make nominating speeches in behalf of favorite candidates.

It seems to make little difference whether the speech has been planned or is given extemporaneously. Our lads choose their words well. There are few grammatical slips. Supporting statements are well chosen and logically arranged; and frequently there is a concise summation—one, two, three, four—which hints of training for judging contests.

The easy conclusion is that one of the benefits of participation in try-outs for judging teams is to help make lads better speakers. And in these days, the ability to stand on one's two feet and think and speak is of as much importance as excess graduation points.

Recently, there have been a few disappointed lads who have come into this office to inquire in a casual way what the requirements may be for election to Alpha Zeta. Of course, it is pretty well known that the students who are invited to accept membership in this honorary fraternity must rank scholastically in the upper 40 per cent of their class. What may not be so well known is that these prospective candidates must also be known on the campus as leaders and useful citizens in the School of Agriculture.

The nominating committee first selects the prospective candidates on the basis of their rank in class. The committee then turns to our accumulative record of extra-curricular activities. If students have been neglectful in reporting their activities to Mrs.

Decker and Mrs. Weisbender, then they may miss out on an opportunity to become a member of Alpha Zeta.

It is important that all students of all classifications remember to report promptly any nice thing that happens to them as students, from scholarship awards to committee assignments, or election to an office. It is from these things that acceptable candidates for Alpha Zeta are developed. We want to know about you.

Good chuckle of the week came when we observed a student in Waters 231 dig into his hip pocket, pull out a screwdriver and a couple of screws and proceed to repair the arm rest on his assigned seat. No department or office seems to feel too much responsibility for these large class rooms that are used by many departments for recitation purposes. So, repair it yourself, lads. Apparently that is the sure way to get the job done.

It was good to see Director C. Peairs Wilson in Agricultural Seminar April 5. Be reminded that he will be carrying the academic responsibilities that formerly fell on Dean Weber. When CWM doesn't get the job done, see Director Wilson. He is going to be easy to get to and will have the highest interest in problems of our students in the School of Agriculture.

About those white cards and blue cards that are posted from time to time on the Placement bulletin board in Waters Hall; the white cards are intended to provide leads for persons who wish to be a bit aggressive in making connection with a job. When the blue cards go up, they announce the date of an interview opportunity. These cards are most important for those seniors who are interested in

the sort of job a personnel man may have to offer. Watch for those BLUE cards.

Congratulations again to the boys and gals who put on such a wonderful Little American Royal on the evening of April 7. Few spectators and not too many students realize the planning that members of the Dairy Club and the Block and Bridle Club have put into the days and days of work that precede the smooth-running spectacle the rest of us see under the lights of the fieldhouse. We can think of a dozen students whose names ought to be spot-lighted here, but we immediately think of another score of names that should not be left out. So, en masse, our heartiest congratulations to one and all, even to the clowns who kept everybody laughing with their antics.

Commendations to these retiring officers of the Agricultural Association. There was never any doubt as to whether or not they would be on deck: Stanley Larson, president; Walt Martin, vice-president; Dick Baker, secretary; Lloyd Christie, treasurer; Mark Drake, Barnwarmer manager; Ray Zimmerman, assistant Barnwarmer manager.

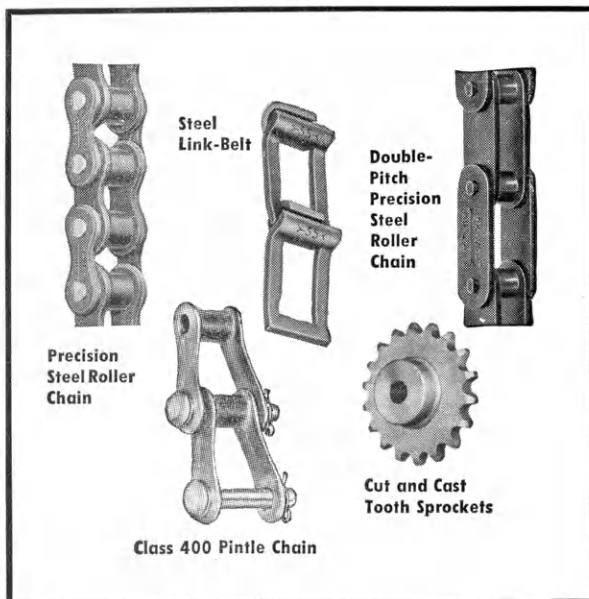
Congratulations to these newly elected officers who will take over at the May Seminar. Affairs of the Association will be in good hands in 1956-57. Walter Martin, president; Virgil Norton, vice-president; Gilmore Dahl, secretary; Jack Van Horn, treasurer; Ray Zimmerman,

(Continued on page 20)



A development of Link-Belt chain engineering, "AG" roller chain combines low initial cost with the advantages of standard double-pitch roller chain so important to farm implement drives and conveyors.

How Link-Belt's complete line lets designers match the chain to the machine



Heavy-duty chain construction required for strength on a hay baler drive may be wasted weight on a grain elevator. And the correct application of chain may mean a substantial improvement in operating efficiency and economy. With these and other factors to consider, many farm equipment designers turn to Link-Belt for their complete chain needs.

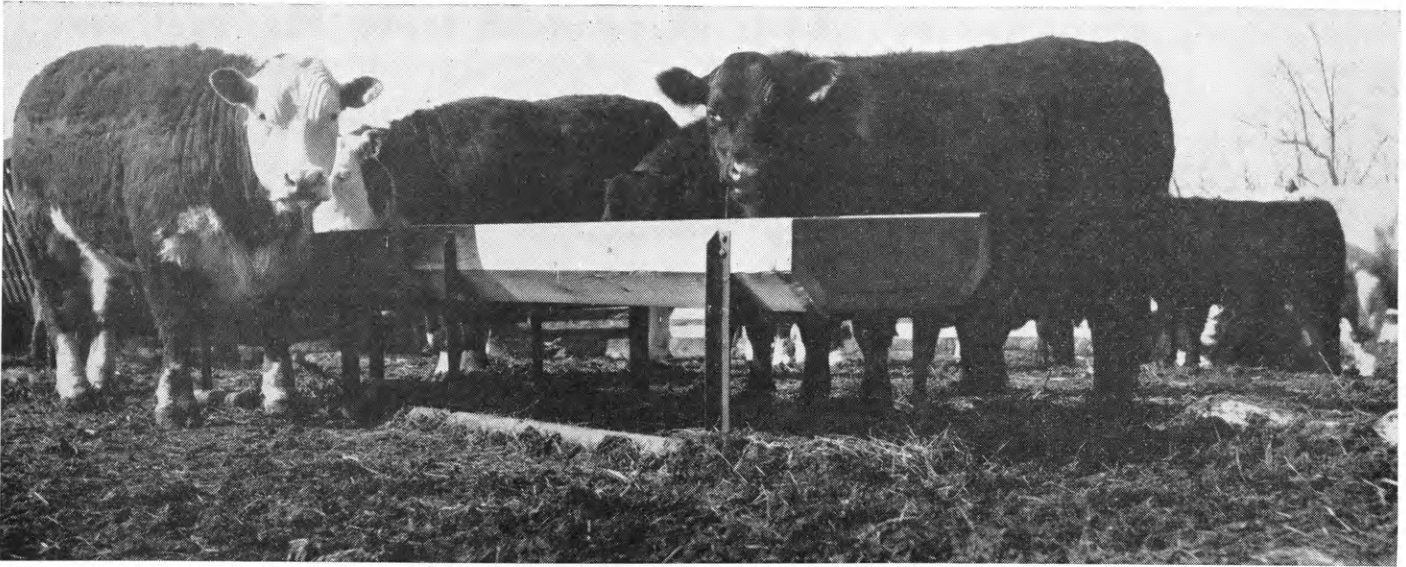
This is industry's most complete line—and as a result, offers unmatched design flexibility. In addition, Link-Belt makes a standard line of chain attachments—can and often has developed others for special jobs.

Yes, whatever the requirements of speed and load conditions, Link-Belt can supply the right drive and conveyor chain. Little wonder more than 400 of the nation's leading farm machinery manufacturers rely on these unmatched facilities.

