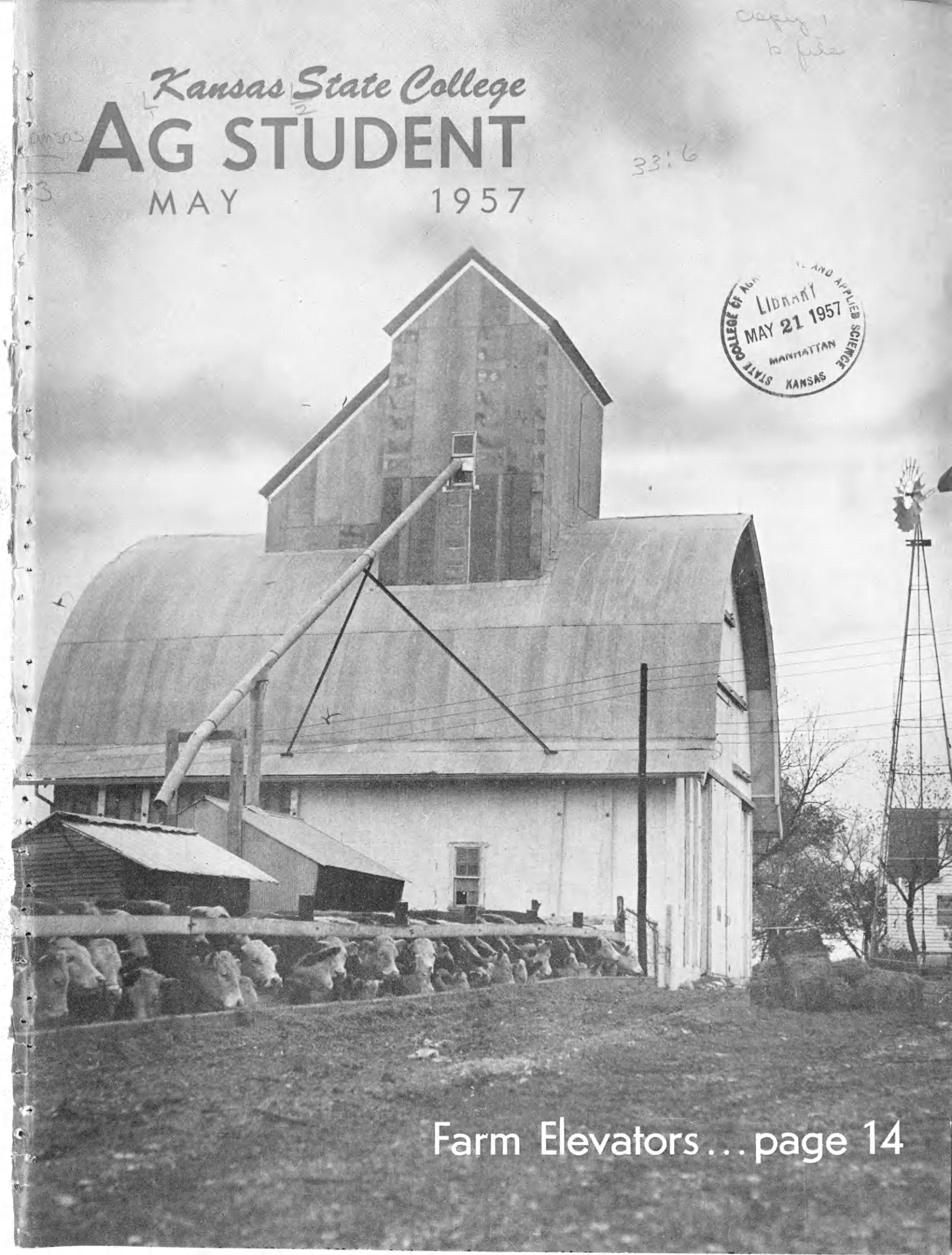
Kansas State College

AG STUDENT

MAY 1957



Farm Elevators . . . page 14

IT MAKES SMALL DIFFERENCE

WHAT MY *Talent* IS . . .

Perhaps I sing . . or paint . . . or write . . .
Or free from stone an image I alone
Perceived before.

Or then, perhaps,
Mine is another gift . . .
The gift to teach . . . to build . . . or to extract
From earth and air and sun and sea
New knowledge, power, or wealth.

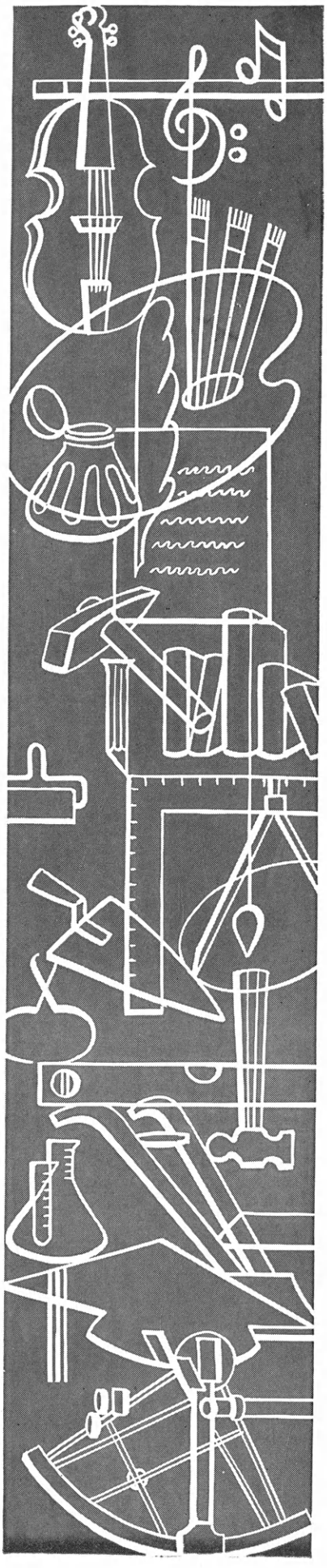
But, as I say,
It makes small difference
What my talent is . . . however grand
Or humble its estate.

Let me but have, as well,
Its rare companion gift
Of wisdom.

Let me be but wise enough
To nurture talent with my toil,
And moisten it with sweat . . . to swell
Its growth with diligence,
And wear its bloom with grace.

Then only will my song
Stir echo in Man's heart, and my painting
Find reflection in his eyes . . .
Then only will my written word find permanence,
And my sculpture honored place.

Finally . . .
Let me be but wise enough
To know my talent's Source,
And let me then—in gratitude—
Give all to it . . .
But more important still—however grand
Or humble its estate—
Give it to All!



Kansas State College
AG STUDENT

Vol. XXXIII May, 1957 No. 6

In This Issue

On the Cover

Grain can be loaded, unloaded, turned, mixed, or shifted by using a farm elevator and pit, and the farmer doesn't have to touch a scoop. The equipment in an elevator may be elaborate or kept conservative.

The elevator shown on the cover is owned by Wesley Sylvester who farms near Junction City. Sylvester has designed his elevator to feed cattle by a system of chutes and elevators. Grain is fed into a grinder by chutes connected to doors of overhead bins. Each of his 15 bins may hold a different grain or supplement.

After the grain is ground it falls into a pit immediately below the grinder where it is picked up by an elevator. The grain and supplement, which is by now mixed, is elevated to the top of the building where it is directed down the tin feeding chute and into the self-feeders in the adjoining feed lot.

This system is not only convenient, but is also a great time and labor saver.

—Gary Yeakley

PHOTO CREDITS: Courtesy of Wesley Sylvester, 3; courtesy McManis Tractor and Implement Co., 5; Department of Agronomy, 7; Kaup Furniture, 8; Dr. and Mrs. Rutz, 9; KSC Extension Service, 10; Entomology Department, 12; Wesley Sylvester, 14-15; State 4-H office, 16-17; Dr. and Mrs. Beck, 18; Ag Student staff.

Staff

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Chit Chat

By Clyde W. Mullen, Assistant Dean

OUR COLLEGE days of forty years ago were not unlike the college days of the present generation, in a good many ways. In particular, there was the continuous round of "speakers": assembly speakers, club speakers, honor society speakers, religious-week speakers, dinner speakers, YMCA speakers, and unattached speakers.

Out of all the dozens and scores of speakers to whom we listened, only ONE (that's right, only ONE) made such an impression on us so that we can now recall even the title of the thing about which he talked. That man was the president of the local power and light company. That was before the days of the engulfment of community power companies by the big power corporations of these modern days (Don't get us wrong. We approve of the engulfment.)

This man spoke to a roomful of YMCA boys on a Sunday afternoon. His subject was "THRIFT."

