

THE KANSAS

Agricultural Student

v. 20 no. 3



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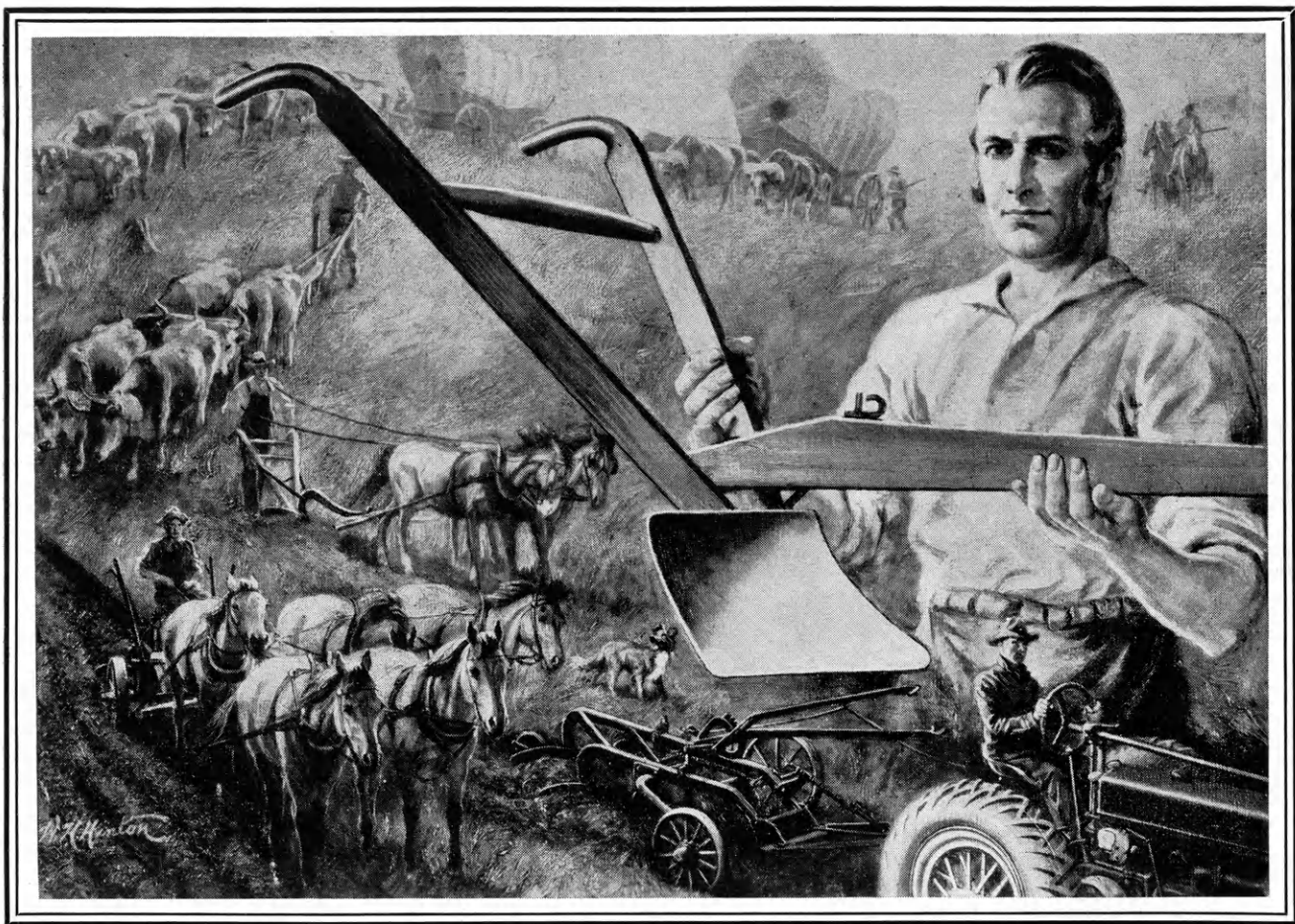
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Beyond the Horizon...

EACH new year brings a new horizon, beyond which are concealed the realities that materialize or shatter our hopes, our dreams, our visions. It is this mystery of the future that adds zest to living and spurs man to new achievement.

In 1837, John Deere caught a vision of a better plow to turn the stubborn soils of the new west. He dreamed, he hoped, as his anvil rang day after day, night after night. Success greater than his fondest hopes lay beyond the horizon for John Deere, the blacksmith of Grand Detour.

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JOHN DEERE • MOLINE, ILLINOIS

THE KANSAS
Agricultural Student
 KANSAS STATE COLLEGE
 OF AGRICULTURE AND APPLIED SCIENCE
 MANHATTAN, KANSAS

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THE COVER PICTURE for this issue of *The Kansas Agricultural Student* shows the Decorations Committee of the Little American Royal putting down the floor ornament in the Judging Pavilion. Truman Gregory designed the floor piece, and those putting the colored sawdust into place are (beginning in the lower left corner) Arden Reiman, Leigh Hines, Bruce Robertson, Howard Hughes, Roman Abt, Friedrich Meenen and Jack Cornwell.

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College men know that a thin mantle of manure on several acres brings about twice the gain in total crop yield, as compared with the same amount of manure in a heavy coat on a single acre. Few farmers take full advantage of this fact because it takes too long to cover the acreage with slow-moving equipment.

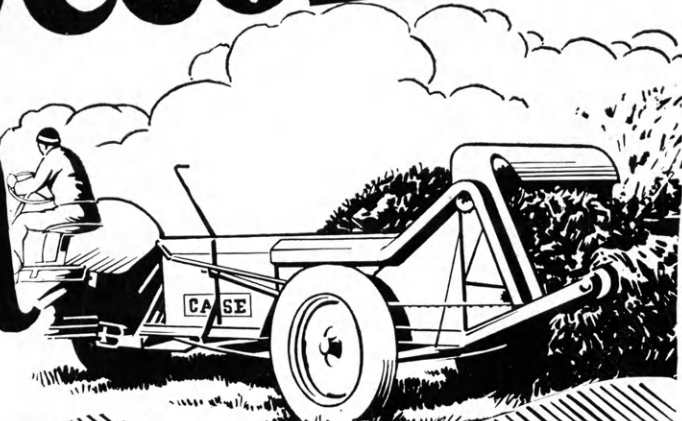
Now, with either of the machines shown here, that waste of crop-producing power gives way to creation of new wealth. Motorized spreading makes thin applications practical because it multiplies the acreage covered in a day. Rubber tires permit spreading at tractor speeds even on rough, frozen ground. Transport from farmstead to field is speeded up still more, even on stony roads.

Hitching is faster because there is no heavy lifting, no jacking up; self-hoisting hitch simply slides to level of tractor draw-bar. Maneuvering is faster because the spreader is built and balanced, steers and

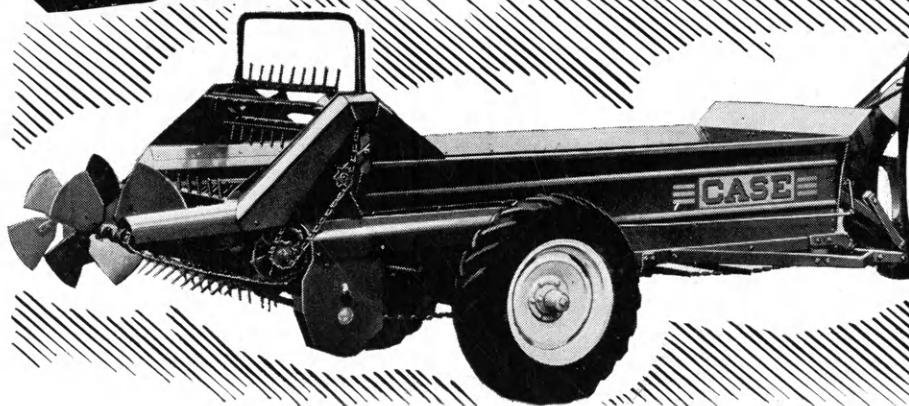
backs like a 2-wheel cart. Loading is faster because the front end lowers for loading, because the low wheels are not in the way. Every detail reduces drudgery, increases daily capacity, encourages better manure management and soil building.

The new low-priced model below has a 70-bushel steel-sided box. Its tires and wheels fit other farm machines, get double or treble service from a single investment in rubber. Both it and the 90-bushel size shown above are built with an apron drive which moves manure more steadily to the beaters ... and uniformity of spreading is required to make manure do double duty through thin application.

There is also a Case horse-drawn spreader, long famous for its light draft, its double steel backbone, its long life. See any or all models at our factory show rooms or branch houses. J. I. Case Co., Racine, Wis.



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**New
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Abrahams and Repstine Win in Little Royal

● *The Abrahams twins now have people convinced that they know how to fit and show swine.*

By JIM CAVANAUGH AND
HOWARD HUGHES

A CAPACITY crowd of 500 Farm and Home Week visitors and what few students that could crowd into the pavilion saw Merrill Abrahams duplicate the skill of his twin brother Maynard by winning the Block and Bridle division championship of the 18th annual Little American Royal Livestock and Dairy show on Thursday evening, February 6. Maynard Abrahams won the livestock showmanship award last year, showing in the swine class. Merrill's entry was a Poland China gilt.

Charles Repstine won the Grand Champion award in the Dairy division of the show with a Jersey cow. Repstine is a freshman in agriculture and the Little American Royal was his first venture.

The reserve champions were Ralph Bonewitz, Meriden, for the Dairy division, showing an Ayrshire cow; and Clarence Shandy, Wakefield, in the Block and Bridle division, showing a Southdown lamb.

The show was staged only in the south half of the pavilion this year, due to the lack of handling room for the animals and to the weather conditions.