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CHAINS AND SPROCKETS



In a local test a dollar's worth of phenothiazine-mineral mix fed to pasture heifers returned \$6.23 in extra sales profits. Grub counts in treated and untreated cattle indicated that a systemic treatment looks promising for cattle grub control.

PHENOTHIAZINE Helps Control Grubs

It May Be Fed in a Mineral Mixture to Cattle on Pasture

by Lynn Perkins

A NEW weapon has been added to the cattlemen's arsenal for combating several perennial pests, including cattle grubs, some internal parasites, and hornflies. It is phenothiazine. Phenothiazine is familiar to sheep growers, who have used a one-to-nine combination of phenothiazine-salt to control stomach worms in sheep. Now it has been discovered that the same mixture is effective in preventing losses in cattle infested with stomach worms.

Cattle grubs have caused an average loss of 160 million dollars yearly, the United States Department of Agriculture estimates. Both in Europe and the United States cattle grubs have been controlled by year-round, free-choice feeding of a phenothiazine-salt mineral mixture. Tests show an average decrease from 25.1 grubs in untreated cattle to 4.5 grubs in cattle that had access to phenothiazine. This means a reduction of 82 per cent in grubs that encysted and

cut holes in the thickest part of an animal's hide.

While it is difficult to accurately estimate effect of phenothiazine mixture on number of internal parasites, worm-egg count was lowered considerably in droppings of calves treated with phenothiazine.

Enough phenothiazine went out in droppings to help control hornflies, pests that cost stockmen more than 50 million dollars annually. The phenothiazine kills larvae as they hatch in the droppings. It is no wonder that several thousand head of pasture cattle were fed phenothiazine-mineral mixtures free choice last summer.

Phenothiazine, as spoken of here, consists of a mixture of 2.5 per cent phenothiazine in a protein feed with other worming agents, minerals, vitamins, salt, molasses (10 to 15 per cent), and meat scraps with enough animal fat to keep the mixture from blowing and wetting.

This mixture was palatable enough that mature animals ate an average of 5 pounds a month, when it was fed free choice. Consumption of 2.5 per cent phenothiazine is considered sufficient. However, mineral-hungry cattle ate twice as much the first week as in any following week, thus getting almost a therapeutic dose.

Probably grub control is the most important and promising effect of phenothiazine. There are other methods to control cattle grubs, but the phenothiazine mixture kills small grubs before they reach the back, while rotenone treatments now used are not applied until after the damage to the hide has been done.

Ease of application of phenothiazine is another advantage. Free-choice feeding to keep the mixture accessible insures treatment, if no other mineral supply is placed before the cattle.

Although the free-choice method of low-level phenothiazine feeding may not be so effective as a drench

that expels adult worms, it lowers worm-egg count in droppings with considerably less labor and cost.

Test cattle had fewer hornflies than untreated check cattle. Enough phenothiazine is found in the droppings of treated cattle to prevent many hornfly larvae from developing. Most effective control is to place the phenothiazine mixture close to a well-charged back rubber—near the watering place, if possible.

As expected with a decrease in parasites and flies on test cattle, larger gains were reported during the test period, according to Ray Cuff, regional manager, Livestock Conservation, Inc., Kansas City. Heifers fed the phenothiazine-mineral mixture, free choice, throughout the summer gained 42.5 pounds more than those in the control lot. The value of the added gain at 17 cents a pound was \$7.23. The mixture cost about \$150 a ton.

As each lot of 150 head consumed one ton during the summer, average cost of the mixture was one dollar a head, leaving a profit of \$6.23 a head or \$934.50 for 150 heifers fed the mixture.

Experiments conducted by Kansas State college during the winter of 1953 and 1954 did not show such optimistic results. However, test cattle showed no significant difference in gain. It must be taken into consideration that the College test cattle had far smaller egg-per-gram counts made from fetal samples than a count considered detrimental.

Results of these two experiments show there is little benefit from feeding phenothiazine unless there is a parasite problem among cattle where it is fed.

Tests from feeding phenothiazine mixture to cattle, sheep, and horses indicate it is safe and effective.

Federal, state, and commercial research workers report: (1) Phenothiazine-mineral mixture is palatable. (2) A combination of phenothiazine and other supplemental worming agents are effective. (3) Grub counts are much lower in treated than in untreated cattle.

Palatability of the mixture is increased by adding 10 to 15 per cent molasses. Specialists recommend using finely ground phenothiazine, treated to remove undesirable tastes and odors.

A practical farm and ranch mix-

ture is phenothiazine, 10 pounds; salt, 30 pounds; steamed bonemeal, 30 pounds; finely ground limestone, 30 pounds. Molasses, meat scraps, or cottonseed meal may be added to make the mixture more palatable.

Before starting to use phenothiazine, one should first determine whether he needs it. The only sure way to find out the seriousness of the parasite problem in cattle is to have an egg count made by a veterinarian. If the count is above 300, treatment should begin at once.

This method is not perfect, but it is better than nothing. It is an easy, inexpensive method that requires no round-up or extra work, other than keeping salt-boxes filled with the phenothiazine mixture.

As worms are present in the intestinal tract of many cattle and since the low-level feeding of phenothiazine to cattle under field conditions makes better gains and more net profits, cattle and sheep growers may use this treatment for more profitable production.

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FFA MARCHES ON

This Chapter Progressed from a Shared Building to a New Shop and Classroom

by James Myers

ANY HIGH school can have a modernly-equipped shop and classroom for vocational agriculture students. Mulvane, Kansas, FFA students have proved it by earning money to buy equipment for their shop. When they can't buy equipment, they make it.

Mulvane High has advanced from a school with no vocational agriculture department to a new vocational agriculture building with a well-

equipped shop and classroom. The FFA chapter has progressed from 35 to 75 members in the past 10 years, and is now holding night meetings once a month to replace former daytime meetings.

The Mulvane ag department was disbanded during World War II. The department started again in 1946 with 35 students taking a 3-year vocational agriculture course in a shop that measured approximately 39

by 28 feet. Equipment consisted of one acetylene torch, a coal forge, and a small collection of hand tools.

Students sponsored a scrap drive to raise money to buy tools. They collected enough scrap to buy a \$300 air compressor and paint sprayer for the shop. Projects and farm equipment were painted with the compressor.

Students made several two-wheel trailers, saw-horses, and feed bunks. Although the shop was small, students turned out a sizable number of projects. The chapter continued to gain members and helped equip the shop by building a 1½-ton hoist.

New Building Erected

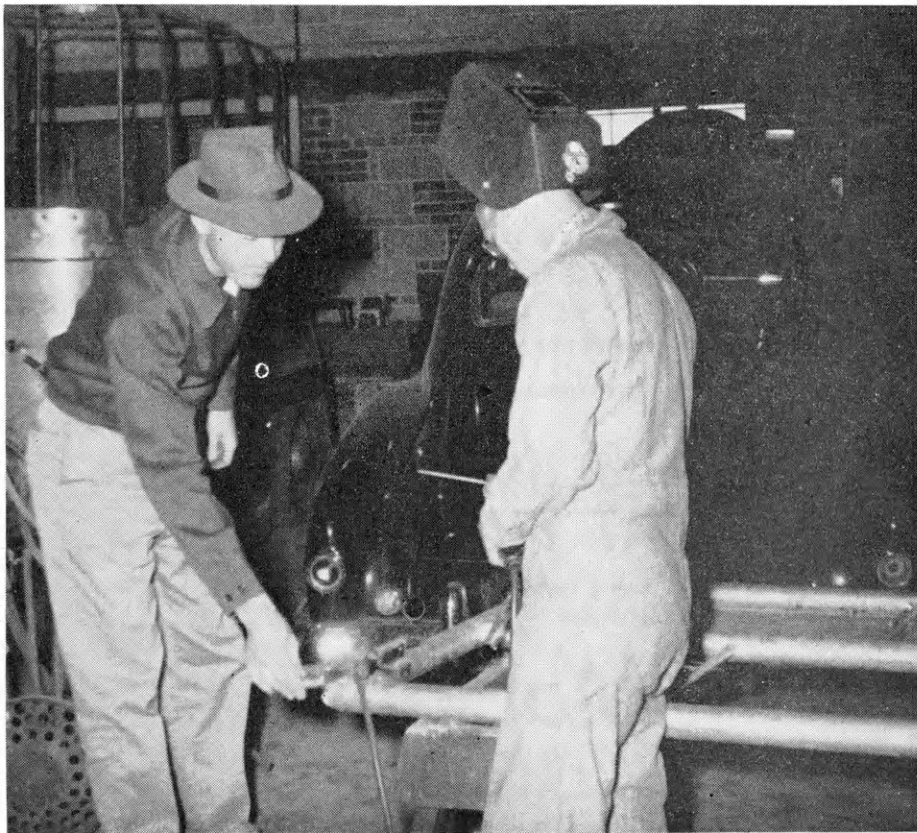
In 1951 the school erected a new building to serve as bus garage at night and ag shop in the daytime. The building was 50 by 70 feet. A classroom building was built east of the shop, which was shared with the band.