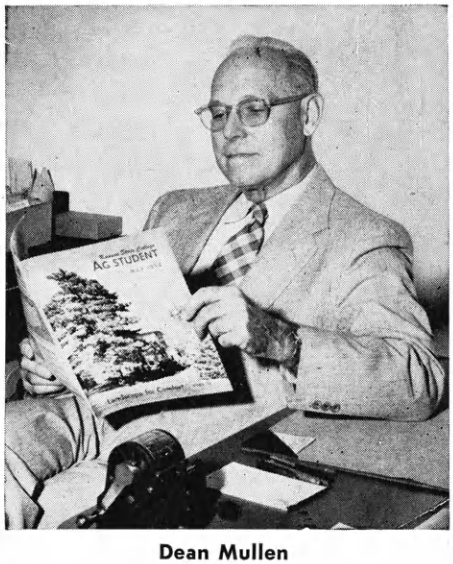
There's a word that has just about disappeared from the every-day use. It was experiencing a sag in the popular mind even in the early part of this 20th century. We lads, many of whom were working our way through college, needed to hear that good talk about thrift.

You know that man even spoke concerning the desirability of being careful about the way we spent our pennies—now dimes. Although he was the president of the light company, he asserted that he was careful to turn off the light switch in his room or any other room where someone was not using the energy that was being expended by that light bulb.

Out of thrift, he contended we have the beginning of economical management that should lead to increase of savings; and savings lead to security.

Thrift about this campus would include less riding, more walking; fewer cigarettes, more magazines; fewer shows, more contributions; fewer charge accounts, more savings accounts; fewer risks, more life insurance taken out at an early age.

Thrift:—Characterized by economy and good management. (Webster.)



Dean Mullen

The quarterbacks and the halfbacks and the fullbacks and the ends; and the showmen and the master of ceremonies and the ring masters; these are never overlooked. Their names are heard over the public speakers and radios and their names are displayed in news columns.

But the guys no one hears about are the poor slogging linemen and the early-rising cleaner-upers.

After the Barnwarmer, there must always be a small crew of loyal aggies who follow through and clean up the mess left by the revelers of the night before.

And after every Little American Royal, there is always the responsibility of taking down the fences and the decorations and the platforms, and restoring scores of items to their appointed places. An acre of sawdust must be scooped into trucks and every square inch of ring 1, ring 2, ring 3, and ring 4 must be brushed up and manicured.

On Monday morning the Field House will again become a sports arena.

And so, on Sunday morning, April 7, fifty loyal aggies, many of whom had been in the show-ring the night before as showmen or ring masters, reported to the Field House at 7 o'clock in work clothes to participate in the inevitable "clean up." It took four hours (200 man hours), (300 dollars worth of pay hours) to restore that huge show-ring to a sports arena.

And it took all of these words to get down to the point of saying: Our hats are off to the clean-up boys. They are the "unknown soldiers" of so many fine events here on the campus at Kansas State College.

Frequently, as early as 7:45 in the morning we find students waiting for admission to the reading room. And sometimes we have been asked why the room is locked at night.

Reason is, there was the morning when we discovered a mustache and goatee had been penciled in on one of the five-hundred-dollar portraits

(Continued on page 21)

Arne Steivang and Charles Baumann of Federal Bakery Co., Winona, Minnesota, receive engineering service and product data from Stan Nelson (left), of Standard Oil, to help keep maintenance costs low on Federal's truck fleet.

How to write a success story

STANLEY NELSON, automotive engineer, is typical of many young men we like to tell about in the Standard Oil organization. He keeps proving to be the right man in the right job as he advances with us.

Stan likes engineering, of course. He graduated from the University of Minnesota with a B.S. degree in Mechanical Engineering in 1950.

He likes people. He especially likes to get into business problems with them where he and his company can help. Truck maintenance, lubrication, and fuel consumption are big items to fleet operators, large and small, who have found that help from Stan pays off—for them.

And he likes selling. He functions frequently as a key man for the sales department. His intelligent analysis of a problem in his field may either improve our service to a valued customer or help us to secure a new one.

He likes to keep moving, too, and he's done that. He held several sales positions in Minnesota and attended Standard's intensive Sales Engineering School in Chicago before being promoted to his present position in which he works out of the Mason City, Iowa, division office.

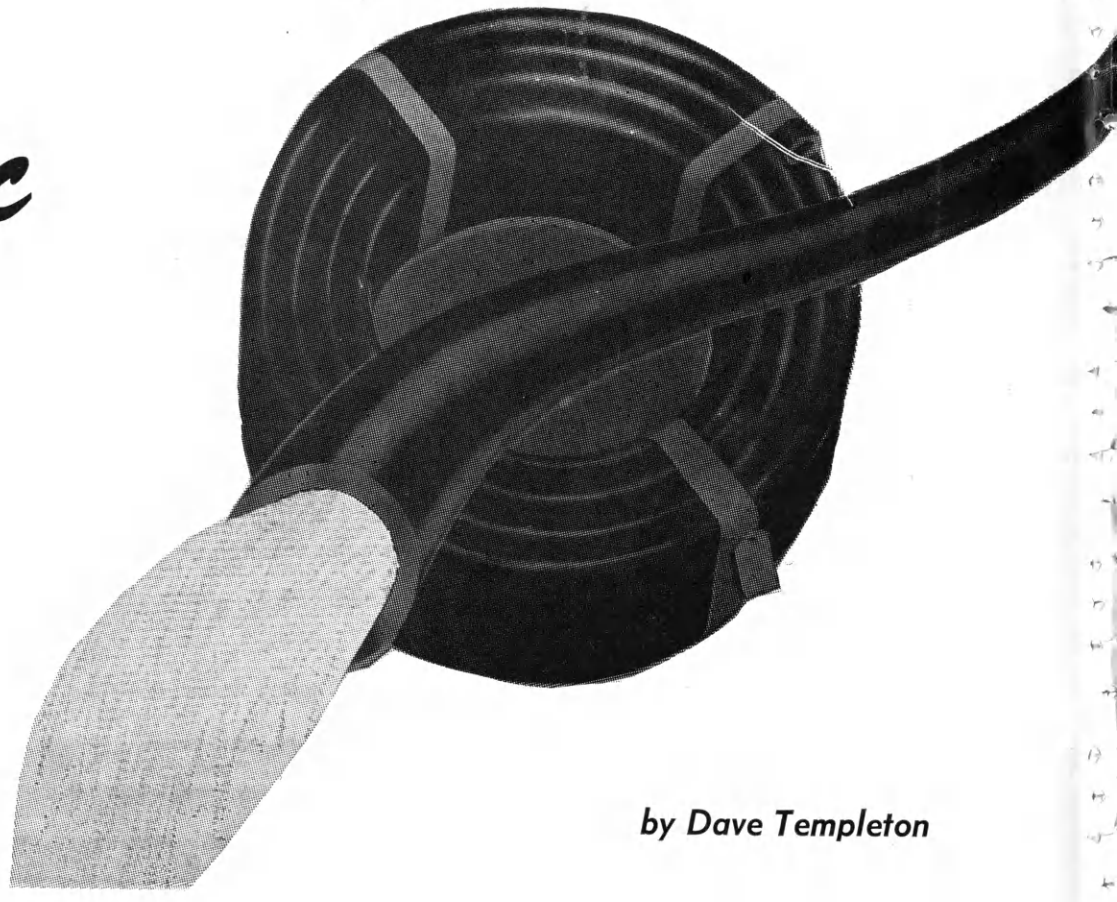
As men like Stanley Nelson earn their way upward in our organization we have frequent openings for ambitious college men to follow them. You might find a career in engineering, research or sales with this stable and progressive company rewarding, too.

Standard Oil Company

910 South Michigan Avenue, Chicago 80, Illinois

STANDARD

Plastic Pipe



by Dave Templeton

PLASTIC is taking its place on the modern farm as well as in the modern factory. One of the newest farm applications of plastic is in the use of plastic pipe.

Ordinarily pipe is thought of as a conveyor of tap water, but other uses have been found for plastic pipe. It is being used for irrigation, drainage systems, insecticide spraying, and even as a casing for electrical wiring run underground.

One reason plastic pipe is becoming popular with farmers is that it will resist chemicals and rust. Corrosive fertilizers and insecticide solutions can therefore be used in the pipe. Temporary pasture irrigation is a popular use of the pipe, since it is light and easy to handle.

A special implement is being manufactured to use in laying plastic pipe for temporary water systems. It is attached to a tractor as a subsoiler, which lays the pipe underground to prevent injury to the pipe by livestock, machinery, or weather.

Quick installation is an advantage of using plastic pipe. It is easily cut and can be attached to metal pipe. Couplings, elbows, adapters, and tees are made especially to fasten into the pipe by means of metal clamps, which install fast and easy.

The elasticity of plastic pipe prevents breakage if freezing happens to damage the fittings. The standard strength of polyethylene plastic pipe is about 75 pounds per square inch working pressure. This is practical for most farm use, but pipe with 100 to 125 pounds per square inch working pressure may be purchased for heavy-duty work.

