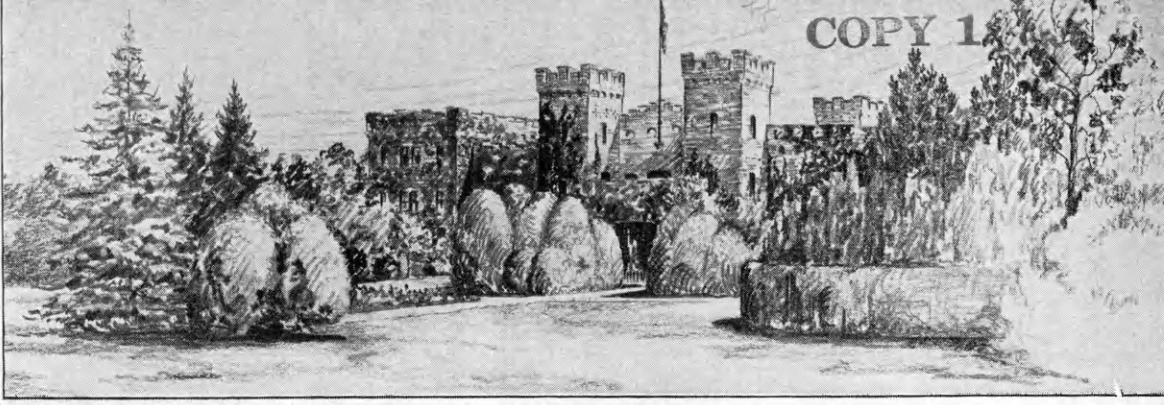


COPY 1



THE KANSAS AGRICULTURAL STUDENT

MANHATTAN, KANSAS



DECEMBER, 1939



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THE KANSAS AGRICULTURAL STUDENT

KANSAS STATE COLLEGE OF AGRICULTURE
AND APPLIED SCIENCE
MANHATTAN, KANSAS

VOL. XIX

DECEMBER, 1939

No. 2

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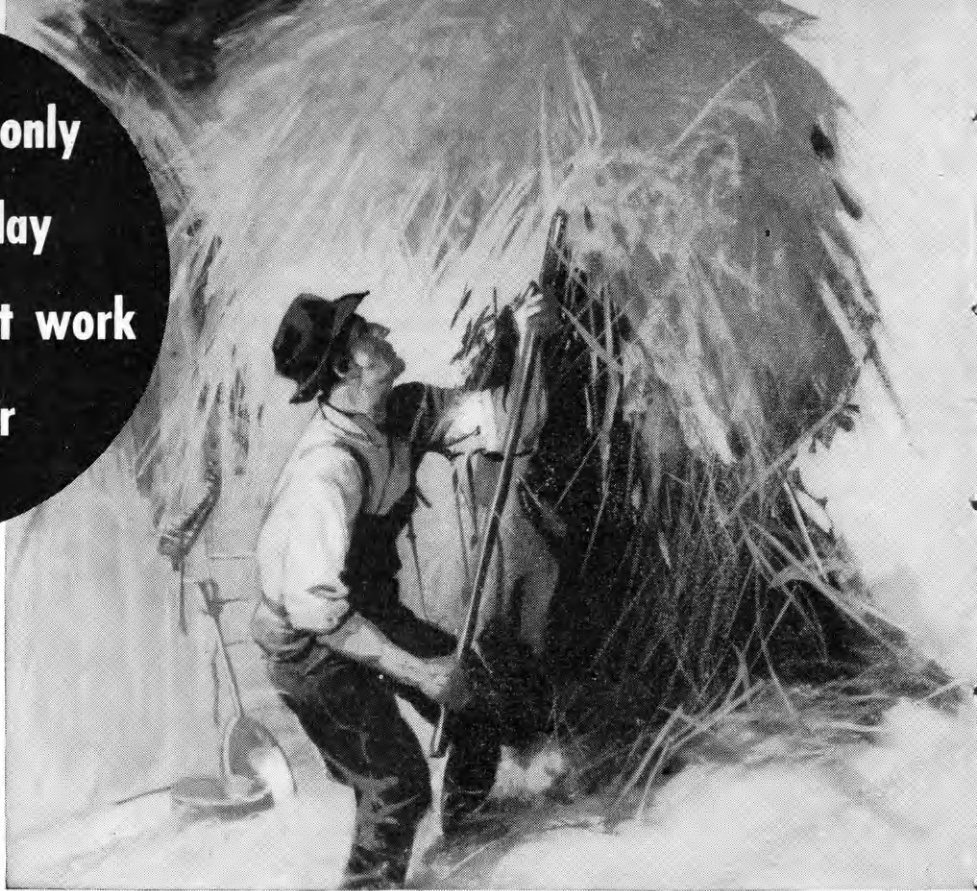
CONTENTS THIS ISSUE

Wheat Yield and Soil Moisture.....	37	Ralph Gross Wins Essay Contest	49
Measuring Transpiration of Trees.....	38	Dairy Meeting Attended by 250.....	50
Prof. A. L. Clapp Honored	39	25 to Block and Bridle.....	51
Pictures of Judging Teams	40	The Cover Picture	52
Judging Teams Do Well at Chicago	41	Killing Jackrabbits	52
Club Presidents, Division of Agriculture.....	42	Hort Show Attended by 2,000.....	53
Tri-K Essay Contest Subject Announced.....	44	Horton Laude Tells of Oxford	54
Raising Turkeys in Kansas.....	45	"Old Grads" Tell What is Needed.....	55
The Better Wheat Varieties.....	46	Weeds Cost Dairymen \$200,000 Yearly.....	60
Kenneth Kruse Wins Honor.....	47	The Bull Comes Home.....	61
Editorial Comment	48	Bob Randle a Star Farmer.....	63

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**He can earn only
a nickel a day
because he can't work
any faster**



REGARDLESS of race or
imate, in Orient or Occi-
ent, in this century or the
st—not one man has been
und, either laborer or ath-
te, who has done the equiva-
nt of one kilowatt-hour
work (roughly a nickel's
orth of electricity) in one
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lison Electrical Institute Bulletin

kilowatt-hour is more work than any man can do in a
ole day. Yet the American farmer pays less than five
nts for that much electricity to do muscle work for
m on the farm.

**nd Look at the Muscle Work Five Cents Worth of
ectricity Does**

tual experience on a typical farm shows that five
nts worth of electricity will grind 250 lb of grain, or
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butter, or milk one cow twice a day for three weeks.

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\$363 a year. I arrived at this figure after deducting
both my power bill and an annual depreciation charg-
of about \$240 on all the equipment I purchased to elec-
trify my farm.”

More and more farmers like Mr. Schoof are discover-
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and at the same time increases the profits and pleasure
of farming.

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while “studying agriculture.” We've bound them into a
couple of interesting booklets which show more than
100 different farm jobs that electricity will do. They're
yours for the asking. Rural Electrification Section
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rrying a hod (16.7 tons up 12 ft.)	6	401,760	.15
mmering	8	480,000	.17
ting weights by hand (65 tons up 4 ft.)	6	522,720	.20
ting with rope and pulley (21.5 tons up 15 ft.) ...	6	648,000	.24
mping or sawing (11,200 gal. up 10 ft.)	10	1,188,000	.45
rning crank or winch (25 tons up 25 ft.)	8	1,267,200	.48
lling or pushing horizontally as on oar	8	1,520,640	.57

ove adapted from p. 532 in Kent's Mechanical Engr's Pocket Book, 1916.
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Taking Guesswork Out of Wheat Yield Predictions

By JACK BOZARTH



THE fact that the yield of wheat in regions of low rainfall is more or less dependent upon the moisture present in the soil at seeding time has been generally recognized. The depth to which the soil is moist is a simple and reliable indication of the amount of moisture in the soil.

On the basis of this fact the Agricultural Marketing Service of the United States Department of Agriculture has inaugurated a system of soil moisture tests designed to supplement information concerning the growth condition of winter wheat on which estimates of expected yield are now based. H. L. Collins, statistician for the Agricultural Marketing Service, and Prof. George Montgomery, of the department of agricultural economics, Kansas State College, are in charge of the tests in Kansas.

TWO TESTS MADE EACH SEASON

Soil moisture tests are made in the fall shortly after seeding and again in the spring after the wheat revives from the winter dormant period. Tests are made with a standard soil tube at regular intervals along a 3,500-mile route covering the western two-thirds of the state. In October, 1938, 686 tests were made to a depth of three feet at intervals of three miles of wheat frontage along the selected route. These tests were duplicated in April, 1939. In October, 1939, a total of 562 tests were taken to a depth of four feet at two-mile intervals. Duplicate tests were made in every fourth field included in the survey.

All tests are taken in fields seeded to wheat. However, at least one test is made every fifteen miles, even though the required wheat frontage has not been passed.

Both the point of entrance into the field in which the test is made and the distance from the road at which the test is made are selected at random.

The soil tube used in soil moisture testing consists of a tube which can be driven into the ground and when removed leaves the sample intact so that it can be inspected easily. The sample is considered moist when it will retain its shape after being compressed in the hand.

EXPERIMENTAL RESULTS SHOW RELATIONSHIP

Sufficient data are not yet available to



Boring for facts about probable wheat yields. Shown in the picture, from left to right, are H. L. Collins, Prof. George Montgomery, J. E. Pallesen and Prof. H. E. Myers. Professor Myers is extracting a soil sample from the soil tube.

determine the correlation of soil moisture and wheat yields when applied to extensive areas. However, the results of experiments conducted at the Hays, Colby and Garden City experiment stations do indicate the yields which can be expected under varying soil moisture conditions.¹

The crops that may be expected when the soil is wet to different depths at seeding expressed as chances and as percentages are given in the accompanying table.

¹ Hallsted, A. L., and Mathews, O. R. Soil moisture and winter wheat with suggestions on abandonment. Kan. Agr. Expt. Sta. Bul. 273. 1936.

(Concluded on page 50)

Measuring the Thirst of Kansas Shade Trees

By GEORGE KLEIER

IT ISN'T difficult to convince a student, hurrying across the campus on a cold December morning, that a certain amount of moisture passes from his body with each exhalation of warm air into the cold frosty atmosphere. Plumes of condensed vapor which quickly disappear are evidence sufficient that each expiration releases a quantity of moisture from the body.