Students had made several worthwhile projects in the small shop, but with a larger building to work in they could make larger projects. Equipment now included bench grinders, four arc-welders, a drill press, and an increase in library books.

FFA members financed their chapter by building a cattle squeeze, hauling hay, and making clothesline poles. The cattle squeeze, rented out by the FFA, provided money for the chapter, and at the same time provided a community service for stockmen.

A revolving fund kept a supply of steel for use in the shop. The revolving fund was set aside by the instructor to keep the shop supplied with steel. Money received from sale of

FFA instructor, Lee Doyen, is showing this Mulvane student some of the practical aspects of electric welding on a shop project that is being constructed in the new shop building.



steel to students was put in the fund and a new supply was bought.

Disaster struck in 1953 when an FFA member was burned to death while cutting metal with a cutting torch. The boy was wearing oily coveralls, which was blamed for the fire. The safety lesson has never been forgotten. Boys are taught danger connected with some of the most harmless-looking equipment, and are taught to use equipment safely.

High School Condemned

The high school was condemned in 1954 and a new one planned with a new shop building that wouldn't have to be shared with the buses and band.

Due to his experience in Leon and Mulvane school systems and his knowledge of the arrangement and needs of a high school shop, Lee Doyen, vocational agriculture instructor, drew up plans for the new building. In the plans he included labor-saving devices for a building suited for needs intended.

Doyen, a 1944 K-State graduate, started teaching at Leon, Kansas, in 1945. After one year at Leon, he moved to Mulvane where he has taught the past 10 years. While teaching he earned a Master's Degree from Colorado A&M college in 1953.

Blueprints called for machinery and rooms to be built at the least cost. Doors, cabinets, and other material were salvaged from the old high school to use in the new building. The completed building is 70 by 117 feet with a paint room, metal storage room, classroom, a 50- by 70-foot shop, industrial arts shop, wood storage room, finish room, and a drawing room.

The new building has an outside entrance to a metal storage room, two large overhead doors, and an overhead door to enter the paint room.

Many Tools Added

Tools added include five arc-welders, a gas forge, a Kalamazoo band hack-saw, six sets of acetylene torches, a 14-inch, 3-horsepower Dewall radial-arm saw, and over \$700 worth of steel in supply racks. A \$300 revolving fund keeps a constant steel supply. School officials value the tools at approximately \$7,000 and the library at \$500.

Safety factors in the shop include three fire blankets, three 5-pound dry chemical extinguishers, one 20-pound

and one 5-pound carbon dioxide trigger-type extinguisher, and one carbon dioxide-fired water extinguisher.

Ten overhead furnaces heat the building. There are 10 arc-welding outlets which allow students to weld anywhere within the building and on a concrete ramp outside the building. Lockers and a shower room with a new washbasin of a spray-type similar to those used in modern factories are some other features of the shop.

The FFA chapter contributed toward the building by using its paint compressor to help pay for the painting system in the paint room. The chapter bought a film projector, screen, and several slides and pictures.

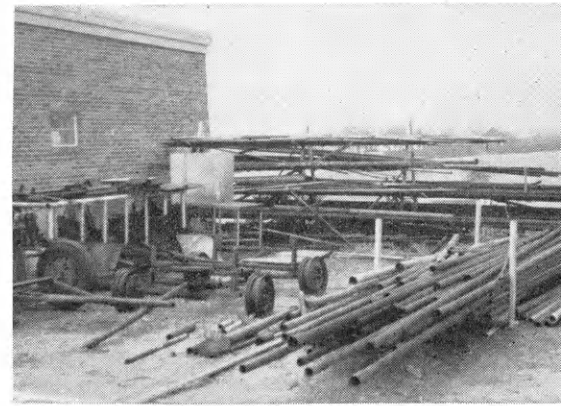
Nine acres of oats the chapter raised last year yielded 53 bushels an acre, which was the high for the community. This year the chapter has nine acres of Concho wheat planted in strips to test effects of different fertilizers.

By planting the new variety of wheat, the chapter is forging ahead to test up-to-date varieties for the community. Doyen said FFA members will have a chance to buy some of the seed wheat for their next year's projects.

Students Construct Projects

Projects students have built in the new building this year include two 4-wheel trailers, one cattle squeeze, two 20-foot hay mangers, a 16-foot feed bunk, and a 20-foot feed bunk.

Under construction now are two 2-wheel trailers, a hog feeder, hay manger, loading chute, and ping-pong tables. A tractor is being painted. Several cars, tractors, trucks, and pieces of farm equipment have been painted. Doyen estimated over 200 sets of clothesline poles have been



A revolving money fund keeps this Voc Ag shop supplied with steel for shop work.

constructed and sold by the chapter while he has been instructor.

Doyen believes vocational agriculture does much to give a student instruction which will help him after leaving school. Practical work a student gets in an ag shop can be used while he is going to school.

Doyen has had eight students from Mulvane receive State Farmer degrees. There are four applicants this year.

The chapter hasn't won an outstanding number of contests, but, Doyen said, "I believe too much emphasis can be placed on winning the contest and not enough on developing a well-rounded ag program for all students. Winning a contest is fine, but a well-rounded ag program will have a longer carry-over after the student leaves school, and will do the student more good."

New Kansas FFA officers are William Wachs, Ellsworth, president; John Arford, Almena, vice-president; Jon Larson, Clay Center, secretary; John Griebel, Stockton, treasurer; Tom Knappenberger, Olathe, reporter; and Duane Unger, Oberlin, sentinel.

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A Farm Is the P

by Bev Sargent



Boy and best friend enjoy rest in the sun after returning from a romp in the meadow.

DO I WANT my children to grow up on the farm? First, I'd like to introduce two neighbors, Danny and Nancy Barton, who live on the same rural route as I do. They'll answer this question for me.

Danny, who is 12 years old, and Nancy, 9, live on a 440-acre farm in Eastern Kansas. Danny finished his last day of school last spring in time to give his dad a hand with their first cutting of alfalfa. Mr. Barton did all the mowing and Danny took over the

raking. They hired a custom crew to do the baling.

The Bartons still had a big job of hauling the bales to the farmstead and storing them in the barnloft. Danny drove the tractor and pulled the hay trailer as his dad and a hired man loaded and unloaded the heavy alfalfa bales.

Nancy was too small to manipulate a bale of hay, the Bartons decided, so she drew another job. About mid-afternoon each day she carried tasty sandwiches, freshly baked cookies, and iced lemonade to the hay field for the men to enjoy.

Danny and Nancy receive more valuable experience at chore time twice a day. Nancy has the responsibility of watering and feeding the Barton flock of chickens and gathering the eggs. She keeps records of the number of eggs the hens lay each day and the cost of the feed they eat as part of her 4-H poultry project.

Horsriding Is Fun

The Barton children trade off on their favorite chore of riding Pal, their Palomino cow pony, to the pasture where their cows graze each day, and drive the cows in for milking. The cows always seem to graze at a spot farthest from the barnyard, Nancy and Danny agree.