Plastic pipe has less friction than does metal pipe, but selecting the proper size for the job is very important. Plastic pipe should not be used for extremely hot water. Water over 140° F. is considered too hot. Plastic pipe should not be used inside buildings either.

Plastic Pipe Now Available

Many hardware stores are now carrying plastic pipe at prices slightly above those of corresponding galvanized pipe. Polyethylene plastic pipe is currently being made in lengths which range from 100 to 400 feet. Pipe ½ to ¾ of an inch in diameter may be purchased in 400-foot lengths. Pipe 1 to 1¼ inches in diameter runs in 300-foot lengths, and other sizes are available up to 3 inches in diameter.

Semi-ridged pipe is available for sewer vents, plumbing fixtures, and drainage uses. Joints of the ridged pipe are solvent welded to fittings made for this type of pipe. The pipe comes in 20-foot sections of ½ to 6 inches in diameter.

It is not yet known how long plastic pipe will last but manufacturers estimate a life of 30 years for pipe used underground. Plastic pipe presently in use is proving quite satisfactory. The most popular uses are for drainage and irrigation, siphon tubes for ditch irrigation, and as main and lateral lines for gated pipe irrigation.

Plastic pipe has been declared safe for water supply usage by the National Sanitation Foundation. As a consumers' guide the foundation has established a registered seal of approval, stamping the letters "nsf" on all approved products used in making plastic pipe. Approved plastic pipe will bear the "nsf" seal.

Sudangrass, especially if it has Johnsongrass in it, may have enough prussic acid in it to be dangerous to cattle, especially after the first frost or during dry periods.

Prussic Acid Poisoning

by Bruce Cleveland

PRUSSIC acid poisoning each year causes the death of many cattle, its most susceptible victim. This type of poisoning results when an animal eats plants that produce prussic acid by the hydrolysis of sugar within the plant. Hydrolysis is simply a chemical change that takes place in a plant when it is suddenly wilted by a hot, dry, summer wind, or when a frost hits the plant when it is still growing.

Not all plants produce prussic acid, but some that do are: Johnsongrass, flax, African millet, arrowgrass, and wild lima beans. These plants are harmful only when the hydrolysis takes place within them.

Even plants that produce prussic acid may be used for hay if they are properly taken care of. The plants must dry slowly in order to allow the acids to unite with the sugars, forming harmless compound sugars. If the plants are dried too fast, prussic acid may be formed and the plants become deadly.

At the first symptoms of prussic acid poisoning an animal will drop to its knees and its muscles will begin to twitch. The symptoms of colic usually appear, followed by unconsciousness and death. Death is due to paralysis of the respiratory system.

If only a small amount of prussic acid is consumed, an animal may survive, but a large amount will kill an animal in a few minutes or hours. If a plant contains .02 percent free prussic acid, five pounds of the plant readily consumed will kill a cow. Smaller amounts may prove fatal in some cases. As little prussic acid as .000204 percent of the cow's live weight has been known to cause death.

If an animal with prussic acid poisoning is discovered, a veterinarian should be called immediately. A drench of a molasses and water solution may help if the animal is discovered shortly after being poisoned. Another treatment is the injection of sodium thiosulfate or sodium nitrate before or just after the animal has gone down.

Care in feeding is the best prevention of prussic acid poisoning. One good practice is to give starchy feeds such as corn, oats, or barley before letting animals have access to forage or pasture that may contain prussic acid. The animals being fed the questionable feed should be watched closely.

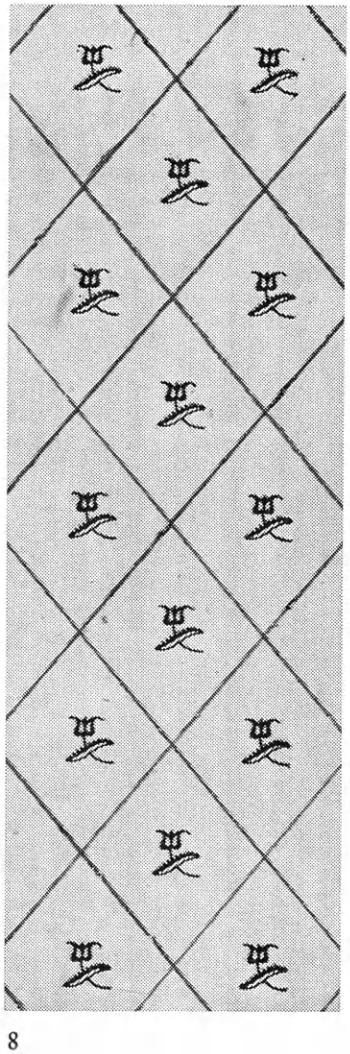
REDECORATING

with spring designs

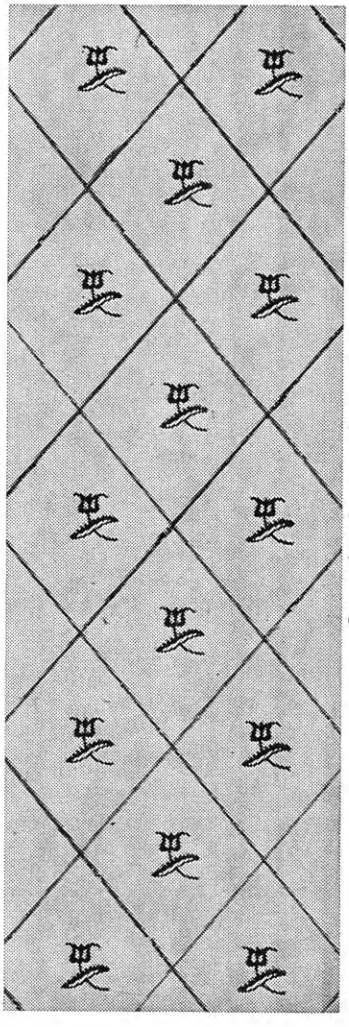
by Ruth O'Hara

THE SEASON is beginning when members of the family like to spend all their available time outside. The home, too, can reflect a fresh, spring look. Spring is being brought into the home with light background colors, more open areas in prints and patterns, and color schemes planned around one hue and its "relatives."

White can be used in large areas to give spaciousness, according to Miss Donice Hawes, extension specialist in home furnishings. Beige, aqua, and warm-earth tones of spice, cork, and bronze are the present trend. A re-



Cloth-backed plastics are especially practical in homes where there are young children. Trends are toward high contrasts like the black and white shown in the picture.



vival of blues will range from ice blue to middy blue, greens from loden to sage, and red from pinks to clear reds.

Wallpaper

Wallpaper will be one of the first areas to reflect spring colors. Lighter backgrounds and smaller patterns will help enlarge rooms in today's compact homes. Designs more geometrical than abstract will display provincial patterns, documentary designs such as Williamsburg and Mount Vernon, and pencil prints backgrounded with airy lines, many in gold. Fewer whimsical harlequin patterns will be displayed this season. Textured papers combined with delicately tinted florals will be popular companions.

Trends in Draperies

Drapery counters will be displaying smoother fabrics. Miss Hawes suggests sail cloth as being popular, accompanied by twill, chintz, and rep. New fibers such as fortisan and dacron are appearing more and more, especially in sheer weaves with metallic threads. Small provincial designs will be especially attractive for short sill-length draperies. Florals will have large background areas, with some plaids and prints being printed rather than woven.

Upholstery

Many fabric blends will be used in the upholstering department. State labeling laws handicap the Kansas homemaker purchasing upholstered furniture. The lenient laws make it impossible for her to know the content of the upholstering. She must rely generally on the manufacturer's name and the general quality of the furniture to determine the quality of the fabrics.

Cloth-backed plastics are especially practical and attractive for homes with small children. Chalk white combined with black makes a dramatic contrast.

Carpeting

Rugs and carpets will be featuring tweed and textured patterns. Blends of nylon, rayon, and dynel take dye easily, so unusual shades such as apricot, lavender, and mustard will be appearing in local stores. In choosing between blends and conventional all-wool carpeting, consider differences in price and resiliency of pile. A new do-it-yourself item is 18-inch carpeting squares with adhesive backing, which can be laid like floor tiles.

Furniture Blends

New furniture pieces will be lighter for easier moving. Warm, brown tones becoming popular are walnut, mahogany, maple, birch, and fruitwood colors. Sectional combinations will make furniture more versatile.

Miss Hawes predicts more early American and Italian provincial influence in furniture. These pieces will blend charmingly with tiny provincial prints in draperies and wallpaper.

Easy mobility is desired in this year's TV sets, becoming increasingly important. Low, round cocktail tables are being used with sectional sofas. Many of the lower priced tables have plastic-coated tops, with expensive tables featuring leather.

