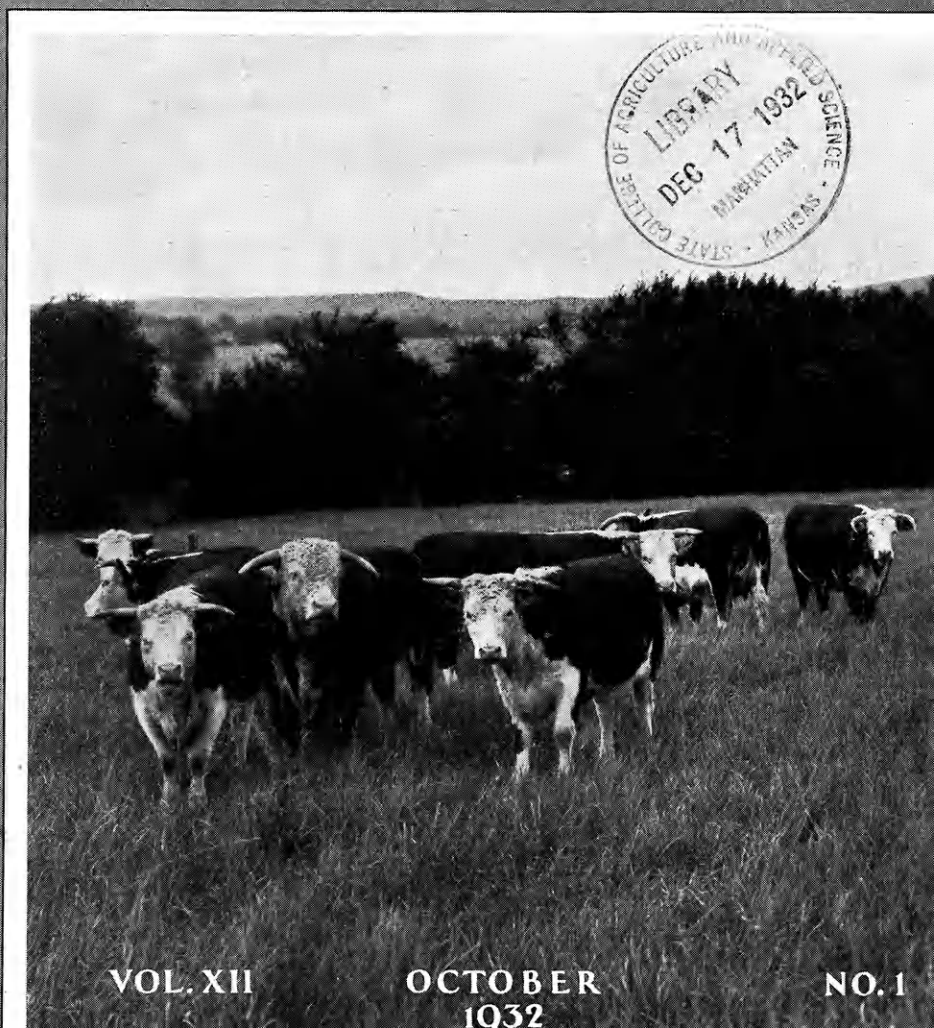


THE KANSAS AGRICULTURAL STUDENT

MANHATTAN, KANSAS



VOL. XII

OCTOBER
1932

NO. 1

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QUEEN AND PRINCESSES OF 1932 AG BARNWARMER

Geraldine Hammond
Ione Hill

Luella Graham

Kay Brewer
Wilma Cook

The Kansas Agricultural Student

VOL. XII

Manhattan, Kansas, October, 1932

No. 1

The Past Season in Kansas

Luke M. Schruben, '33

Reports from most parts of the state show that in general Kansas farmers did not fare so well during the past season. A few reports show excellent conditions here and there as far as crop yields are concerned and most reports carry a tone of "stick to it," which is typical of Kansas farmers as a class. Kansas, in general, suffered a summer drought, ranging from a partial drought in eastern Kansas, which was severe in certain localities, to a severe drought in the western part of the state which took most of the corn and feed crops. Showers scattered here and there gave sufficient moisture to produce average yields.

Corn in northeastern Kansas produced a good average yield. Nemaha and counties west, however, were considerably affected by the prolonged summer drought. Wheat and oats in that section ranged from one-half to one-fourth of a crop.

C. E. Lyness of Troy says, "It has been an unfavorable season for orchardists of this region. An 'off year' for apples augmented by unfavorable weather during the blossoming period resulted in a crop of about one-fourth that of a normal year or about 10 to 15 per cent of the 1931 production. Prices are somewhat more favorable this season than last. Second grade apples sell readily but consumers hesitate yet to pay the additional cost of a No. 1 pack."

The importance of live stock in northeastern Kansas is realized, but due to financial conditions many feeders are prohibited from buying feeder stock as they would in normal times. This difficulty is being met to some extent by loans from the Agricultural

Credit Corporation of the Reconstruction Finance Corporation that are now available.

The Kaw valley potato yield was above average, but due to low prices the crop would scarcely pay harvesting and shipping expenses.

Corn in the east central part of the state gave promise of a bumper crop in July, but due to prolonged drought and damage done by chinch bugs the yield was reduced to 60 per cent. The wheat yield in this section was light. The Johnson county average was but 6 bushels per acre.

C. A. Jones of Johnson county says, "Soybeans have found a definite place in eastern Kansas agriculture. There are 6,000 acres of soybeans in Johnson county this year against 300 acres four years ago." Live stock is in good condition with an increase in dairy cattle in the vicinity of Kansas City.

For the most part southeastern Kansas has come through the summer exceptionally well, although the late freeze damaged the wheat, oats, and fruit crops considerably, leaving practically no fruit. Corn yielded above the five-year average. The flax crop is above average. Yields of 13 bushels per acre have been reported. Feed is abundant and much is put up in the form of silage and baled hay. Most of the cattle and sheep were short fed and marketed with a good return. One farmer in Coffey county reports a profit of \$47 per head on two carloads of steers which he marketed early. Pastures are in excellent condition and many farmers are needing more cattle and sheep to winter. The fall drought has decreased the wheat acreage somewhat

this fall in many localities. Many farmers find it necessary to haul water several miles to supply their live stock.

Farmers of southwestern and south central Kansas are optimistic but for the most part are basing their optimism on the future. For the most part wheat, their most important field crop, was far below normal and in many places it blew out or froze out altogether. Hessian fly did considerable damage, this injury being as much as 20 per cent in Sedgwick county, according to C. E. Crews of Kingman. An increased acreage of row crops was planted but due to too much rain when the seed was coming up and too little during the summer, the yield was small. Double-spaced listing in southwestern Kansas made a fair crop of good quality whereas the regular spaced rows failed in most cases. Live stock is in a poor condition due to the dried up pastures and lack of feed crops. There is a decrease in the pig crop. Summer fallow proved its worth this year and reports show more wheat ground will be fallowed next year. Due to the lack of rainfall ground which produced a crop this year is in poor condition, but in most places wheat on fallow is satisfactory.

J. D. Adams of Garden City says, "Sugar beets are looking fine. The largest tonnage is expected this year in the history of the sugar-beet industry in Kansas with an approximate 80,000-ton harvest producing approximately 244,000, 100-pound bags of sugar."

Crops in north central Kansas were spotted due to scattered rainfall. The corn crop is better than last year but below the average. Most places report a low wheat yield with good yields in spots. There is an abundance of feed with the exception of a few areas in which shortage, according to L. C. Aicher of Hays, was due chiefly to indifferent farming or extreme local drought. The live-stock industry seems to be holding its own.

According to E. H. Coles of Colby, fair wheat and barley crops were harvested over most of northwestern Kansas. Winter wheat conditions in general are poor. West of the eastern half of Norton and Sheridan counties little wheat has emerged except that seeded on summer fallowed land and even that is none too good. R. W. Fort of Colby reports that a very bad epidemic of hog cholera swept the northwestern section of the state beginning as early as the middle of July in some localities.

With the corn crop practically a total failure, a poor wheat crop, and a poor seed bed condition this fall for 1933 wheat, the farmers of the western fourth of Kansas are hit hard from the point of view of the season—to say nothing of general economic conditions.

F. W. Boyd, '21, is agent in the Indian Service, Yokima Reservation, Toppenish, Wash.

F. W. ImMasche, '29, is employed by the Federal Farm Board as live-stock economist. His headquarters is Washington, D. C.

Ervil S. Fry, '32, is in the employ of the Ferry-Morse Seed Co., with headquarters at San Francisco, Calif. His present address is 1305 Lyon St., San Francisco.

W. C. Hall, '20, R. 2, Coffeyville, Kan., still depends on hogs for cash returns from his farm but during past months has been increasing his number of dairy cows until he has two score of them now and a very good dairy herd business.

M. L. Baker, '24, is in charge of animal husbandry work at the North Platte branch of the Nebraska Agricultural Experiment Station. The North Platte station carries on extensive work with lambs, hogs, and cattle, its Duroc-Jersey hogs and creep-fed calves having a wide reputation.

New Credit for Agriculture¹

Orville F. Denton, '33

Recent legislation has created new sources of credit available for agricultural purposes. This means that there are now more credit institutions from which farmers may borrow. It does not necessarily mean more credit or new credit for all farmers. This new credit is available to those who can offer satisfactory security. There are those who have already borrowed so heavily that to lend them more money may only prolong the day of reckoning, if present low price levels continue. It is useless to borrow more money under usual circumstances, if it is impossible to pay even a fair proportion of the interest on that which has already been borrowed. Hence new credit cannot be expected to save all farmers who are in financial distress at the present time. It is farmers who need credit and can use credit in the conduct of their usual business operations, that will be benefited by new sources of credit, particularly since many of them are unable to secure needed funds from the sources they have been using in the past.

The sources of credit for agricultural purposes now include local agricultural credit corporations organized in connection with the Federal Intermediate Credit banks, the new regional agricultural credit corporations set up through the Reconstruction Finance Corporation, the Federal Land Banks, local banks, and private agencies.

Long-time agricultural credit with real estate as security, has come principally from the Federal Land Banks and from private agencies such as land mortgage companies established largely by life insurance companies. A year ago these Federal Land Banks were confronted with difficulty in securing funds to make new loans. An appropriation of \$125,000,000 by Congress to

provide additional funds for these banks has improved the situation.

Local banks, in the past, have been the principal source of short-time loans needed by farmers for production and marketing purposes. It is the claim of the Federal Farm Loan Board that the failure of so many commercial banks in the agricultural districts of the country, due to the decline in bank deposits resulting from the low prices of recent years, has developed an increasing need for agricultural credits of the class which the Intermediate Credit banks are able to furnish. Inasmuch as their business is confined to direct loans to agricultural cooperative associations or discounts for banks and agricultural finance companies, the development of such organizations is greatly needed in the present crisis. To meet this need for short-time credit for the farmer, Congress passed an act early in March of this year providing a revolving fund of \$10,000,000 for the purpose of assisting in the formation of local agricultural credit corporations, in connection with the Federal Intermediate Credit banks.