But it isn't so easy to prove that plants in leaf are continuously giving off tiny streams of moisture and particularly it isn't so easy to measure the comparative amounts of moisture given off by plants.

HOW "THIRSTY" ARE TREES?

In the study of trees for drought resistance, it is necessary to know something about their relative ability to decrease transpiration under conditions when moisture in the soil is limited or when hot, dry winds are taking from plants, soil and free-water surfaces every molecule of moisture which can be pulled from such surfaces.

Different plants do have the ability to resist excessive transpiration. Different trees have the ability to resist excessive transpiration. But how to measure that difference in moisture conservation and how to measure what must in turn be a difference in drought resistance is not so simple.

At the Fort Hays Experiment Station interesting experiments were conducted during the summer of 1936 in studying the transpiration of 37 species of trees under observation at the station. The purpose of the study was to determine their drought hardiness and their adaptation to the west-ern plains.

A report is not yet available for publication as to the outcome of these experiments. However, the technique employed by Leon Minkler of the Forest Service is of interest.

The apparatus consisted of a cylinder made of cellophane approximately six feet high and about four feet in diameter. This cylinder was placed over the trees, usually seedlings and two-year-old transplants.

Air was drawn in by suction from the base of the chamber which was set upon the ground. A suction hose approximately two inches in diameter was connected with the top of the cellophane cylinder and led to the moisture-measuring apparatus. The air passed through a battery of calcium



The transparent transpiration "hood" and other apparatus in operation at the nursery at the Hays Branch Experiment Station. This equipment measures the amount of water lost by a tree.

chloride tubes which removed all moisture in the air. Atmospheric moisture or relative humidity was at the same time being determined so that the proper deduction could be made for such atmospheric moisture. The difference represented the moisture transpired by the tree. Observations were made from May to October.

TREES VARY WIDELY

As might be expected it was discovered that trees vary widely in their ability to close their stomata and preserve their turgidity during long periods of drought.

Our own department of horticulture re-

(Concluded on page 49)



DAVE LONG

AARON SCHMIDT

WARREN WAKEMAN

Winners of the advanced, senior and junior divisions, respectively, in the annual student poultry judging contest. Long was trying to appear nonchalant when the photographer caught him. Notice the stance.

They Got the Birds

Dave Long, Aaron Schmidt and Warren Wakeman won the turkeys offered by the Kansas State Poultry Club as first place prizes in the annual poultry judging contest held November 18. There were 73 entrants in the three divisions. Cash prizes, subscriptions to poultry magazines and ribbons were awarded to other high-ranking contestants.

Four exhibition classes and four production classes were judged. In the advanced division (for entrants who have had poultry judging) Allen Starosta, Paul Sanford and Dave Long tied for first place, each scoring 770 of 800 possible points. Joe Short was fourth with 755 points.

Aaron Schmidt won the senior division

with 755 out of 800 points. Edward Brenner placed second with 725 points, Ronald King won third with 725 points and George Wreath won fourth place with 695 points. The senior division was open to those students who have had, or are now enrolled in the course in farm poultry production.

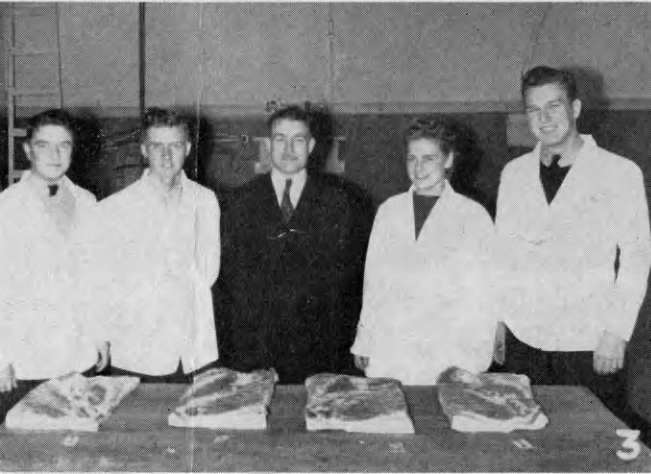
In the junior division, open to those who have not had any poultry judging experience, Warren Wakeman won first place with 755 points. Ralph Bieberly, LaVerne Harold and Malvin Johnson finished second, third and fourth in the order named. Each had 695 points out of 800 possible. The rankings were determined by the placings within the classes.—R. N. S.

Clapp Heads International Crop Improvement Ass'n.

A. L. Clapp, professor of agronomy and secretary of the Kansas Crop Improvement Association, was elected president of the International Crop Improvement Association at that organization's annual meeting in Chicago during the International Livestock and Grain Exposition. Professor Clapp had served as secretary of the International

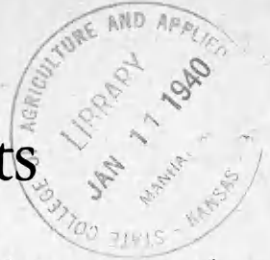
Crop Improvement Association for the past four years.

Due to the federal seed law which becomes effective on February 5, the work of the International Crop Improvement Association will be intensified. Methods of grading and certifying seed must be standardized in all the states. Thirty-four states and nine Canadian provinces are affiliated with the association.



Pictured above are the intercollegiate judging teams from the division of agriculture. (1) The poultry judging team. Wade Brant, Paul Sanford, Dave Long and Allen Starosta. (2) Dairy Products. Willard Davis, Ronald Morton, W. H. Martin, coach, Arthur Mussett. (3) Meats. Eugene Watson, George Cochran, D. L. Mackintosh, coach, Jessie Collins, Stanley Winter. (4) Crops. Prof. J. W. Zahnley, coach, Harold Jones, John Dean, Milan Smerchek, Aaron Schmidt, Prof. C. D. Davis, assistant coach, Ray Cudney. (5) Dairy. Prof. A. W. Shaw, coach, Cecil Robinson, Farland Fansher, Clayton David, Wm. Winner, Clifton Jackson. (6) Livestock. John Blythe, Dale Engler, Evans Banbury, Prof. F. W. Bell, coach, Marcel McVay, Wm. Ljungdahl, George Kleier, Dale Mustoe. (7) Apple. Travis Brooks, Wm. Ackley, Prof. G. A. Flinger, coach, Charles Carter, Richard Bullock.

Judging Teams Place High in International Contests



THE judging teams representing the various departments in the division of agriculture at the International Livestock and Grain Exposition at Chicago recently were consistently high in team and individual placings. While none of the teams won first-place honors, two ranked second, one ranked fourth, and the remaining team ranked fifth.

LIVESTOCK TEAM WINS SECOND

The livestock judging team missed first place by seven points, being outranked only by the team from Ohio State. The Kansas State College team, coached by Prof. F. W. Bell, was made up of William Ljungdahl, Menlo; Dale Engler, Topeka; Marcel McVay, Sterling; George Kleier, Oxford; Evans Banbury, Pratt; Dale Mustoe, Rexford; John Blythe, White City. Twenty-nine teams competed in the inter-collegiate livestock judging contest.

Professor Bell has been coaching livestock teams at Kansas State College for 21 years and his teams have never ranked lower than tenth place. Last year's team gained permanent possession of the trophy by being the third Kansas State team to win first place.

MEATS JUDGES RANK HIGH

The meats judging team, coached by Prof. D. L. Mackintosh, also won second place in competition with 14 other teams. First place was won by the team representing the University of Wisconsin. Professor Mackintosh's team included Jessie Collins of Dwight, a home economics student; Stanley Winter, Dresden; Eugene Watson, Peck; and George Cochran, Topeka. Miss Collins, the only girl in the contest, ranked seventh in all classes, and was high individual in judging beef. Professor Mackintosh's teams have been consistently high in the Chicago contests, and

have won first-place honors consistently at the contests at Wichita and Kansas City.

SCHMIDT THIRD IN CROPS

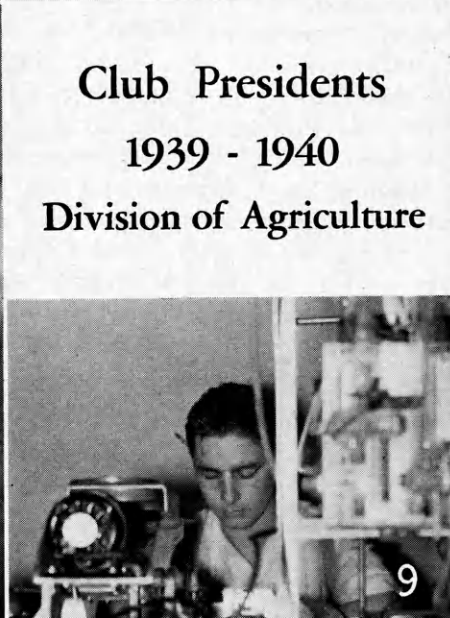
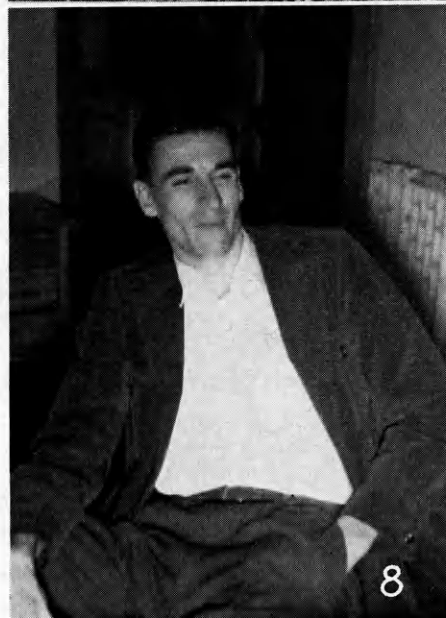
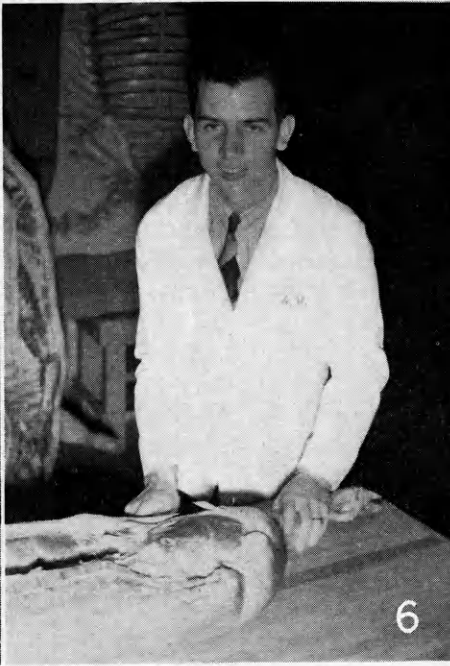
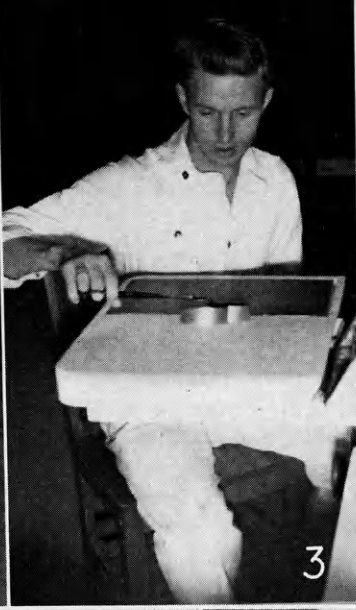
The crops judging team, coached by Prof. J. W. Zahnley, placed fourth in the Chicago contest. The Oklahoma A. and M. College team won first place, followed by Nebraska, North Carolina, and Kansas State. Twelve teams were entered. Aaron Schmidt, Newton, placed third in the individual rankings and was only six points below the high-ranking individual. Other members of the crops team were Ray Cudney, Trousdale; John Dean, Manhattan; Milan Smerchek, Topeka; and Harold Jones, Concordia. Prof. C. D. Davis assisted Professor Zahnley with the coaching.