Danny is a fast milker. He is especially fond of feeding the bucket calves. He has a special interest in one little Jersey heifer, Candy, because Candy's mother was his 4-H cow. Nancy and Danny have many pets. Their English shepherd, Chico, gives them many happy hours as he accompanies them on horseback rides.

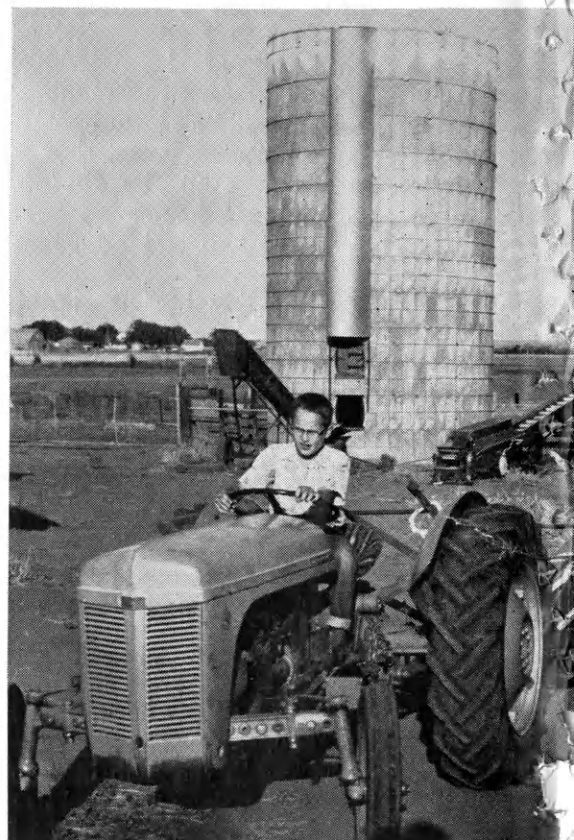
Goldie, Nancy's yellow Persian mother cat, raised four little kittens. They make their home in the Bartons'

barn where they are valuable as mouse catchers and no bother to Mrs. Barton.

During the June wheat harvest the Barton children were on duty again. While Dan was busy hauling grain to the granary Nancy was in the house setting the table and helping as her mother prepared a big dinner for the harvest crew.

During free time Danny and Nancy beat the heat by heading for the new pasture pond which their father has recently built. The children spent two days during the fourth

Danny is having fun driving the tractor while helping his mother operate the silage cutter to the field to chop the green forage for the cows.



Place to Raise Kids

So They Will Have Room To Grow and Have Fun

of July weekend building a raft which really floats.

Nancy, Danny, and their fellow 4-H'ers built a beautiful float which won a blue ribbon in the county 4-H fair parade last fall.

"My first outdoor chore on our farm was carrying wood in from the woodpile to be burned in the fireplace on winter evenings," Nancy said. "I never minded the work because we had so much fun sitting around the fire and eating popcorn."

Danny likes tractor driving most

of all. He has driven for some time and can handle a tractor very well, Mr. Barton says.

"Tractor drivers usually make excellent automobile drivers, too," Mr. Barton says. "I'm sure backing the family car into a parallel parking place will be no trick at all after the experience Dan has had at backing a tractor and trailer."

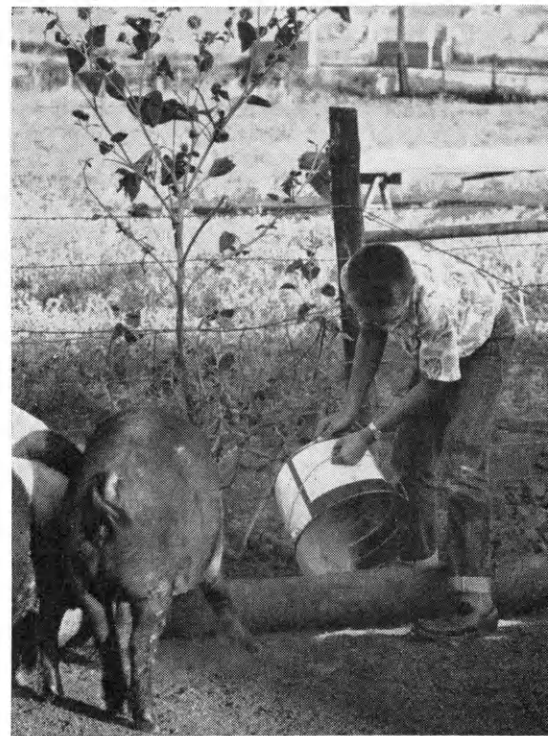
Winter Is Enjoyable

During autumn and winter Danny and his father take full advantage of the hunting season. A large, empty pasture is an excellent place to develop marksmanship, Mr. Barton feels.

The snow season is always a joy on the farm. The Bartons invite all the children of their community over for an ice-skating party on their private pond each winter. Mrs. Barton increases the fun by serving hot chocolate and hot-dog sandwiches to the skaters. Sledding on dirt roads can't be beat, and the Bartons always take advantage of a good snowstorm. Every winter the Barton children hike to their pasture to select and cut a cedar for a Christmas tree.

Mr. Barton says proudly that the snow has never been deep enough to keep the children home from school, but Nancy and Dan are hoping for a bigger snowstorm each year.

The nicest thing about their story is the future. The story will become better as it goes on while Nancy and Dan are growing up. They've had wonderful times on their farm so far, but won't they be proud when they invite their high school crowd out for a big dance in the hayloft, or a hayrack ride on one of Mr. Barton's hay trailers. Officers of their high school classes are almost sure to ask permis-



Serving dinner to these porkers is a daily chore for Danny before he goes to school.

sion to have their last-day-of-school picnics and softball games in the Bartons' pasture.

After graduation Danny may want to join his father as a partner on their farm; or he may plan to enroll in agriculture at Kansas State college to learn new methods of farming.

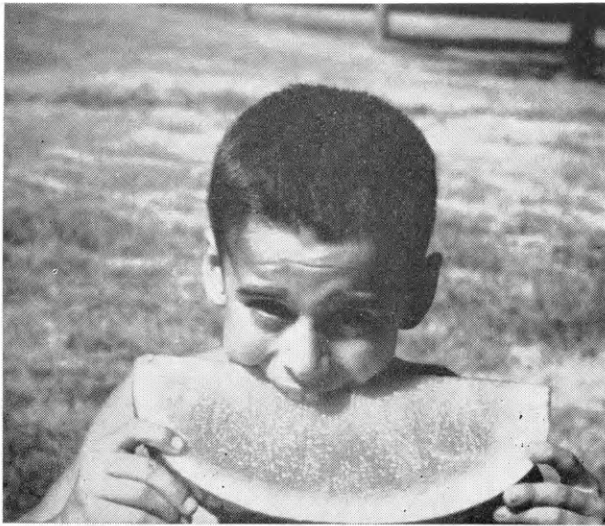
If Danny's college interests lie in another field he can always use his knowledge of farming to secure a part-time job to help finance his college career.

Nancy's experience and work on a farm have prepared her for a college career. Housework and 4-H projects have trained her in homemaking.

The Barton children would be a credit to any community in which they choose to make their homes, as would any children who have grown up with the responsibilities, advantages, and challenges of farm living.

g his father during silo-filling time by taking the en- livestock will need during the winter.





Who wouldn't envy Tom Slagle as he bites into this delicious Kansas-grown melon?

PICK YOUR MELON

*From These Recommended
Varieties*

by Ray Lippe

BOY! I'd give a lot for a slice of cold juicy watermelon right now, the average person is apt to say when he sees a picture of someone eating a melon.

Charles Hall, horticulture professor at Kansas State college, said watermelons and muskmelons can be grown in practically all areas of Kansas. They are well suited to Kansas climate.

Usually the first melons to show up in local grocery stores in Kansas are muskmelons. They arrive about the latter part of April. These melons are grown in lower Mexico. Later, melons come to stores from California, Arizona, Florida, Texas, and other southern states.