These local credit corporations are organized by local people who furnish the necessary capital stock. They can then rediscount intermediate term agricultural paper with the Federal Intermediate Credit banks. This permits the securing of credit for farmers, that is up to six to eight times the amount of the capital stock of the local organization. The rapid increase in this type of credit institutions brought the number of such agricultural credit corporations to 790 in the United States this summer.

Since its organization in 1929, the Federal Farm Board has loaned large sums to cooperative marketing associations for operation and for obtaining adequate marketing facilities, such

1. The author is indebted to Dr. W. E. Grimes, head of the Department of Agricultural Economics, for much of the material in this article.

(Continued on page 24)

Suggestions on Turkey Raising

R. T. Harper, '33

For the benefit of the beginner it can be said that there are as many ways of raising turkeys as there are of raising chickens. Some of these methods give satisfactory results part of the time, and a few give good results most of the time, if—and there the proposition brings in the word, “if.”

If contemplating raising turkeys, questions to be answered among the first are: How shall I start my turkey program? Shall I start on a large or on a small scale? Shall I start with day-old poults, eggs, or breeding stock? The novice never fails to ask these questions and for his benefit it can be said with emphasis: Start on a small scale and learn as you go. It is probably easier to start by purchasing day-old poults from a breeder. It is wiser, however, to start with hatching eggs, and still better to start with breeding stock. Why? The answer is, it is safer, more economical, and affords one the opportunity of learning as he goes. Day-old poults are expensive and entirely too valuable for a novice to experiment with under the brooder. Buying hatching eggs is somewhat of a gamble. They do not always hatch; possibly the fault lies in the eggs themselves, and then again possibly the blame can be placed on the operator of the incubator.

In the fall several weeks before Thanksgiving one can purchase stock for very little above the market price. Thus a tom and ten females could be purchased for about forty dollars. These females will lay some 450 eggs during the season and when set in four or five hatches it is obvious that the operator will have an opportunity to learn as he goes. Turkey eggs sell from 25 to 50 cents each. A simple calculation will demonstrate the economy of the “learn as you go” plan. The sale of the breeders at the conclusion of the season will off-set the cost of main-

taining them during the egg-saving months.

If the turkey enterprise is to be a success one must obtain the maximum number of hatchable hatching eggs, hatch the greatest possible number of poults, and grow a fair percentage of the poults to maturity.

The breeding flock should be penned away from chickens. Turkeys pick up the blackhead organism from chickens. The organism does not apparently affect the chicken but is usually the cause of death to the turkey that becomes its host. It is not necessary nor advisable to permit turkeys to range at large. During the egg-gathering season pen up the turkeys in a small pen and cut down all of the weeds, grass, and shrubs; then provide the hens with covered nests with plenty of straw in them. Turkey hens are very clever at hiding their nests and valuable eggs will be lost if there is any place for the hen to hide them. The eggs should be gathered once or twice a day and kept in a damp place at a temperature as near 55 degrees F. as possible. A cave or cellar is a good place to keep hatching eggs.

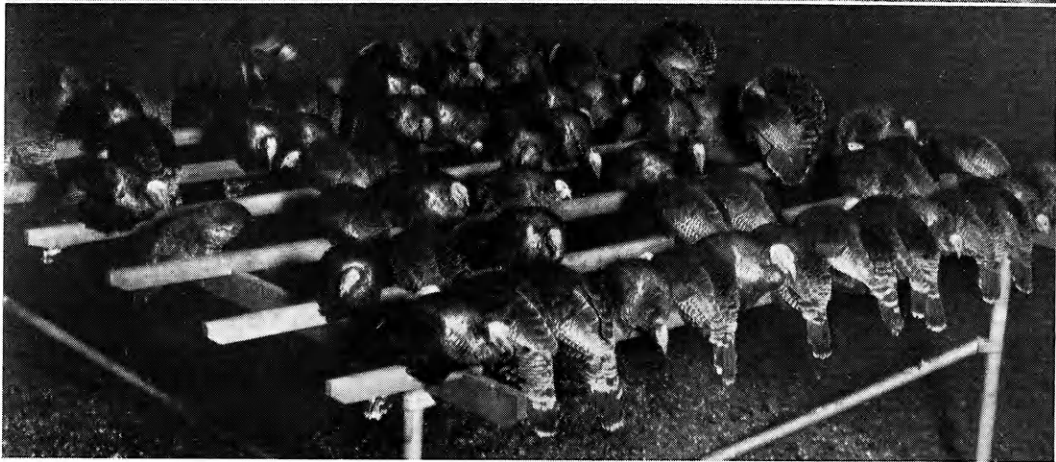
Turkey eggs can be incubated successfully in an incubator with a natural air circulation by placing the incubating trays about three-eighths of an inch lower than for hen eggs and starting the incubator at a temperature of 99 degrees and raising it 1 degree each week. When turkey eggs are incubated in a forced-draft machine a uniform temperature of 99 degrees has given the best results.

Almost everyone agrees that the only satisfactory method of starting poults is by artificial brooding methods. These methods vary considerably. Some use peat litter and an ordinary brooder stove. At the Nebraska Agricultural Experiment Station the poults are brooded in houses with sun porches

on them. The sun porches have dropping pans and there are three tiers of pens to the house. Various brooding experiments have been carried on at the Kansas Agricultural Experiment Station and there has always been a good deal of mortality from impacted

enough to go back to the heat as chickens do.

To overcome these difficulties a method has been evolved by which the poults are taken from the incubator and placed in covered pens made of hardware cloth and two-by-two sup-



TURKEYS AT K. S. C.

Upper: A flock of turkeys on the range. In the background may be seen the movable roost with a dropping board that also serves as a sunshade.

Lower: Flash-light picture of turkeys on stationary roost.

crops and injuries of the digestive tract when the poults could possibly get at any coarse material such as sand, straw, peat litter, lawn clippings, or stemmy alfalfa. When an ordinary brooder stove and hover is used the poults wander away from the heat and chill. They do not seem to have sense

ports. The pens are set on horses two feet from the floor and straw scattered under them to catch the droppings. The room is heated by a brooder stove equipped with a thermostat and a uniform temperature secured by use of a fan and circulating tube. The pens are

(Continued on page 24)

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No. 1

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THE DIVISIONAL HONOR ROLL

The Kansas Agricultural Student in this issue is placing on the "High Honor Roll" of the division all last year's students whose record for the year was free from delinquencies and who made a two-point average in scholarship. Such a record, especially in the freshman and sophomore years, shows large possibilities for college honors. It is particularly an outstanding earmark of possibilities for leadership.

The second group commended for worth-while records makes up the "Honor Roll." These students might be readily subdivided into several groups including the following: (1) Students who are among the best leaders and all-round men of the college. They are worth-while leaders wherever you find them. They are always good students but they are not simply good students. They are good citizens and leaders. (2) Those who are bright, naturally, sometimes brilliant, but not living up to their possibilities. In other

words, when their capacity is taken into consideration their record is not so commendable. (3) Those who overcome handicaps, such as serious financial embarrassment or a mind naturally a little slow in action, and by hard, faithful, and conscientious work make progress that is a real credit to them and an indicator of larger success.

The "High Honor Roll" of the freshman group is an exceptionally fine showing. Of last year's freshmen, 12½ per cent made better than a two-point average. That is unusual and outstanding. In making the best scholarship average of any freshman in the division, Albert A. Thornbrough of Lakin won the Alpha Zeta freshman scholarship medal. Such a medal is awarded annually by the honorary fraternity of Alpha Zeta and the winning of it is a real mark of distinction. Mr. Thornbrough's medal will be the eleventh awarded. He is the first, however, to win on an "A" average, though some others have lacked only one or a very few points of reaching that goal.

COLLEGE NOTES

HONOR ROLL, 1931-'32

For the past college year, 1931-'32, in the Division of Agriculture, 133 students are hereby commended by The Kansas Agricultural Student for their creditable and satisfactory scholarship records. Each of these students carried on regular assignments not less than 12 credit hours of work each semester, had practically no delinquencies against him throughout the year, and made a total of not less than 48 points on his two assignments, according to the K. S. C. point system (1).

Those students making not less than a two-point or "B" average for the year are given special commendation as winners of high honors. Both the high-honor and the honor groups are listed below.

HIGH HONOR ROLL, 1931-'32

Seniors	Home P. O.	Credits	Scholarship Av.
Will M. Myers.....	Bancroft	26	2.77
Luke M. Schruben.....	Dresden	36½	2.69
G. Raymond Kent.....	Wakefield	34	2.57
Tom D. Dicken.....	Winfield	28	2.46
John I. Miller.....	Prescott	37	2.459
Alvin E. Lowe.....	Argonia	31	2.42
W. Loy McMullen.....	Oberlin	34	2.41
John G. Bell.....	Atchison	32	2.406
John B. Roberts.....	Manhattan	34	2.38
Franklin L. Parsons.....	Ruleton	34	2.35
I. Ernest Ollivier.....	Albia, Iowa	35	2.34
Duane H. Daly.....	Armington, Ill.	36	2.31
Charles E. Powell.....	Frankfort	35	2.26
Lloyd M. Copenhaver.....	Manhattan	27	2.22
Phares Decker.....	Holton	33	2.18
L. Albert Wilhelm.....	Arkansas City	28	2.14
Charles T. Hall.....	New Albany	32	2.13
George Washington.....	Manhattan	33	2.12
Raymond T. Harper.....	Manhattan	33	2.09
John Hamon.....	Valley Falls	39½	2.07
Charles W. Naueheim.....	Hoyt	30	2.066
Luther A. Jacobson.....	Holton	32	2.06
F. Dean McCammon.....	Manhattan	34	2.03
Carl E. Elling.....	Lawton, Okla.	29	2.00

Juniors

Erwin Abmeyer.....	Grantville	37	2.57
Orville F. Denton.....	Denton	32	2.56

1. Passing grades in K. S. C. are, from highest to lowest, A, B, C, and D. Each credit hour of "A" gives the student three points; each credit hour of "B" gives the student two points; and each credit hour of "C," one point. No student will be graduated unless his total number of points earned at least equals the total number of credit hours required in his curriculum.