The poultry judging team, coached by Dr. H. M. Scott, placed fifth among the 11 competing teams. Members of the team were Paul Sanford, Milford; David Long, Abilene; Wade Brant, Sawyer; and Allen Starosta, Pomona.

The poultry judging contest was won by the team from the University of Illinois and was coached by T. B. Avery. Mr. Avery received his master of science degree in poultry husbandry at Kansas State last spring. He did his undergraduate work at Kansas State, also. Mr. Avery's home is at Coldwater, Kan.

Dr. G. A. Filinger's apple judging team won first place in a contest held last month at Tulsa, Okla. Two other teams were in the contest—one from the University of Missouri and the other representing Oklahoma A. and M. College. The Kansas State team scored 6,650 out of a possible 7,050 points. Missouri was second with 6,515 and Oklahoma third with 5,585 points.

Members of the apple judging team are Wm. B. Ackley, Charles Carter, Travis Brooks and Richard Bullock.



**Club Presidents
1939 - 1940
Division of Agriculture**

Club Presidents Make Up Division's "Brain Trust"



Pictured on the opposite page are the presidents of the various departmental student clubs and societies in the division of agriculture. The fact that they head their respective departmental organizations is evidence that the boys possess leadership ability and personality. All of them are top-flight students, too. One student saw the panel of pictures before it went to the engraver's and dubbed the boys the "agriculture student brain trust."

Below is presented a brief "thumb-nail" sketch of each of the presidents.

THE POULTRY CLUB (1)

WADE BRANT's popularity doesn't stop with the students enrolled in poultry. Wade seems to be quite popular at one of the K-State sorority houses as well as in 4-H club work. It wasn't long after the boys returned from the World's Poultry Congress at Cleveland last summer that tales of Wade's popularity with Canadian drum majorettes reached the campus. Wade's home town is Sawyer. He is a senior.

TRI-K (2)

RAY CUDNEY, Ag 4, high mogul of the Klod and Kernel Klub, can be reached by telephone at the Clovia house more frequently than he can be found at his own place, Farmhouse. One wonders how Ray majored in agronomy, considering the fact that as a freshman, he won the livestock judging contest. Maybe Ray sat down in front of the wrong man the first time he enrolled. His home town is Trousdale. He is a member of the crops judging team.

DAIRY CLUB (3)

ARTHUR MUSSETT, Ag 4, is one of the Leavenworth boys who made good. Art heads the Dairy Club and was a member of the dairy judging team that went to

San Francisco recently. Other members of the team report that Art wasn't a bit backward about finding out what night life in the big cities is like. Art's one regret about the San Francisco trip was that the Sally Rand show closed before the Kansas State boys hit town.

ALPHA ZETA (4)

JOHN DEAN is Chancellor of Alpha Zeta. John is an agronomy major, member of the crops judging team, etc. One of the rules for success in John's little book is "do your studying late at night and don't let the freshmen bother you." He's pretty tough on freshmen and they've learned through experience not to eat or drink anything given them by Dean. . . Manhattan is given as John's home town.

BLOCK AND BRIDLE (5)

His parents christened him Marcel but he's PETE McVAY to the students and "Honorable President" to members of Block and Bridle, animal husbandry club. Pete's contribution to science is his special technique used in studying. The study period starts with an after-dinner nap. The nap ends when it's time to go to bed. The other members of the livestock judging team all agree that he does all right in the big cities. He is a member of the fashionable younger set of Sterling, Kansas.

AGRICULTURAL ASSOCIATION (6)

BILL LJUNGDAHL, AH 4, Menlo, is president of the Agricultural Association, divisional student organization. Bill's dad is a livestock man, a member of the tax commission, etc., so being a big shot sort of runs in the family. When Bill started to assist Professor Mackintosh in the meats laboratory, the enrolment of home ec girls almost doubled. Bill's brown curly hair

(Concluded on page 44)

ANNOUNCE TRI-K ESSAY SUBJECT

CLUB PRESIDENTS

(Continued from page 43)

is one of the reasons, and Bill has a way with the girls, too. Bill is the AGR "problem child."

AGRICULTURAL ECONOMICS CLUB (7)

The little man with the pencil in his hand and the big sheet of statistics before him is JOHN MCCOY, AA 4, president of the Agricultural Economics Club. While he's not attending class on the third floor of West Ag, he's working in the department. But too much work would make John a dull boy so he goes out for wrestling. Fishing, hunting and basketball are his other sports. He's one of the local boys and has a brother, Donald, enrolled in the same course.

SEARS CLUB (8)

BILL WINNER, AA 3, is the Big Catalog in the Sears Club, organization of Sears Scholarship students. He's one of these strong, silent men from Topeka. Bill was one of the members of the dairy judging team that went to San Francisco and the other team members "ain't a-talkin'."

ALPHA MU (9)

GLENN WEST, MI 4, is president of Alpha Mu, milling industry fraternity. Glenn is better known to his friends as "Little Doc Dough Ball"—a name he picked up as a result of experimental work done for Dr. C. O. Swanson. . . One of Glenn's extracurricular activities is the baking of cinnamon rolls. He often spends a laboratory period "whipping up a batch" and then takes the rolls to class with him. Manhattan is "Dough Ball's" home town. He's quite an outdoor enthusiast—hiking, hunting, skating—and his principal indoor sport is dancing, of which he does a lot.

HORTICULTURE CLUB (10)

CECIL WENKHEIMER, SH 3, is president of the Horticulture Club. His photograph

explains the "Romeo" reputation he has over in Dickens Hall. Much of his inspiration and "mental lift" is obtained from letters postmarked Lindsborg which Cecil gets with astonishing regularity at the college post office. The girl is a music student at Bethany. Cecil's home town is Hutchinson.

Tri-K Essayists to Write About Pasture Improvement

"Causes of Run-down Pastures and Methods of Improvement" has been chosen as the topic for the 1940 essay contest in the Student Section of the American Society of Agronomy, according to J. W. Zahnley of the department of agronomy. Members of Tri-K are eligible to submit essays and it is expected that several will be submitted from Kansas State.

The Chicago Board of Trade is offering three prizes of \$50 each for the best three essays submitted in the contest. Each school having a Student Section of the American Society of Agronomy will have entrants.

First, second and third place winners will receive, in addition to the \$50 prizes, gold, silver and bronze medals, respectively. The next five winners receive cash awards of \$25, \$20, \$12, \$10, and \$5, respectively. Several Kansas State students have won prizes in the contest, among them were Hugh Myers, '38, second; Horton Laude, '37, second; and Walter Abmeyer, '38, fifth.

The essays should be between 3,000 and 4,000 words in length, and are due on or before August 1, 1940. For students who shall receive their degrees in June, essays must be submitted before the contestants are graduated.

Additional information concerning the contest may be obtained from Professor Zahnley.

"To love to read is to exchange hours of ennui for hours of delight."

—Montesquieu.



The author with a part of Edward White's flock of 1,700 turkeys northwest of Manhattan. Mr. White gradually built up his flock with selected breeding stock and three incubators.

Turkeys No Longer "Sideline" in Kansas

By ROBERT SHOFFNER

KANSAS poultrymen have been keeping pace with the poultrymen of other states in the phenomenal increase in turkey production. In the last year turkey production in the United States increased by 22 percent, with a total of 32 million birds. Kansas had an increase of over 15 percent last year, according to the Agricultural Marketing Service. Kansas poultrymen produced approximately 911,000 birds last year.

The large increase in production of turkeys has not been due to the expansion of large commercial flocks, but was brought about by the increase in the number of small flocks. This year was especially favorable for the producers as feed costs were comparatively low. Turkey prices were lower this year, too, but not as low as was anticipated earlier in the year.

SMALL "RANCH" NEAR MANHATTAN

As a common practice, turkeys usually are raised as a "side line" by many farmers,

but there are many farms in Kansas that have turkeys as the main enterprise.

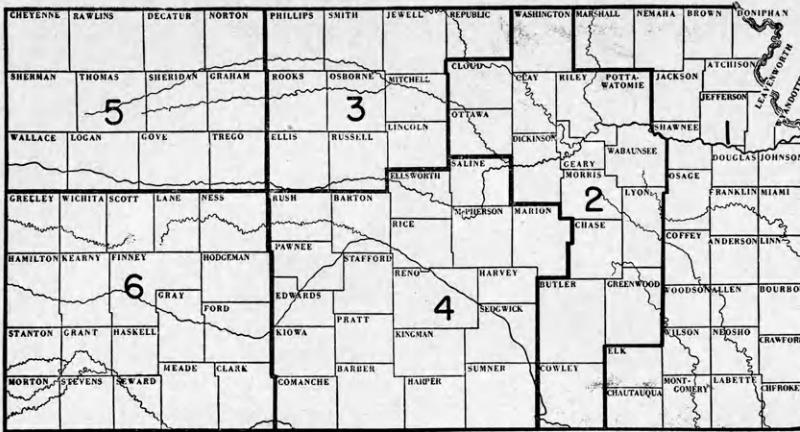
Edward White, living about 12 miles northwest of Manhattan, has such an enterprise. Mr. White's 120-acre farm is located in the Bluestem hills and he has about 50 acres under cultivation. He got his start in the turkey business in 1932 when he raised and marketed 100 birds. Since that time he has increased his annual production to about 1,000 large Bronze birds.