These melons are shipping varieties and must have been harvested a week to ten days before arrival in Kansas. First locally grown muskmelons are on the market in late July. The watermelon market starts in early August when melons are at their best.

"There will be more long gray watermelons on the market this year. I believe the quality of these melons is better than round, dark green melons," Hall said. A few hills will supply a family with melons, and in a good year they may provide a few for neighbors.

One of the first requirements for success in growing and marketing melons is variety selection, Hall said. Many production and marketing problems may be reduced if best available varieties are selected. A person raising melons to sell will find that a

market outlet will affect his choice of varieties.

Watermelon varieties recommended by K-State are Black Diamond, Texas Giant, Charleston Gray, Blacklee, Rhode Island Red, and New Hampshire Midget.

Black Diamond or Texas Giant are round, dark green melons suitable for shipping, but neither is disease resistant. Charleston Gray is a long gray or light green melon, suitable for shipping, and is resistant to fusarium wilt and anthracnose. Released by USDA in 1954, it has gained nationwide popularity from standpoints of quality, yield, and its ability to grow on soil infested with diseases.

Blacklee is a long, green shipping melon having wilt resistance. Rhode Island Red, a round, striped, early melon, is suited to home and market gardens. They are very early and weigh 15 to 20 pounds when ripe.

New Hampshire Midget is a cantaloupe-size ice-box watermelon. Its sugar content is low compared to regular-sized melons.

Recommended Varieties

Three varieties of cantaloupe or muskmelons are recommended by the College. Mildew-Resistant 45 is a good shipping cantaloupe, but may be a little too firm for local markets, especially when harvested too soon. It should ripen on the vine.

Hale's Best 36 has long been a standard for many cantaloupe growers. It does not ship so well as the 45.

Honey Rock is an excellent home or market garden cantaloupe.

"As a result of three years of intensive variety testing at the College, I feel that these varieties are as good as are available today," Hall said. "This coming year we will have several new varieties and advance breeding lines in test plots. Some may prove superior to older varieties."

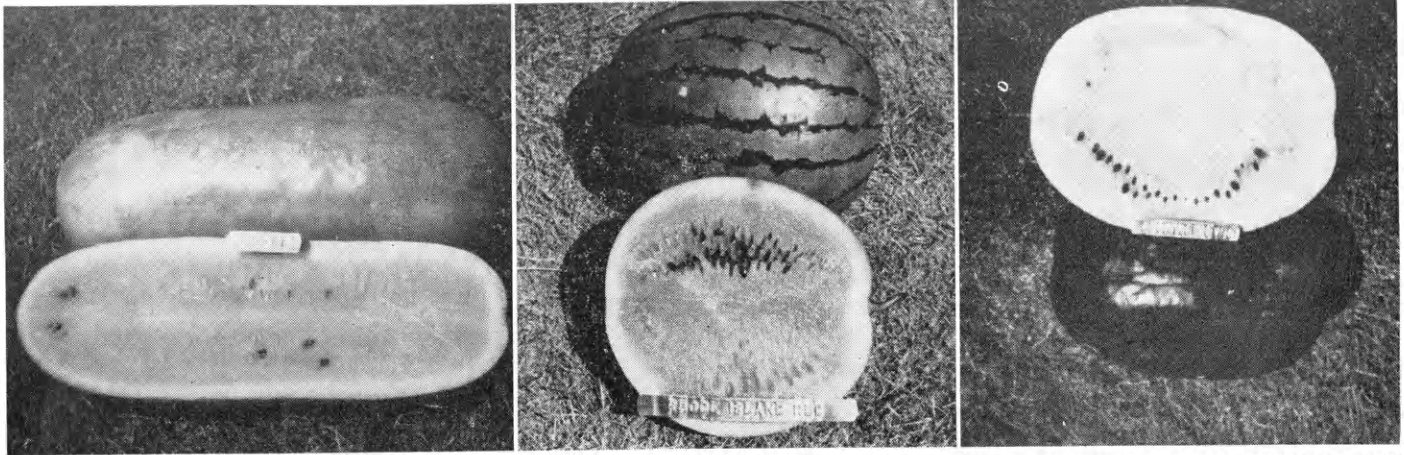
Plant Around May 1

Watermelons and muskmelons should be planted around May 1 in most Kansas areas. Planting may be done in late April in southern counties.

Growers often plant melons too close together. This causes a special problem in dry years. A minimum of 12 by 12 feet for watermelons is the usual spacing. They should be thinned to two plants per hill about the time plants start to vine. Where irrigation water is available, they may be planted thicker.

Muskmelons should have about four feet between plants in a row, with six to eight feet between rows. Two plants may be left in each hill.

Melons need fertilizer on most Kansas soils. Barnyard manure may be placed in a deep furrow under a row and covered with about six inches of soil. Manure should be applied at least six weeks before planting. A sidedressing of 100 pounds of ammonia nitrate an acre or equivalent should be applied at the final thinning.



Watermelon varieties recommended by K-State (left to right) Blacklee, Rhode Island Red, and Black Diamond. Other recommended varieties are Charleston Gray and Texas Giant.

Where no manure is available, about 250 to 500 pounds an acre of 10-20-0 fertilizer may be applied in a band under a row prior to planting. Shallow cultivation is advised as long as equipment can be driven between rows. Cross cultivation may damage plants after vines have reached a length of two feet.

Time of irrigation is important, especially where a sprinkler system is used. About three thorough applications of water are usually enough to make a good crop of either watermelons or cantaloupes.

The first irrigation should come immediately after planting if moisture is deficient. The second should come after the last thinning and sidedressing, and the third, just before or immediately after the fruit crop has set on.

Amount of water applied depends largely on soil type. Sandy soil will absorb moisture faster than heavier soils. Where it is possible, approximately two inches of water should be applied at one time.

Apply Water Early

Water should not be applied after melons begin enlarging. Apply irrigation water early in the season instead of during the later stages of fruit development, Hall suggested. If sprinklers are used, water should be applied on warm, bright days so foliage will dry rapidly.

A common pest of melons is the cucumber beetle. They can be killed by dusting plants with cryolite, rotenone, or methoxychlor, when beetles emerge from the soil. You

may write to Kansas State college for either Extension Leaflet 13 or USDA Bulletin 46 to get recommendations for control of other insects and diseases.

John Britt, who owns and runs a truck farm southwest of Manhattan, has raised melons for several years and nearly always has a pretty good crop. Britt says his two top varieties of watermelons are Charleston Gray and Black Diamond. Although it was released only in 1954, Britt thinks the Charleston Gray is going to be a top melon because of its quality and resistance to anthracnose.

Spraying Controls Insects

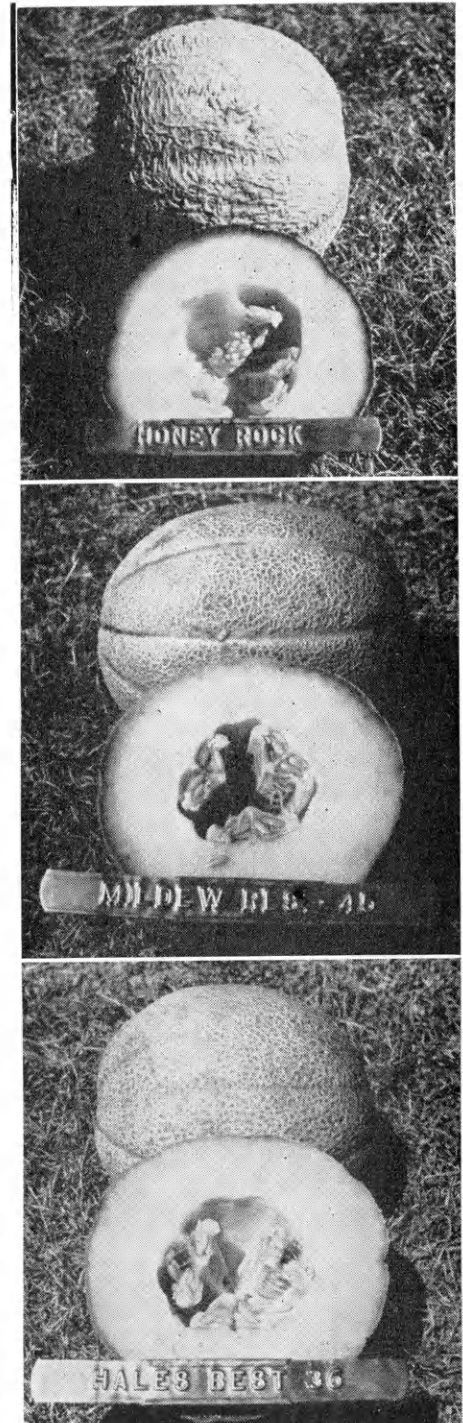
Britt usually plants melons around April 25 to May 10. The melons are ripe about August 15 and will last until frost in a normal year. Cucumber beetles are his biggest trouble so far as pests go. These are controlled by spraying.