The floor design this year was an American eagle. The centerpiece was done in dyed sawdust and was quite attractive. Truman Gregory made the design. The whole arena took on an aspect of splendor as a background to the carefully groomed animals that were brought into the ring.

Dean L. E. Call introduced, as special guests, the eight judging teams which have represented Kansas State College in various contests this year.

Al Praeger, Claflin, president of the Agricultural Association, was master of ceremonies and head ringmaster for the evening. Praeger presented Francis Wempe, Frankfort, president of the Dairy club, who announced the dairy show, making supplements to the program and adding color to

the show with facts about the students and the animals.

For the first time in recent years an outside judge made the placings in the Dairy show. George Cooper, manager of the Ralph L. Smith Jersey Farm at Stanley was quick and confident in his placings and the contestants and audience were pleased with his work. Instead of having the judge look at the animals when they were selected, Dr. H. E. Bechtel and Ballard K. Bennett, of the Dairy Husbandry Department scored the animals on a percentage basis as to their condition when they were drawn and again the afternoon of the preliminary showing.

A word of credit is due to Miss Bernice Wiggins, sophomore in Agriculture, who was the only girl contestant of the show. This was the first time since the 1937 Royal that a girl has fitted and showed an animal.

Eugene Watson, Peck, president of the Block and Bridle Club announced the last half of the show adding much humor and spice with his comments.

A. M. "Andy" Paterson, secretary of the American Royal Livestock show, Kansas City, made the awards in the livestock classes.

E. E. Germain, superintendent of the dairy at the State Industrial School at Hutchinson, and Francis Arnold, president of the Kansas Livestock Association presented the grand championship cups to the winners in the Dairy and Block and Bridle shows, respectively.

In both the Dairy and Animal Husbandry shows a good practice was started this year in having the first and second place winners in the individual classes show for breed champions and awarding a reserve champion ribbon to the second place winner in each breed. In the final class for grand champion, all champion and reserve champions in the breed classes were brought into the ring.

Excellent showmanship, hearty cooperation of all committees, and efficient management combined to make the 1941 Little American Royal one of the outstanding events of Farm and Home week.

Following is a list of the ribbon winners in the classes:

The Dairy Winners:

Holstein Cows

First: William Mudge, Gridley, Breed Champion

Second: Roger Phillips, Manhattan, Reserve Breed Champion

Holstein Heifers

First: Howard Johnstone, Wamego

Second: Bob Flipse, Oakley

Guernsey Cows

First: Tommy Benton, Olathe, Reserve Breed Champion

Second: Russell Nelson, Falun

Guernsey Heifers

First: Kenny Bowers, Manhattan, Breed Champion

Second: Max Benne, Morrowville

Ayrshire Cows

First: Ralph Bonewitz, Meriden, Breed Champion and Reserve Grand Champion of Dairy Show

Second: William H. Hardy, Arkansas City, Reserve Breed Champion

Ayrshire Heifers

First: Charles Bruna, Bremen

Second: Charles B. Schwab, Morrowville

Jersey Cows

First: Charles Repstine, Cummings, Breed Champion and Grand Champion of Dairy Division

Second: Dale Bowyer, Manchester

Jersey Heifers

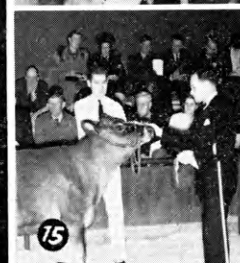
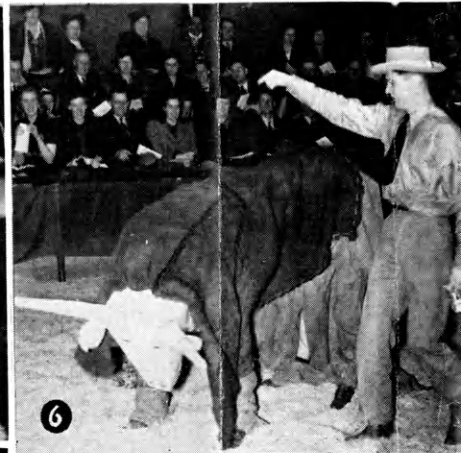
First: John Weir, Geuda Springs, Reserve Breed Champion

Second: Cecil Eyestone, Leavenworth

(Concluded on page 65)

The Pictures

(1) Clarence Shandy, Eugene Close and Roger Murphy blocking their wethers. (2) Francis Wempe, J. C. Mohler, Al Praeger, Gene Watson and E. E. Germain pose for a picture after the show. (3) Bill Mudge and his cow win the blue ribbon. (4) Charles Repstine receiving the Dairy trophy. (5) Wilbur Tendick and Wayne Good point their steers while Clair Parcel watches the judge. (6) "Ferdinand" almost gets Toreador Garold Way. (7) "Big Abe" Abrahams demonstrates the technique that won the Block and Bridle trophy for him. (8) A. M. Paterson telling the folks why "Big Abe" won. (9) George Cooper explains his placings to the audience. (10) Calvin Doile does some fancy rope spinning. (11) LaVerne Harold, champion beef cattle showman. (12) Ralph Bonewitz slicks his cow up while Dr. A. O. Shaw looks on. (13) The big feed in the Meats Lab, a Little Royal tradition. (14) The home talent artists gaze into the camera's lens. (15) Al Praeger hands out another ribbon. (16) Walt Robinson gives Charles Repstine a few pointers before the show. (17) The Dairy Club runs a cafe for a day.



The Agricultural Graduate Can Become a Farm Owner

● *It is becoming much easier to purchase and own a desirable farm, on a minimum of cash.*

By GLENN BUSSET

THERE may not be enough "white-collar" jobs for all the graduates of the division of agriculture this spring. There seldom are.

There were not enough permanent jobs to go around last spring and many boys with fine records went to temporary jobs, and to the army. It becomes apparent that more and more of the graduates must expect to return to the farm, and many will begin to lay plans accordingly.

It is fortunate that some of the graduates have farms to which they can go. There are many boys, however, that would like to farm, but have no means of obtaining one. One-sixth of the 1940 graduating class in agriculture said they intended to go directly back to the farm, in a survey made last year. In answer to the question, "Would you like to farm if finances and opportunity would permit?" one-half of the seniors said "yes". These boys intended to earn enough money to buy a farm and start farming as a career.

Because of the present unequal ratio between trained men and desirable wage-paying positions, some means must be found for establishing these men who so desire on their own farms. The optimum situation would be for the man to own the farm. A young man starting in farming operations on a rental basis is forced to compete for the rental of good farms with older, well established tenants. Because tenancy is rapidly becoming an uncertain means of progressing from tenant to owner, investigations have been made toward assisting young college graduates to buy farms as soon as possible after graduation.

Seven large life insurance companies who own a large number of farms in Kansas have responded to inquiries on the point. The Federal Land Bank of Wichita also owns several farms, and also like the life insurance companies, is ready and willing to dispose of them.

"It is the policy of our company to return all acquired farms to private

ownership as rapidly as possible," wrote the superintendent of land-sales of a large middle-western insurance company. "We will make every possible concession to be of assistance to high class graduates of your school if they desire to purchase farms owned by our company."

Terms offered varied with the companies. A large insurance company in Topeka sent a representative to Manhattan to explain their sales plan. The terms and conditions are so favorable they will be mentioned in detail. A farm can be purchased for 10 percent down, on the assurance that the purchaser has a reasonable chance to complete the payments. The actual interest rate of the unpaid balance will be two and one-half to three percent. Under the 15 year plan for amortizing, an interest rate of between five and six percent can be paid annually. By the end of the 15 years, 55 percent of the sale price of the farm will be paid. By this plan the principal can be retired by payments that are no greater than the average interest rate required in many cases.

As an added advantage, if the purchaser wished to move onto the farm at once and needed the barn or house repaired, repainted or rebuilt, the insurance company will do the work and apply the cost on the farm debt. The improvements can be made on two and one-half or three percent interest rather than the usual eight or ten percent required by banks.

An interesting sidelight on the sales policy of this company is the graduated scale of interest according to the value of the farm. This interest scale was made in recognition that it is much easier to make interest payments on a good farm than on one that is eroded and thin.

Other firms and the Federal Land Bank asked down payments ranging from 10 to 25 percent, with the final payments spread over several years at a reasonable interest rate. One firm makes special arrangements for years of drouth, calamity, or crop

failure for any "reasonable cause." All companies and agencies having farms for sale are looking for men of ability and ambition, rather than for men who might be expected to lose the farm again within a few years. An excerpt taken from one letter letter signifies their desire to cooperate fully, "We shall always be willing to give consideration to exceptional cases."

Financing the purchase of a farm is probably the greatest problem for graduates. Men of good reputation who have completed college successfully should be good risks for the local bank, relatives or friends with money to invest, or government lending agencies. The necessary farming equipment and livestock would be harder to obtain, ordinarily. If the young man can obtain a farm close to the home place, he could make some deal with his father to share farming machinery until he could purchase his own. On this basis, the down payment on a \$6,000 farm could be made, and farming operations started for less than \$1,000.

It might be necessary for the young graduate to farm in partnership with his father until he could start alone. Some insurance companies will take good men under contract as tenants until they can purchase the farms. However, on the basis of present attractive offers, farms can be purchased with only a slightly greater debt and responsibility than is assumed by the cash renter.

It is encouraging to know that it is becoming easier for young men of ability and ambition to purchase and own desirable farms. However, a word of caution should be inserted. As soon as the present artificial stimulus to prices and industrial production is stopped, we will be in for a fall in agricultural prices and a rather severe depression. It is suggested that farmers avoid long-term debts and build up reserves against the post-war readjustment. Unless the young farmer sees the way clear to own 50 percent or more equity in the farm within two years, even with the present favorable farm prices, he should be cautious about going too deeply in debt.