Donald H. Bowman.....	Manhattan	30	2.43
Charles E. Fisher.....	Cuba	31	2.42
Herbert W. Clutter.....	Larned	33	2.24
Glenn S. Fox.....	Rozel	33½	2.238
Charles A. Hageman.....	White Cloud	34½	2.231
Margaret M. Knerr.....	Manhattan	27	2.19
Floyd E. Davidson.....	Madison	31	2.16
Martin F. Keck.....	Kansas City, Mo.	33	2.03
Andrew B. Erhart.....	Timken	36	2.06
Olin Sandlin.....	Palco	31	2.03
Everett J. McNay.....	Clay Center	31	2.00

Sophomores

John R. Latta.....	Holton	27	2.74
J. Warren Mather.....	Grinnell	35	2.66
Wilfred H. Pine.....	Lawrence	33	2.64
Kenneth S. Davis.....	Manhattan	32	2.50
C. Dean McNeal.....	Boyle	33	2.39
Clarence L. Gish.....	Abilene	31	2.387
Lawrence L. Kelly.....	Seymour, Mo.	33	2.30
Pius H. Hostetler.....	Harper	36	2.28
Woodrow W. Rufener.....	Strong	31	2.26
Richard H. Campbell.....	Grenola	32	2.13
John O. Miller.....	Meriden	31	2.10
Clarence E. Keith.....	Ottawa	34	2.09
John R. Patton.....	Columbus	33	2.06
W. Morris Gale.....	Pond Creek, Okla.	33	2.03

Freshmen

Albert A. Thornbrough.....	Lakin	32	3.00
Donald R. Cornelius.....	Wheaton	32	2.81
Emory L. Morgan.....	Ottawa	32	2.81
Lewis S. Evans.....	Washington	32	2.50
William H. Juzi.....	Florence	39	2.48
Celestine C. Graham.....	Stockton	32	2.41
Frank G. Parsons.....	Winfield	32	2.31
Eugene E. Sundgren.....	Falun	34	2.26
George A. Rogler.....	Matfield Green	32	2.25
Donald F. Isaacson.....	Topeka	35	2.06
Charles E. Murphey.....	Lecti	34	2.03

HONOR ROLL, 1931-'32

Seniors	Home P. O.	Credit hours passed	Total points
Cirilo L. Adan.....	Sison, Pang., P. I.	38	50
Pallas D. Alsop.....	Frontenac	33	65
Paul W. Archer.....	Hutchinson	35	52
Ralph D. Barnhart.....	Sterling, Colo.	31	53
Robert O. Blair.....	Coleman, Tex.	33½	65
William J. Conover.....	Elkhart	41	67
Leonard E. Croy.....	Norcatour	35	69
Salvador B. Della.....	Santa Maria, P. I.	34	49
Keith B. Dusenbury.....	Anthony	34	55
Thomas E. Hall.....	Manhattan	31	49
Alfred W. Helm.....	Chanute	33	59
Taylor L. Jones.....	Garden City	32	52
Hugh I. Moore.....	Wakarusa	35	57
Claire W. Munger.....	Hoisington	31	56
Ralph C. Munson.....	Junction City	31	61
Harold W. Overbey.....	Winfield	31	53
Lewis S. Perkins.....	Argonia	36	60
Irving E. Peterson.....	Haddam	37	73
Leonard A. Rees.....	Abilene	32	53
Earl H. Regnier.....	Spearville	32	56
Milton E. Saffry.....	Alma	37	64
Joe D. Smerchek.....	Garnett	21	53
Alvin H. Stephenson.....	Clements	34	58
Chester G. Thompson.....	Randolph	35	66
Eugene A. Ward.....	Lawrence	37	59
Carl Williams.....	Dodge City	33	50

Juniors

Lewis H. Bacon.....	Sylvan Grove	33	49
Frank R. Brandenburg.....	Riley	31	54
Lester R. Chilson.....	Oberlin	32	59

Raymond J. Cohorst.....	Marysville	35	67
W. Phillip Glunt.....	Garrison	37	72
Thomas C. Hinkle, Jr.....	Carbondale	33	53
Harvey C. Holm.....	Dwight	33	48
Mark E. Jennings.....	Eskridge	33	56
Y. S. Kim.....	Shanghai, China	33	33
Harold L. Kugler.....	Abilene	32½	57
Robert W. Lukens.....	Beloit	32	53
Gilbert C. Moore.....	Louisburg	35	52
Norris W. Nelson.....	McPerson	35	56
W. Newell Page.....	Detroit	34	56
Leonard W. Patton.....	Newton	34	51
Marion W. Pearce.....	Miltonvale	32	58
Ruth N. Quick.....	Redfield	32	48
J. Milton Raven.....	Morrowville	34	54
A. Lawrence Reed.....	Manhattan	33	51
William R. Smith.....	Manhattan	32½	49
Charles G. Steele, Jr.....	Barnes	32	58
Arthur C. Thomson.....	McCune	30	57
Marvin E. Vautravers.....	Centralia	31	49
Raymond B. Wagner.....	Richmond	33	40
Wilbur Wahl.....	Wheaton	33	57
Herschel W. Weber.....	Novinger, Mo.	33	59
Everett F. Yoxall.....	Woodston	32	63
Robert A. Zebold, Jr.....	Little Rock, Ark. ..	33	52
Walter W. Zeekser.....	Alma	32	50
Sophomores			
Vernon E. Burnet.....	Manchester, Okla.	34	62
W. Harley Chilson.....	Oberlin	30	53
Harry W. Coberly.....	Gove	34	58
Harold E. Grogger.....	Solomon	33	52
D. Ross Haney.....	Marceline, Mo.	30	58
Louis B. Hanson.....	Jamesstown	30	52
Wilbur M. Lehman.....	Wathena	33	56
Nevlyn R. Nelson.....	Belle Plaine	33	62
Herbert T. Niles.....	Olivet	35	63
Val W. Silkett.....	Downs	36	50
A. Bentley Wilson.....	Galesburg, Ill.	30	51
Maurice I. Wyckoff.....	Waldo	36	71
Freshmen			
J. Ivar Johnston.....	Stonington, Colo.	32	51
Edwin R. Lamb.....	Mendon, Mo.	32	50
Edward F. Moody.....	Greeley	32	51
George C. Pierce, Jr.....	Belleville	32	50

SIXTH ANNUAL AG BARNWARMER

The sixth annual Ag Barnwarmer was held in Nichols Gymnasium, October 21, 1932. All Ags were agreed after the final clean-up that they had spent a really enjoyable evening.

The orchestra, June Layton and his band, were at their best and anyone having a desire to dance was in for an evening's treat. For those who did not wish to dance, the girls' gymnasium was fitted up for games and entertainment. For refreshments, apples, cider, and doughnuts were served.

The decorations of hay, straw, cornstalks, sumac, cedar trees, and various-colored fall leaves were very fitting and attractive. The moon room was reported to be perfect.

Probably the most outstanding feature of the Barnwarmer was the co-operation of the entire Ag division in making the event successful. Barnyard

tuxes were worn Thursday and Friday and were the order of the evening.

From ten candidates for princesses of the Ag Barnwarmer, the following five were elected at Ag Seminar, Thursday, October 13:

Miss Kay Brewer, GS Spec., Wichita

Miss Wilma Cook, PE 2, Ash Valley

Miss Luella Graham, GS 4, Topeka

Miss Geraldine Hammond, MEd, St. John

Miss Ione Hill, C 1, Harper

The Ags then held a regular formal election, Thursday, October 20, and from the five princesses Miss Luella Graham was elected Queen. She was formally crowned at 9:15 the evening of the Barnwarmer by Dean L. E. Call. Miss Graham took the part of queen with dignity and grace. She is a member of the Chi Omega sorority, and while she is a member of the Class of '33, this is her second year in K. S. C., having entered with junior standing in September, 1931, from Washburn College, Topeka.

—A. C. T., '33.

DAIRY PRODUCTS TEAM OF 1932

The Students' National Contest in Judging Dairy Products was held this year on October 17, in Detroit, Mich., in connection with the Dairy Industries Exposition. After five weeks of workout Prof. W. H. Martin chose the following men to represent Kansas State College in this national contest:

Harry W. Coberly.....Gove

Floyd E. Davidson.....Madison

Wilfred H. Pine.....Lawrence

W. Harley Chilson (alt.).....Oberlin

These men left Manhattan, October 14, in Bill Juzi's Model A Ford. The first night out was spent at Champaign, Ill. The team looked over the campus in the morning then drove on to Purdue. At Purdue the men enjoyed the Purdue and Wisconsin football game, then drove to Fort Wayne, Ind., for the night. Sunday, October 16, they drove to Detroit.

On Monday, October 17, the contest

was called. It consisted of scoring, placing, and the criticisms of seven samples in each of four classes—the milk, butter, ice cream, and cheese classes.

There were 18 teams entered in the contest and the five highest were: Mississippi, first; Kansas State, second; Purdue, third; Nebraska, fourth; and Ohio, fifth. Kansas State missed first place by only five points. In the entire contest Pine was fourth high individual, Coberly, seventh high, and Davidson, ninth high. Kansas State was second high in butter, third high in ice cream, fourth high in milk, and sixth high in cheese. Pine was fourth high in butter and seventh high in ice cream. Coberly was fifth high in milk and seventh high in butter.

The high team of the contest, also the high team in each class, was given a silver loving cup. The three high individuals in each class were given gold, silver, and bronze medals, respectively. In the milk class the high man received in addition another gold medal and a gold watch. The six high eligible individuals in the entire contest each received a fellowship of \$750. To be eligible the individual must be a senior in college and must be majoring in dairy manufacturing. The college grades of the individuals were considered. Kansas State had no eligible men.

After looking over Detroit, the team started home. The first night was spent in Chicago, the next in Ames, Iowa, and part of the next night at the Ag Barnwarmer at K. S. C.

—W. H. P., '34.

COULTER WINS TOPEKA JUDGING CONTEST

The annual live-stock judging contest, held in connection with the Kansas Free Fair at Topeka, Thursday, September 15, 1932, was won by Earl C. Coulter of Willis. Mr. Coulter is a senior in animal husbandry at K. S. C. He was a member of the junior live-

stock and the dairy-cattle judging teams last year. His score in the Topeka contest was 491 out of a possible 550 points. C. G. Page of Norton placed second with a score of 480. Mr. Page is a senior at K. S. C. and a member of the dairy-cattle judging team this year.