Mr. White has kept his own breeding flock each year by selecting the best from the flock. He keeps about 100 hens and 10 toms in his breeding flock and beginning about December 20, lights are turned on in the laying pens at 4:30 o'clock each morning so that the hens will come into early egg production. Unless this practice is followed, the hens will not start laying until in the spring months, usually March. If the poults are not started early they will

(Concluded on page 56)

Let's Reduce Wheat Varieties

By JOHN DEAN



KANSAS WHEAT VARIETY MAP

District 1—Kawvale or Clarkan. Tenmarq for hard wheat. District 2—Tenmarq or Kawvale. District 3—Cheyenne, Tenmarq. District 4—Tenmarq. District 5—Cheyenne, Tenmarq, Kanred, Turkey. District 6—Tenmarq, Blackhull.

“WHAT variety of wheat did you plant last fall, Joe?” asked Jim Jones, a typical Southeast Kansas farmer.

“Oh, I planted some of the wheat that I threshed last summer. It is mixed but it is cheaper and it grows as good as any,” Joe answered.

“The seed doesn’t cost you much that way,” Jim said thoughtfully, “but Smith’s wheat was the best in the neighborhood last year. He planted one of the varieties that yielded best in the variety tests made by the agricultural college in this part of the state. Clarkan, I think he called it. I planted some of that.”

Jim Jones was smart. Clarkan not only “was the best in the neighborhood” but has been one of the leading varieties in the Co-operative Wheat Variety Tests during the period 1935 to 1939 in the eastern one-third of Kansas.

GROW ONLY ADAPTED VARIETIES

Wheat varieties differ greatly in their reaction to the climate and soil in which they are grown so that a variety adapted to Brown County would be practically worthless in Wichita County and would not always lead where it is adapted. Knowing this, the Co-operative Wheat Variety Tests were organized by the Kansas Agricultural Experiment Station in conjunc-

tion with farmers, county farm bureaus and vocational agriculture departments to determine the best varieties of wheat to grow in Kansas. Recommendations are based on the average yield, quality, marketability, and resistance to drought, disease, and insects.

In Northeast Kansas, the area lying east of the Blue River and north of the Kaw River, Kawvale has consistently yielded higher than any other varieties included in the tests for a number of years. This variety is resistant to loose smut and somewhat resistant to leaf rust and Hessian fly, but it shatters badly and is a semi-hard variety which makes it difficult for either hard wheat or soft wheat millers to use. Clarkan, a typical beardless soft wheat, has yielded nearly as well as Kawvale during the years that it has been included in the tests and is rapidly gaining in favor with farmers. It is susceptible to loose smut which is extremely difficult to control. Tenmarq has yielded well in all tests and is recommended where a high quality hard wheat is desired.

The same varieties are recommended for Southeast Kansas which lies south of the Kaw River and east of and including Shawnee and Chautauqua Counties.

(Concluded on page 51)

LITTLE ROYAL PLANS BEING FORMED

Kenneth Kruse Wins Honor

Kenneth Kruse, '38, recently was chosen the outstanding Block and Bridle member from among the total membership of the 18 chapters of the animal husbandry organization in the United States. Kruse now is assistant county agent of Republic County with headquarters at Belleville.

The selection was made at the annual national meeting of Block and Bridle at Chicago during "International Week."



KENNETH KRUSE
His record was outstanding

Each chapter submitted a candidate for the honor. In making the selection, scholarship constituted 40 points, Block and Bridle activities 40 points and extracurricular activities 20 points.

Kruse's scholastic average during his four years at Kansas State was 2.39. He received Phi Kappa Phi freshman honors and was on the high honor roll during his freshman and sophomore years. He was elected to Alpha Zeta in the spring of 1938 and in his senior year was elected to Gamma Sigma Delta and Phi Kappa Phi.

In addition to maintaining a high scholastic average in class work, Kruse found time to be a member of the varsity track team during his sophomore and junior

years, to take an active part in the work of the Collegiate 4-H club, to play intramural basketball, softball and horseshoes and to work part time for the botany and agricultural economics departments. He was a member of the junior livestock judging team that went to Fort Worth in 1938.

Here is a splendid example of a student who could find time for extracurricular activities and at the same time carry a full assignment without apparent effect upon his grades. In his sophomore and junior years when many honors were coming to him and when he was engaging in a number of outside activities, he was at the same time carrying 18 and 19 hours per semester and making the same point average he finally earned for his entire college career. In the final semester of his senior year it was necessary for him to carry only 10 hours for graduation. He was graduated at the end of eight semesters.

Kruse was born and raised on a farm in Washington county near Barnes.—M. M.

Plan for Little Royal

Plans are being made for the seventeenth annual Little American Royal livestock show, a highlight of the Farm and Home Week program February 5 to 9, inclusive. The show will be held on Thursday evening, February 8, according to William Ljungdahl, president of the Agricultural Association. The show is sponsored by Block and Bridle, animal husbandry organization; and the Dairy Club.

The Little American Royal consists of two divisions, the dairy show and the animal husbandry show. Students enrolled in agriculture fit and show animals from the college herds, competing for trophies that are awarded to the champion showman of each division. The trophies are donated by the officials of the American Royal Livestock Show of Kansas City.

Student committees are being selected at this time, Ljungdahl said, and a keen interest in the event by the students is anticipated.

JUDGING TEAMS SHOULD GET MORE FUNDS, HE BELIEVES

“Taint Fair, McGee”

Last fall after enrolment approximately \$55,000 was divided among 14 campus activities by the student council apportionment board. \$1,920 of the \$55,000 was granted to the judging teams. That \$1,920 was about three and one-half percent of the total fund.

On that basis, each student contributes 26 and one-fourth cents toward the maintenance of the many judging teams. That isn't much, is it, when one considers the benefits, the prestige and the publicity the judging teams bring Kansas State College. To have the best collegiate livestock judging team in North America; to have the best collegiate poultry judging team in North America certainly brings the college as much, and probably more, prestige as does the fourth best football team in the Big Six. That isn't meant to be ridicule for the football team. But facts are facts.

Athletics, as usual, got the big slice of the activity fee. Athletics got \$26,000 of the \$55,000—about one-half the total. In addition to that slice of the activity fee, athletics has the gate receipts of home games and games away from home to support it. Maybe athletics needs that much—and more. Probably it should not be singled out in any comparison.

One thing that is certain is that the judging teams should be allotted more. In trying out for a judging team, the candidate always wonders whether he can afford to make the team. Members of the livestock judging team that represented Kansas State at the American Royal spent on an average of \$9 each to defray their living expenses. The boys were allowed \$17 each for subsistence. That was all the judging team budget would allow. Living in Kansas City on \$17 a week would entail sleeping in a “flop house” and eating at some “grease joint.”

Members of the four teams that went to the International at Chicago were allowed \$50 each. Pay your railroad fare to Chicago and back, live there a week and you won't have much trouble counting

your change when you get back home. You'll probably be “in the red.”

If the collegiate judging teams can't come in for their just share of the activity fee, the Agricultural Association will have to hold benefit bridge parties, pie socials, cake walks, or husking bees to make up the deficit. It is hardly fair to expect the team members to pay for the privilege of representing Kansas State College. Athletes don't have to do that.—W. A. L.

How Is Your Credit?

The local bank has two important functions in the eyes of the public: To loan money to its customers, and to act as custodian of customers' money. The local bank, however, also has important functions to perform in relation to governmental affairs.

Many persons take an attitude similar to the “gimme” attitude of the child when they wish to borrow money. They seem to think that because the money is there, they should be able to borrow it regardless of their security. Others think it is a favor on the part of the banker. A leaflet recently issued by one of the leading banks of the nation states that “a loan is not a favor but a business transaction and should be of mutual benefit to both borrower and lender.”

If one wishes to obtain a loan for a sound purpose, and if he meets other credit requirements, his application will promptly be approved. If his application does not meet the requirements for sound banking, he will be told so frankly, together with the reasons.

In granting loans, the banks have important obligations to four groups: Depositors, borrowers, stockholders, and to their communities. To protect the interests of these four groups, the banks have definite policies made in accordance with sound banking principles. Loans represent the primary source of income of most banks. No bank wants to refuse a loan but

(Concluded on page 50)

RALPH GROSS WINS FIRST IN ESSAY CONTEST

Gross Wins Essay Contest

Ralph Gross of Colby, a senior in animal husbandry, won first place and a trip to the International Livestock Exposition in the Swift Essay Contest. Approximately 100 essays were entered.

In 1933, while he was in high school, Gross won a similar trip in a contest sponsored by the Rock Island railroad.



RALPH GROSS

Gross was active in 4-H club work before coming to Kansas State College. He now is a member of the Collegiate 4-H Club. He also holds membership in Block and Bridle and Farmhouse fraternity.

Prof. L. F. Payne, head of the department of poultry husbandry, was chairman of the contest committee. The final group of essays were judged by Prof. R. J. Barnett of the department of horticulture, and Paul L. Dittmore, editorial assistant of the experiment station staff.

"He who loves reading has everything within his reach."—Godwin.

KANSAS TREES GET THIRSTY

(Continued from page 38)

ports that the burr oak, because it transpires small quantities of moisture even when conditions are favorable for excessive losses, is one of the most drought-resistant types of oaks.

Surprisingly, the Chinese elm releases vast amounts of water whenever it is present in the soil in amounts above the wilting point, according to Professor Barnett. Yet, it must be conceded that the Chinese elm is resistant to drought. Also, according to Professor Barnett, the pines and cedars transpire freely under favorable conditions but are able to conserve their moisture when the weather is hot and dry.

EACH TREE USES 400 GALLONS

An ordinary fruit tree, such as the apple, consumes about 500 pounds of water for each 3 pounds of new dry matter produced, and the apple tree retains about 2 pounds and 6 ounces out of each 500 pounds of water used or less than one half of 1 per cent. An apple tree 30 years old that produces at least 100 pounds of new wood, roots and leaves in a year would require 500 pounds of water per pound of dry matter or 17½ tons (over 4,000 gallons) of water a year. This tree will evaporate water into the air at the rate of ½ barrel a day as long as it is in leaf. All trees do not transpire the same amount of water because atmospheric conditions such as wind and humidity, the texture and composition of the soil, the topography of the land, and many other factors must be considered before an accurate estimate could be made for any specific type of tree.