In Mogador, Morocco, there are tree-climbing cows! That is how they get the tender leaves of certain trees.

Cochran "Tops" in Ag Division

George Cochran, a senior in Horticulture, was selected as the representative student in the Division of Agriculture, and presented to Farm and Home Week visitors at a banquet February 7.

George has a record that would challenge the best students in any division. He has taken an active part in all the organizations to which he belongs, and can be relied upon to do anything that is assigned to him. George enrolled at Kansas State as a freshman the fall of '37 on a U. P. Scholarship. Since that time he has kept the qualifications of an excellent student.

Last fall George was elected to Phi Kappa Phi, honorary scholastic fraternity. His grade average of about 2.7 or better justly merits his membership in this organization. Few students are able to make or keep such a grade average.

Last spring he was elected to membership in Alpha Zeta, indicating that his good work is recognized by the students in the ag division. He exhibits all the qualities that are set forth for an AZ member in the constitution—those of high scholarship, character, leadership, and personality.

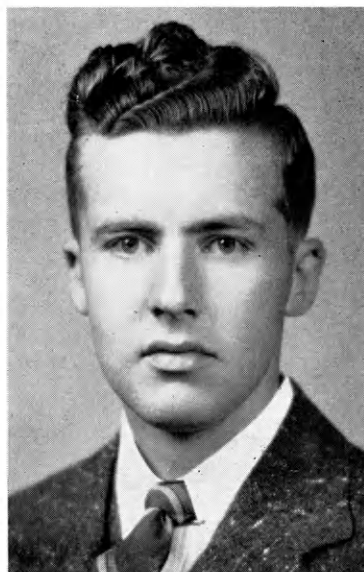
Outstanding leadership is illustrated by active participation and responsibilities in various organizations. He is a member of his departmental club, the Hort Club, and was president the spring semester of last year. He was student manager of the 1940 Hort Show and contributed his share to its success.

George has also been a member of the Block and Bridle Club since his sophomore year. He was a member of the Kansas State meats judging team that placed second at Chicago in the fall of '39. George placed ninth among the individuals. The team also competed at the American Royal in Kansas City.

George has been a member of the Collegiate 4-H all four years of his college career, and has served on many committees in that organization. He became a member of the Athenian Literary Society in the fall of '39. He served as treasurer one semester and is now parliamentarian and critic for the society.

During the summer of 1938 George spent two weeks at Camp Miniwanca,

the American Youth Foundation Camp, at Shelby, Mich., representing Kansas State as the agricultural freshman, as a result of a scholarship awarded by Wm. H. Danforth. These Danforth Fellowships are awarded



GEORGE COCHRAN

only to outstanding ag students in various colleges. The selection is based on well-rounded 4-fold development—physical, mental, social and religious.

George has not neglected his religious activities. He is a member of the Methodist church and is active in the Wesley Foundation. He has

shown in the Little American Royal two years. He has also played on intramural athletic teams—playing basketball two years and softball his freshman year.

George has been self-supporting while in school. He has worked for the Botany department since enrolling as a freshman. For the past two years he has stayed at the Plant Research Laboratory and acted as student caretaker of the Botany greenhouses. The past two summers he has worked with small fruits at the Northeast Kansas Experimental farms at Wathena.

As a student George is classed as "tops" by his professors. To sum it all up, he is a "swell guy" to know.

George expects to do graduate work next year. We expect him to continue his good work.

—Bob Singleton.

Instr. Glenn Beck is in charge of editing a page in the *Milking Short-born Journal*, under the head of "Science Studies the Farm Problems."

The new key sported by genial Gene Watson signifies that he is a member of Who's Who in American Colleges and Universities.

Doctor Scott Leaves Kansas State

●Dr. H. M. Scott, better known as "Scotty" to Kansas State students, resigned February 1, 1941, as associate professor in the department of poultry husbandry at Kansas State to accept a position as professor in poultry husbandry and head of the department at the University of Connecticut at Storrs.

Doctor Scott's work at Kansas State other than teaching has been mainly research with the physiology of egg formation, nutrition, incubation, and endocrinology of chickens and turkeys. He has written about forty publications in these fields. In addition to these tasks, Dr. Scott was coach of the poultry judging teams. Kansas State placed first five times during the eleven years that Scotty coached the team.

Doctor Scott graduated from Oregon State College in 1924 and took the position as manager of a commercial poultry farm in western Oregon for two years. In 1926-27 he did graduate work at Kansas State College and then received an instructorship in poultry at North Dakota Agricultural College for a year. He has since been a member of the poultry department at Kansas State except from September 1936 till July 1938 when he was engaged in graduate study at the University of Illinois in physiology and nutrition. He received his Ph. D. degree from that institution in 1938.

Doctor Scott is a member of Gamma Sigma Delta, Sigma Xi, Alpha Zeta, and Phi Kappa Phi honorary societies and a member of Phi Delta Theta, social fraternity. In Manhattan he has been a leader in Boy Scout work and was president of the local Lions Club.—D. L.

Irrigation Becomes a Permanent Part of Kansas Agriculture

● *Irrigation is increasing rapidly even on the uplands as farmers realize its value as a form of crop insurance.*

By BOB WAGNER

EIGHTY-FIVE bushels of kafir seed and five tons of forage is a pretty good return from a single acre of anybody's land. Unbelievable as it may seem, this production was from land in the so-called dust bowl, too.

This was the average yield of a 22-acre field of certified pink kafir produced in the 1940 season on the farm of Edward J. Oborny near Bison, Kan. That wouldn't be a bit hard to take, would it?

How did he do it? By irrigating his land.

Ben Parsons of Hugoton—out in the center of the dust bowl—averaged 57 bushels of barley to the acre on his irrigated land in 1939, while an ad-

joining field which was not irrigated produced only eight bushels to the acre. On a 12-acre field of irrigated wheat land he averaged a yield of 35 bushels to the acre while nearby land, not irrigated, yielded six bushels to the acre.

Walter Mott, who operates an Elm Creek Township farm near Salina, boasts taking three crops from a 25 acre irrigated plot during the past year. Mott planted wheat on the land in the fall and pastured 60 head of livestock upon it for 60 days, realizing a good price when the stock was marketed. In June he harvested a wheat crop averaging 58 bushels to the acre from the land and, this done, planted

the plot in cane to be used for silage.

Important crops of western Kansas such as alfalfa and sugar beets would have no place in that section were it not for irrigation. It would be useless to attempt growing these crops to any extent on dry land.

Irrigation fits in well with Kansas' livestock industry. Irrigation and livestock seem to go hand in hand. Where there is irrigation, there should be livestock to make the best use of the abundance of forage produced; where there are livestock, it is a good plan to have irrigation to insure a plentiful supply of feed.

In the early days of irrigation, it was looked upon merely as a plaything for a few of the more wealthy who could afford to spend time and money on it. But as time went on, farmers began to see its merits.

The first irrigation was practiced in river valleys where the water could be taken directly from streams. Success was such with this type of irrigation that more and more farmers were induced to take advantage of stream water. The result was a deficiency of river water supplies. This led to the development of low-cost shallow well pumping plants in the valleys, which proved highly successful.

Not to be outdone by others of their kind, farmers of the uplands began to investigate possibilities of obtaining water from wells for their lands. It was found that large supplies of ground water underlaid much of the Great Plains region. While costs of irrigation on uplands were higher, farmers found that in many cases it was still profitable to irrigate. "Cheap power, the need for continued irrigation and the existence of a large quantity of ground water combine to form the basis upon which pump irrigation is possible in the upland areas", says M. H. Davison, Assistant Engineer, Division of Water Resources, State Board of Agriculture, Topeka, Kan.

In addition to these factors, it is important that those engaged in irrigation farming have that as their main interest, and not just a side line to a large acreage of dry-land farming. An irrigation farm is a full time job in itself. Eighty acres of irrigated land can keep the average farm family well occupied.

Today, we have extensive irriga-

(Concluded on page 64)

TRANSFORMATION OF A "DESERT"



What was once almost barren prairie land in western Kansas has been transformed into highly productive land through irrigation. Fields of sorghum such as the one illustrated above are becoming common sights in areas where irrigation has been adopted.

Beauty of Landscape Is a Kansas Asset

● *Look about you and learn to enjoy the Kansas landscapes that cause visitors to become ecstatic.*

By WALTER KEITH

THE beauty in Kansas is generally more appreciated by visitors from other states than by the residents of Kansas. Possibly this is psychological but is nevertheless true. Perhaps we, in Kansas, are so used to our surroundings that we are not particularly conscious of the beauty. Then, possibly we are guilty of feeling "The grass is always greener on the other side of the fence". Regardless of where you are there is beauty everywhere, if you will only take the time to enjoy it, and know where to find it. Kansas is no exception to this statement.

Beauty has been defined by one author as "Complete unity of organization". Nature is a wonderful organizer. There are many kinds of beauty surrounding us. There is definitely a type of beauty about an industrial district if you have the power to appreciate it. A massive grain elevator, white, and towering above the silver ribbons of railroad tracks, cutting their way thru the golden grain fields across the state is beautiful in its way. These elevators may be likened to the silos of farmsteads of the men who are taking their living out of the soil.

In the summer the combines, cutting their way through the seas of golden wheat, is a sight that tourists, passing through the state, stop from their hurried journeying to watch. They enjoy the beauty of nature combined with the beauty of seeing a man hard at his job, working hand in hand with nature so that the nation might eat. A concrete bridge, a busy office building, a bin full of red apples; here is unity of organization, here is beauty.