Britt irrigates his melons during the summer. He said he had one of his best watermelon crops last year. Without irrigating, the crop would have been considerably less, he said.

He sells melons to local markets. He hasn't planted too many ice-box varieties because there has not been a big demand locally.

Raising melons takes some time and effort, but most people agree that it's worth it when they can go to the refrigerator on a hot summer day and cut open a home-grown melon.

Honey Rock, Mildew Resistant 45, and Hale's Best 36 represent popular varieties.



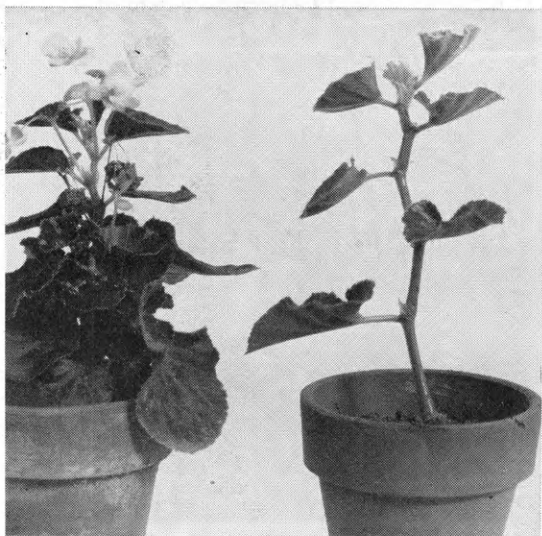
HOUSE PLANTS *That Will Grow* *at Temperatures Above 70*

by Carol Ward

A PERSON doesn't have to be lucky or have a green thumb to grow house plants. Anyone can grow healthy house plants, according to William J. Carpenter, K-State horticulture professor. If a person gives plants proper environment and care, he won't have to depend on luck.

Too much rather than too little heat for best plant-growing conditions is a problem in most Kansas homes. In a typical Kansas home, temperature is generally above 70 degrees F. in winter and usually hotter in summer. Humidity is usually less than 40 to 60 per cent, which many house plants require. Plants grown under such conditions often are spindly and lanky, with sparse, widely spaced leaves.

The geranium on the right has an unhealthy appearance due to too much shade and heat.



Rather than choose a plant at random and then try to make it grow, a homemaker might consider where the plant is to be grown and select a plant to fit the environment. Checking optimum temperature range of a plant before buying will prevent many disappointments.

Foliage plants native to the tropics grow well in daytime temperatures of 75 to 80 degrees F. and night temperatures of 60 to 70 degrees F. Cast-iron plants and cacti survive high temperatures and dry air. Other plants may do better if moved from a warm room to a cooler room at night.

Controlling Heat Is Not Enough

Controlling only the heat will not make a perfect plant environment. Factors such as intensity of light, humidity, kind of soil, and quantity of water affect plant growth. Simple directions such as "water once a day" are not sufficient for growing healthy house plants.

Certain plants are better suited to high temperatures than others. Water and light requirements vary among high-temperature plants. Cast-iron plants need plenty of water and bright, indirect sunshine. Treebines or cissus need bright, indirect sunshine, lots of water, and good drainage.

Although the Chinese evergreen will survive even if poorly cared for, it prefers to be kept moist and in partial light.

Fern or sprengeri asparagus is adapted for a glassed-in porch. It can be placed outside during the summer if shaded from intense sunlight.

Plants that get insufficient light often have weak leaf stalks, lanky stems, and small pale leaves that are widely spaced. Amount of available light inside a house varies. It is important to know where to place a plant because some require more light than others.

Windows on the south are ideal for plants requiring full sunshine. Cacti, flowering plants such as wax begonia and geranium, and highly colored foliage plants are good for southern exposures. They may need shading from intense noon sun.

East and west windows provide indirect or partial light. Plants that require partial light may do better if given the milder morning and evening sun rays in summer and curtained from intense mid-day rays. Ferns, philodendron, rex begonia, and many foliage plants are in this classification.

In addition to a familiar window full of plants, many modern homes have plants growing out of the structure. Plants may be grown between room partitions and in wall niches only where artificial light is available.

African Violets Are Recommended

Artificial light can supplement natural light in a home. For partitions and flower boxes receiving little or no natural light, the answer may be plants such as African violet and gloxinia, which thrive on artificial light.

Some places in a home such as the kitchen and bathroom, where water is used often, are more humid than



The healthy appearance of the Rex begonia, geranium, and aspidistra is aided by placing the pots in a tray filled with moist sand and gravel to raise the humidity around them.

other rooms. Plants needing high humidity might be grown in these rooms.

Plants placed in groups rather than placed singly tend to give off enough moisture to raise the humidity around them slightly. Occasionally spraying house plants with a fine mist of water will increase humidity.

Humidity can be increased by placing plants in trays filled with damp gravel, sand, cinders, or moss. Evaporation from the trays tends to keep the air humid.

When the temperature is high, the sun strong, and the humidity low, as is typical of Kansas in summer, rapid moisture evaporation causes plants to dry out quickly. House plants should not be allowed to become so dry that the leaves wilt before they are watered. If the surface soil and that beneath are dry, the plant needs watering, Carpenter said.

Some Plants Require More Water

A plant with a well-developed root system tends to require more water than a dormant or newly rooted plant. A robust, leafy plant such as a leafy hydrangea may need water twice daily in hot, dry weather, while a cactus may require water only once a week.

Poor watering practices can easily

harm or kill house plants. A plant should not be forgotten for weeks and then overwatered. In hot, dry times, soil around a neglected plant can crack and become dust in a few days.

A recommended watering method is to immerse the pot half-way in water until the soil surface is damp. The pot should not be kept standing continuously in deep water because overwatering makes it difficult for the roots to get air. Sour-smelling soil is due to rotting roots.

Soil Influences Plant Growth

Soil and fertilizers influence plant growth but they are more easily adjusted than temperature and humidity.

Garden soil often contains too little organic matter and is too fine for potted plants. Carpenter recommends a mixture of one part garden soil, one part sand, and one part organic matter such as leaf mold or peat moss for most house plants. One part soil to one part organic matter is suggested for foliage plants.

When a house plant looks sickly, the first thing the owner decides is that it needs fertilizer. However, fertilizer is not a cure-all, and its benefits do not necessarily increase in proportion to the amount used.

Follow Directions

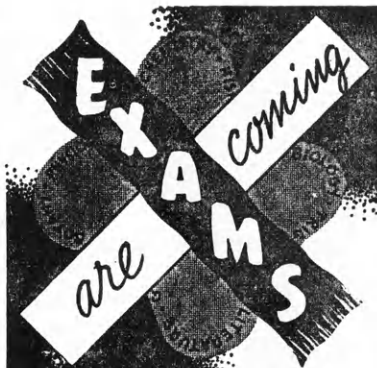
If a plant needs fertilizing and a commercial brand is used, follow the manufacturer's directions. It is important to use only the quantity advised because excess fertilizer harms rather than benefits a plant.

Many authorities consider liquid fertilizers the best. Plants should be watered an hour before applying fertilizer. Powdered fertilizer may be scratched into the soil surface.