Lewis Wedding Date Set

Joe W. Lewis, '39, and Margaret Eyer, '39, both of Larned, will be married January 28, according to an announcement made public by Mr. and Mrs. D. V. Eyer, Margaret's parents. Joe is engaged in farming near Larned with his brother Walter and his father.

DAIRY DEPARTMENT HOST TO 250 DAIRYMEN

BORING FOR FACTS

(Continued from page 37)

When the comparatively heavy soils at any of the three stations are moist to a depth of three feet or more, a good yield has been fairly well assured. Only very

Dubois Wins Alpha Mu Key

Donald Dubois, a sophomore in milling industry, was recently presented with the Alpha Mu award for having maintained the highest scholastic average among last year's class of "cub" millers. Alpha Mu is

PROBABILITIES OF OBTAINING SPECIFIED YIELDS OF WHEAT WHEN THE SOIL WAS DRY OR WET TO DESIGNATED DEPTHS AT SEEDING TIME, AS DETERMINED BY RESULTS FROM HAYS, COLBY, AND GARDEN CITY.

Depth to Which Soil Was Wet.	Failure (4 bus. or less).	10 bus. or more.	20 bus. or more.	30 bus. or more.
Dry	27 in 38 or 71%	7 in 38 or 18%	0 in 38 or 0%	0 in 38 or 0%
1 foot	18 in 53 or 34%	23 in 53 or 43%	10 in 53 or 19%	0 in 53 or 0%
2 feet	5 in 34 or 15%	21 in 34 or 62%	10 in 34 or 29%	3 in 34 or 9%
3 feet or more	6 in 61 or 10%	51 in 61 or 84%	43 in 61 or 70%	14 in 61 or 23%

adverse conditions during the growth of the crop have been able to cause low yields or failures.

When the soil was dry or wet to only a few inches at seeding, poor yields or failures have resulted more often than not.

Although sufficient data are still lacking, according to Mr. Montgomery, soil moisture tests, when used in conjunction with observed growth conditions, are expected to prove valuable in estimating the yield of winter wheat.

YOUR CREDIT

(Continued from page 48)

when a refusal is made, the applicant is told why. After all, the banker doesn't own the money. Some bankers used to feel that way about it, but a banker is a custodian, working under strict federal and state laws in behalf of the public.

A loan is not a favor but the banker does the would-be borrower and everyone else concerned a definite favor when he refuses an unsound loan.—*Dale Woolsey.*

*"Give a man a pipe he can smoke.
Give a man a book he can read
And his home is bright with a calm delight
Though the room be poor indeed."*

—Thomson.

the honorary milling industry fraternity.

Glenn West, president of the organization, presented Dubois with the scholarship key at the Alpha Mu smoker. The society makes the presentation annually as an incentive to the "cub" millers.

Since winning the award, Dubois has been elected to Alpha Mu. He is majoring in the chemistry of flour milling and is taking his minor in milling technology.

Dairy Meetings Draw 250

Approximately 250 attended the two-day session of the Dairy Inspectors and Purebred Dairy Cattle Breeders Schools at Kansas State College last month, according to Prof. F. W. Atkeson, head of the department of dairy husbandry.

Numerous Kansas State College faculty men appeared on the programs. Among the faculty members who were on the program were: Dr. O. A. Shaw, Dr. L. O. Gilmore, Prof. J. A. Linn, Prof. E. A. Cleavinger, Dr. C. H. Kitselman, Prof. V. D. Foltz, Prof. W. H. Martin, Prof. J. H. Roberts.

Delegates to the meetings visited the college creamery and the dairy barns as a part of the program.

25 to Block and Bridle

Twenty-five new members were initiated last month into Block and Bridle, organization for animal husbandry students.

Those initiated were Charles Adams, Wilsey; John Blythe, White City; Jack Cornwell, St. John; Ralph Einsel, Greensburg; Bert Gardner, Carbondale; Jackson George, Lebo; Kenneth Griffith, Larned; Frank Howard, Oakley; Bill Lytle, Wellsville; Friedrich Meenen, Clifton; John Poole, Manhattan; Dale Ressel, Colony; Bruce Robertson, Barnard; Brace Rowley, La Cygne; Moutrie Salter, Wakefield; Arthur Saylor, Langdon; Clarence Schulze, Blue Springs; Herbert Steinhausen, Omaha, Nebr.; Wilbur Soeken, Claflin; Ervin Stever, Ulysses; Perrin Symns, Atchison; Delbert Taylor, Meade; Alton Wilson, Quenemo; Chase Wilson, Mulvane; George Wreath, Manhattan.

Eugene Watson, Peck; and Wm. Ljungdahl, Menlo; were appointed to represent the Kansas State chapter of Block and Bridle at the organization's national convention at Chicago during the week of the International Livestock Exposition.

WHEAT VARIETIES

(Continued from page 46)

The transition zone between the true soft wheat and hard wheat regions is known as East Central Kansas. This area occupies a narrow strip of territory extending westward from the above regions to a line from Washington County to Cowley County. Both Kawvale and Tenmarq yield well here but Tenmarq is to be preferred as a typical high quality hard wheat.

CHEYENNE IS WINTER-HARDY

There is little difference in variety yield in the North Central section of the state which has Phillips, Ellis, Lincoln, and Republic Counties representing the corner of the region. Cheyenne, Tenmarq, Blackhull, and Early Blackhull all show some advantage over Kanred and Turkey. Cheyenne and Tenmarq are both excellent quality wheats with Cheyenne having

somewhat more winter hardiness.

Tenmarq is definitely adapted to South Central Kansas which extends southward from the above region with Rush and Comanche Counties representing the western boundary.

Tenmarq, Cheyenne, and Early Blackhull lead the other varieties in Northwest Kansas. Turkey and Kanred are somewhat lower in yield but show less tendency to fail completely. Again Cheyenne has an advantage in winter hardiness. This region extends west from the North Central section to the Colorado line and south from the Nebraska line to Trego and Wallace Counties.

TENMARQ A QUALITY WHEAT

Tenmarq, Blackhull, and Early Blackhull are best adapted to Southwest Kansas, extending southward from the above region to Oklahoma and west from the South Central Kansas area to the Colorado line. Tenmarq is easily the best quality wheat of the three, and is equal or superior to either in yield. Early Blackhull shows a decided tendency to lodge and is not eligible for certification.

Chiefkan has yielded well in all tests and was one of the leaders in the four western regions. However, Kansas Crop Improvement Association and Kansas State College agronomists do not recommend it because of its distinctly low quality which will lead buyers to discriminate against areas that produce large amounts of this variety.

More detailed information on the adaptation of wheat and other crops is available from the Co-operative Experiments Office, Department of Agronomy, Kansas State College, Manhattan.

Smies Gets National Office

Henry Smies was elected vice president of the student section of the American Society of Agronomy at the annual meeting of that organization. The meeting was held in connection with the International Livestock and Grain Exposition at Chicago December 2 to 9.

AGS FURNISH POWER TO FOOTBALL TEAM

The Cover Picture

Four dependable performers on the 1939 Kansas State College football team—all seniors in the division of agriculture. Left to right are Jim Brock, 190-pound blocking halfback; Bill Beezley, guard who tips the scales at 205 pounds; Ralph Huffman, 195-pound tackle; and Don Crumbaker, 195-pound end and honorary captain of the team. A rugged blocker, Brock also was the leading place-kicker in the Big Six conference. Huffman, a steady player, could be counted on to open holes for the ball carriers. Beezley was a power on defense and Crumbaker starred as a pass receiver and as an effective blocker. Both Beezley and Crumbaker received all-Big Six recognition and accepted invitations to play on the West team in the annual East-West football classic in San Francisco, Calif., New Year's Day.

Easy Methods for Killing Those Pesky Jackrabbits

Jackrabbits are considered by farmers in the arid farming region of Eastern Colorado as the worst pests of farm crops. In the vicinity of Hugo the hungry rabbits

eat the young corn and beans back to the ground every night. When rabbit hunts and trapping failed to kill the pests off fast enough to save the crops, farmers discovered a new method of destroying them.

A block of salt is placed out in an open spot. The rabbits soon become accustomed to gathering around the salt block late in the evening to lick the salt before they begin their nocturnal foraging expeditions. After about a week, and when the rabbits are beginning to gather in large numbers, the salt block is removed and a pan of poisoned oats is substituted. Next morning the farmer picks the dead rabbits up and either burns or plows them under. The pan of poisoned oats is removed before daylight to prevent birds from becoming poisoned.

—G. B.

They Hold Their Jobs

"It will be of interest to you and others in the division of agriculture to know that in the many personnel changes caused by variable budgets, none of the Kansas State College graduates have lost their jobs on any of the staffs with which I have ever been connected," writes Morris Evans, '20.



"The Chicken Roost Gang"

The flock perching on the back porch at the "Chicken Roost" out on the poultry farm. From left to right: Edward Buss, Ralph Bieberly, Ted Levin, Wade Brant, Carroll Mogge, Dave Long, Walter Campbell.

2,000 See Second Annual Hort Show

By WALTER KEITH

THE second annual Horticultural Show was held in Dickens Hall on the Kansas State College campus, November 24 and 25, put on by the students and faculty of the horticulture department. Dr. W. F. Pickett, head of the department, stated that the show was a complete success. Approximately 2,000 students, townspeople, and others saw the show. About 85 nurserymen attended the Nursery School on Friday, November 24, held in conjunction with the show. This figure was several hundred over last year's attendance. Dr. Pickett went on to say "The quality of the individual exhibits was of a much higher caliber than last year. We made great gains. If next year's show reveals as much improvement over this year's show as did the one this year over last year's, the Horticultural Show will become one of the outstanding popular student activities of Kansas State's school year."