NO MONOPOLY ON BEAUTY

Beauty can be found in all of the corners of Kansas. From the apple-laden trees of northeast Kansas to the great seas of prairie in the western portion. In natural beauty we have plants just as beautiful as in any state

in the Union. Our native flowers, trees, and shrubs may be compared with the outstanding beauties of specimen plants in any section of the country. It is a pity, that so many of our native plant material goes unnoticed by the Kansas resident, but is appreciated by all who visit our state.

In all seasons of the year there is beauty to be found. In the spring the wild violets of the woodlands carpet the shaded portions in lieu of grass, giving the black soil a soft covering of orchid coloring blending into the soft greens of new foliage. The native red bud tree adds beautiful pinks to the woodlots, and in the northern portion of the state, the native crab tree can be surpassed by none with its delicate pink blossoms.

As the season progresses, the flowering shrubs approach their peak of beauty. Buttonbush, fragrant sumac, dogwood, wild plum, elderberry, Texas buckeye (sometimes called the rhododendron of Kansas), and others, present an array of colored blossoms ranging from white to yellow, and pink, blending together with the colorful wild flowers, such as the Kansas gay-feather, "pentstemon" or fox-glove, gaillardia, sunflowers, cone-flowers, wild verbena, "wild sweet william" and many others.

During this array of color, one tends to overlook the foliage coloration of the trees and shrubs. True there is only one color predominate, but did you ever stop to notice how many different greens there are? There are no two greens exactly alike. This is due to different amounts of light falling on the foliage, and to the different species. In a forest of oaks there are the delicate light greens of the pin oak to the darker greens of the burr oak, the red oak, and the scrub and post oak on the uplands. Likewise, the greens vary in the maples. The shades, tints, and hues of green are numerically unlimited. An artist could spend a lifetime trying to reproduce the different greens

painted by nature, and he would still never complete the job.

BRILLIANT COLORS IN FALL

From summer we pass on into fall and early winter, into the season regarded by some as the most brilliantly colored season of the year. Blossoms give way to colored fruit, and green foliage steps aside for beautiful yellows, oranges, reds, and browns.

The fragrant sumac has beautiful red foliage together with soft red colored fruit. Dogwood has beautiful white berries, and the smooth sumac grows in scarlet clumps that may be seen for miles, dotting the fast browning hills. Coralberry (buckbrush), and snowberry, are much in demand in the eastern nurseries, and here we have it wild and we scarcely notice it. The fall coloration of the Virginia creeper, which covers the buildings of the Kansas State campus, and climbs the trunks of native trees in Kansas woodlots, becomes fiery red after the first frost.

In the fall the oaks take on beautiful colors. The red oak goes true to its name blending with the varying shades of green, orange, brown, and yellow of the pin oak, the swamp white oak, the burr oak, and the post oak. The brilliant yellows are found in the foliage of the honey locust, black walnut, and the Kentucky coffee tree. Along the rivers the cottonwoods and the willows add yellows and greens to the landscape scene. Our native evergreen, the Virginia red cedar takes on a purplish cast as winter sets in.

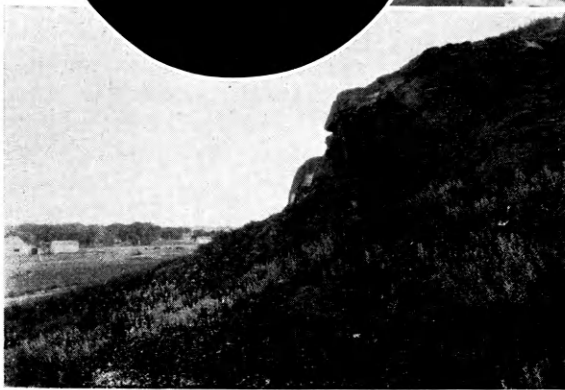
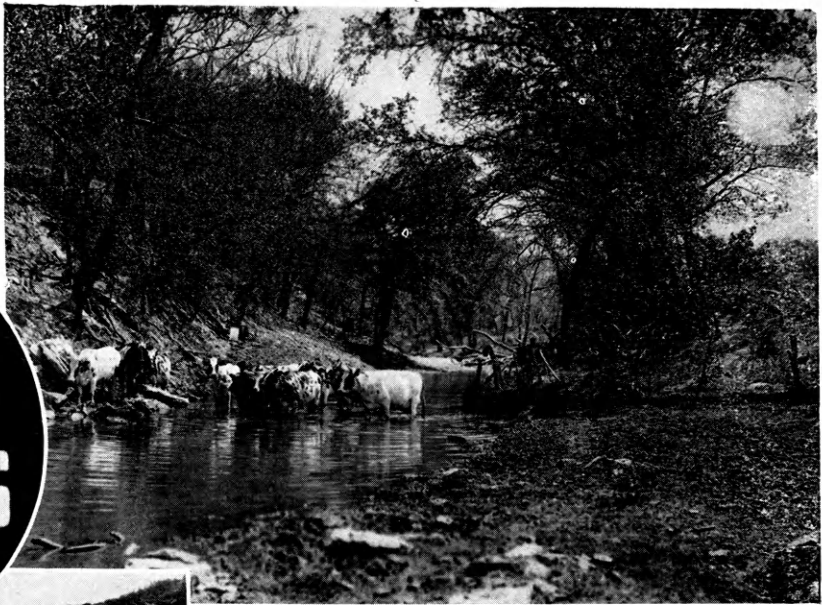
WINTER CHANGES THE PATTERN

As winter covers the earth with a blanket of snow, a new type of beauty takes form; the pattern of barren branches against the blue winter sky. The varying grades of texture and patterns of branches cannot be duplicated by any artist as well as nature has done. This cycle of beauty in Kansas goes on year after year, bringing natural beauty to every corner of our state.

Too often the unusual features of a state are played up so much that the wrong impression of it is given. Kansas visitors do not see the grasshoppers, jackrabbits, and prairie dogs unless their attention is specially called to them. Their attention must be called to the sweeping lines of ma-

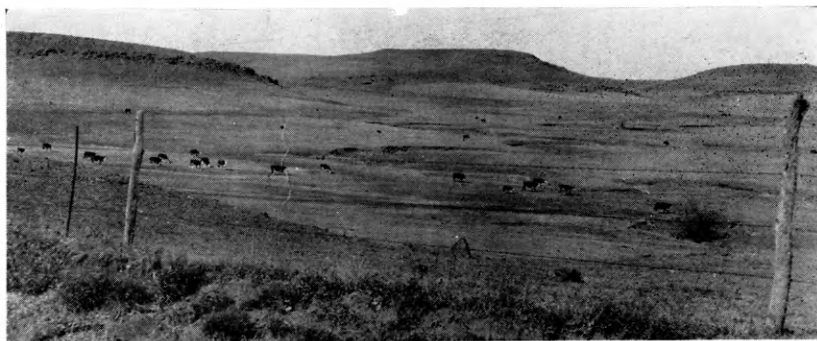
(Concluded on page 62)

SCENIC KANSAS



Those who for the first time view a typical eastern Kansas landscape usually receive a pleasant surprise. Too often the unusual features of a state are so played up as to give the wrong impression of it as a whole. Kansas varies widely in both the climate and topography of its expanses. In early summer the never-ending landscape of level fields of waving wheat in western Kansas is indeed a rare and impressive sight. While this is the prevailing view in western Kansas, the eastern two-thirds of the state is more rolling than much of the middle west. The rivers, the sweeping lines of majestic limestone and Flint Hills present a scene of beauty that is truly unique. (Cut courtesy State Board of Agriculture.)





Although the plains as well as the hills of Kansas have but few trees, the valleys of its streams are more or less heavily wooded. The early settlers realized the value of trees and most of the older towns and cities are well provided with shade trees and the farms with groves.

Castle Rock seen at the right is one of the interesting chalk formations in Gove county. This is a remnant of the chalk formation that once covered this entire area. Forces of erosion have removed much of the material leaving only unique monuments of this sort. (Cut courtesy State Board of Agriculture.)



Danforth Fellows Sponsor A New Campus Organization

● 23 college students who have received Danforth Fellowships organize for a purpose.

By A. D. FULLER

TWELVE students in the division of agriculture and members of the recently organized Danforth Fellows group. An organization made up of scholarship winners, its membership is limited to Kansas State students who have attended Camp Miniwanca, American Youth Foundation camp near Shelby, Michigan.

Bob Singleton, 1939 winner of the ag freshman Danforth fellowship, is president, and Roger Murphy, 1940 winner of the same fellowship is vice-president. Prof. Robert Eggert of the department of economics and sociology is the faculty sponsor. Mr. Eggert was selected to represent Kansas State at a college faculty conference held last September at Miniwanca.

The new organization of 23 members has selected an ambitious program. They want to encourage more young people to attend the camp, to promote year round fellowship among the K-State Founders, and to promote campus and state-wide interest in the American Youth Foundation. They intend to improve the quality of future Kansas delegations by helping those who select the students to understand what is required of the campers when they arrive on the sand dunes of Lake Michigan. A program to present the history and philosophy of the organization to newcomers is planned. The Fellows are especially interested in making it possible for more campers to return for a second year of the four year camp.

Although the youngest organization on the campus, the Danforth Fellows have been especially active. A program of Miniwanca songs, short talks, and a skit was presented by the entire group to the Collegiate 4-H club. Recently they entertained Dr. William J. Hutchins, new chairman of the Danforth Foundation which has its headquarters in St. Louis, Mo. Doctor Hutchins is president emeritus of Berea college in Kentucky, and has three sons who are also college presidents. He made a study of the

Kansas State campus, considering it as a potential location for the establishment of a Danforth Foundation which will carry on primarily a religious program.

An entire page of the 1941 Who's Who't will be devoted to the new organization, and a group picture of the Fellows will appear in this year's Royal Purple.