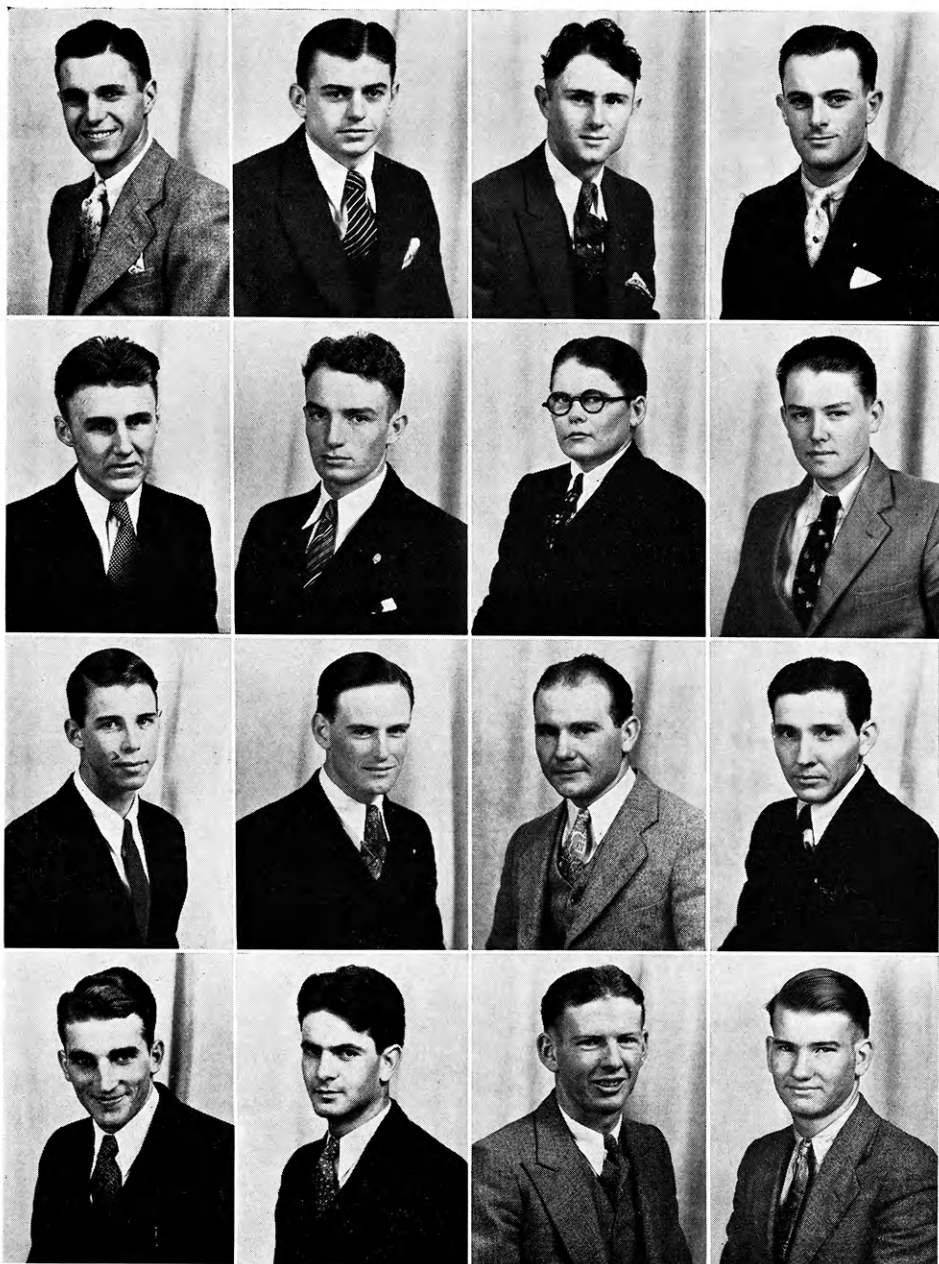


ALBERT A. THORNBROUGH, HIGH FRESHMAN, 1931-'32, WINNER OF ALPHA ZETA MEDAL

Mr. Thornbrough placed first in the freshman class of the division for 1931-'32 with an "A" average for the year. This placing won him the medal awarded by the honorary agricultural fraternity of Alpha Zeta to the freshman of the division making the highest average in scholarship.

He was on the poultry and the junior live-stock judging teams last year. Walter M. Lewis, Larned, and Joe F. Knappenberger, Penalosa, both sophomores at the college, placed third and fourth with scores of 473 and 463, respectively. A. C. Thomson of McCune, a senior at K. S. C., placed fifth with a

(Continued on page 19)



Freshmen, 1932-'33

At the beginning of a freshman student's record in the Division of Agriculture his freshman picture is filed. His scholastic and activity records are thereafter regularly recorded.

Last year The Kansas Agricultural Student reproduced the pictures of Ag freshmen. In continuation of that plan, pictures of beginning freshmen of this semester are presented in this issue. Their names and home addresses are given on the following page.

FRESHMEN, 1932-'33**PAGE FOURTEEN****Top Row**

ARTHUR C. AUSERMAN
Elmont
RAYMOND R. BEELER
Mankato
ARTHUR R. BLYTHE
White City
GORDON A. CARTER
Bunker Hill

Second Row

RAYMOND I. CHAFFEE
Talmage
WILLARD A. CHALLENGER
Sedgwick
J. EDWARD CHEATHAM
Valley Falls
HOWARD V. CHENEY
Grainfield

Third Row

ORVILLE B. CHESTNUT
Denison
LOUIS H. COOL, Jr.
Glasco
KERMIT L. DAVIES
Emporia
LLOYD M. DAVIES
Emporia

Fourth Row

CLAUDE H. DENCHFIELD
Piedmont
ROLLIN W. DUNAHUGH
Clyde
DONALD E. FLENTHROPE
Wamego
GEORGE W. FOLMER
Olathe

PAGES SIXTEEN AND SEVENTEEN**Top Row**

GEORGE W. FUNDIS
LeRoy
PAUL GILPIN
Topeka
GEORGE A. GREENWALD
McCracken
DAVID W. GREGORY
Cheney
ORIN D. GRIFFING
Council Grove

A. MILTON GRIMES
Lyons
HOWARD J. HAAS
Almena
NORMAN L. HALL
Powhattan
L. WAYNE HERRING
Tulia, Tex.
ROBERT H. HOLMES
Wichita

Second Row

GEORGE H. HOOPINGARNER
Manter
J. PHIL JACKSON
Hutchinson
CARL JOHNSON
Greeley
ROBERT W. KIRK
Scott City
DWIGHT D. KLINGER
Ashland

MILTON C. KOHRS

Elmo

VICTOR M. KRAINBILL
BernHORACE H. LAMBORN
LeavenworthJOHN M. LEEPER
TopekaDONALD K. LONG
Neodesha**Third Row**

J. EDWIN McCOLM
Emporia
ALBERT L. MALLON
Anthony
ROBERT M. MILLER
Lawrence
B. HAMILTON MURPHY
Topeka
ROYSE P. MURPHY
Norton

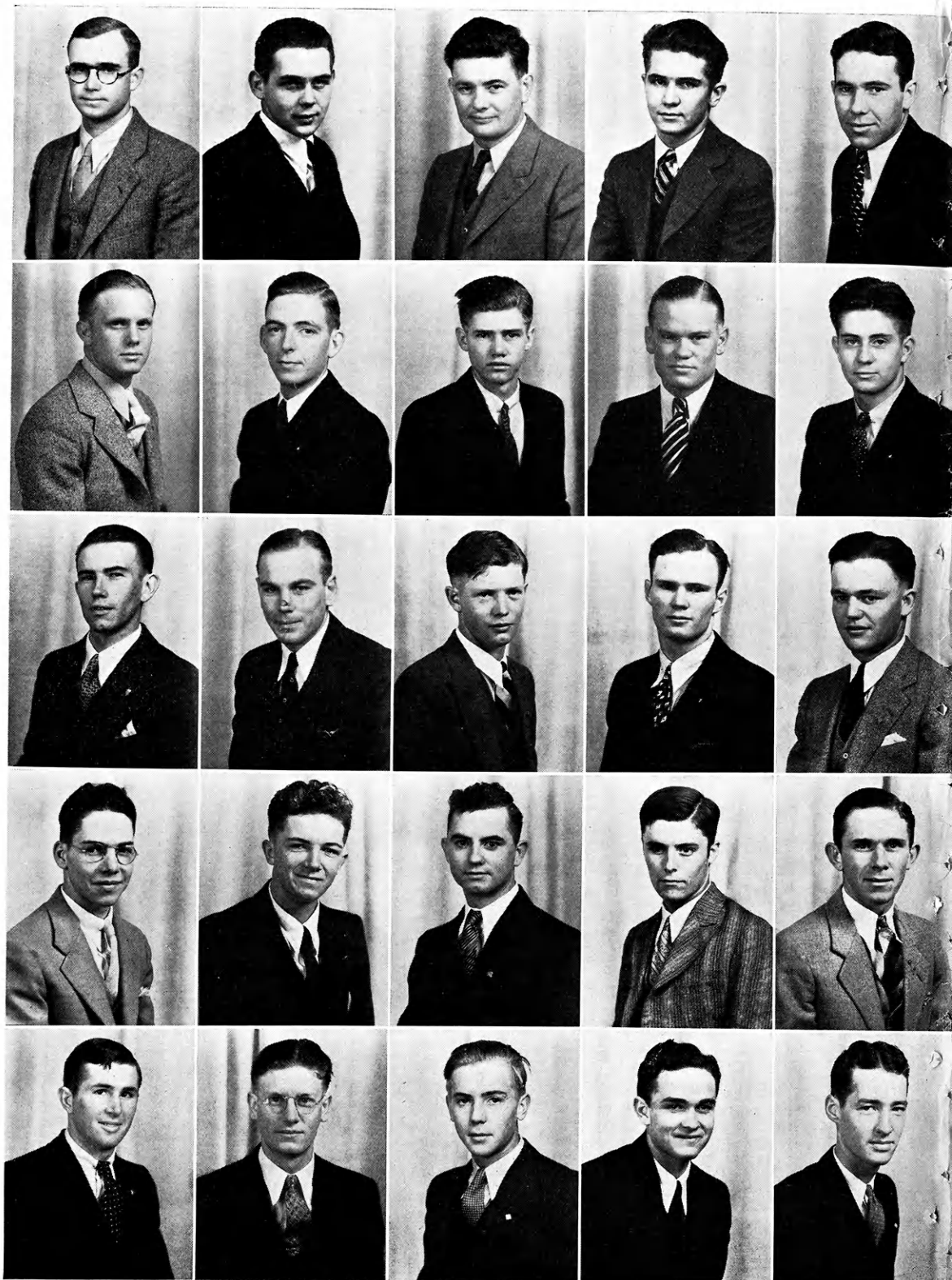
CHARLES W. MYERS
BancroftJ. LOWELL MYLER
AndoverEARL W. PARSONS
WinfieldORIL E. PENNINGTON
Winston, Mo.REMO L. PILLA
Porto Alegre, Brazil**Fourth Row**