Bill Lobenstein of Edwardsville was general student chairman of the show, and Prof. S. W. Decker was the faculty adviser. Student chairmen of the various exhibits were: Richard Bullock, Glasco, in charge of the insecticides and fungicides; Travis Brooks, Salina, had charge of plant pathology and entomology as related to

horticultural crops; Ronnie King, Council Grove, was in charge of the vegetable gardening exhibits; Eugene Baird, Kansas City, floriculture; Fred Rumsey of Kinsley, landscape gardening exhibits; Julius Mai, Tribune, collected various interesting items concerning forestry; Elizabeth Holman, Leavenworth, selected outstanding books and magazines related to horticulture and was in charge of the horticultural library; Charles Carter, Morrowville, was in charge of pomology. He received apples from about twelve other states as well as an interesting collection of leading Kansas apple varieties.

George Cochran of Topeka displayed varieties of nuts prepared by Prof. R. J. Barnett, professor of horticulture, and other features concerning general horticulture. George has been selected as the student chairman for next year's show.

In addition to local exhibits, 25 or 30 manufacturers of insecticides and fungicides and spray machinery sent exhibits and equipment to the show. Various Kansas nurserymen sent specimens of their nursery stock.

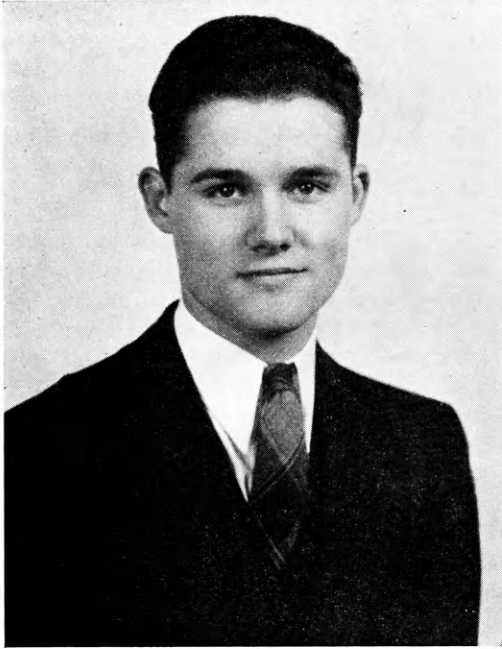
Some of the outstanding exhibits of the horticultural show included a natural wild

(Concluded on page 59)

One of the many horticultural exhibits at the second annual departmental show.



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HORTON LAUDE, '37

Mr. Laude Goes to Oxford

By GLENN BUSSET

THE Rhodes scholarship that took Horton Laude to Oxford University in October of 1937 introduced him to a different and interesting system of education.

Although Oxford is in an English speaking country, the ancient traditions and customs there make the college seem strange to an American. There is no campus at Oxford. The university is composed of 25 colleges scattered all over the city. When a student enrolls, he simply specifies the college in which he intends to live. Horton lived at Wadham college, which was built in 1610, and has been changed but little since. Plumbing and the ordinary modern conveniences that usually go with plumbing have not been installed.

A college at Oxford consists of one or two quadrangles of buildings where the students live, eat, and study. There is a garden around the buildings, and it is all surrounded by a high stone wall inset with broken glass, wire, and spikes.

Horton arrived at Oxford on a cold, rainy October afternoon, all of which is typical of English Fall weather. His first reaction favored a quick return to America. By the time he had dried out and

warmed up at the tiny coal fire in his room, he decided to stay for a while, at least. The manservant or "scout" who cared for six or eight of the "young gentlemen" helped him to unpack and tried to make him feel at home.

ONLY ONE COURSE AT A TIME

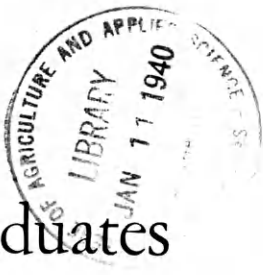
Horton expected to study botany, which the school officials refer to as "reading botany," rather than as a "major" as it would be referred to in American universities. The Oxford student is assigned a senior tutor, who suggests outside work for the student, tells him what classes to attend, and what reports to submit. A student must visit his tutor at least once a week for a discussion of the past week's work, the problems of class work and a report of progress. Reports to a tutor may be oral or submitted as a paper. Under the tutorial system each student is given personal supervision. There is no indiscriminate mixing of courses. When a student studies botany, nothing else is studied, just a steady diet of botany.

A typical day at Oxford begins about

(Concluded on page 58)

Scanning the Mail

From "Ag" Graduates



By GLENN BUSSET

In order to bring the division's alumni files up to date, and to obtain other valuable information bearing upon the courses in agriculture, a survey of Kansas State graduates in agriculture was made last summer. Many of the "old grads" had a lot to say that should be of interest and value to you undergraduates. The opinions and suggestions of some of those graduates are presented here.

G. E. DULL, '11, is farming near Morrowville. His letter was an interesting one, and contains much for the youngster to think about. "The past few years have been quite trying on the farmer, from the standpoint of production and prices," Mr. Dull says, "but there is a pleasure in having one's own home near to nature and with the assurance that each season has its tasks and rewards. We need many men with an education and an ability to think and plan for themselves without regard to political plans or government subsidies. Our soils and crops need keener thinking than ever before. Our local organizations offer a great opportunity for leadership to those taking their place in the rural sections of this country."

Mr. Dull's letter is, in a great measure, a challenge to young farmers. "We need many men with an education and an ability to think and plan for themselves without regard to political plans or government subsidies." Think it over, boys.

Another challenge to the younger men comes from HARRY COLGLAZIER, '18, now farming near Larned. "Why is it that college graduates take so little interest in the affairs of their community and their state after they get out into life?" Mr. Colglazier asks. "I have always felt that I owed my community and my state any service I was able to give as payment for the money they invested in me for education."

DR. PAUL G. ROOFE, '24, continued in

his studies, and was awarded his Ph. D. degree by the University of Chicago. Dr. Roofe is doing research work and teaching at the University of Louisville. In his letter, he makes many suggestions worthy of serious consideration by undergraduates. "What I really want to say is that if there could be more personal counseling, you might save considerable time and worry for the student who is more or less undecided," is one of Dr. Roofe's statements. He tells of having new vistas opened for him while at Kansas State by educators such as "Nabours, Parker, Ackert, Gates, Hamilton, in fact all" and he added that he was "ill at ease because I could not settle on one field of interest." And to the faculty men he makes the plea that "more time should be given the students for personal guidance." He adds that "I know from personal experience as student and teacher that we are not wasting our time, nor the student's, nor are we geared to a rigid efficient goose step in higher education."

C. LYMAN CALAHAN, '37, is with the Forest Service, and is located at Russell, Kan. In his response he states "During my two years from graduation in agriculture, my entire work has been with rural life and it has been a treat to find so many people working in the interests of Agriculture that are graduates of Kansas State. Few people realize the value of the local county agent to the people of the county in carrying out the work of the Extension Division."

J. B. GRIFFING, '04, returned from Brazil last summer after having done considerable work for the Brazilian government. "To tackle the rehabilitation of an agricultural college, organization of an experiment station, and development of a cotton breeding program, without even a knowledge of the language at the start, would have been

(Concluded on page 57)

CONSTANT ATTENTION REQUIRED IN TURKEY RAISING

TURKEY RAISING IN KANSAS

(Continued from page 45)

not be finished in time for the early market.

CAN INCUBATE 1,500 EGGS

Five still-air incubators with a total capacity of 1,500 eggs are used on the White farm. Constant attention must be given to the eggs at all times in order to insure a good hatch. Mr. White says that he has never obtained less than a 70 percent hatch, considered a high percentage with turkeys.

After the poults are brought off the incubators they are brooded in a warm stone-and-concrete brooder house for eight weeks. Kerosene and coke are used as fuels for the brooders. The poults are fed a starting mash mixed according to Mr. White's own formula, which contains cod liver oil and buttermilk. After eight weeks, the poults are put on range and are fed mash without the cod liver oil and buttermilk. Grain, consisting of two parts corn to one part wheat, is fed in large range hoppers along with the mash in other hoppers.

WHITE "CHURNS" THE FEED

Mr. White has devised a labor-saving method of mixing the feed. He purchased an old creamery churn which will mix between 1,200 and 1,500 pounds of feed at a time. The mixer is powered by the tractor. "The churn really saves a lot of labor," Mr. White commented, "and has the old hand-mixing with a scoop shovel beat all hollow."

At first the turkeys eat more mash and then gradually turn to the grain so that by the end of the feeding season they eat considerably more grain than mash. Late in November, 1,000 turkeys were eating 950 pounds of grain to 400 pounds of mash. Water is hauled to the range fountains with the use of a tank in a trailer pulled with the farm tractor. The trailer-tractor combination also transports the feed to the hoppers.

The turkeys run on Sudan grass range. Each range is about eight acres in size with three such fields arranged in series, permit-

ting the poults to be moved periodically from one range to the other. This sanitary range practice has kept disease at a minimum, Mr. White says.

DOGS, CHICKENS NOT ALLOWED

No chickens are kept on the farm. Chickens carry blackhead disease, one of the many diseases feared by turkey raisers.

"Our greatest losses usually come shortly after fly time along in the forepart of May," Mr. White said. "Evidently the flies are carriers of turkey disease germs. We had only a few cases of blackhead this year and the infected birds were immediately removed from the flock to prevent further contamination," he added.

The extremely hot weather late last July was "too much" for many of the turkeys. Mr. White said that he did not lose any turkeys to thieves this year. To ward off coyotes, Mr. White keeps an electric floodlight on around the roosts at night.