Ag students who are charter members of the new organization are Bob Singleton, Harlan Shuyler, Paul Sanford, Fred Talbot, Edwin Kline, Malvin Johnson, Roger Murphy, Lloyd Francis, Jack Featheringill, and Charles Adams.

SCENIC KANSAS

(Continued from page 59)

iestic limestone hills, broken rimrock ledges, heavily wooded valley in the eastern part of the state, and our sunsets that put California to shame.

Castle Rock, the Garden of the Gods in Gove county, Rock City in Ottawa county, our fertile river valleys, the virgin pastures of the Flint Hills Bluestem area, the fine hardwood forests along the Neosho, Osage, and Marais des Cygnes river are all worth the time of the harried tourist who arises early and drives recklessly to reach Denver by night so his vacation will last longer. He could have many short and varied vacations in his own native Kansas if he only had time to enjoy the beauty of his home state. There is beauty in God's out-of-doors, and Kansas has plenty of that.

Kent Patton will teach vocational agriculture at Mulvane. He is replacing Jess Cooper, '39, who resigned to accept a teaching position at El Dorado high school.

High temperature keeps the native cheese in a liquid state in Guatemala, so that it is common to order a bottle of cheese.

The neatest bit of ad libbing that we have heard for some time occurred during Ag economics seminar when Wellington Dunn was discoursing on the surplus cotton problem and the suggested remedies thereof. Said one bright-eyed innocent, "If Congress passed a law to increase the length of shirt tails by four inches, wouldn't that take care of the surplus?"

"Yeh," Dunn said, "That would just about cover it."

Marriages

TEICHGRAEBER—AICHER

The marriage of Maribelle Teichgraeber, f. s. '40, and George W. Aicher, Ag. '39, was December 8. The bride is affiliated with Pi Beta Phi sorority and the groom with Sigma Phi Epsilon and Phi Kappa Phi, honorary fraternity. He was a Student Council member while in school.

The couple reside in McCook, Neb., where Mr. Aicher is associated with the Great Western Sugar company as field man.

PALMER—SIMPSON

Doris Palmer of Norwich and Carl Simpson, Ag. '40, of Norwich were married Sunday, December 1, by the Rev. B. A. Rogers at the Methodist Student parsonage. The couple will reside in Milton.

MOORE—LAW

In a ceremony performed November 27 at Madison, Wis., Roberta Moore, Manhattan, became the bride of Alvin G. Law, Ag. '38, M. S. '40. The bride has been employed in the Division of College Extension at Kansas State College for the past four years. Mr. Law is now research assistant in agronomy at the University of Wisconsin. Mr. and Mrs. Law will make their home at 112 North Orchard, Madison, Wis.

KENSLE—SHULL

Geneva Kensler and Harold D. Shull, Ag. '39, both of Manhattan, were married December 8 at the Methodist Memorial temple in Manhattan. They are at home at Washington, where Mr. Shull is the county agent.

Finding fillers for these little blank spaces is one of the things that make editors go gray early in life.

Swiss Invasion of Kansas Is by Peaceful Penetration

● *Schwyzers have traveled 6,000 miles over land and water since leaving their native land.*

By JIM CAVANAUGH

THE herd of Brown Swiss, recently purchased for the Garden City Branch Experiment Station, did not make this entire journey, but they completed the last leg of a trip started by their direct ancestors back in 1867—for it was in that year that the first Brown Swiss Cattle were imported to this country.

How much different is the home of these cattle now in western Kansas from their ancestors who came from the Cantons of Lucerne, Zurich, St. Gallen, and Schwyz in the northeast part of Switzerland. There Swiss cattle are found from the shores of Lake Constantine, at an elevation of 11,400 feet above the sea, to near the line of perpetual snow in the Alps.

What a different habitat is their new home on the prairies of southwestern Kansas, where the wind swept plains are at best only gently rolling,

in contrast to the lakes and valleys of Switzerland, with the snow capped peaks of the Swiss Alps rising vertically almost from the doorstep of the dairyman's home.

In Kansas these cattle may spend a lifetime on the same 80 acres of land and most of that time in the same corral or barn. In Switzerland, as spring opens, they are taken to the edge of the valleys and Lower Alps, up to an elevation of about 3,000 feet, where they are pastured on an average of about 116 days. As the summer advances the herds are moved upward to the Middle Alps, which are at an elevation of from 3,000 to 6,500 feet, where they are pastured on an average of 92 days. In July and August they are taken on to higher pastures, which are called the High Alps, at an elevation of from 6,000 to 8,500 feet—during the summer

months at Garden City the cows will spend the still day swatting at flies, while they all try to crowd under the one tree in the lot and even there in the shade the temperature is 110 degrees.

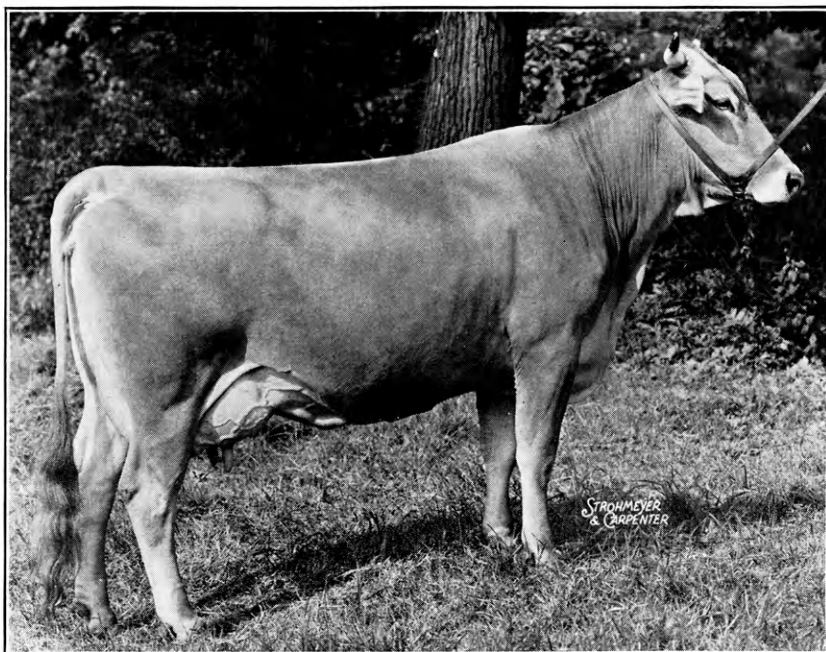
But the change in environment has not disturbed these cattle as they have readily adapted themselves to their new home in this country—whether it be in Kansas or Canada, Oregon or Mexico, Wisconsin or Texas, they have continued to consume whatever feed they are fed and produce a maximum of milk with a minimum of care.

The hardy rugged Swiss cow has demonstrated her practical value in so many regions and in so many hands that her friends are prepared effectually to present her claims to the public.

The dairyman and farmer of Kansas is interested in the Brown Swiss as they are the fastest growing breed at the present time even though but little advertising has been done by either the breed association or by the breeders. Although Kansas has had Brown Swiss for many years, only in the past 4 or 5 years have the numbers increased rapidly and the breed has become overwhelmingly popular.

So the future is bright for the Brown Swiss cow, affectionately known by her owner and admirer as "The Big Brown Cow", even though she is 6,000 miles away from her native habitat in the Swiss Alps.

A CHAMPION OF CHAMPIONS



Jane of Vernon 5th won the championship ribbon in the Brown Swiss division of the 1940 National Dairy Show and went on to win the Grand Championship over all breeds. (Cut courtesy the Brown Swiss Journal.)

Max Dawdy, B. M. I. D. (big man in dairy) is back in school this semester after spending most of last year with the Carnation Farms at Seattle, Wash., helping keep those "Contented Cows" contented.

Ray Stewart, Ag Administration, finished at the end of the first semester and had a job waiting for him. Ray now is teaching vocational agriculture at Centralia.

Kenny Porter is 4-H club agent in Rice county this year. Kenny explains that too many night meetings caused all those dark circles under his eyes.

Bill Duitsman pledges again—this time to Thula Mae Muchow, of Van Zile and Alpha Xi Delta.

Vitamin B₁ Bread Is the Goal of Millers and Chemists

● *If present plans are completed, bread will contain everything from metals to acid.*

By ED ELLING

FORTY-FIVE million people in the United States are suffering from an inadequate supply of vitamin B₁ (thiamin) and other food essentials in the diet, according to the United States Bureau of Home Economics. Experiments have been run which illustrate the vital need of this all-important vitamin. The Mayo Clinic, located at Rochester, Minnesota, illustrated this by feeding six healthy persons a diet generous in all the essential life chemicals—except thiamin. They expressed the results in the following manner.

"In a few short weeks the natural good cheer of the subjects turned to sadness and discouragement. They complained of sudden spells of giddiness. They developed backaches and sore muscles. They hardly slept. Finally they refused to eat the tempting food that was set before them. They couldn't think or quite remember. Then they began to vomit the little food that they could bring themselves to eat. For 88 days the test lasted. Then a tiny shot of thiamin. Improvement observed in every case in a few hours—vomiting ceased, food was eaten without urging. Fatigue vanished."

After wheat, which contains about 5.58 gammas of B₁ per gram, is milled to ordinary white flour it contains approximately 1.1 gammas of B₁ per gram of flour. This is a loss of 80 percent of the vitamin B₁. Most of the B₁ of the wheat is found in the bran, while the vitamin E or riboflavin is furnished in large quantities by the germ. At the present time both of these are going to our livestock as feed.