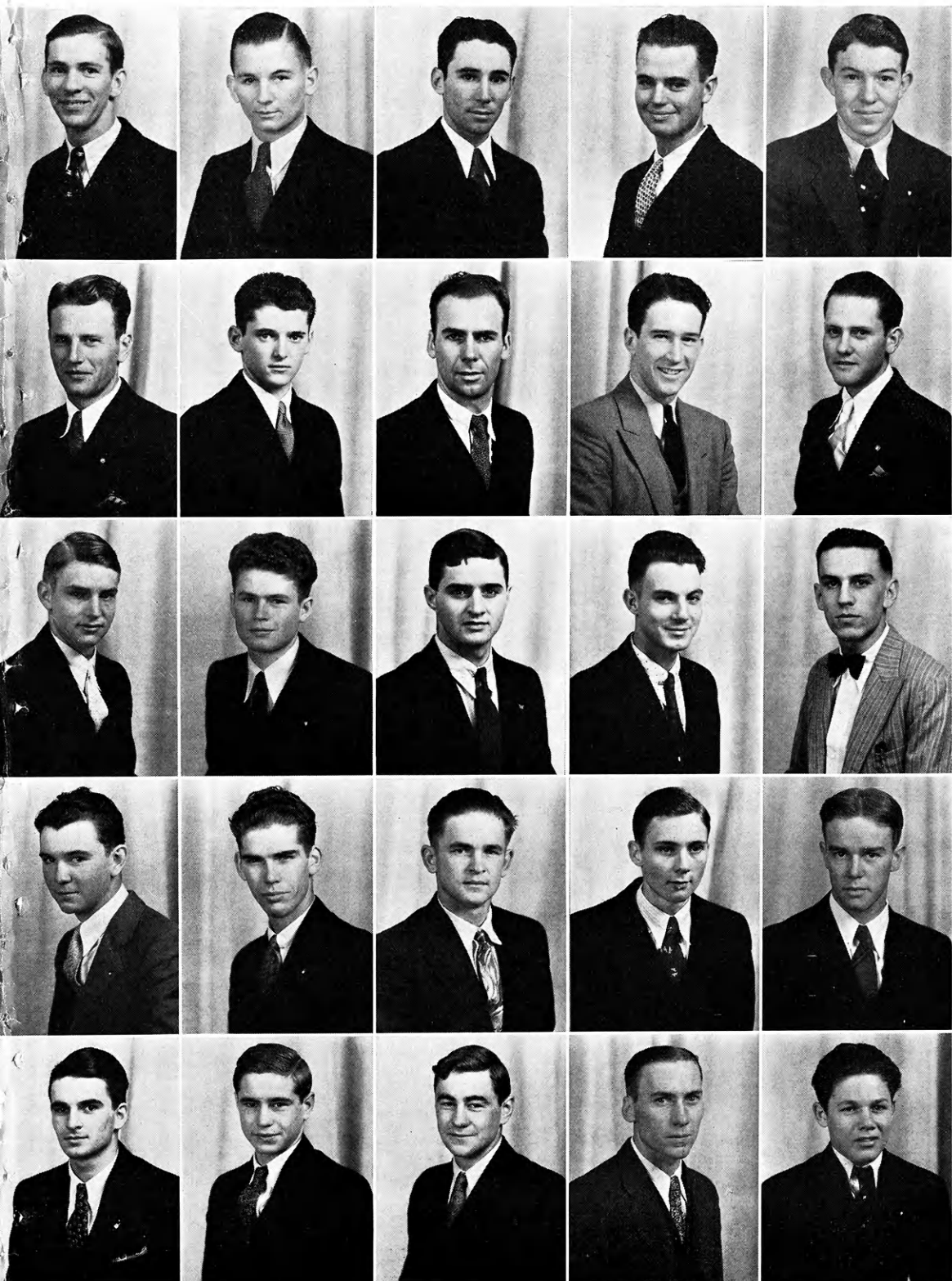
VIRGIL R. SCHIBLER
Manhattan
JOHN L. SCOTT
White City
LEBERT R. SHULTZ
Eureka
WILMER R. SMITTLE
Columbus
ROBERT D. SPENCER
Leavenworth

MAURICE H. STAUFFER
HymersPAUL W. STEPHENSON
ClementsFRANK B. STUCKEY
LeavenworthNED O. THOMPSON
ManhattanWAYNE TJADEN
Wichita**Fifth Row**

CLAUDE C. UHRIG
Preston
LEON E. WENGER
Powhattan
JOHN B. WILCOX
Lawrence
KELLY WILCOX
Jamestown
FRANK E. WILKESON
Salina

ELMER B. WINNER
TopekaJAMES E. ZIEGLER
Junction CityRICHARD H. ZIEGLER
Junction CityJOSEPH ZITNIK
ScammonEMANUEL ZOGLIN
Kansas City, Mo.

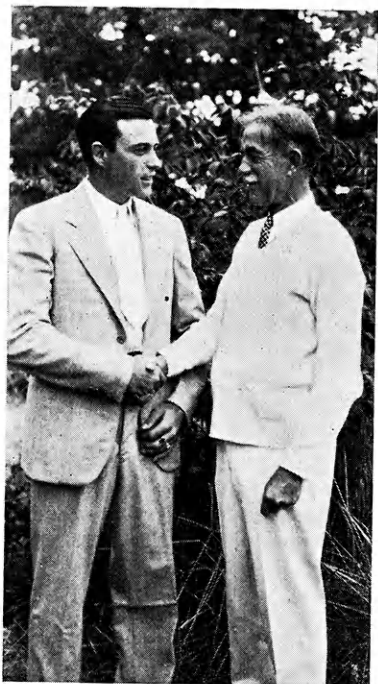




The Danforth Foundation Fellowships

John I. Miller, '33

On the morning of August 8, 1932, 31 young men, representing 30 colleges of agriculture in the United States and Canada, met at the Ralston Purina Mills in St. Louis, Mo. They were the college students who had been awarded the Danforth Foundation fellowships



JOHN I. MILLER, LEFT, AND WILLIAM H. DANFORTH, DONOR OF THE DANFORTH FOUNDATION FELLOWSHIPS

Mr. Miller was awarded the Danforth fellowship available for a junior in agriculture of K. S. C. the summer of 1932. Mr. Danforth's generous and extensive projects for youth improvement make him a public benefactor. It is impossible to measure his influence on the groups he serves.

for 1932. A fellowship is offered each year to a junior in the college of agriculture in various states of the United States and provinces of Canada. These fellows of the 1932 group had been selected by the colleges they represented and by William H. Danforth, president of the Danforth Foundation. Selections

are based upon leadership, character, personality, and scholarship. There were representatives from schools throughout the Middle West as well as from such distances as Washington, New York, Massachusetts, and the Ontario Agricultural College of Canada.

The first morning at the mills was spent in getting acquainted with each other and with the heads of the organization. A young man from Canada, two from Texas, and one from each of 28 other states certainly made a varied group of young men. In the afternoon of the first day the group left for the Purina Experiment Farm near Gray Summit, Mo., a distance of 40 miles from St. Louis. The company maintains this farm of about 320 acres for experimental work. It is very well equipped with buildings and live stock. About 70 men are employed and a great many experiments are being carried on at all times. Many of the workers are college graduates, always interested in hearing from their particular colleges.

The Danforth boys were divided into three groups; namely, dairy husbandry, animal husbandry, and poultry groups. Each group studied in detail, the experiments being conducted in its department. The procedure and methods were given the most attention. It should be stated that no effort was made to "sell" the members on the value of Purina feeds but rather to show the methods a large feed concern uses in carrying on research work. The period at the farm was especially valuable as an opportunity for each man to get better acquainted with the others. Some very interesting information concerning agriculture in the different sections of the country could be learned from these men.

On the fourth day the group returned to St. Louis to study the preparation and marketing of Purina products. Here they really learned something of

the vast size of the company and the extent and variety of its products. Although Purina chows are perhaps the most familiar to everyone, the company has 67 different products for sale. The central mill is located at St. Louis but many branch mills are located throughout the United States. The heads of the various departments gave talks on the production, advertising, and sales methods used in making and marketing these products. Tours were made through the mill and actual observations of production were made. In fact the entire organization was studied and discussed by the members of the Danforth fellowship group.

Everyone had an opportunity to see the objects of interest in St. Louis as well as some of the more important concerns associated with agriculture. Parts of several days were spent in touring such places as the St. Louis stockyards, Armour packing plant, and the St. Louis grain exchange.

At the end of the second week the Danforth boys left for the American Youth Foundation Camp at Shelby, Mich., for the next two weeks of training. The camp is located near Stony Lake and Lake Michigan and is almost an ideal spot for a camp of this kind. It is maintained throughout the summer for both boys and girls. At the time the Danforth boys were there it was open primarily for boys between the ages of 16 and 21. Approximately 150 boys were in attendance at that time. The two weeks were divided between classroom work and recreation. Courses in Philosophy of Life, Ethics, Fourfold Life Development, Essentials for Business Success, and talks by several nationally known business men were offered to the Danforth group. Recreation consisted of group games, field and track events, and swimming. The camp was directed by men and women especially fitted for this type of work and everything so managed that everyone had a very busy and profitable two weeks.

In connection with this camp it should be said that the Danforth fellowship boys of this past summer are planning on sending, next summer, one outstanding student of agriculture to this camp. Each member of the past fellowship will recommend either a senior in high school or a freshman in college to Mr. Danforth. The Danforth Foundation will then select one man from the 31 recommended for the free two weeks training in the camp. Final selection will be based upon a questionnaire sent to each of the nominees and on their agricultural leadership. The one selected will receive a high honor besides receiving the advantages of a camp of this kind. This fellowship for the camp is entirely separate from the Danforth Foundation fellowship for juniors in colleges of agriculture.

In conclusion I would like to express my thanks to all those who had a part in making it possible for me to have this very much worth-while four weeks' training last August. I will always cherish the friendships I made and expect to see many of the boys again. It was alone worth much to make the acquaintance of Mr. Danforth, who each year spends many thousands of dollars to aid in youth development. It is his belief that the money is better spent in this manner than in charity work for older people. I am sure that all those who have been benefited by one of these fellowships will agree that it is a great privilege and that the junior in K. S. C. selected next spring for the 1933 Danforth fellowship has much in store for him.

COULTER WINS

(Continued from page 13)

score of 462. The next two places were won by Four-H club judges, Ralph Dent tying for sixth place with Vincell Sundgren, each making a score of 451. Eighth place was won by George L. McCole of Emporia, a sophomore at K. S. C., with a score of 444 points.

The contest consisted of placing

seven classes of live stock and giving oral reasons on four of them. The five highest grades on reasons were: Earl C. Coulter, 185 points out of a possible 200; A. C. Thomson, 180, Walter M. Lewis, 166; C. G. Page, 163, and Harold A. Daily of Waverly, 158.

—A. C. T., '32.

DAIRY CATTLE JUDGING TEAM

The Kansas dairy cattle judging team composed of Pius H. Hostetler, Orville F. Denton, Wayne W. Jacobs, and Carmy G. Page, alternate, competed at the National Dairy Cattle Congress at Waterloo, Iowa, October 3, placing tenth with 15 teams competing. Denton was the high man of the Kansas team, tying for fourteenth individual placing in the entire contest. Hostetler was sixth on Guernseys; Jacobs, tenth on Ayrshires; and Denton, tenth on Jerseys. The team as a whole placed fourth on Guernseys and Holsteins.

The team left Friday, September 30, and traveled through Nebraska reaching Waterloo Sunday evening, October 2. In Nebraska they visited the university farm at Lincoln and Steven's Brown Swiss herd and Ibson's Holstein herd, both located near Fremont. In Iowa, they visited Meredith's Jersey farm and Chas. Mountain's Guernsey herd and also stopped at Des Moines and the Iowa State College farm at Ames.

The placings were made from 8 o'clock to 11:30, Monday morning, October 3, and reasons were given orally from 2 o'clock to 7, Monday afternoon. Monday evening, a banquet was held at which the team and individual placings were announced. Tuesday and Wednesday were spent visiting the show, the team leaving Waterloo Wednesday afternoon, spending the night in Des Moines, and arriving in Manhattan, Thursday, October 6.