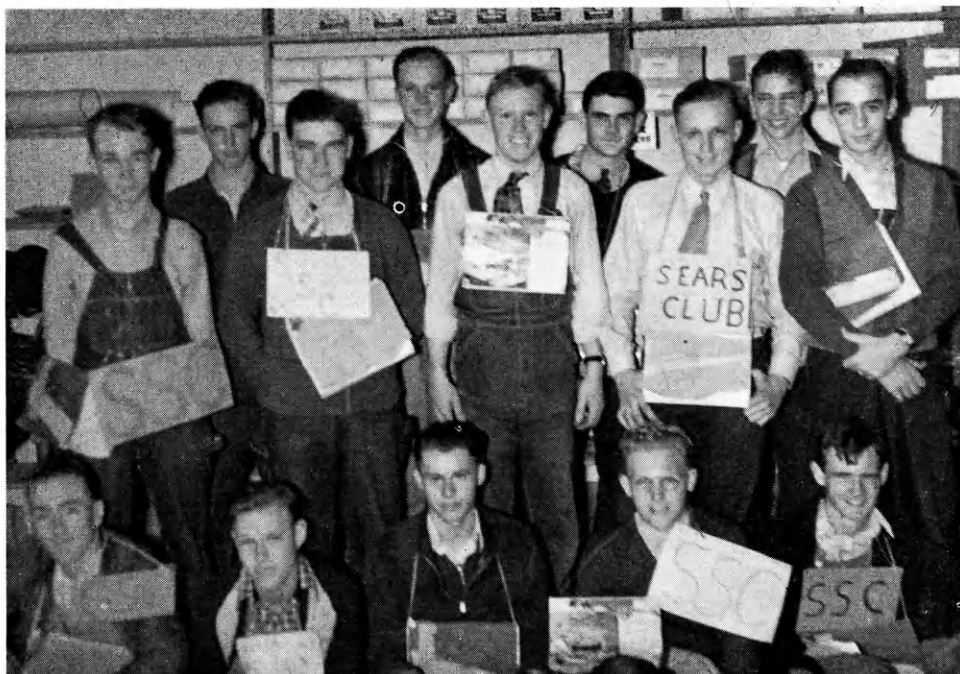
The Whites kill and dress the turkeys for market, and ship directly to a commission firm in Chicago. A few are sold in Manhattan to individuals and produce houses. Mr. White starts selling in the fall as soon as the turkeys are large enough. About 150 birds per week have been marketed, and at Thanksgiving time he had marketed over one-half of his flock. The toms averaged 22 pounds and the hens averaged 12 pounds dressed.

HAS MADE BUSINESS PAY

Mr. White had little experience with turkey raising when he moved to his farm five years ago. He has proved that turkey raising can be made a profitable business when proper measures are used. He says turkeys require a lot of attention and a lot of work, but they can be made to pay. As proof of his success, he now is completing a modern house for his family, he has an electric plant, and to aid him in his farming and turkey raising, he has a rubber-tired tractor and a handy pick-up truck.

"In the highest civilization the book is still the highest delight."—Emerson.

The Boys with the Catalogs



THE SEARS FRESHMEN

This picture was taken during the initiation ceremonies for the 1939 "crop" of Sears scholarship students. The boys are: Back row—Glen Engler, James Neilson, Paul Kelley, Chase Wilson. Second row—Jack Nutter, Dale Woolsey, Amos Wilson, Malvin Johnson, Gale Breed. Seated—Gordon Bartholomew, George Stein, John DeFord, Keith Tolson, Lowell Penny. Wayne Thompson was absent.

AMONG THE ALUMNI

(Continued from page 55)

enough," he relates. "But obstacles thrown by politicians were far more difficult to overcome than the Portuguese personal infinitive. At any rate, we left them a good organization, two promising cotton varieties, and a stream of professors going to the States at the rate of two each year to carry back more of what I tried to give them," he concludes.

DR. FRANK W. JORDAN, '39, is acting head of the department of veterinary science at Mississippi State College. He is teaching anatomy and physiology. "I feel fortunate in having a position of this type and will strive to so perform my duties that I might return what Kansas State College and the Union Pacific Railroad Company did for me."

LESLIE W. KING, '35, continued his

studies at the University of Minnesota and was granted a Master of Science degree in 1937. He is employed by the International Milling Company, 800 McKnight Building, Minneapolis, Minn. "Recently a personnel director of a company, after hiring one of your graduates, remarked 'The boys down there learn how to work with their hands.' I deemed such a remark a compliment to Kansas State College as too few of the college graduates have other ideas. Employers want men who can do more than sit behind a desk."

Elmer Dawdy, '38, now county agent of Saline County, had the state championship 4-H club livestock judging team this year. He took his boys to Chicago to compete with other 4-H teams in the national contest at the International Livestock Exposition. The team placed seventh in the contest, and was high team in judging horses.

MANY OLD CUSTOMS FOLLOWED AT OXFORD UNIVERSITY

HORTON LAUDE AT OXFORD

(Continued from page 54)

8 o'clock because the days there are much shorter than in our latitude. Breakfast is at 8:30 o'clock, with all the boys of the college in the college dining hall. First classes meet between 9 and 9:15 o'clock, and last about an hour, but as they have no bell system, a professor may talk as long as he desires. If a student has another class he wishes to attend, he simply gets up and walks out.

MUST WEAR CAPS AND GOWNS

Since many of the lectures are given at widely scattered colleges of the university, students must ride bicycles to reach classes on time. All students are required to wear caps and gowns to lectures, so it is a familiar sight to see a student peddling rapidly to class with his long gown streaming behind his bicycle.

Lunch hour is observed from 1 to 2 o'clock in all the colleges. Between 2 and 4 o'clock it is the custom to engage in some sport, such as rowing on the Thames, rugby, soccer, hockey, or lacrosse. Everyone plays regardless of his individual skill, and there is no "cut-throat" rivalry. Although the English take their sports seriously, they play for the fun rather than for the prize.

EVERYONE STOPS FOR TEA

At 4 o'clock everyone stops for the traditional English tea. The entire college stops functioning for an hour, as that tradition is stronger than any necessity to get a certain amount of work done. From 5 to 7 o'clock, the time is spent in laboratories, lectures, and also the weekly visits to the senior tutor.

Dinner is served at 7:30 o'clock in the college dining hall, where all students must wear caps and gowns. There is a fitting penalty for all who fail to observe this custom. One rule is there shall be no discussion of studies. After dinner, students are allowed to do as they like. Some students attend the cinema, or "flicks" as they are called. Others go to the library. There are literally hundreds of clubs at Oxford. Some

students belong to as many as 12 clubs at a time. At 9:15 o'clock the college gates are closed and fines are collected from those unfortunate individuals who arrive late, the amount of the fine being graduated to the lateness of the hour. At midnight, the gates are locked, and no one is admitted. There are no "jelly joints" or social meetings in the college proper, so the student who studies late is undisturbed.

"VACATION" A MISNOMER AT OXFORD

The Oxford university year consists of three terms, each eight weeks long. This appears to be a snap, but the tutor is careful to assign enough outside work before the vacation starts so that a student often works harder during the vacation than the regular term. When a student goes home or travels on vacation, he packs his suitcase full of books rather than dirty clothes. The colleges always close between terms. Hence, the student must obtain a special permit to remain there if he so desires.

A final examination in one subject requires about a week of written, oral, and laboratory work. This practically eliminates the good old American custom of cramming until 3 o'clock in the morning before an examination.

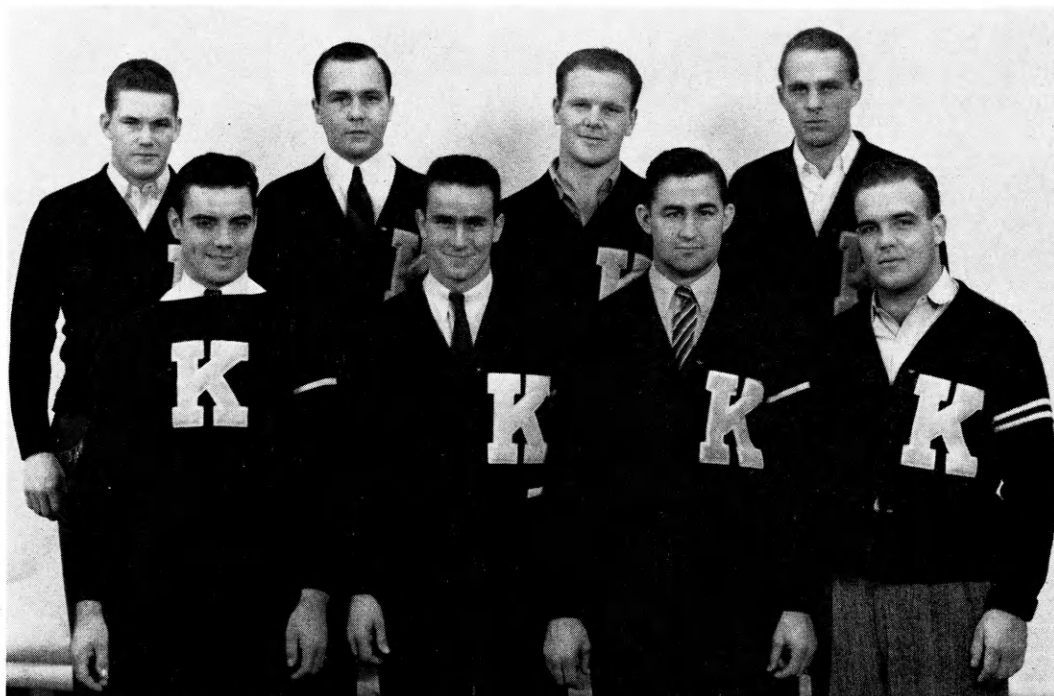
Oxford is perhaps the most cosmopolitan of all colleges. Nearly every race, religion, and country is represented. A student can count among his friends boys from every continent and climate.

ENGLISHMAN HAS A SENSE OF HUMOR

In spite of what we usually think, the English really have a keen sense of humor. It is different from ours, due to different customs and background.

One of the old traditions practiced there today would certainly shock Kansas State students. At Oxford, the girls' colleges are detained for two days after the boys are dismissed to prevent their returning home on the same train. So it is the tradition and history of Oxford that make it different from other institutions of learning. It has survived for over 800 years, and apparently will survive for many more.

Eight Ags Earn Football Letters



Back row—Eugene Fair, Norbert Raemer, Jim Brock, Chris Langvaardt. Front row—Ken Makalous, Don Crumbaker, Ralph Huffman, Bill Beezley. Eight students in the division of agriculture earned letters on the varsity football squad last fall. Four of the boys, all "regulars," are pictured on the cover page.

2,000 SEE HORT SHOW

(Continued from page 53)

garden complete in every detail with a natural rock formation, trickling spring, growing grass, wild flowers, shrubs and small trees. In the forestry exhibit was a fine collection of pine cones, a display of forest tree seeds and germination tests. Walnut products were also an interesting feature of the exhibit together with various wood plastics.

Prof. S. W. Decker, associate professor of floriculture and vegetable gardening, displayed a large collection of colorful ornamental gourds. This collection came from commercial growers in Wilmette, Ill., and is one of the finest collections of its kind in the country being surpassed only by those of gourd breeders, and the famous J. C. Robinson collection of Waterloo, Nebr., which has 100 different varieties. Professor Decker has 50 different varieties

in his collection, ranging from the smooth-surfaced to the rough and warty; from an ivory white to green and deep orange with all sizes and shapes, including such famous varieties as the "dipper." The collection was placed on a revolving table so the public could view it from all angles.