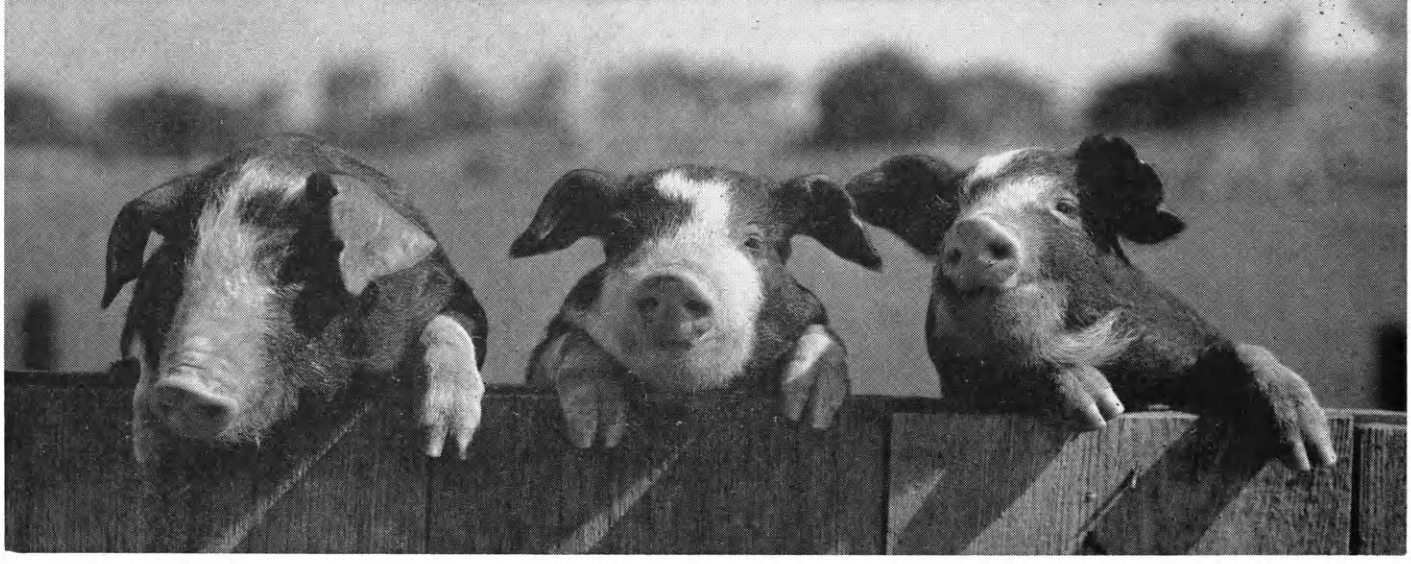
Versatile Dining Sets

In dining furniture, wood-grained dinette sets will have hard-surfaced tops and legs of black, gray, or bronze-colored metal. They will be practical in either the kitchen or living room, but a growing trend back to dining rooms will probably result in more traditional-type dining-room furniture.

The emphasis this season is on large accessories, some using oriental designs. A few distinctive room accessories can give the home that final, finished touch of spring gaiety.

New furniture can't be purchased with each change of season, but some new furniture, wallpaper, or accessories will probably be added each spring, and occasionally it will be time to entirely redecorate a room. This is the chance to use spring colors and designs to give the home a brighter, spring look.

This inviting desk center makes effective use of large accessories. The large brass desk lamp, the wall clock, and glossy rubber plant all emphasize warmth of the maple in the early American desk and chair. You, too, can express your individuality, add interest to your home, and reflect the seasons with your choice of room accessories.



History of Hogs

by Bruce Cleveland

SWINE are known as the oldest form of domestic mammals that exist today. It is estimated that swine are millions of years old. The hog has undergone less evolutionary change than any other farm animal.

One change that has taken place is in the digestive system. Roots, shrubs, and other similar foods were the main diet of pre-domesticated hogs, so the digestive system had to adapt itself to present-day feeds.

Origination

The first swine to be domesticated were crossed between Chinese and European hogs. Although the Egyptians raised hogs in ancient times, the Chinese were first to domesticate and make use of swine. Hogs were easy to domesticate, since they could eat many varieties of food grown by man.

The first hogs were brought to the Western Hemisphere in the 15th and 16th centuries by Columbus on his second trip. He brought eight head of swine with him. The offspring of these hogs attacked men, especially those that tried to corner and catch them.

Hogs were also brought to this continent by Cortes when he entered Mexico in 1524. As the United States increased in population the number of hogs increased. Hogs were not raised in great numbers in the western states until railroads were built and the invention of the refrigerator car. After these new inventions were released the production of hogs grew into a large industry throughout the country.

The earlier hogs lacked the quality and type of our hogs today. Hogs were considered corn on the hoof because of their large consumption of corn.

Lard Needed for Cooking

The corn produced a great deal of fat which was rendered into lard, giving the best animal. fat for cooking purposes. Prior to World War II hogs were raised mainly for production of lard. The Poland China, Chester White, and several other breeds were noted for this purpose.

Meat-Type Hog Demanded

After World War II housewives demanded more meat and less fat. The reasons for this demand were the development of vegetable fats for cooking, more lean meat for the family, and upon mechanization, energy-producing fats were not needed, so consumers demanded a meat-type hog. The days of the 500-pound market hog were over and the demand for lighter, less fatty hogs caused the development of trimmer, longer sided hogs.

The early meat-type hogs lacked the hams desired by consumers, so careful breeding and selection developed a longer, leaner ham on the meat-type hog than was on the old lard type.

Pork is one of the main dishes on the American table, and consumer demand has caused the increased development and improvement in hogs.

Opportunities in

AG ECONOMICS

by Fred Clemence

ONE OF the most important decisions in a young man's life is that of choosing an occupation. There are many young men in the United States that have made a decision to go into the field of agriculture. A person that has chosen the agricultural field for his work may feel that he knows all about agriculture. He knows agriculture as the farmer knows it.

This person may ask, "What are the opportunities in farming or working on a farm?" The 1956 Agricultural Research Service reports that, "Output per man-hour of farm labor has doubled since 1940. This increase in productivity has resulted both from greater output and from fewer man-hours of work. The average farm worker now produces enough food, fiber, and tobacco for himself and 19 others." Also the total number of farm workers is now declining. The size of farms is increasing and the number of farms is decreasing. It takes a lot of money to get started for yourself. Therefore, the opportunity of an agricultural man to go back to the farm is getting smaller and smaller.

It would be wise for a young man to choose another specific job in the field of agriculture. One of the fields that leads to great opportunities is the field of agricultural economics. It is estimated that 3,000 new graduates can find jobs in the agriculture business field each year.

Business Positions

There are many different jobs in the agriculture business. There are many positions open to agricultural economics graduates in the field of finance. Banks expect to employ between 4,000 and 6,000 agriculture graduates to serve as farm bank agents during the next ten years. Many co-operatives also want men trained in agricultural economics. These men are trained to work with farmers, and they know the problems farmers have. They can appraise the value of farms and farm products and know how to make good loans. Those who buy and sell land need men with similar training to work as salesmen, brokers, and land appraisers.

Another major field in which an agricultural economics major can work is marketing. Agricultural market places, stockyards, large grain terminals, small elevators and commodity exchanges all want agricultural economists who know farm products and have a background in agriculture. They need specially trained men to buy and sell products for them.

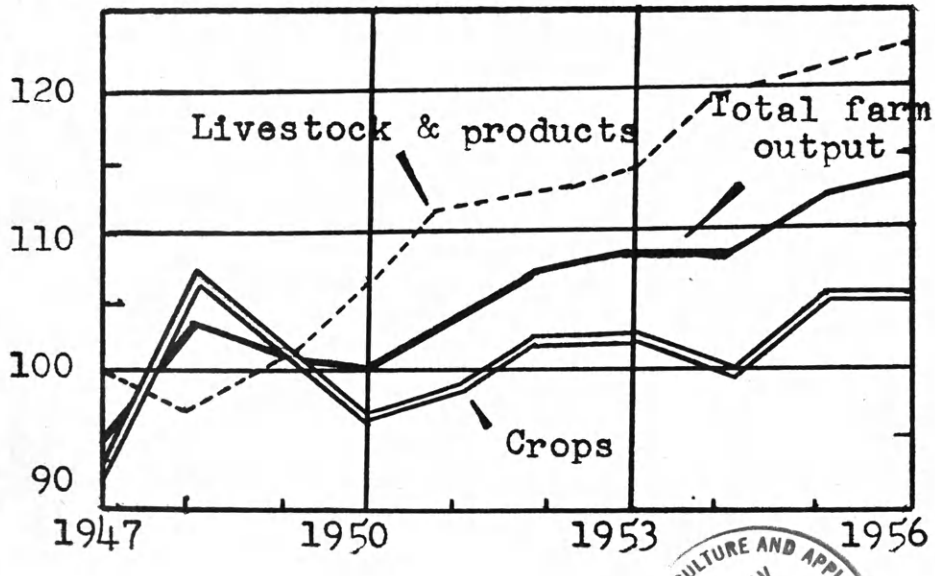
Also there is a need for graduates to become farm managers. Farming is a big business and an agricultural economist is trained to operate and finance big farms. It takes a man with an agriculture business knowledge to operate a farm to its full potential. Training in agricultural economics can be very helpful in knowing how, when, and where to buy and sell your products.