The Iowa State team won first place in the contest and the team from Ontario, Canada, placed second.

—W. W. Jacobs, '34.

Earl H. (Duke) Regnier, '32, and R. F. (Bob) Lang, Physical Education, '32, are two of the five Kansas students attending the National Recreation School in New York City, training for recreation and social welfare work. Duke and Bob will be remembered for their interest and ability along these lines. The school is located at Fifth Avenue and 104th Street and offers intensive training in this particular field. The faculty and equipment, as reported by Duke, are among the best. The present enrollment in the National Recreation School is 29, nine women and twenty men. Kansas having the largest representation of any state.

Naturally these two Kansas boys are doing outside work part time to pay part of their expenses. Duke is training quartettes and leading group singing in a boys' club and Bob directs gym work for a group of newsboys five evenings a week and directs a class in handicraft three afternoons a week.

The following statements are taken from letters received recently from Duke: "The course outlined by the school is straight and clean-cut. You are assigned to every subject in the catalogue. We attend classes from 9 a. m. until 1 o'clock. The rest of the day is open for study and work. Of the graduates of this school five have located in 4-H Club work, according to Mr. Noren, director of the school. This sounds very encouraging to me. My opinion of New York is 'it's a good town to be from.' I'd give a great deal to see a tractor tearing down a field row right now."

Fred W. Schultz, '26, is food and drug inspector of the U. S. D. A., located at Portland, Oreg.

John B. Sieglinger, M. S. '15, is agronomist in the United States Department of Agriculture, in charge of grain sorghum and broom corn investigations at the Southern Great Plains Field Station, Woodward, Okla.

Recent Popular Publications of the Agricultural Experiment Station

The Kansas Agricultural Experiment Station has received from press during the past few weeks six valuable agricultural publications. Three of these are bulletins and three are circulars as follows:

Bul. No.

- 258 Factors Influencing the Time of Buying Feeder Steers and of Selling Them as Choice Summer-fed Steers. By Homer J. Henney. (35 pp., 14 illus.)
- 259 The Organization and Operation of Cooperative Creameries in Kansas. By George Montgomery and W. J. Caulfield. (43 pp., 7 illus.)
- 260 Soil Fertility. By R. I. Throckmorton and F. L. Duley. (59 pp., 21 illus.)

Circ. No.

- 166 Twenty Years of Experience with Dairy Sires. By J. B. Fitch and H. J. Brooks. (42 pp., 30 illus.)
- 167 Judging Dairy Cattle. By J. B. Fitch and H. J. Brooks. (47 pp., 21 illus.)
- 168 The Progeny Test in Poultry Breeding. By D. C. Warren. (24 pp., 9 illus.)

These are all popular publications and only two are on the same phase of the agricultural industry. One or more of these publications will be of value to a large percentage of Kansas farmers and to practically every teacher of high school agriculture. A brief review of each is given in following paragraphs for the information of the reader. Copies may be secured by addressing a post card request to Agricultural Experiment Station, Manhattan, Kansas.

BULLETIN 258

Bulletin 258 on factors affecting profits on summer-fed steers, treats the subject in a chronological way. The price at the time of buying the steers that are to be sold one year later as fat steers is emphasized as being as important as the price at the time of selling. The size of the corn crop and the

profits from feeding steers the winter before are shown statistically to be important factors to consider at buying time. After the steers are purchased the bulletin leaves the factors affecting buying until the selling period approaches in the early fall.

Nothing on the method of feeding as it affects profits is given. The important factors influencing the time of selling are the old corn crop, the new corn crop, and the peak price the previous year.

BULLETIN 259

Bulletin 259, as the subject indicates, discusses both the organization and the operation of cooperative creameries in Kansas. During the past five years, nine cooperative local creameries have been organized in Kansas. These, the bulletin points out, have operated with varying degrees of success. A few have made a profit while others have sustained heavy losses in short periods of time. The fact that some have not been successful does not indicate that conditions in Kansas are unfavorable to cooperative creameries. It simply emphasizes the importance of sound organization, careful management, and efficient operation.

In regard to organization the bulletin makes clear that cooperative creameries should be organized by the farmers of the community. The directors should be farmers and the operation of the plants should be supervised by capable managers or buttermakers. The most desirable way of financing the organization is the sale of common stock in small shares to the dairymen of the community, and preferred stock to business men and others who wish to support the creamery but do not own cows. Construction of the plant should not be started until it is certain that the creamery will have sufficient volume to enable it to operate economical-

ly. This means that the creamery should be assured of 225,000 to 250,000 pounds of butter fat annually which is equivalent to the production of approximately 1,700 average Kansas cows.

Efficient management of a cooperative creamery is considered fully as important as proper organization. The price which a creamery can afford to pay for butter fat depends upon the market price of butter, the creamery over-run, and the creamery margin. The most satisfactory method for paying for butter fat is the payment at the end of the month of a price determined from the proceeds of the butter sold during the month. This avoids the danger of attempting to "outbid" competitors or to pay more than the butter fat is actually worth.

An adequate system of records and accounts is essential, since it furnishes information for the monthly operating statement to the director, and provides a basis upon which changes and future improvements in the business may be made.

BULLETIN 260

Bulletin 260, "Soil Fertility," is intended as a sort of handbook on Kansas soils. It includes a description of the more important soil areas in Kansas and the trends of fertility in recent years. The physical and chemical composition of the soil are discussed in relation to crop production and the maintenance of fertility.

The extent of loss of fertility through cropping, soil erosion, soil blowing, and leaching is discussed along with methods of reducing these losses to a minimum. The use of manure, green manure, commercial fertilizers, and lime is discussed in relation to the production of various crops in different parts of the state.

The building up of run-down land by drainage, irrigation, and improvement or elimination of alkali spots is briefly considered.

This bulletin should be of particular

interest both to farmers and teachers of agriculture.

CIRCULAR 166

Circular 166, "Twenty Years of Experience with Dairy Sires," features the four breeds of dairy cattle maintained in the college herd.

The Department of Dairy Husbandry has maintained accurate production records on the cows in their dairy herd for more than twenty years, thereby making it possible to measure the value of the sires used. The circular is divided into four sections, each dealing with one breed of dairy cattle. It contains 23 pictures of the different sires used in the herd, along with their pedigrees. The value of a herd sire is exhibited in the ability of his daughters to produce more pounds of butter fat in a given period of time, than their dams. The comparison of the butter-fat records of the daughters and their dams is made clear by tables presented in the circular.

It is believed that the information contained in this circular should be of great value to both large and small dairymen, as the accurate study made of the various sires, their pedigrees, and the production records of their daughters will assist dairymen in making correct decisions in the evaluation and selection of dairy sires.

CIRCULAR 167

Circular 167, "Judging Dairy Cattle," is a unique publication of its class both from the point of view of illustrations and the correlation of production with type. An attempt is made to correlate scientific research, with respect to dairy judging, to the standards by which dairy cattle are judged in the show ring. Prof. W. H. Riddell says this type of judging is coming into use due to the criticisms of judging dairy cattle only on the basis of their appearance in the show ring.

The circular gives a detailed and illustrated comparison of the dairy type cow to that of the beef type, showing

the form, skeleton, and udder structure of each type. A schedule showing the scale of points for general dairy judging is given, as well as standard score cards for each of the dairy breeds. Along with the score cards there are illustrations showing the true type and an outstanding representative of each breed.

CIRCULAR 168

Circular 168, "The Progeny Test in Poultry Breeding," outlines the methods of application of the progeny test to poultry breeding problems, on the basis that the progeny test in animal breeding is the application of the principles of genetics to this field of endeavor.

The major divisions of the circular are the application of the progeny test to breeding for production qualities, to breeding for standard qualities, and to breeding for production and standard qualities combined. A short-cut progeny test is presented and the significance of the pedigree discussed.

The chief contribution of this publication is the emphasis it places upon the value of proved parental stock. The short-cut method outlined is of considerable value in facilitating the early recognition of outstanding breeders and thus avoiding much of the delay necessitated by fully proving them.

Quality in Kansas Wheat

Wheat flour furnishes on the average one-third of the total food of the American people and, hence, it is the largest single food item. To make good bread and other bakery products it is necessary to have good flour, and good flour can be made only from good-quality wheat. To many people wheat is wheat and flour is flour. To the careful users of wheat and flour there are many degrees of quality. Kansas produces more of high-quality bread wheat than any other state.

Most of the wheat flour is used for

baking light bread with yeast as the leavening agent. Other baked articles such as hot biscuits, cakes, and various pastries use soda with some acid or acid salt as the leavening agent. Wheat may in general be classed as hard or soft. The hard wheats make the best flour for making light bread, and the soft wheats are better for the other class of baking. Most of the Kansas wheat is hard and, hence, it is pre-eminently a bread wheat.

The best hard wheats are produced where the annual rainfall is 30 inches or less. In the main wheat belt of Kansas the average rainfall is about 25 inches. The soft wheats are grown where the rainfall is about 35 inches or more, hence these wheats are confined to the extreme eastern and particularly southeastern Kansas. Hard wheat is well suited to the conditions of central Kansas. It ripens early enough to escape the hot winds of the summer.

The hard wheats from Kansas and the Southwest have a good reputation in the export markets. The importing countries need hard strong wheat because their own wheat and that of nearby countries is soft or weak. The hard strong wheat is needed for blending in order to get a satisfactory bread flour. Kansas wheat is particularly adapted to meet this need. The most pressing agricultural problem is the wheat surplus. The best solution lies in greater exports, and Kansas wheat has the particular quality of strength required by importing countries. —C. O. Swanson, Head, Department of Milling Industry.

E. S. Lyons, '21, formerly a member of the faculty in the Department of Agronomy, is assistant soil technologist in the Bureau of Chemistry and Soils of the U. S. D. A. At the present time he is located at Scottsbluff, Nebr., where he is engaged in sugar beet fertilizer work.

NEW CREDIT FOR AGRICULTURE

(Continued from page 7)

as elevators, warehouses, creameries, and other equipment suited to the marketing of the various agricultural commodities.

Seed loans secured by a mortgage on the crop have also been made to individual farmers. These loans have been made through the United States Department of Agriculture.

Regional Agricultural Credit Corporations have recently been established under the Reconstruction Finance Corporation. These corporations have the authority to lend funds for many agricultural purposes. At present, most of their activities are concerned with live-stock loans. Farmers may secure loans for breeding herds, range production of live stock, and on stocker and feeder live stock. These loans are made with interest at 7 per cent which also covers all inspection charges. The headquarters of the Regional Agricultural Credit Corporation serving the district of which Kansas is a part, is at Wichita, Kan.

These new credit sources for agriculture were established by Congress in answer to an urgent need of the farmer and the local banks, which were unable to serve adequately the demands of agriculture. Much has already been done to relieve the strain upon the agricultural banks and many farmers and live-stock men who were in need and could use additional credit to advantage have been granted loans.