At the present time the Millers National Federation is trying to establish standards for a flour to which will be added any one or more of the following nutrient ingredients, or a combination of them: thiamin (B₁), riboflavin (B₂), vitamin D, nicotinic acid, calcium, iron and phosphorus.

There are some individuals who claim that we are trying to change

our flour into a "cureall" for everything from bunions to baldness. But after all, if the people must be supplied with these food elements in their diets, is there any better method of giving it to them than through their "daily bread", this "staff of life", that forms a stable article of food on the tables of one-third of the people of the world, and contributes over 20 percent of the caloric intake of the American diet?

IRRIGATION IN KANSAS

(Continued from page 58)

tion on uplands as well as valley lands. The most pronounced expansion on uplands has taken place in the shallow water basin of Scott County. The irrigated acreage in that county increased from 1,020 acres in 1932 to 17,164 acres in 1940. In other words, seventeen times as much land was under irrigation in that one county in 1940 as eight years before. That is significant.

Even in the eastern sections of the

state where the average annual rainfall is sufficient for crop production, irrigation is feasible and profitable. In these sections irrigation is practiced principally in the valleys and is used as supplemental water and as a form of crop insurance. In many years total rainfall may be abundant, but it may not come at times when it is most needed or when response from it would be greatest. If irrigation is possible, these deficiencies of rainfall may be satisfied, and a marked increase in yield will consequently be the result. Also in drouth years as occurred in 1934 and 1936, irrigation is a blessing to any part of Kansas.

In western Kansas irrigation takes on a much more important aspect than in the eastern section. In the western section moisture is the limiting factor to crop production. Soils will produce abundantly, as is shown by the previous examples, if only sufficient water is available.

It is evident that irrigation has a definite place in Kansas agriculture. It is one of the best forms of crop insurance. It furthers stabilization of agriculture. It provides for a higher and more uniform standard of living for Kansas farmers.

Today, irrigation is being included in a permanent system of agriculture. It is rapidly assuming an important place in land-use planning programs in Kansas. There are now 180,000 acres of irrigated land in Kansas.

BEATING THE DROUTH



An irrigation pump delivering 1800 gallons water a minute near McPherson. This plant has been in operation for five consecutive years. (Cut courtesy State Board of Agriculture.)

Chinese Graduate Works To Improve the Good Earth

● *Farmers in China are almost as stubborn in their resistance to new farming methods as they are to the Japanese invasion, Edward Shim says.*

By BOB WAGNER

CHINESE farmers are almost as stubborn in their resistance to changes in farming as they are in their resistance to the invasion of the Japanese. One draws that conclusion after hearing Edward Shim, graduate of Kansas State College in 1916 and now Technical Adviser to the Empirical Chemical Industries Inc. of China, in a talk before a special meeting of the agronomy seminar.

Mr. Shim cited one case in his own experience when he started recommending a kind of fertilizer different from that which the farmers had been using, but one which gave as good results. He even had a hard time giving it away, just because it was something different. So, he finally guaranteed results and provided labor for handling the fertilizer if some of the farmers would use it. In other words he gave them the fertilizer and then paid them to use it.

Even a change in the packaging of a fertilizer was enough to cause the farmers to stop buying it. It was the same fertilizer in every way, but packaged in a different bag. Mr. Shim said that Chinamen seem to associate the packaging with the content.

In his talk Mr. Shim indicated that agricultural crops and practices of China are in many cases not far different from those in Kansas. The use of chemical fertilizers in rebuilding the fertility of Chinese soils is much the same as that in Kansas. Among the common fertilizers used in China are: ammonium sulfate, superphosphate, and raw rock phosphate, all three of which are used in Kansas. Shim stated that the most of the fertility work is done on soils in South China.

Many of the crops in China are also familiar to Kansas farmers. Shim said that rice is the most important crop in South China, but north of the Yantze River, wheat, millet, sweet potatoes, peanuts, soybeans, and koliang—which is their type of sorghum

—are the most common crops. In Manchuria the leading crops are corn, wheat, soybeans, millet, koliang, and green beans.

Contrary to popular opinion, Mr. Shim said that not all Chinese are rice eating people as we usually believe. In South China, they do eat considerable rice, but it does not by any means comprise their entire diet. In Manchuria one of their main foods is vermicelli, a food similar to spaghetti.

Mr. Shim has been working with Empirical Chemical Industries, Inc., since 1924. Most of his work has been with chemical fertilizers, but for the past year he has been devoting his time to the development of insecticides for use in China.

When asked if insects are as bad in China as in the United States, Shim replied that in a general way insects are much worse in China than in the United States. As a result, insecticides are particularly important to China.

Mr. Shim was born in Hawaii and since his graduation in agronomy, has had wide experience in agricultural work in Hawaii and other countries. He taught school in Hawaii for several years and was with a feed company his last year there. From Hawaii he went to the Philippine Islands where he was in charge of a cocoanut plantation. He left the Philippines to go to China, and since 1924 has had the same job he now holds.

Charles Streeter, who graduated at the end of last semester, is with the Farm Security Administration at Mound City.

John Clow, AA '40, is in the Army Air Corps Training Detachment at Oxnard, Calif.

Gerald McMaster, AA '40, is teaching vocational agriculture at Auburn.

LITTLE ROYAL WINNERS

(Continued from page 54)

The Block and Bridle Winners:

Poland China Hogs

First: Merrill Abrahams, Wayne, Breed Champion and Grand Champion of Block and Bridle Division

Second: Bill McMillan, Reserve Champion

Duroc Hogs

First: John Tasker, Caney

Second: Dale Knight, Manhattan

Southdown Lambs

First: Clarence Shandy, Wakefield, Sheep Champion and Reserve Grand Champion of Block and Bridle Division

Second: Robert Randle, Riley, Reserve Champion of Sheep

Shropshire and Hampshire Lambs

First: Eugene Close, Solomon

Second: Edward Buss, Holton

Senior Horses

First: Wayne Coltrain, Neodesha, Champion Horse Showman

Junior Horses

First: Walter Smith, Shawnee, Reserve Champion Horse Showman

Second: Bob Gilchrist, Coldwater

Herefords

First: Edwin Kline, Mentor

Second: Clair Parcel, Coldwater

Angus

First: Laverne Harold, Parker, Champion Beef Showman

Second: Frank Wilson, Maple Hill

Shorthorns

First: John Banbury, Plevna, Reserve Champion Beef Showman

Second: Russell Cummings, Satanta

Livestock Judgers

Fourth at Denver

The Kansas State College Junior Livestock Judging team composed of George Wreath, Frank Marcy, Harold Peterson, Bertil Danielson, and Dean Weckman, placed fourth in a field of 10 teams judging at the Western National Stock Show in Denver.

The team ranked second in judging beef cattle and second in all classes of breeding stock. They were sixth in the judging of market classes.

Fifty contestants competed in the contest, Marcy being high man in judging breeding classes and also fourth in sheep judging. Peterson was fourth in swine judging and Wreath was fifth in judging fat classes. Wreath was high man of the team. Prof. F. W. Bell is coach of all livestock judging teams.

Clair Parcel of Coldwater will spend a week of next summer in Washington at the 4-H leadership encampment. General excellence in leadership work in the 4-H club was the basis of the trip Clair received.

Agriculture and the High School Graduate

The question which faces young men on graduation from high school is whether or not to attend college, and what course to take. This letter from a young man at Kingman recently came to our attention, so we looked up the answer to it. All the questions have been asked many times before, but we believe that we have never read a more completely satisfying answer than that given by Dean Call. The letter to Dean Call, and his answer follows exactly as we received them.

Kingman, Kansas
January 12, 1941

L. E. Call,
Dean of Agriculture,
Kansas State College,
Manhattan, Kansas.

Dear Sir:

I would like for you to answer a few questions in regard to a course in the agricultural field in college work.

Is the field in agricultural work filled or are there plenty of vacancies? What are some of the different fields within the study of agriculture? What are the requirements for entering college in a course of agriculture? What is the main part of the work to be done in some of these fields? What is a boy's chance of receiving a job or position after he graduates from college?

I am trying to decide what kind of a course to enroll in at college. I will graduate this spring from the Kingman High School. I have had six years of 4-H Club work and three years of F. F. A. work. I am interested in livestock and general farming. Is it advisable to attend college and then go back to the farm?

I hope that you may be able to answer some of these questions and I am sure they will be helpful to me in deciding what to do.

Yours truly,
Arthur Beat.

Mr. Arthur Beat
230 Avenue C, East
Kingman, Kansas

Dear Mr. Beat:

I have your letter of January 12 in regard to college work in the field of agriculture.

There is a continuing demand for young men with farm experience and college training in agriculture to work in various fields of agricultural service. I know of no field for which the institution trains men in which the demand for service has been greater during the past ten years than in the field of agriculture. Just what the demand will be in the future is difficult to determine accurately. It is my opinion, however, that the re-armament program of the country will center people's attention on training in other fields rather than in agriculture and that for this reason there will be some reduction in the number of students entering college for agricultural instruction in the next three or four years. I do not anticipate a reduced demand for the service of men trained in agriculture. For this reason, I anticipate that the opportunity for the placement of those trained in agriculture at the time those now completing high school work will have completed their college training will be better than at the present time.

My advice to you would be to enroll in college in the type of work that you are interested in. If, as a result of your six years of 4-H Club work and three years of work in vocational agriculture, you are interested in continuing your education in agriculture, I would advise you to do so. With the background that you have had, you should find ample opportunity for service after completing specialized college training in this field.

I feel that it is highly desirable for a young man who expects to farm to secure, if possible, a college education. A college education is not absolutely essential for success in farming as is evidenced by many successful farmers who have not attended college. I believe, however, that you will agree with me that a college education is highly desirable if a farmer is to render the community service that is desirable and if he is to assume a position of leadership. Competent farm leaders are urgently needed. I hope that a large number of young men now in high school who expect to farm will attend college in order to prepare for positions of leadership in the agricultural affairs of the state and nation.