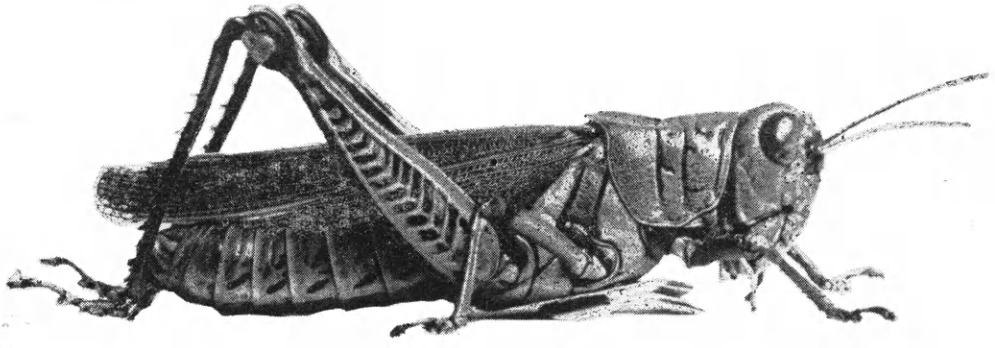
Many opportunities are also open for an agricultural economist in the field of sales and service. Trained men are needed for store managers and clerks. These men know how to buy and sell products. They can study market supplies and prices, check what the customer wants to buy, and advise in the general running of the firm.

Other fields that an agricultural economist can go into are county agent work, storage and warehousing, transportation, custom services, farm utilities, and private business.

Agriculture is the basic industry because food is essential for man's existence. It is therefore a big business, and trained men are needed as businessmen to run agriculture in a businesslike fashion. Agriculture can be built stronger by agricultural economists and by graduating more men in this field, attainment of this goal can be reached.

One of the jobs performed by agricultural economists is to collect and compare figures concerning the agriculture industry. This chart compares farm output of the past years.





Grasshoppers...

the Kansas invader

by Paul Bocquin

EARLY reports indicate that grasshoppers will be numerous in Kansas again this year, according to Prof. Dell E. Gates, extension entomologist of Kansas State College.

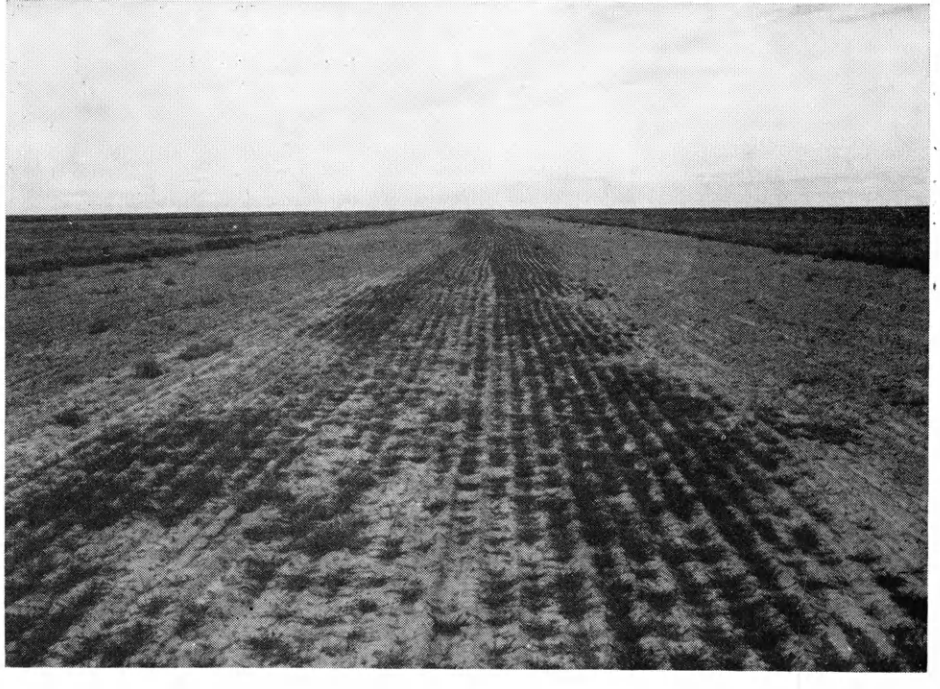
Severe outbreaks are expected in 16 counties and very serious infestations, with 28 or more grasshoppers to the square yard, are expected in several others.

Infestation in the eastern half of Kansas will be as heavy or heavier than in 1956. The rangeland grasshopper problem is expected to be twice as serious as last year's.

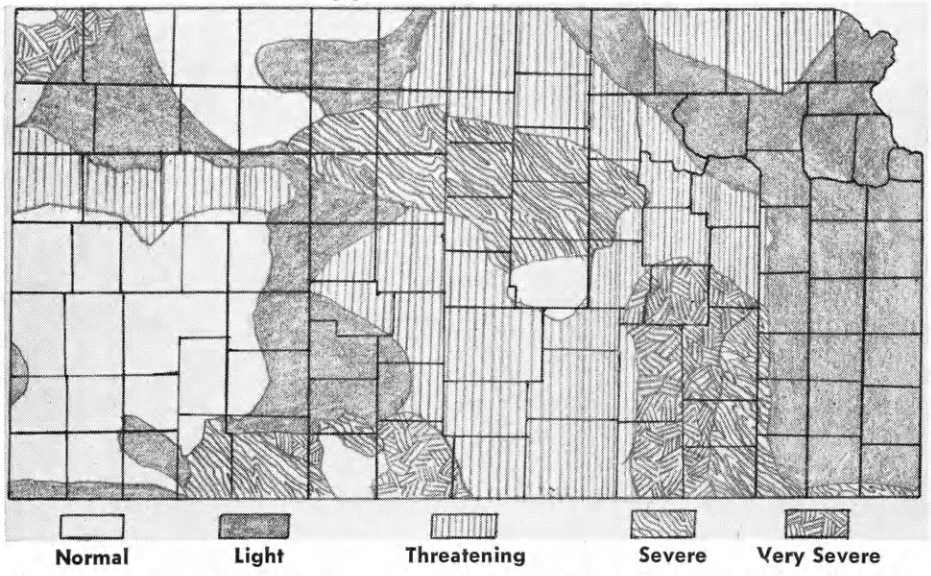
A maximum increase in grasshopper populations results from a cool, wet season early in the spring followed by a warm and moderately dry summer. Heavy mortality of grasshoppers would result from a warm spring followed by a cool, humid summer.

A day of heavy rainfall followed by bright sunshine has little effect on grasshoppers but the same amount of moisture scattered through a week of cloudy weather may start an epidemic

Grasshoppers severely injured this field of wheat in western Kansas, by early October. The lesser migratory species attacked this field especially along the outside margins.



Grasshopper Infestation for 1957



The very severe population areas mean 28 or more grasshoppers per square yard of cropland; severe populations range from 14-28 on cropland, 8-14 on range land; threatening from 7-14 on cropland, 4-6 in range areas; and light from 3-7 on cropland and 2-3 on range land. Map areas were plotted from surveys of adult grasshopper population last summer and grasshopper egg numbers this fall, which ran higher than surveys for 1956.

of grasshopper diseases, killing large numbers.

At least 90 percent of all grasshopper damage to crops in the United States is caused by five species, four of which are found in Kansas—the Migratory, Differential, Two-striped, and Red-legged grasshoppers.

Grasshoppers have been known to destroy entire crops of small grains, corn, soybeans, alfalfa, clover, and other grasses. After the crops are wiped out they even attack trees. An attack on the blooms of alfalfa and clover means heavy losses to farmers, beekeepers, and seedgrowers.

On range areas, grasshoppers cut the stems and blades of plants, preventing reseeding, and eat the grass closer than livestock would. When extremely abundant, they injure plants so severely that growth is retarded for several years.

Overgrazing by grasshoppers, especially during drought years, exposes the soil to wind and water erosion. Some of the worst dust storms have followed grasshopper outbreaks.

Present Control

More is known about grasshopper control today than was known in the 1930's when the last serious plague occurred in Kansas. Modern sprays, when used early in the spring, are almost 100 percent effective. Now is the time to start spraying, while the insects are still hatching.

Fall plowing destroys eggs laid in fields. However, grasshoppers usually deposit their eggs on pasture land or orchards, Professor Gates said. The number of egg pods laid by one female varies according to the species, food supply, and weather.

Migratory grasshoppers have been known to lay 21 pods in a single season, with many eggs in each pod. They usually average about 200 eggs a season but have been known to lay as many as 400.