This new agricultural credit is, in reality, a closer cooperation between the local banks, the Federal Intermediate Credit banks, and the Federal Reserve System, with the necessary machinery to better meet the credit demands of agriculture. Under the new system of cooperation between the Federal Reserve and the Intermediate Credit banks the future of intermediate credits and the maximum usefulness of the Federal Reserve to agriculture depends very largely upon the develop-

ment of financial institutions such as those discussed herein.

It cannot be expected that a revised credit system, taken alone, will cure all the ills of agriculture, but these new institutions of credit are serving a genuine need.

TURKEY RAISING

(Continued from page 9)

made in sections and can be taken out and washed. By using this method the poults cannot become chilled, cannot eat anything but what is given to them, and do not pile up and smother. The pens are 2 feet high, 3 feet wide, and 7 feet long. About 50 poults are placed in each pen. Lacking the facilities for this method of brooding, fairly good results may be expected if an ordinary brooder stove and hover are used. The corners of the house or pen should be rounded to prevent the poults from piling. The house should be thoroughly cleaned and disinfected and sand used on the floor.

The poults must receive all the necessary nutrients from a finely-ground mash which is fed in a 3-foot mash hopper placed inside the pen. For the first few days rolled oats is spread on top of the mash to get the poults to start eating. The following all-mash ration is used for the first three weeks; then 4 per cent tobacco powder is added to help control parasites which might be picked up later on the range.

Ground yellow corn.....	200 pounds
Ground oats	150 pounds
Ground wheat	200 pounds
Wheat bran	150 pounds
Alfalfa leaf meal	50 pounds
Meat scraps	150 pounds
Dried buttermilk	100 pounds
Cod-liver oil	10 pounds

At four weeks of age the poults are moved out on the range.

Under Kansas conditions about 75 turkeys to an acre are sufficient. The range should have a good stand of some green feed crop such as alfalfa; should not have had chickens on it for several years previous; and should be

(Continued on page 26)

The Tribune Agricultural Experiment Station

Andrew B. Erhart, '33

In the extreme western part of the state, often known as the grazing region of Kansas, there has long been a need for reliable information relative to the growing of feed necessary to supplement the low carrying capacity of the native buffalo and grama grass pastures. This need led to the establishment of the Tribune branch of the Kansas Agricultural Experiment Station in 1911, in Greeley county, 16 miles from the Colorado line and midway between the Smoky Hill and Arkansas rivers. This region is passing rapidly from a grazing area into a region where large-scale farming is being successfully conducted.

The Tribune station consists of approximately 100 acres, about 70 acres of which is divided into fields and plots of various sizes and used for experimental purposes. Experiments of most importance deal with crop rotations, soil fertility, variety tests, methods of seedbed preparation, time and method of seeding, and width of row.

Kanred wheat has proved the best of the standard wheat varieties over a period of years with a seven-year average yield of 18.4 bushels per acre on summer fallow and 9.8 bushels per acre on cornstalk ground. From September 1 to 15 seems to be the optimum date of seeding as there is little or no damage by Hessian fly and the early seedlings are more likely to escape winter killing.

The highest-yielding variety of corn, based on the last six-year average yield, is Cassel, a rather early-maturing white corn developed by the station's first superintendent, C. E. Cassel. This variety has averaged 20.6 bushels per acre for the past six years. Hays Golden, its nearest competitor, made an average yield of 18.8 bushels per acre for the same six-year period. The "plant two skip one" method of planting, that is, plant two 42-inch rows

then leave one blank, has given the greatest return in bushels per acre, as an average for the last eight years, yielding 16.7 bushels, while 84-inch rows produced 15.4 bushels and 42-inch rows, 14.9 bushels.

Freed sorgo and Red amber have led the standard sorghums in grain production during the past five years but have been surpassed by new material developed at the station which gives promise of being worthy of distribution among the farmers of this region. Recent demands for combine types of sorghums have led to quite extensive variety testing and there are some promising varieties now being grown. Sorghum width-of-row tests have given evidence as conclusive as the corn width-of-row tests in favor of the wider spacings. Forty-two-inch rows have yielded 8.7 bushels per acre; plant two skip one, 9.7 bushels, and 84-inch rows, 11.4 bushels (seven-year average).

In an 11-year average, Kanota oats has yielded 5.5 bushels more per acre than Red Texas and seems the best adapted variety of oats grown in this region, having an average yield of 25.5 bushels per acre. Stavropol barley yielded 17.7 bushels per acre (seven-year average); this yield was 1 bushel more than Coast, its nearest rival. Spring wheats seem to have no place in this region as the highest 10-year average yield was 7.5 bushels per acre. These yields for oats, barley, and spring wheats are averages for plantings on fallow and cornstalk ground.

A great many varieties of flowers as well as garden and vegetable crops may be grown in this region if care is taken in preparing the land for planting, in the choice of varieties, and in frequent irrigation.

Chinese elm, Russian olive, green ash, red cedar, hackberry, and cottonwood trees do quite well in this section

if well cared for, especially during the first two years.

The high altitude and low average annual rainfall of this region make it particularly important to use extreme care in the selection of crops and varieties of crops, and to consider carefully the various methods of growing the crops selected. The branch Agricultural Experiment Station at Tribune is having a large part in the agricultural development of this section of Kansas.

TURKEY RAISING

(Continued from page 24)

enclosed with a 5- or 6-foot fence of wire netting.

Some sort of shelter should be provided if the poults are put out on range early in the spring. An enclosed house would be best. If the poults are not put out until the weather is warm a roof enclosed with woven wire is cheap and efficient.

After the poults are put out on range the cod-liver oil and the alfalfa leaf meal may be removed and more corn added to the ration. Plenty of hopper space should be provided and the hoppers should be so constructed that they can be moved often and that the mash will not get wet. The birds should have free access to the hoppers. When the poults are about 16 weeks of age they should be fed a grain ration of 1 part wheat to 3 parts corn. This could be varied to suit the supply of grains in the different localities. Half-bushel measures make excellent water containers. Fresh water should be kept before the birds at all times and the water pails moved often to prevent contamination of the surrounding soil.

Sanitation is very important in raising turkeys. An outbreak of blackhead in a turkey flock is very expensive and hard to control. It is for this reason that artificial incubation and brooding are recommended. The tobacco dust in the ration helps to keep down parasites but will not eliminate parasite trouble

if sanitation is neglected. Outdoor roosting space should be provided after the poults have begun to fly. The accompanying photographs show two types used at K. S. C. One is movable and is very satisfactory. It provides a dropping board which also serves as a sunshade. The dropping boards are easily cleaned and the turkeys are screened away from the droppings. The roost can be moved easily and encourages the turkeys to forage on new ground. A temporary roost can be constructed with posts and wire. The droppings may be scraped off the ground and removed from time to time.

Mid-West Horticultural Exposition

The apple judging team will compete this year in an intercollegiate contest to be held in connection with the Ninth Mid-West Horticultural Exposition. This exposition is held in the even-numbered years, and this year it is to be held at Marshalltown, Iowa, November 15 to 20, 1932, under the auspices of the Iowa State Horticultural Society. The exposition covers the entire scope of midwestern horticulture and in certain classes the entire United States and Canada. Exhibits will include fruits, vegetables, home-canned products, edible nuts, flowers, and honey products.

Any agricultural college in North America offering a course in horticulture may enter a team (three persons) in the apple judging contest. To be eligible the student must be enrolled as an undergraduate in an agricultural course and must not have taken part in any other intercollegiate apple judging contest any previous season.

The apples for the contest will be taken from the exhibits. The contest will include 15 classes of apples to be identified and placed and 100 speci-

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Annual Meeting of American Institute of Cooperation

Franklin L. Parsons, '32

Problems of cooperation among farmers and agricultural organizations have reached such a magnitude during recent years that the American Institute of Cooperation has been founded to further cooperative endeavor and to help solve some of the problems. Last year the Institute met at Kansas State College, Manhattan, for the week, June 8 to 13. This year it convened August 1 to 6 at the University of New Hampshire, Durham, N. H.

The American Institute of Cooperation is composed of cooperative organizations in the United States. An office is maintained in Washington, D. C., where a secretary looks after the interests of the organization in Washington and conducts the affairs of the institute each year.

According to Dr. W. E. Grimes of the Department of Agricultural Economics, who attended the meeting in August, the program this year was devoted to a discussion of problems of cooperation dealing with the products of New England and the Middle Atlantic States. Two forenoon sessions were given to questions and policies of the Federal Farm Board. Dr. Grimes stated that these meetings attracted the largest attendance because of the addresses of Dr. E. G. Nourse of the Institute of Economics and Carl Williams, member of the Federal Farm Board.

Dr. Nourse contended that it is impossible to eliminate competition in the marketing of farm products because the competition is among the units of the products marketed, whether they are marketed by one agency or a number of agencies. He also contended that the tendency of members of the Federal Farm Board has been to encourage the view that a cooperative can secure a monopoly on a product

and exercise monopoly control satisfactorily.

Mr. Williams countered by saying the Federal Farm Board did not subscribe to the idea of monopoly control. He defended the policies of the board with reference to specific national marketing associations.

Dr. Grimes presented a paper discussing the program and some of the problems of the Farmers National Grain Corporation. He outlined the history of the grain-marketing program of the Federal Farm Board. It was out of a meeting of members of the Farm Board and officials of grain-marketing associations, as well as others from general farm organizations, that plans came for a national grain-marketing agency to include all cooperative grain-marketing associations in the United States choosing to join in this national movement. As a result of these efforts the Farmers National Grain Corporation came into existence in October, 1929.

As recorded in the speech one of the primary objectives of this national cooperative agency set up by Farm Board leadership was to coordinate the activities of grain cooperatives in various terminal markets and in various sections of the country and provide a direct route for grain to move from farm to mill or export market.

The Farmers National Grain Corporation has been successful in coordinating the activities of terminal cooperatives as is evidenced by the agreement of three terminal cooperatives, who were operating on the Kansas City Board of Trade in competition with each other and with private grain companies, to take stock and become members of the Farmers National Grain Corporation.

In the concluding part of his paper

Dr. Grimes stated that, "The biggest problem now confronting the Farmers National Grain Corporation and the Federal Farm Board in their grain-marketing program is to secure the loyal support of grain producers. The outstanding problem is in handling people rather than commodities as is almost universally true in cooperative marketing."

HORTICULTURAL EXPOSITION

(Continued from page 26)

mens to be identified. A class of apples will consist of three plates of five apples each. These 15 classes will be selected from 20 of the most common varieties. The apples for identification will include single specimens from 30 or 35 of the more common varieties.

The point system of scoring will be used to determine the winners. The perfect score for the contest will be 2,225 points and the points are to be awarded as follows: 1,500 for the perfect judging of the 15 classes, 225 points for the correct identification of all the apples in the contest, and 500 points for the correct naming of all the 100 specimens in the separate identification list. The team with the highest aggregate score will be awarded a cup.

—E. A., '33.