How often to fertilize a plant depends on the plant itself. Dormant plants need not be fertilized. Every six to eight weeks is often enough for rapidly growing plants.

Insects and diseases affect house plants. "Any old spray" will not cure "any old disease." Specific diseases require recommended treatment. Inspecting plants often may eliminate many diseases and insects.

The least easily adjusted environmental factors are temperature and humidity. For good "luck" with house plants, select the plant to fit the environment rather than try to find a suitable environment for a plant chosen at random.



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Try Your Hand at Art

Rural Kansas Supplies Continuous Subjects for Amateur Artists

by Roe Borsdorf

FARM PEOPLE are naturals for creative work because they are exposed to it all the time and have the patience to work, study, and re-work." This is the belief of Mrs. J. J. Moxley of Council Grove in reference to the Kansas rural art program.

The Kansas rural art program is an art appreciation and participation program sponsored by general extension, and department of architecture and

allied arts at Kansas State college. This program seeks to promote a liberal art education among Kansans.

Objectives are to stimulate interest in art and art appreciation; to encourage creative art in the state, particularly in those areas which do not have museums or art exhibitions; and to provide resources for high school art programs.

By promoting an intelligent appre-

ciation of art, the program develops an audience for art and artists in Kansas, as well as providing greater personal satisfaction for Kansans.

Exhibits Develop Interest

One method of developing interest in rural art is exhibitions, said John Helm, Jr., professor of drawing and painting. The first state-wide exhibition was held during the 1953 Farm and Home week. This exhibition of 60 paintings was received so enthusiastically that it grew to 107 selections in the 1956 show. The entrants in the 1956 show were selected from regional shows held at Salina, Garden City, Lyons, Winfield, and Atchison during 1955.

These artists have had little or no formal training. They have gained their knowledge from high school work or from extension rural art classes conducted through local clubs, Professor Helm said. Local clubs usually meet weekly for one hour of lecture and two hours of work.

In these three hours members learn about perspective, light, shadow, composition, color, and proportion. Classes are usually taught by a member of general extension, the college staff, or someone with a professional knowledge of art. Adult education art classes are also being offered by some of the smaller colleges in the state.

Painting Need Not Be Expensive

People participating in the art program are mostly lay people, housewives, and retired people. Painting need not be an expensive hobby, as

"Church"—an oil painting by Mrs. Glen Anshutz of Lakin, Kansas, was recently exhibited at the Farm and Home week Rural Art exhibition that displayed 107 amateur paintings.





An oil painting, "The Landmark," by Mrs. Walter Umbach of Spearville, Kansas, was also exhibited during the recent Farm and Home week show that featured the work of Kansans.

you may use charcoal and newspaper to master the fundamentals, Mrs. Moxley said. As a painter progresses in skill, he will want to add to his equipment.

Mrs. Moxley is very enthusiastic about the Kansas rural art program. She feels it is an outlet for a creative instinct that everyone has. It is very satisfying to be able to create something the like of which has never been made before, she said.

Some creative work of Kansas artists includes paintings in oil, water color, casein, and pastels; drawings in pencil, charcoal, and pen and ink;

graphic arts consisting of block prints, etchings, lithographs, and serigraphs; decorative arts of ceramics, metal-smithing, weaving, and wood carving; and sculpture in stone, wood, and metal.

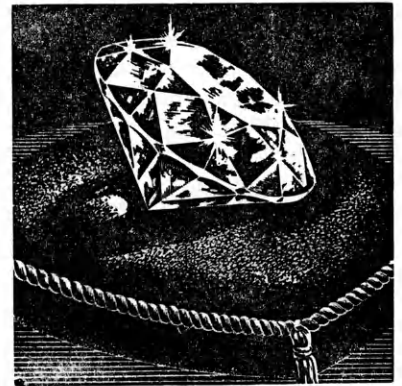
Future plans of the Kansas rural art program include a traveling exhibition of work by professional Kansas artists. A taped lecture and cards describing the paintings will travel with the exhibition. Great response has been shown toward this program and a much greater response is expected as the program grows, Professor Helm said.

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The Store for Men and Women

Chit Chat

(Continued from page 6)

Barnwarmer manager; Paul Faidley, assistant manager.

Nearly two hundred graduating seniors from the School of Agriculture will in a few days be making that long-anticipated trek across the stage in Ahearn Fieldhouse where President McCain will be handing each graduate a coveted parchment and Dean Weber will be extending a hand of congratulation.

One scarcely knows how to react to this "once in a lifetime" experience. Is it a feeling of exhilaration? Is it a feeling of relief? Is there an element of pride, as the graduate realizes that probably sitting somewhere

out in the audience are his parents who have sacrificed in more ways than one, in order that their son might have the benefit of a college education? Is there a feeling of uncertainty? What next?

Yes. All of this, and more reactions and sensations go coursing through one's conscious and subconscious mind as he takes the long walk in the spotlight on graduation day.

Our colleges will be turning out more than a quarter of a million graduates this year, ten times the out-turn of half a century ago. Estimates run to three hundred thousand or more per year in another five years.

Although it means much to individuals to have attained a high level of education, it means much more to

our country when whole armies of well-educated young people are released from our educational institutions each year.

On the whole, higher education contributes to a high level of general ability; to a high level of idealism; to a high level of culture; to higher and ever higher levels of living; more and more leisure; and an increasing satisfaction out of every-day living.

We can measure in billions the value of our annual out-turn of automobiles, but no one has yet devised an expression of value to measure the worth of our annual out-turn of college graduates. That value can never be measured in dollars. We can only stand by and marvel at its potentialities.

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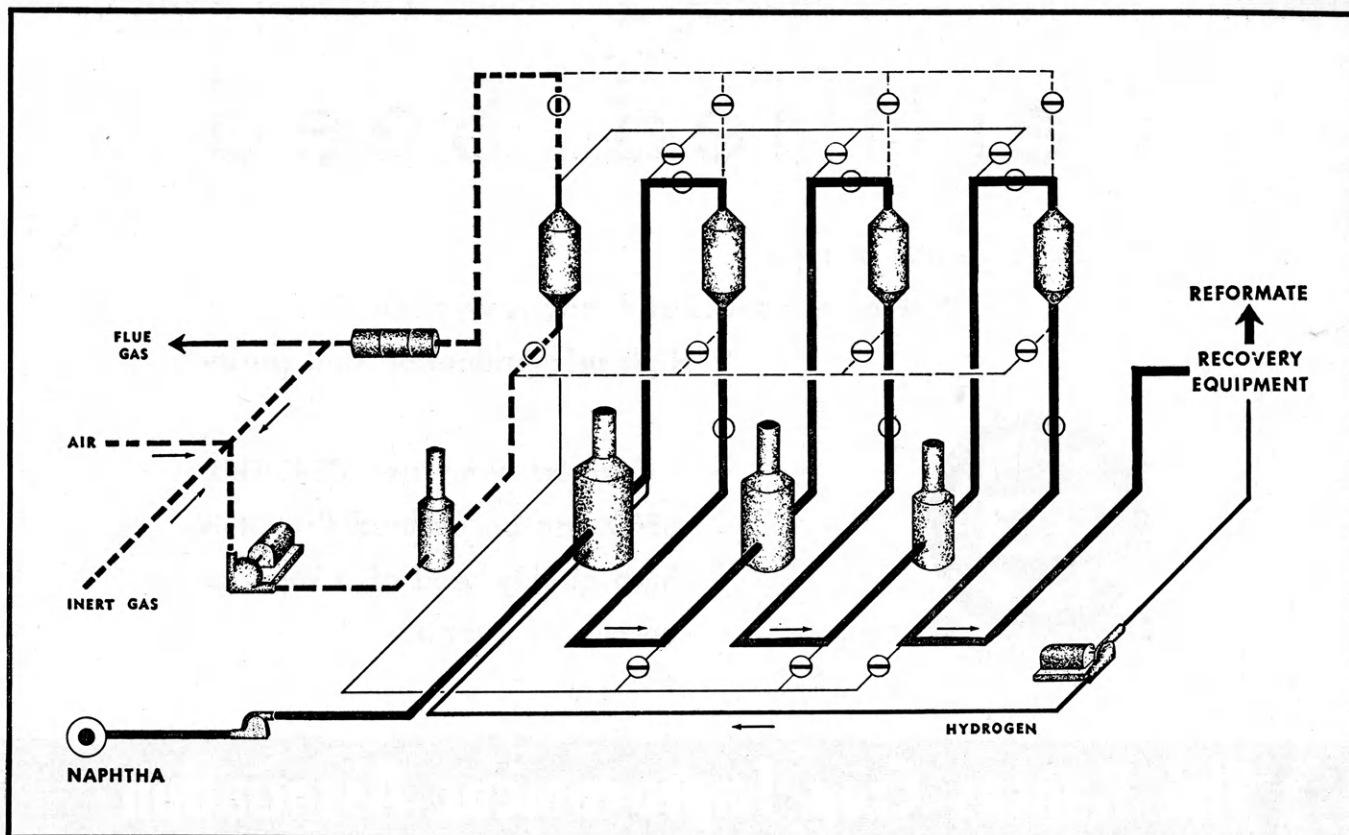
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The diagram, with a minimum number of reactors, illustrates cyclic regeneration. Piping arrangement permits the swing reactor to substitute for any other reactor in the system. High activity of catalyst is maintained—without interrupting production—in the ULTRAFORMING process.