Insecticidal Control

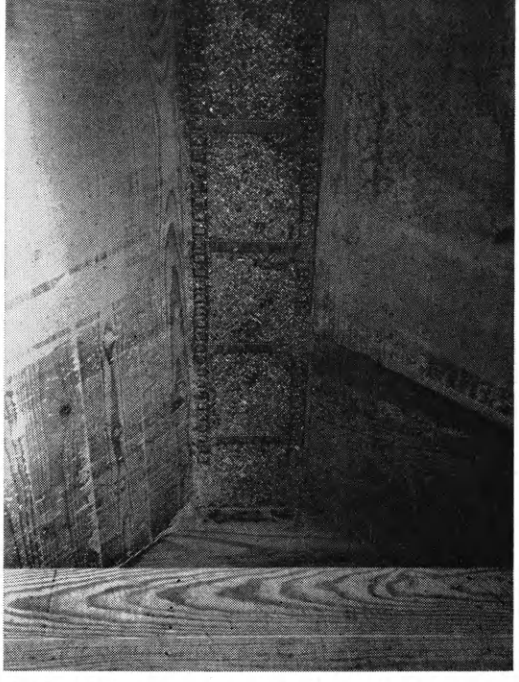
Five spray insecticides have been developed in recent years for farms and pastures—aldrin, chlordane, dieldrin, heptachlor, and toxaphene. Long-lasting sprays should be used to control infested alfalfa, flax, wheat, and barley. Methoxychlor is an effective insecticide for fruits and vegetables.

Chlordane should not be applied to crops to be fed to dairy cattle or livestock being fattened for slaughter. A period of several days or weeks should follow application of the other sprays before grazing should be permitted.

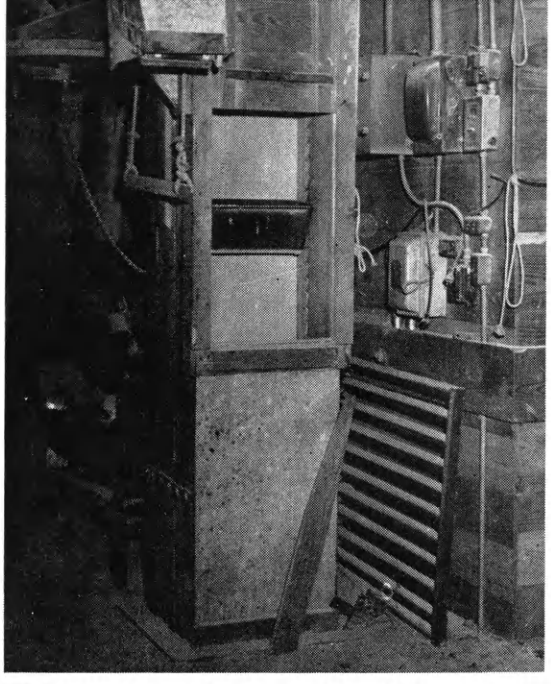
The recommended waiting period after spraying with heptachlor is 7 days; aldrin, 21 days; dieldrin, 30 days; and toxaphene, 40 days.

Grasshoppers can be controlled in Kansas with insecticides. A farmer should start an insecticide program early enough and continue it to keep ahead of grasshoppers costing him in crop damage every year.

There's a real demand for college graduates!



Grain, either ground or whole, is first dumped in the pit. This one has a 300-bushel capacity.



The grain is picked up from the pit by this chain elevator and elevated to the top of the building.

Farm Elevators

by Jerry Schweitzer

FARM elevators save time and labor and eliminate storage problems. What could be more practical than driving into your own elevator and dumping the grain without fighting long lines at the local elevator? This kind of an arrangement cuts down on time on the road, and could eliminate the use of an extra truck, because of the time that would be saved in unloading and getting back to the field. Farm elevators are not restricted to grain-farming operations, but may also be used by livestock producers in feeding operations.

Many farmers believe that the construction of an elevator would be too expensive, but such an elevator was built by Wesley Sylvester on his farm near Milford, Kansas, and he thinks that it is one of the best investments on his farm.

Sylvester converted a 30- by 40-foot horse barn into a grain elevator having a capacity of 15,000 bushels. This conversion cost about $10,000 plus a little of his own labor. The main construction job was done by a contractor.

Large—Convenient

The elevator is divided into 15 bins with a capacity of 1,000 bushels each, and a 300-bushel pit. Grain is dumped into the pit and elevated to the top of the building where a system of chutes leads to the different bins. The elevator dump chute, located at the top of the building, is fixed on a spindle so that the grain may be dumped into any bin selected from the ground floor.

Each of the overhead bins has a door in the bottom, which makes it easy to load a truck or wagon, or to mix grain from several different bins. This arrangement makes it especially easy to move grain from bin to bin by simply dumping the bin from the bottom door into the pit, and then elevating it back into the desired bin. This operation alone would save a great deal of labor if it became necessary to store grain with a high moisture content. Several thousands of bushels of grain could be moved in a matter of minutes.

Used in Feeding

Sylvester finds that his elevator takes the hard work out of cattle feeding. The storage space provided by the elevator is great enough that he may buy grain in large quantities and mix his own ration, which saves dollars in the long run. He sets his portable grinder directly over the pit

The elevator chute is on a spindle so it can be revolved to empty in any of the bin chutes.

The 15 overhead bins are reinforced and empty through the bottom either into the pit or a truck underneath.

—Labor Savers

and the grain is conveyed into the grinder from the overhead bins. This method enables him to mix several different kinds of grain as he grinds. He keeps one bin full of supplement and it is mixed with the grain as it is ground, and falls directly into the pit.

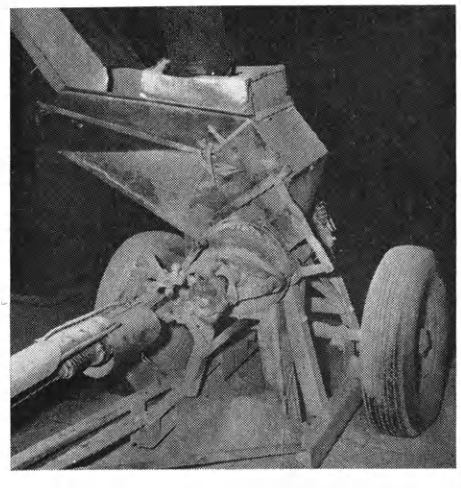
The ground feed is then elevated from the pit to the bins above for storage, or into a chute that goes from the elevator to a self-feeder in the adjoining feed lot. The entire feeding operation is accomplished without touching a scoop shovel. Sylvester is able to feed 200 head of cattle in less time by himself than it would ordinarily take two men. Here again the labor saved is money in his pocket.

An elevator of this type would take care of almost any kind of a storage problem that a farmer could have. It is ideal for government storage, which is an important factor when you consider the farm programs we have today. The added storage space would enable the farmer to hold more grain under government loan, which would be a point to consider when figuring the cost of an elevator. Also the capacity is great enough to take care of any temporary storage problems that might arise, due to weather conditions or a flooded market.

A Good Investment

Any farmer would consider a project very carefully before he would invest $10,000. However, when you consider the cost of a battery of grain bins that would hold 15,000 bushels, and the wages of a hired man that would be necessary without the elevator, the investment does not seem so great. Although the farm elevator may appear to be an expensive project, in the long run it may be the most economical investment that a farmer could make.

The grinder empties into the pit where the ground grain can be elevated out the feed chute to the self-feeders or back to a bin.



It's Round-up Time

by Walt Martin

EACH YEAR one of the busiest weeks on the K-State campus is the "lull" between the end of the spring semester and the start of summer session. It is at this time that the cream of the crop from Kansas' 32,000 4-H members converge at Manhattan for the annual Kansas 4-H Round-Up. It is certainly a colorful week with the delegates decked out in traditional uniforms—white shirts and trousers with black ties for the boys, and green and white 4-H uniforms for the girls.

The swimming pool is a popular gathering place for 4-H members attending Rock Springs Ranch. The pool, fed by spring water, is only one of the many recreational facilities.