If I can be of further assistance to you in helping you to decide the field of work in which you wish to prepare yourself, do not hesitate to write me.

Very truly yours,
L. E. Call, Dean
Division of Agriculture

LEC:M

LOTS OF SUGAR



We're not referring to Bob Wagner, but to the amount of sugar he is putting in his coffee. The picture was taken at the Tri-K, Ag Ec, Alpha Mu joint meeting in Thompson Hall.

New Turkey House For the Poultry Farm

Filling a long apparent need a new modern turkey breeding and brooding house 20x70 feet, has been completed at the poultry farm. Regardless of a statewide increased production of turkeys the College poultry department has been forced to delay a number of breeding and production tests which now can be carried out in the new building.

Divided into a number of breeding and a number of brooding pens capable of registering several different tests the house is being used in an experiment to determine the relationship of nutrition and of egg hatchability. Work towards developing and improving a strain of broad breasted turkeys will begin soon.

Using artificial lights and running water about 500 poults and 72 breeders can be housed in the new building.

The longest milk route in the world, 4,200 miles, is served by the Yankee Clipper. It begins at Honolulu, stops at Midway and Wake Island and ends at Guam.

A Few Examples of Our "Not so Dumb" Animals

If horse sense is the result of stable thinking, many of our farm animals must spend much time in serious reflection. Psychologists are agreed that there are exceptional animals the same as there are exceptional people. Anyone who has ever driven a cantankerous team of farm mules possessed of determined dispositions and iron mouths will remember how hard it was to force those undisciplined quadrupeds to make the last round before dinner. They learned to tell time long before the hired man ever bought a dollar watch to keep himself from working overtime.

It's always a good idea to send mules to the field with the hired man because mules can always be depended upon to take care of themselves. They may run away but they will be cautious and not hurt themselves. The ability of the mule to protect himself from injury is the reason mules are used in mines instead of ponies. Ponies are prone to throw their heads up against the low overhead beams causing poll evil to set in. The wise mule, however, prods along with his head down, avoiding all contact with the obstruction.

These long-eared beasts even have a lot more sense than humans when it comes to eating. Mules never overeat and thus spare themselves the digestive aches and pains that so afflict the human gluttons.

When it comes to eating habits, the human is about on a par with his equine friend, the horse, whose will power reaches a low ebb when he faces an amply filled feed trough. Even so, your faithful servant isn't so dumb, he has a few tricks of his own up his fetlock. Many a horse with a versatile muzzle can open gates and barn doors with ease. Feed lot teams can pull a load of feed through a maze of bunks, unguided, and not scrape off a splinter. A horse which has ever had personal contact with an electric fence, declares safety first rules in order and avoids even harmless coils of wire that chance to be lying out in the center of a field.

Old "bossy" whose duties we consider as being limited to producing a calf now and then and keeping the milk bucket filled with grade A milk, exhibits a glow of intelligence now

and then. She learns to know where her place is in the barn and often obligingly comes in of her own free will to be milked at the proper time. One resourceful old cow has even been known to pump water with her horn when she gets thirsty.

Even the lowly sow shows evidence of "gray matter" at times. She can find with ease a hole in the fence that was missed by the farmer's critical eye. However, once she is outside the pen she has a mental relapse and it seems that it is impossible for her to find the way back. A nip on the heel from the farmer's dog immediately restores her memory, however, and she scampers to the safety of her pen.

The much talked about ever normal granary wasn't an original idea by a long shot, the squirrels had one long before Henry Wallace killed his first pig.

The story is told of an old elephant that accepted pennies from visitors at the zoo, placing the pennies in a cash box and ringing the bell. You may attribute a lot of the things animals do to instinct but you'll have to admit there aren't any cash boxes in the jungles, so maybe animals do think once in a while after all.

—Howard Hughes.

Edward Zahn has accepted a vocational agriculture teaching job at Hill City. He succeeds Carol Coleman, '39, who left to teach at the Atchison County Community high school at Effingham.

Winzer Petr is teaching at Powhattan, replacing John Moyer, '28, who is in the national guard. Raymond Stewart is teaching vocational agriculture in Centralia high school.

CHOOSING ELECTIVES

(Continued from page 70)

strong hint of the direction of their interests. These men usually turn out to be our strongest students. A large percentage of them will graduate."

The head of another department says, "We coddle our students here too much. Some of them come in to have their electives made out without having given any serious thought to the matter at all. If a student comes to me with a well-selected group of electives already outlined, I usually

let them have their way about it. I like to have students who are majoring in my department show initiative."

Another man with more than 20 years of experience and observation in his department reports, "When a student comes in with a strong and well-planned list of suggested electives, we let him take them almost as he has outlined them in nine out of ten cases. It is evidence of a promising student when he has in the quiet of his room projected his future as best he could by developing a strong group of electives, well-rounded and well-planned."

It is, indeed, a momentous 15 minutes in the life of a young man when he sits down across the table from the head of the department in which he will major and begins a discussion of electives. When he leaves the room, bridges have been burned behind him. Decisions that will affect a lifetime and a career have been made. His future, and the future of those who will become dependent upon him in the years ahead, have been plotted in a general way.

Outlines for developing and grouping electives may be obtained in the office of the dean or in the office of a student's major department. There is a lot of satisfaction in working out one's own suggested group of elective courses.—C. W. M.

NATIONAL PRESIDENT



Tommy Benton recently attended a meeting of the Rural Life Association in Nashville, Tenn. Benton is president of the Youth group of the association.

Practical Summer Work For Juniors in Agriculture

● *Actual field experience with the Soil Conservation Service provides valuable training.*

By HAROLD FOX

ARE you a junior in agriculture, and looking for a job this summer? Maybe you don't want to go back to the home farm, yet feel that you should be getting some experience in this big world that you will soon be entering in search of a permanent job.

There is a possibility that you may obtain summer work with the Soil Conservation Service as a student assistant. Several students have obtained such work in the past. The work consists of going out to a soil conservation district, either to a C. C. C. camp or to a regional office, and acting as an assistant to the agronomist, the conservationist, and the engineer in charge during the summer.

If you go to a C. C. C. camp, you will be getting a taste of living in mess halls, barracks, and the like. In fact, it will resemble the life that a large number of college students will be leading next year—army life. The C. C. C. boys in the camp furnish the main labor, and the Soil Conservation Service men furnish the supervision and instruction.

The student assistant has the opportunity of participating in all the various types of work about the project, even to handling the business end of what the C. C. C. boys call a "sweat-stick" or shovel. The first month's work is usually spent with the engineer, where the student learns to operate transit, level, altitude, and plane boards in plotting a farm. After the survey crew gets through surveying and mapping a farm, they return to a farm where the terraces are being built, surveying the site for the terrace, and later making a recheck after the terrace is nearly complete to determine the accuracy of the work.

The student will usually go out with the agronomist to inspect grass plots, farm timber lots, and rotations. He has opportunity to learn how to make rotations, how to organize a farm to obtain maximum soil

conservation with minimum expense, and how to seed grass plots. The agronomist plans the acreages of each crop to be grown in various fields for the best results. Sometimes there is a soils man working with the agronomist, and the student has opportunity to work out rotations and farm plans on the basis of acidity of soil, type of soil, and topography.

While working with the conservationist, the student has a chance to work with the farmer. The conservationist and the student work with the farmer in drawing up the contract, offering the most services to the farmer, and seeing that the farmer gets everything that has been promised him.

Juniors who have worked in the service during the past two years have related widely varying experiences. The general consensus is that the work is worth as much or more than a semester of theory in the classroom. Some of the boys have even looked on the summer of work as a vacation, even though there was some manual labor connected to it.

If you are interested in doing this out-of-doors class work during the summer, make appointment with one of the agronomy professors, who in turn will give your name to the Personnel Director of the regional office of the Soil Conservation Service. During May the Personnel Director will come to the college to interview men who have shown interest in the work. Usually from five to ten men are selected, depending on the funds available.

Those fancy white unionalls with the purple lettering is just the dairy student's way of letting the world know he's proud to be a member of the Kansas State Dairy Club.

Forrest Freeman Builds Airplanes

Dear Professor Mullen:

● I have just received the letter from your office today, inquiring as to the situation that has prevented my returning to school. No, I have not given up the idea of finishing my work at K. S. C. Whether I do or not will depend upon future events.

Now, as to why I am here and not there. At present I am on the payroll of Lockheed Aircraft Corporation. My particular job is on the inboard fairing of the wings of the Lockheed bomber. I help trim and fit this part, do a little riveting, line up conduit holes for cables, and other similar tasks. Previous to my employment here, I completed a two months' course at an aircraft school, where I learned a few basic essentials of airplane construction.

Several different factors contributed to my rather sudden decision to go into aircraft work. By far the strongest influence was the war situation. In July, I decided that it would be a good opportunity to see some more of the United States and at the same time get some good experience. I am not sorry for my decision but I do want to be able to finish my schooling in the not too-distant future. Speaking of experience, one has to be able to take it at the plant—or else. Some of the bosses would make excellent army officers as their vocabulary and ability to dish it out are both above par. Really, though, Lockheed has a pretty good group of men as a result of the special tests which they give before employment.

I like California very much, that is, the climate and scenic features. As to people, I like those of the middle west much the better. There are of course many nice people out here but as a whole they are not friendly and there are entirely too many who depend upon making their living at the expense of the other fellow.

Forrest E. Freeman
827 Glenwood Road
Glendale, California

How Much Do You Know About the Paint You Buy?