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For years activity could be restored only by taking the catalyst out of the unit and sending it away for special treatment. To keep from having too many of these shutdowns, refiners had to operate at relatively low octane numbers.

Standard Oil research scientists came up

with a better answer. They developed a new type of platinum catalyst, and they learned how to regenerate it repeatedly—while it is still in the unit. When a swing reactor is provided, the unit need not even be shut down. The new process is called ULTRAFORMING.

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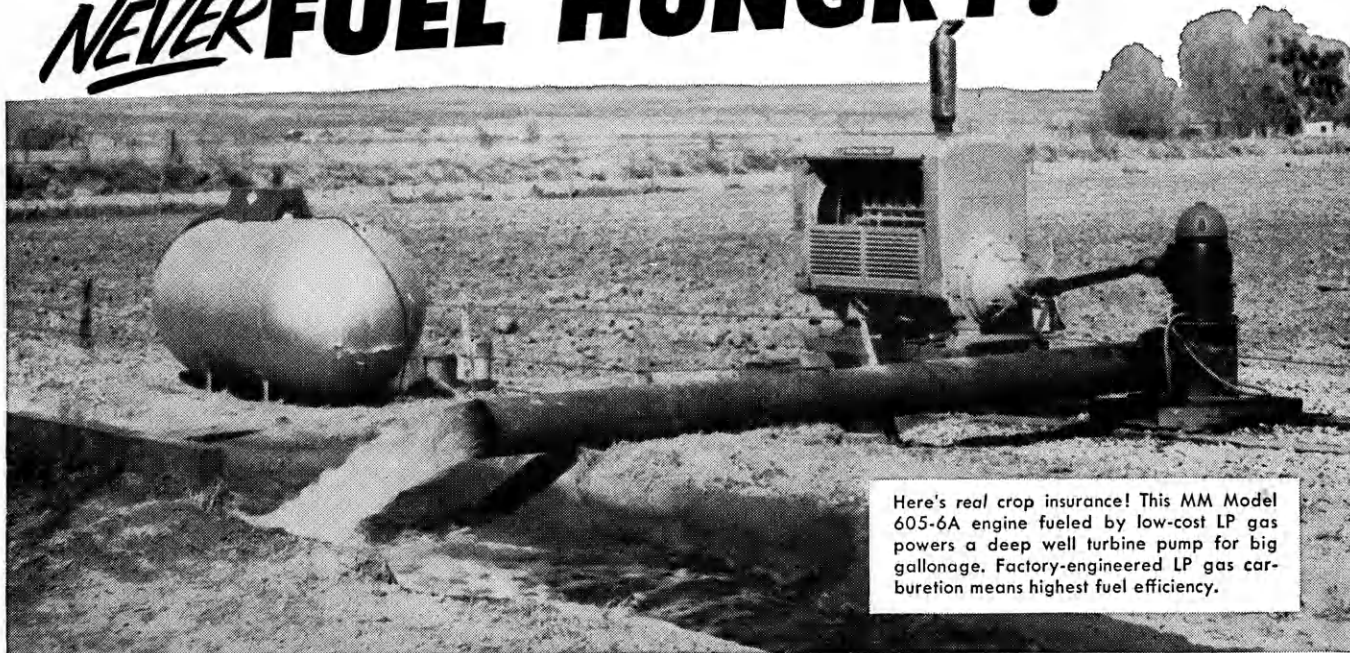
ULTRAFORMING is only one of the many major achievements credited to the scientists who have made careers at Standard Oil.

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MINNEAPOLIS 1, MINNESOTA

MM 425-4A engine on LP gas drives this pump on a non-stop schedule with dual fuel tanks. Long-run MM design with big piston displacement and husky bearings keeps maintenance costs at rock bottom.



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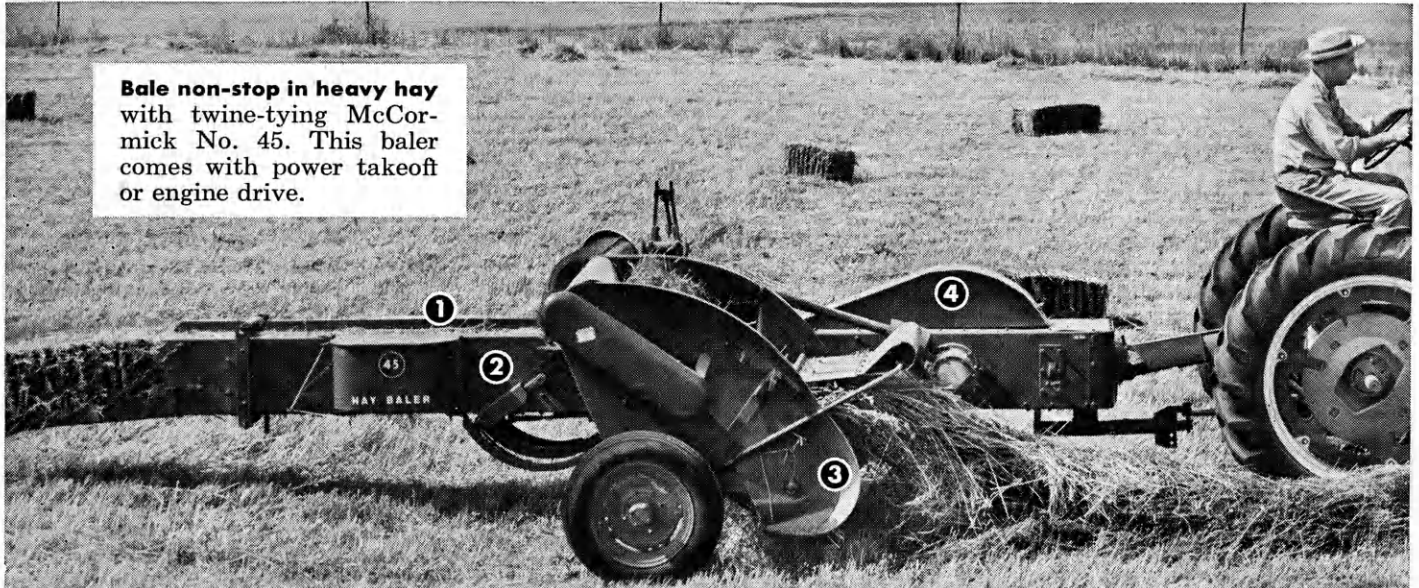
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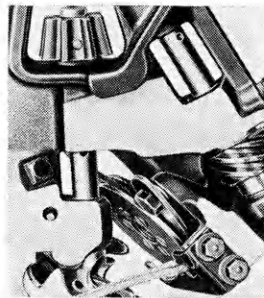
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