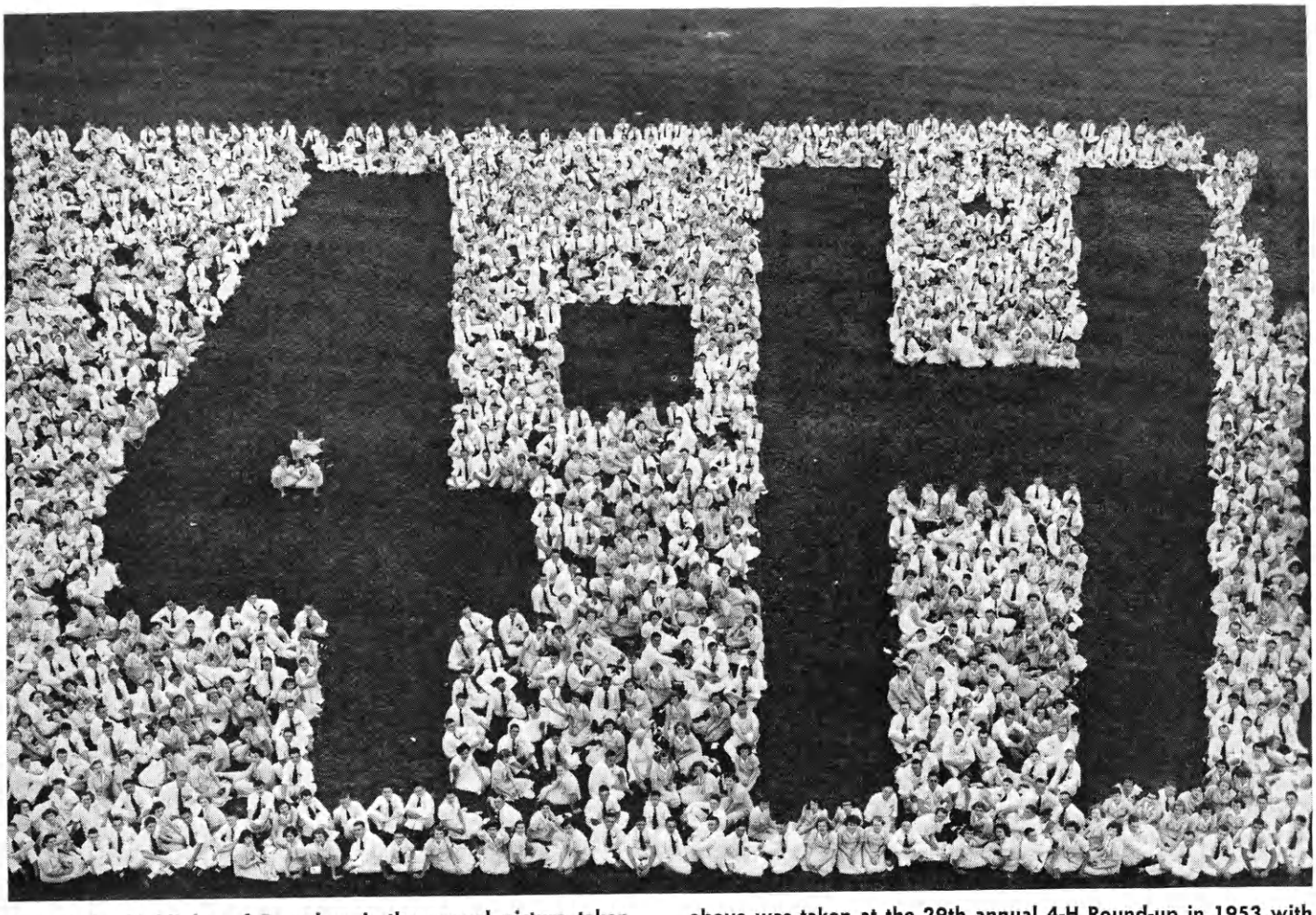
Approximately 1,250 members, leaders, and agents will attend this year from May 28 until June 1. Delegates will be greeted by a well-rounded program of recreation, fellowship, and study.

Classes Conducted

Classes concerning the various phases of project and activity work in home economics, agriculture, and leadership will be conducted by specialists in the respective fields. Recreation and group singing will be directed by outstanding leaders in these fields.

About thirty-five promotional talk winners from the regional 4-H Club Days over the state will participate in special classes to study public speaking.

In addition to professional enter-



One of the highlights of Round-up is the annual picture taken of delegates from 4-H clubs throughout the state. The picture above was taken at the 29th annual 4-H Round-up in 1953 with delegates forming a large 4-H inside a pattern of the state.

tainment and outstanding speakers, delegates will enjoy 4-H talent. Representative winners of regional 4-H Club Days will present model meetings, demonstrations, folk games, and musical ensembles.

IFYE's Attend

Adding an international air to Round-Up will be the International Farm Youth Exchangees who are living on Kansas farms at that time. Meeting farm youth from other countries is one of the most inspirational experiences for the 4-Hers attending Round-Up.

Rock Springs Trip

A big day for the delegates will be Memorial Day, May 30. On the schedule for this day is a visit to Rock Springs state 4-H camp near Junction City. There Round-Upers will join two hundred other 4-Hers who are attending state music camp for a day of outdoor activity. A highlight of the program will be the dedication of the new health center, meditation chapel, and small auditorium. Also, the first part of the new dining hall will be under construction.

Round-Up on the modern K-State campus today is a far cry from the first Round-Up held in 1923. Improved facilities, especially in housing and food service, have eliminated many problems. In earlier years each county could send as many delegates to Round-Up as was desired. However, interest soon grew until it was necessary to limit the number that could attend. This was done by assigning each county a quota. All counties will be represented this year, with about six-tenths of the clubs sending delegates.

Purpose Stated

Round-Up serves several purposes in the Kansas 4-H Club program. In the words of Mr. J. Harold Johnson, State 4-H club leader, "Round-Up provides (1) an opportunity for outstanding 4-Hers to meet and make friends, (2) top-notch instruction in the important phases of the 4-H program which tends to build increased interest, and (3) an opportunity to meet outstanding personalities. Extension agents and club leaders also look forward to gathering at Round-Up to exchange ideas."

Arouses Interest in College

Mr. Johnson continued, "Many 4-Hers are inspired to come to Kansas State by their Round-Up experience." Delegates certainly become familiar with the facilities of K-State during the week. Guided tours of the campus are conducted. Members of the K-State Collegiate 4-H club serve as hosts and hostesses for Round-Up and assist in a variety of activities. A tea is held for high school seniors in the group, at which campus life is further elaborated upon.

Round-Up is certainly a highlight in the 4-H careers of members who are fortunate enough to attend, just as 4-H club experiences in general are a highlight in the lives of many thousand youth all over the world.

New built-in ovens are designed with oven controls at a convenient height. Recommended height for the bottom of the oven is three inches below the bend of the operator's elbow. Adjoining this oven is a four-burner range with its controls set in the counter top away from children.

Easy Does It

by Ruth O'Hara

IF YOU strain to reach for the equipment and supplies in your kitchen, sagging shoulders and a curved spine will fatigue you before the morning dishes are out of the sink. Careful planning and consideration of the arrangement of work-center equipment can help you conserve time and energy and maintain health. Whether you're washing dishes, ironing, or sewing, you need to consider heights of counters, tabletops, shelves, drawers, chairs, and stools. In these days of increasing demands for your time outside the home, you owe it to yourself and your family to provide for efficient work centers.

Efficient work centers encourage good posture, the position requiring the least energy for work. When you are standing well balanced your head will be directly over your feet. A line dropped from your ear will pass through the middle of your shoulder, hip, knees, and just in front of the ankle. When you are leaning forward from the waist over a counter, another part of your body must be held off center so that you will keep your balance. Strain and fatigue will result.

Determining Heights

To promote good posture and prevent fatigue, one of the most important steps is placing the equipment and supplies in relation to your own figure and your ability to use it at that position, according to Miss Tessie Agan, associate professor in household economics. Body height was formerly considered important in determining work heights. Other fundamental factors are length of arm, height of elbow, abdominal and bust extension, the fullness of upper arm, and vision (near or far sighted). You can take these personal measurements to use in planning the location of shelves, drawers, and hooks: (1) height; (2) eye level; (3) comfortable reach upward with one hand with no obstruction, and with two hands, no obstruction; (4) comfortable reach downward; (5) comfortable reach upward with one hand over a one-foot counter, and with two hands over a one-foot counter.

Main Work Centers

Since the dish-washing center is one of the most used centers, consider the height for the bottom of the sink. It should be approximately the height of the outstretched palms with arms downward and bent slightly at the

elbows. The body should not lean forward at the waistline, throwing posture off balance. An average preferred height for the bottom of the sink is 31 inches, with a 5-inch sink depth.

The adjoining work counters are an average of 36 inches high, which should be convenient for scraping and stacking dishes, preparing salads, etc. Depth of sinks may vary, making either counter-tops or the bottom of the sink higher or lower.

Mixing of doughs and batters and rolling out pastries are more comfortably done at a lower work counter than those adjoining the sink. A lower surface of 32 to 33½ inches, as an average, may be provided by a pull-out board, by a small table, or by a built-in cabinet. As with the sink height, the height for this mixing center should be determined by your experimenting for the most comfortable reach.

This housewife using a counter convenient to her height will not tire at the waist, enabling her to enjoy her work with ease.