Fred P. Eshbaugh, '26, is station horticulturist and associate professor of horticulture at the Panhandle Agricultural College, Goodwell, Okla. Goodwell is located about 68 miles southwest of Liberal, Kan.

Bernie W. Wright, '24, county agricultural agent of Russell county, puts out a weekly news letter to his farm bureau members. This letter is a regular feature of his extension program and contains information on coming events of interest to farm bureau members and brief items about the happenings in his county, especially along general agriculture, home economics, and 4-H Club lines.

Combine Sorghums for Southwestern Kansas

The statements made in this article refer to the portion of Kansas lying west of a line drawn through Liberal, Garden City, Oakley, and Colby. This section of Kansas is a wheat-producing area and the common belief of the people seems to be that wheat farming and combine sorghums go hand in hand, irrespective of location. This is not true. The combine sorghums as produced to date, due to the length of season required for maturity, are adapted to a more limited area than is winter wheat.

The principal advantage of a combine-type sorghum is the economy of harvesting. This type of sorghum has become popular with the wheat producer because it is adapted to the use of a combine for harvesting and threshing. The disadvantages, however, are: (1) It often will not yield so much per acre as other types of grain sorghums adapted to this area. (2) In northwestern Kansas the growing season is too short to guarantee a ripened crop. (3) The fodder yield per acre is small, therefore the crop must be considered as a grain crop only. (4) If the grain as harvested contains more than 14 per cent moisture, it cannot be stored in bulk without danger of heating.

The two best known varieties of combine sorghums are Wheatland and Beaver. The Wheatland variety has received state-wide publicity and has given excellent yields in central Kansas. Wheatland in the northwestern Kansas counties will not mature a grain crop under average conditions. This variety may prove its worth, however, south of the Arkansas valley because it is a high yielder, provided climatic conditions are favorable. Beaver shows less promise than Wheatland in Kansas, with the possible exception of the southwestern counties.

Through the efforts of J. B. Sieglinger of the Southern Great Plains Field

Station, Woodward, Okla., A. F. Swanson of the Fort Hays Agricultural Experiment Station, Hays, Kan., and E. H. Coles of the Colby Agricultural Experiment Station, Colby, Kan., new varieties that show promise as combine sorghums for western Kansas are being produced. These new varieties are not as yet released for distribution in Kansas but they have a very short growing season and have every indication of being high yielders with rigid, strong stalks. Any quick-maturing sorghum that has a short stalk strong enough to withstand lodging from the time of ripening to the time it may be harvested, and that produces a high yield of seed suitable for live-stock feeding, is a desirable combine sorghum whether it be of the kafir or milo type. The Wheatland and Beaver varieties have some of the qualifications required in the extreme western counties of Kansas but still earlier types would be desirable. It is hoped that a variety which meets these requirements will be developed to supplement properly the wheat-farming program of this section. —H. L. Murphey, '28.

K. S. C. Hereford Breeding Herd

The Hereford breeding herd at Kansas State College consists of 25 cows of breeding age. The principal reason for maintaining this herd is to provide judging material for the students in animal husbandry judging classes. In order that students may better appreciate the type and individuality of the cattle which are judged, representative animals produced by the college are shown at some of the major live-stock shows. Four Hereford steers will be shown at the American Royal, November 12 to 19, 1932.

At the present time special interest is centered in the herd bull, Lassie's Tone 1759101, which heads the Hereford herd at Kansas State College. This

bull was bred by Mr. Robert H. Hazlett of Eldorado, Kan., and has been loaned by him to the college for a period of one year. (He may be seen in the cover page picture of this issue with a few of the cows and heifers of the college herd.) He was sired by Hazford Tone 1093542, a bull that won first as a three-year-old in the 1924 International Live Stock Exposition. Hazford Tone 1093542 was sired by the 1916 International Grand Champion, Bocaldo 6th 464826. It is this line of breeding that has placed Mr. Hazlett in the front rank as a breeder of Herefords.

Five Hereford cows in the Kansas State College herd were purchased a few years ago from Mr. Hazlett. Each one is an excellent individual and it is believed they will cross well with Lassie's Tone, for such matings have consistently resulted in outstanding individuals in the Hazlett herd.

It is interesting to note that the best Hereford steer in the college herd at the present time is out of a Hazlett bred cow. —A. D. Weber, Professor of Animal Husbandry.

Frank R. Freeman, '32, is farming on Route 2, Kirwin, Kan.

H. W. Mathews, M. S. '31, is in the commercial research department of Swift and Company, Kansas City, Mo.

W. M. Myers, '32, has an assistantship in plant genetics in the University of Minnesota. He is also working on his master's degree.

C. O. Jacobson, '28, is in charge of the work in dairy manufacturing at the College of Agriculture, University of Arkansas, Fayetteville.

The state county agent headquarters reports that of the 78 county agricultural agents in Kansas, 70 are graduates of the Division of Agriculture of K. S. C.

Wheat for Fattening Hogs

Wheat has long been recognized by research workers and practical feeders as a good feed for live stock. Its value as a cash grain, however, usually prevents its being used for this purpose. During the past two years wheat has been so low in price and so plentiful that many feeders have been feeding it to live stock. This situation has caused an unusual number of inquiries to be received by the Department of Animal Husbandry of the Kansas Agricultural Experiment Station regarding the feeding of wheat to hogs. During the past summer an experiment was conducted by that department to compare wheat and corn (fed separately) for fattening hogs on alfalfa pasture.

The swine used in the experiment were pure-bred, Duroc-Jersey, spring pigs of practically the same age, type, breeding, and weight. They were grouped into three lots of 10 pigs each, with as much uniformity as possible. All three lots were fed on self-feeders. The grain and protein supplement were fed in the same feeder in separate compartments for a period of 84 days. The following rations were fed: Lot I, shelled corn and tankage; Lot II, whole wheat and tankage; and Lot III, ground wheat and tankage.

The variation in the average daily gains of the three lots was not great enough to justify one in saying that one feed was superior to the others. The average daily gain for the corn-fed lot was 1.48 pounds; for the whole-wheat lot, 1.45 pounds; and for the ground-wheat lot, 1.48 pounds.

The results of the experiment showed that wheat was more palatable than corn, as shown by daily feed consumption. The corn-fed pigs ate on an average 5 pounds of grain per day; the whole-wheat pigs ate an average 5.45 pounds per day; and the ground-wheat pigs, 5.1 pounds per day. It was also noted that the corn-fed pigs consumed more tankage than the wheat-fed pigs,

with the ground-wheat pigs consuming the least.

In considering the amount of grain required to produce 100 pounds of gain, the corn-fed pigs consumed less grain but more tankage than did the wheat-fed pigs. It was noted that manure from the whole-wheat pigs contained a considerable amount of undigested grain. The cost of gain was computed on the basis of corn at 30 cents per bushel, wheat at 35 cents per bushel, and tankage at \$27.50 per ton. The cost per 100 pounds of gain for the pigs fed corn was \$2.14, for those fed whole wheat, \$2.41, and for those fed ground wheat, \$2.23. A charge of 10 cents per hundredweight was made for grinding the wheat.

These results show that the relative price of wheat is the determining factor in feeding wheat in preference to corn, to fattening hogs.

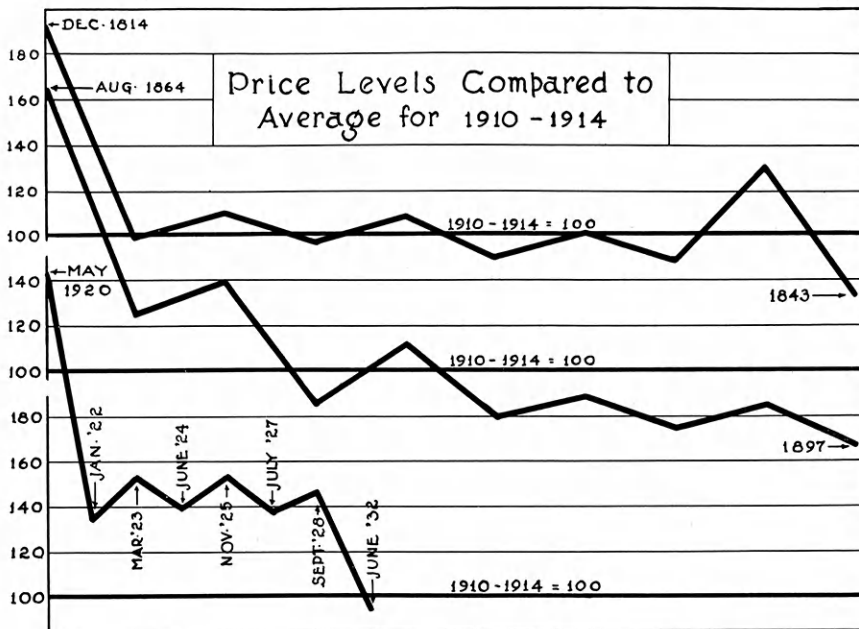
—Raymond B. Wagner, '33.

George J. Raleigh, '22, is extension specialist in vegetable gardening, Cornell University, Ithaca, N. Y.

T. W. Kirton, '29, formerly with the Shadow Lawn dairy at Clay Center, one of the outstanding Jersey farms in the United States, is now county agricultural agent of Kingman county.

H. F. Moxley, '25, is extension animal husbandman in Michigan State College. His major project is horse production. Two of the seven colts he picked for 4-H Club boys, were champions at the Michigan State Fair this fall.

L. A. Peck, '31, M. S., Illinois '32, is employed by the Warren Mortgage Company whose central office is at Emporia, Kan. He is managing the investors' real estate of the John Hancock Life Insurance Company. He has at the present time 75 farms under his supervision.



Taking the Bumps After Three Great Wars

Not wars, but what is done during wars causes the trouble afterwards. One thing that is done in every war was done on a grand scale during the last war. Twelve to fifteen years ago we went down town with our check—our income—in our right hand and bought with the whole of it. In our left hand we had all the credit that merchants and bankers would give. We bought with it, too. We bought with both hands. Behind wheat prices, hog prices, clothes prices, and all, were total national income plus all the new credit we could get. Uncle Sam did likewise. Everybody was doing it.

Then came a day when some of the old promises came due. We could no longer spend all of our check or income for commodities. Part of it had to go to pay old promises. It was credit when we got it but debt when we had to pay it back. Behind wheat, hog, cattle, clothes, and other commodity prices there was now only a piece of an income. Whereas commodity prices had been supported by national income plus new credit, they were now supported only by part of income. Commodities were no longer an attractive speculation. Money to pay debts was becoming more important.

The first drop in price was about 45 to 50 per cent after each of the last three great war periods. (See figure above.) Debt settlement, private and public, became the problem of first concern. The utility and value of a dollar increased. There were temporary improvements and short upturns in prices followed by declines to lower levels. Not until debt settlement to some degree had been effected was bottom finally reached. It is debt, says the farmer of today, that hurts.

—R. M. Green, Professor of Agricultural Economics.

In the next issue "Bumping Our Way Into Debt Settlement" will be discussed.



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