● *The public probably knows less about paint and what makes a good paint than any other general commodity it must buy.*

By ROBERT STEPHENS

CAN the public be made "paint wise"? Of course! A "Consumer's Guide" could protect those who buy and apply paint against substitutions and adulterations in ready-mixed paints.

At present paint buying and its application is a field in which the public is not well protected. The custom is to call in two or three paint contractors, give the job to the lowest bidder and then hope that he knows his business.

The general public probably knows less about paint, its properties and what makes a good paint than it does about any other commodity it must buy. If there is a course available to students in the Division of Agriculture intended to familiarize them with paints and painting, I do not know about it.

It has been my fortune to learn about paints and painting by experience. I am painting my way through college. Naturally I like to know what makes a good paint job. Therefore, I have done some extensive reading and investigating in regard to paint and its application.

I have found that a good paint should consist of forty percent pigment and sixty percent vehicle by weight. The essential parts of pigments are white lead and zinc oxide while the vehicle is made up of turpentine and raw or boiled linseed oil.

A combination of white lead and zinc oxide produces a harder paint and one which does not wear down from the surface quite so readily as white lead does. However, it may be more likely to crack. The zinc oxide content should not be excessive, or the paint will be too hard and will crack badly.

White lead is known as an "active" paint pigment. It has a strong affinity for linseed oil and reacts physically and chemically with this oil so that a tough elastic paint film results after the paint has been applied and air dried.

The liquid or vehicle in oil paints (for exterior wood) should be at least eighty percent and preferably about ninety percent by weight linseed oil. The remainder may be made up of volatile thinner and paint drier, preferably below ten percent. No liquid has been found to excel linseed oil in making outside paints for wood surfaces. Upon exposure to the air, pure linseed oil changes from a liquid to a flexible, almost transparent film solid. Its imperviousness to moisture, its toughness and elasticity when dry make it an ideal binder to hold the pigment to the surface.

Some thinner is desirable in the first or priming coat. It causes better penetration of the paint and leaves a flat finish which give tough or adhesive quality for the succeeding coat. Pure turpentine is best.

White lead paint wears slowly and uniformly. This desirable quality permits the white lead film to remain unbroken, smooth and even, providing efficient protection for the surface during the entire long life of the paint.

So far as the liquid portion of paint is concerned, the greatest fraud is the inclusion of water. Water not

only evaporates after the paint is applied and therefore does not become a part of the permanent paint film but it hastens paint failure by wetting the wood, causing it to swell and later, after evaporation, to dry and shrink. Oil and water do not mix, hence an emulsifier must be added to promote mixing. The emulsifiers, even in small quantities, are extremely harmful to paint.

Common transparent pigments used for fillers and extenders in low-grade paints with the many different names that may be found on can labels are as follows:

Calcium carbonate (also called whiting, chalk or pulverized limestone).

Silica (also called silicious matter, quartz or sand).

Magnesium and aluminum silicates (also called asbestine, talc or soapstone).

Calcium sulfate.

Barium sulfate (barytes). A small amount of barium sulfate or calcium sulfate is used in colored paints as a carrier of coloring matter.

Lithopone (barium sulfate—zinc sulfide). It is advisable to be cautious of exterior paints containing lithopone. Although this is a widely used opaque pigment for interior paints it should be used rarely, if at all, in high-grade exterior paints.

Thoughtful consideration of the formula of paint to be purchased is always advisable.

Two-thirds of a paint job on a building is the labor cost, and it is time and money wasted to use a low-grade, short-lived paint.

Outside painting should be done during fair weather. Painting during periods of high humidity should be avoided. The weather and the surface should both be dry, and the temperature should be above 40° F.

Judging Teams Are Dinner Guests

● Seven judging teams and their coaches were guests at a dinner given at the College Cafeteria on January 17. This banquet, given by President F. D. Farrell, Dean L. E. Call, and the heads of the departments is an annual dinner honoring the members of the judging teams and their coaches. Mrs. Farrell, Mrs. Call, Mrs. R. I. Throckmorton, Mrs. L. F. Payne, Mrs. C. W. McCampbell, and Mrs. F. W. Atkeson were hostesses for the dinner.

The teams honored were the women's meat judging, men's meat judging, livestock, crops, poultry, dairy cattle, and dairy products teams. Professor Throckmorton acted as toastmaster, introducing one member of each team who in turn introduced his teammates and coach and gave a brief resume of the activities of the team.

The various speakers and the teams they represented were HoBart Frederick, livestock; Bill Winner, poultry; Ed Reed, dairy cattle; Oscar Norby, men's meat judging; Conrad Jackson, dairy products; Emerson Cyphers, crops; and Cornelia Burtis, women's meat judging team.—J. S. W.

The Last Word

Editorial Comment



The Pro and Con of Judging Teams

"Best practical experience I ever had. I wouldn't have missed it for anything."

"It was an awful waste of time. I never got anything out of all the work I did."

These statements present the extreme views taken by former members of Kansas State's judging teams, in answer to the question, "Is trying out for a judging team worth the time and work it takes?"

From the student's viewpoint, a judging team takes a lot of time that might be well spent at something else. "Too many hours work for the credit," said one boy.

"It cost me at least \$50 in time lost from work to make a judging team last fall," another boy said. "If I had been depending entirely on work for my school expenses, the team would have been too much of a luxury for me."

"Trying out for the team and taking the trips after I had made the team lowered my grade point drastically," was the experience of still another boy. "One more judging team and I would be going up before the reinstatement board."

A common cry of woe is the fact that appropriations for judging teams are so small the student must scrimp during the trip or pay the balance out of his own pocket.

On the credit side of the ledger, most of the boys think they obtained more good out of the judging practice than they possibly could out of comparable hours of class room work.

"I learned more in one hour of judging than I did out of any three hours of lecture I ever had," said one boy who had tried twice for a team and failed both times.

"Those trips are swell," another boy said. "You can learn a great deal by just going on trips and keeping your ears and eyes open. You get a broader understanding of types and classes of livestock all over the country."

"Practice at forming reasons and

thinking on your feet while you present those reasons is a valuable asset," was the opinion of another team member. "After a little practice I automatically 'size up' an animal and catalogue all the outstanding features almost as soon as I see it."

"I wanted to go on the trips, but especially I wanted to wear a 'K' medal," was the frank statement given by a former judging team member.

And what do the coaches and professors of the various departments think of it? As a man, the coaches seem to be enthusiastic about judging teams, but among the professors a note of doubt crept in. "Some of the standards followed in the show ring have been abandoned by the practical breeders," said one professor. "A class judged according to best show-ring standards would often be placed differently by a practical breeder."

The only answer to the question seems to be, if you are interested in the hogs, cattle, horses, sheep, apples, butter, milk, cheese, meat, seed or dairy cows that you will be judging, then go out for the team if you possibly can. But if you're more interested in the medal and the trips, then spend your labs at the Avalon.

Choosing Electives

It is "elective" time at Kansas State.

During the second semester, probably two-fifths of the students in the Division of Agriculture are nearing the end of their sophomore year. Next fall at assignment time all of this year's crop of sophomores will begin dipping into their electives. That's the reason all students will have their electives made out by the end of their sophomore year.

Significant things come to light when students take their dean's cards into the office of the department in which they will major and ask to have their electives made out. They can be bracketed into three groups based on their attitudes and evidence

of thoughtful planning at that time.

There is the small group yet completely uncertain as to the field in which their greatest interest lies. Departmental heads are glad that this group is small. It usually includes those students whose future is fairly well assured. They are in college because their parents have sent them. It also includes students which for many reasons have given little or no thought to the selection of their electives. In this group will be the "floaters" who are taking the line of least resistance in all matters having to do with their education. They are not thinkers. They are not planners. A large percentage of them will not be graduated.

A second and larger group includes those who have given some thought to their electives. They are ready to name some of the courses in which they have a special interest. They have at least been thinking about their plans and their future. They are not in a boat without oars. Sometimes youth and inexperience and lack of information about making out electives have limited them in their decisions.

Finally there is a large group of good students who have been keeping their eyes and ears open since their first weeks in Freshmen Lectures. They have caught step with the purpose and intent of those orientation lectures presented by the heads of departments in the Division of Agriculture. As a result of counsel with advisers, counsel in their dean's office, conversations with different departmental heads and thoughtful consideration as they have completed various basic courses, they have reached conclusions that have directed them toward the field of their greatest interest.

Having decided upon the department in which their major studies will be taken, they have gone further to browse the catalogue in search of courses that should develop their education in the field of their choice. If decisions have not been made in complete detail, they are at least ready to name courses and ask questions. Already they have a goal.

One departmental head says, "We like to have students come in with a list of electives fairly well made out. We then know they have been thinking about their future. It gives us a

(Concluded on page 67)



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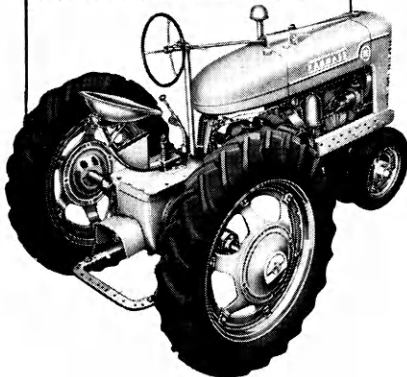
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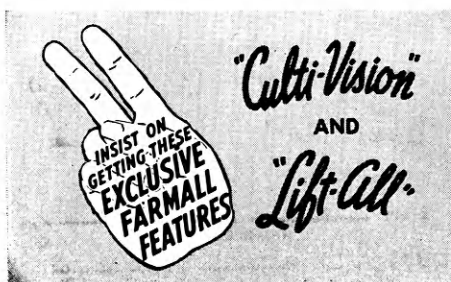
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