Sit if Possible

Don't overlook reducing your energy output also by providing for sitting down at work centers, and for alternate sitting and standing at work. You will probably use an ordinary chair from your breakfast set to sit at a low table or pull-out board. For higher counters you should have space for feet and legs below, with a comfortable stool of proper height. Chairs should adjust in height so you can rest both feet on the floor or on a foot-rest. Adequate chairs are 16 to 17 inches wide with front edge slightly higher than the back, and a depth of 13 to 14 inches to permit the body to bend forward from the hips instead of the waist.

Strain caused by bending over an oven may result in fatigue. Modern wall ovens do away with bending, even to reach controls.

Judge: "Officer, what makes you think this Aggie is intoxicated?"

Officer: "Well, judge, I didn't bother him when he staggered down the street, or when he fell flat on his face, but when he put a nickel in the mailbox, looked up at the bank's clock and said, 'My Gawd, I've lost 14 pounds,' I brought him in."

"How'd you puncture that tire?"
"Ran over a milk bottle."
"Didn't see it, huh?"
"Naw, some kid had it under his coat."

I drink to calm my nerves,
My steadiness to improve;
Last night I got so steady
I couldn't even move.

Student Housing: "How do you like your room as a whole?"

Aggie: "As a hole, it's fine; as a room, it's terrible."

Aggie: "How about a kiss?"

Co-ed: "I have scruples."

Aggie: "Oh, that's OK. I've been vaccinated."

Chit Chat

(Continued from page 4)

hanging in the room. That was before the room was closed at night.

Conclusion was that irresponsible persons must have entered the room sometime during the night, and, intent on doing something cute, concluded to express their talent by marring a dean's portrait. We believe it to have been non-college youngsters.

Since that time, it has seemed to be best to close the reading room at five o'clock each evening, and open it again the following morning.

However, the above incident could have involved a freshman, because the story is told of a first-year lad who came to the campus (many years ago) and within the first month he had bitten a dean and six instructors.

He was called into the president's office and was pressed to tell why he had bitten the dean. The boy's only explanation was that the dean just rubbed him the wrong way and he couldn't resist snapping at him. That explanation seemed good enough.

Next question: "Why did you then go out and bite a half-dozen teachers?"

The boy had a quick answer for that, too. It was to get the taste out of his mouth.

We have had an awful time with a bunch of keys in recent weeks. Early in the month, they flipped from our pocket in the vicinity of the Farrell Library. It was about 9 a.m. At 9:45, they were back in our possession, through the courtesy of Miss Phyllis Losek.

Within a week, the same bunch of keys slipped from our possession near the entrance to the Sears store, down town. An hour later, there came a telephone call saying that our keys were at the Sears mail order desk.

A few days later, the darn things got away from us again in the driveway back of the College post office. That would have been about 9:35. By 9:50, Miss Norma Bollinger had walked all the way across the campus to deliver our wayward keys into our trembling hands.

Just think of it. Three times in three weeks.

Lads, this is the same bunch of unidentified keys that hung in our Waters Hall bulletin board for two months, with no claimer. Only difference was, we had our name, room number and telephone number on an identification tag on the key ring.

Next month, we are going to try losing our billfold containing five twenty-dollar bills. It, too, will carry identification. First place we are going to lose it will be—in our bedroom.

Page 5 of the program said that CWM was "the answer to a student's prayer." That's good. He never seemed to be the answer to a maiden's prayer.

In the Aggies' World

B&B Judging Contest

THE BLOCK and Bridle club will hold its annual judging contest May 11. The contest will be held in the livestock pavilion and is open to all students. The contest is divided into junior and senior divisions. The senior division is for students who have had classes in judging. A small entry fee will be charged, according to Walt Martin, president of Block and Bridle.

The contest will include classes of Quarterhorses, cattle, hogs, and sheep. It has been an annual affair since 1920. It is operated by the senior livestock judging team with the help of Prof. Don Good.

The winners will have their names engraved on a bronze plaque that is shaped like the state of Kansas. Prizes will also be awarded, which will include cash, livestock equipment, and magazine subscriptions. Also the top five senior judges will get a free three-day trip to St. Joseph, Mo., for a marketing school.

Also this spring the Block and Bridle club will sponsor a wool judging contest, April 27, and a meats field trip to Swift and Company in Kansas City, May 7.

Wool Judging Winners

DALE Schilling, AH Jr from Havensville, and Don Mach, prevet Soph from Narka, were divisional winners of the Block and Bridle club's third annual collegiate wool judging contest, April 27. Forty-one students participated in the junior and senior divisions.

Schilling, winner of the senior division, received a silver tray given by the American Royal show. Mach, winner of the junior division, was presented a trophy from the Kansas Purebred Sheep Breeders' association.

Other winners in the senior division grading ten fleeces, placing seven classes, and giving two sets of oral reasons were: Ben Handlin, AH Jr from Geneseo, second; Walt Martin, AH Sr from Opolis, and Loris Luginsland, AH Sr from Dunlap, tied for third.

The junior division winners grading five fleeces and judging seven classes were: Burke Rogers, AH Jr from Garnett, second; Edward Swiercinsky, AH Sr from Republic, third; William Greenwood, AEd Soph from Carlton, fourth; Ben Brent, Ag Soph from Gaylord, fifth; Arthur Armbrust, TA Sr from Ellsworth, sixth; and Rae Luginsland, AH Soph from Dunlap, seventh.

Cattle may be moved to different kinds of pasture and they become adjusted to the feed change more rapidly by feeding dried rumen organisms. These organisms are largely still experimental, but results have been good.

Feeding Rumen Organisms

by Vern Bartlett

ADDING rumen organisms to a cow's rumen or stomach may add dollars to the cattle feeder's pockets. The addition of these organisms may help digestion of a larger percent of feeds, start calves on roughages earlier, and adjust cattle and other ruminants to a ration faster. Experimentation with rumen bacteria has indicated that these possibilities are very practical.

Rumen bacteria play an important role in the well-being of ruminant animals. If they are not present in large numbers in the rumen, important functions cannot be accomplished adequately and the animal will not grow, reproduce, and lactate as it should.

Recent research has shown the changes in feedstuffs after entering the rumen of ruminant animals. Ruminant animals can eat grass, roughages, and poor-quality feed, getting an appreciable amount of nutrients from them. This is not true with the simple-stomached animal like the pig, chick, or the human.

At the present time there are many known micro-organisms present in the paunch, making nutrients available to the animal. The exact processes and the different kinds of micro-organisms are not known. There is evidence that beneficial results are received from these micro-organisms and that the kinds and numbers of them vary. It is on this basis that many feel the adding of dried rumen or paunch contents to feed would be of value to animals.

There are three types of organisms present in the paunch. They are (1) bacteria, which are small plants, (2) protozoa, which are one-celled animals, and (3) yeastlike organisms. It is not known whether these yeastlike organisms are real yeast or what function they may have. Also, no particular value has been found for the

protozoa. This leaves the bacteria, which are believed to carry out most of the functions in the paunch.

These functions of bacteria are to break down and digest cellulose or woody parts of the roughage, the utilization of poor-quality protein, transforming it to a usable form, and finally, bacteria produce vitamins. Bacteria break down cellulose in a manner comparable to the way moths eat holes in a wool suit. The transformation of protein is the reason we are not concerned about the quality of protein-fed ruminants.

Starting Calves

Calves are born with a simple stomach. It develops as the animal grows older and begins to eat. Experts believe that it would be desirable to speed up the development of the rumen so that the calf could start using larger amounts of roughage at an early age. It is thought that by feeding dried rumen micro-organisms, the rumen will start functioning as early as two or three weeks of age.

There is usually a period of a few weeks before cattle start gaining on pasture after having been fed dry feed all winter. It takes a certain period of time for the organisms in the paunch to adjust to each kind of feed. The idea has been expressed that it may be possible to feed dried organisms from cattle that grazed on pasture and reduce the time required for cattle to become adjusted to pasture. This feeding of organisms could be started before the animals go to pasture.

The reverse of what has just been said could also be true concerning cattle going from pasture to the feed lot. The cattle would have to be fed organisms from cattle that had been on a fattening ration. Theoretically, cattle would start gaining faster and go on full feed faster. It is also thought that the dried rumen contents fed throughout the fattening period would maintain a better balance of organisms for more efficient use of feed.

Roughage Replacement

Stock feeders realize good-quality roughage reduces the problems encountered in feeding cattle and sheep. However, good-quality roughage is not always available. It is in this case that feeding dried rumen contents could be beneficial. Dried rumen contents may obtain a very prominent place in the feeding of dairy cows in an attempt to increase production of milk.

Still Experimental

These theories indicate the proposed value of feeding dried rumen contents. While some of the benefits have actually been observed, it should be pointed out that this work is still in the experimental stage. There are problems to overcome, such as how to prepare the organisms without destroying them and how to obtain the proper organisms for feeding at the proper time.

Dried rumen contents are on the market at the present time. They are obtained from the rumen or paunch of cattle when they are slaughtered at packing plants.

As more is learned about the functions of rumen organisms, man may be able to help nature speed up physiological processes.

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