"From one that reads but one book—the Lord deliver us."—Howell.

Diamonds — Watches

College Jewelry

Silverware

We Repair

PAUL C. DOOLEY, Jeweler

25 Years Service in Aggieville

Dairymen Lose \$200,000

Yearly Because of Weeds By FARLAND FANSHER

“OFF-FLAVORS” in milk and cream caused by weeds cost the Kansas dairy industry more than \$200,000 during 1938. The damage done by weeds has been increasingly great during the last few years, until many creamery operators are now seriously considering the necessity of refusing to buy milk and cream with weedy flavors. Consumers respond quickly to changes in the flavor of dairy products and sales decline rapidly when off-flavors appear.

SEEK SOLUTION TO PROBLEM

Because of the enormous losses to dairymen caused by weeds each year, a better understanding of ways to prevent these losses should be of great value to dairy farmers. Many agencies are realizing this, and are now at work seeking a solution to this problem. Research staffs of large creameries, experiment station workers, and committees from the American Butter Institute and the National Dairy Science Association are doing all they can to provide the milk producer and creamery operator with information on means of preventing weedy flavors and also on methods of removing these flavors after they enter the milk.

Although much time and effort will be needed to solve all the problems of weedy flavors in milk, enough scientific information is available to enable creamery operators and producers to do a great deal toward controlling this menace.

Weedy flavors can be almost entirely eliminated by efforts of the producer toward the following preventative measures:

1. Adopt a plan of weed eradication and restoration of pastures. Regular mowing of weeds is important in this respect. County agents can be of great assistance in supplying detailed information on weed eradication.
2. Provide good feed other than weedy pastures. Grain mixtures and hay, or temporary pastures of wheat, barley, or oats should be used to supplement weedy pastures.
3. Remove cows from weedy pastures at least four hours before milking and longer if possible, to reduce weed flavors to a minimum.
4. Cool milk rapidly and market it as soon as possible.

Creamery operators have tried many methods to remove weed flavors from milk after it reaches the milk plant, but none of these seem to be very effective. High temperature pasteurization, vacuum treatment, and aeration of the milk all have beneficial effects, but will not eliminate the off-flavors. A great many experiments have been tried in order to remove weed flavors from milk by chemical methods, but none of these has been successful.

FOUR PRINCIPAL WEEDS IN KANSAS

The principal weeds causing serious trouble in Kansas are peppergrass, French-weed, wild mustard, and ragweed. Many others affect the flavor of milk to a lesser extent. The increased growth of these weeds in Kansas is due to drought damages

(Concluded on page 61)

HEADQUARTERS
NATIONALLY KNOWN
MERCHANDISE
AT A SAVING



THE BULL TROPHY COMES BACK TO HIS OWN PASTURE

WEED FLAVORS IN MILK

(Continued from page 60)

suffered by pastures during the last few years. The strong, bitter, tainted flavors produced by these weeds affect not only market milk, but all products manufactured from milk, including butter, ice cream, cheese, and others. The strength of weedy flavors in milk depends on the type of weed, stage of maturity of the weed, stage of lactation of the cow, and the time

the weeds are consumed in relation to the time of milking.

Dairy farmers throughout Kansas should realize the importance of preventing weed flavors in milk and that unless remedial measures are taken in the near future, their losses will be even greater in cost and more lasting in evil effects than in the past.

"A book that is shut is but a block."
—Fuller.

Back to His Own Pasture

The livestock judging team, on their return from Chicago, brought this bull back to his own—and permanent—pasture after he had spent a year at Iowa State College. Last year's team won permanent possession of the trophy which will be placed in a case in East Waters Hall.



WHERE THEY ARE AND WHAT THEY'RE DOING

With the Alumni

M. J. KINDIG, '30, is field representative for the Union Central Life Insurance Company. His address is 1405 Garfield street, Beatrice, Nebr. "I am looking after company-owned farms and farm and city property mortgages in 22 counties in Southeast Nebraska," he writes. "I have 70 farms that are owned by the company and 108 farm and city mortgages to look after, besides being in charge of sales in my territory. It keeps me pretty busy, but I don't mind that, for the work is interesting."

PENN THOMPSON, '33, is another graduate working for an insurance company. He is working for the Equitable Life Assurance Society and his address is Watertown, South Dakota. "I enjoy my work very much here," Penn writes. "I have charge of the Society's farms and loans in five northeast South Dakota counties."

S. J. COE, '22, is with the Phoenix Mutual Life Insurance Company, in the Mortgage Loan division. His address is 118 West Myrtle street, Independence, Kan.

JACK W. DUNLAP, '24, is an agriculturist turned psychologist and statistician. He is with the University of Rochester, Rochester, N. Y. "My work is strictly research, teaching one class in statistics a week. The research deals with university personnel, primarily students," he writes. A suggestion is contained in his letter. "My rather broad experience with statistics during the past 15 years leads me to make one suggestion, namely, get a good mathematical statistician who is interested in agricultural applications and make a course available for your division."

Forrest Fansher, '38, is herdsman for the Thomas Jersey Farm in Hartford, Michigan.

Among the class of '38 teaching vocational agriculture we find Milton Kohrs at Little River, Robert Cassidy at Council Grove, and Blaine Brandenburg at Randolph.

Wheat Restrictions

Here are the wheat production trends in the United States and foreign countries, before and after 1924:

UNITED STATES

Average 1919-1924.....	790,000,000 bushels
Average 1925-1938.....	775,000,000 bushels

FOREIGN COUNTRIES

Average 1910-1924.....	2,844,000,000 bushels
Average 1925-1938.....	3,898,000,000 bushels

Average American production in the 14 years since 1924 has been 15 million bushels less than the average for the 15 years preceding that time. Foreign production in the period from 1925 to 1938 has averaged in excess of one billion bushels more than between 1919 and 1924.

Small wonder the United States has been experiencing difficulty in exporting wheat.

Wheat is a great international commodity, the world supply and demand on which meet in the Liverpool market. In the last two years our part of the world production has been scarcely a sixth of the whole. Because of this small fraction, there are those who believe that any production restriction on our part can have little influence on world prices.

Roland Elling, '38, champion judge of livestock at the International in 1938, is now county agent located at Ottawa, Franklin county. He was promoted from assistant agent in November, 1938.

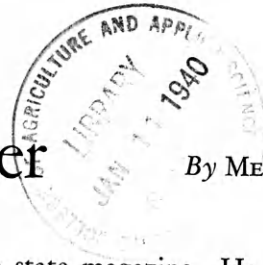
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For Fine Cleaning Send It to

BACKMAN'S

Robert Randle the Kansas Star Farmer



By MERRILL ABRAHAMS

ROBERT F. Randle, a freshman in the division of agriculture at Kansas State College, is the 1939 Star Farmer for Kansas. This honor was bestowed upon him by the National Future Farmers of America recently for outstanding project work in F. F. A. With this honor came \$100 in cash awarded by the Weekly Kansas City Star. He is one of four Kansas boys given the degree of American Farmer. At the end of this year his project record showed a saving and inventory of \$1,733.

Randle is the son of Mr. and Mrs. R. F. Randle of Riley, Kansas, and was graduated from Wakefield High School where he was salutatorian of his class last year. He was also a member of the football team for three years. His main projects were cattle and wheat with minor projects in swine, sheep and sorghum. He started his projects in 1934 when he entered Wakefield High as a freshman. He now has a herd of 30 Hereford cattle.

Asked what he intended to do after his graduation from college, Bob said, "I will either enter Smith-Hughes work or return to the farm and carry on what I have now started." Most of his weekends are spent at home farming and getting ready for winter as his father was injured in a fall a few weeks ago and is unable to run the farm by himself.

Vocational agriculture has not been his only connection with agriculture as he has also been active in 4-H club work for seven years. Last year he was a member of the Riley county Livestock Judging team who were state champions and represented Kansas at the International Livestock Exposition at Chicago, Ill. He has also held many offices in his local club and was a member of the county council.

Last year in the Future Farmers of America Association he was a member of the State Executive Council and editor of

the state magazine. He was awarded the State Farmer degree in May, 1938. Last summer he was awarded a Danforth Scholarship to Camp Shelby, Mich. This is a two week study camp where boys learn the four-fold way of living.

Some of the requirements of candidates for the American Farmer degree are: Must earn and deposit at least \$500 on project work; must have represented the high school on some team, athletics, debate or judging; must be an officer in the local chapter; and must be in the outstanding one tenth of one percent of F. F. A. members in the United States.

At the student election held at the beginning of this term, Randle was elected president of the Freshman class by a large majority. His other activities include membership in the Collegiate 4-H Club, Agricultural Economics Club, and the Y. M. C. A.

We're Sorry, Kenney

When the honor roll averages were figured last fall, the name of Kenneth F. Parsons was inadvertently omitted from the listing. Kenney completed 27 hours last year, earning 62 points for an average of 2.29, which admits his name to the Junior High Honor roll.

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Our engineers have given *fullest attention to clean skimming*. The *self-centering stainless steel bowl* gets all the cream. It skims cream of light or heavy density with equal efficiency. Adjustments are easily made enabling owners to standardize milk to any desired test. Choice of four McCormick-Deering sizes: 500, 750, 1,000, and 1,250 pounds per hour. Direct motor drive available for electrified farms.

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Carbon steel spouts, supply can, regulating cover, and float also available.

1—All parts contacting milk made of STAINLESS STEEL (bowl and discs, cream and skim milk spouts, regulating cover and float, supply can).

2—STAINLESS STEEL parts last longer, prevent odor and metallic flavor, are easier to clean, and do not rust.

3—Open, easy-to-clean cream and skim milk spouts.

4—Smooth, easy-to-clean, no-flange regulating cover.

5—4-lead faucet assures quick, complete drainage of the no-seam, no-splash supply can.

6—4 high quality ball bearings

on spindle and cap pinion.

7—Spindle of hardest, quality steel for maximum life.

8—Conical socket joint on spindle assures perfect centering of bowl.

9—Full automatic oiling ball bearings and main drive gear; exclusive oil trap construction feeds only cleanest oil to bearings and gears.

10—Positive friction-clutch, instantaneous in action, saves wear on entire drive mechanism.

11—Smooth frame—no crevices to catch dirt.

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