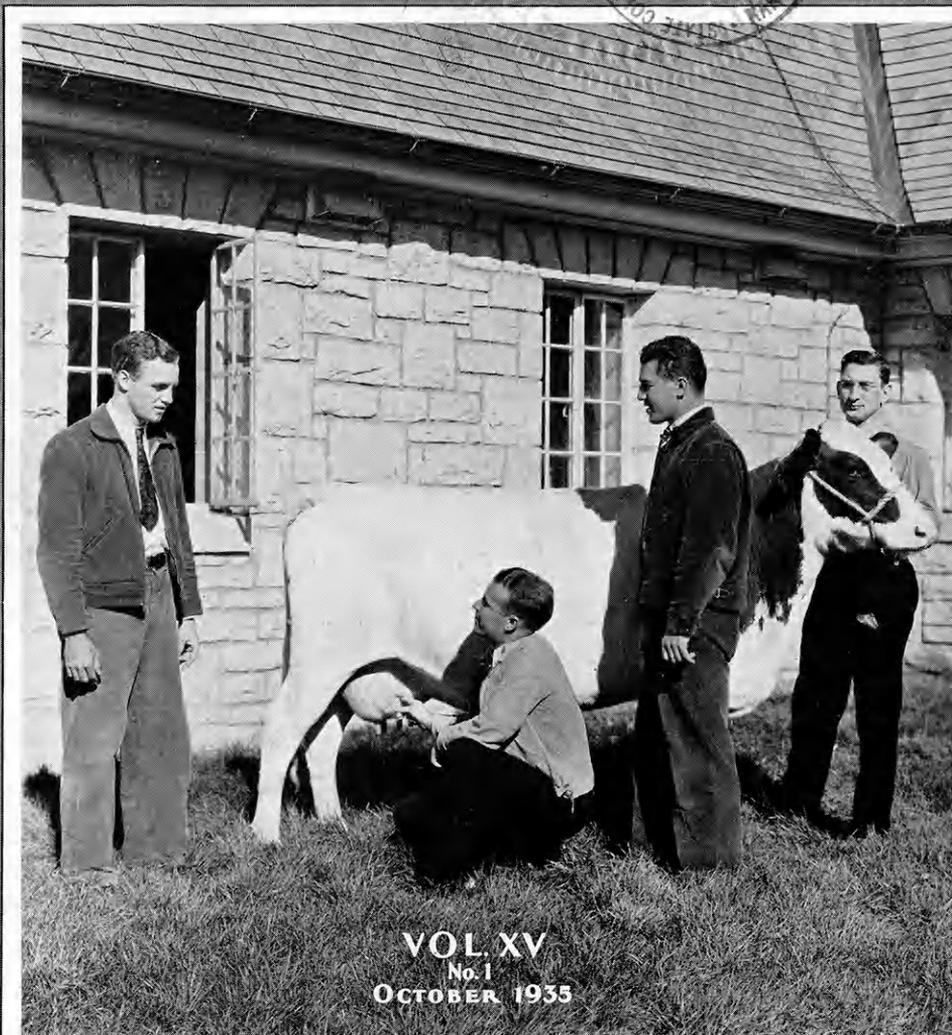


# THE KANSAS AGRICULTURAL STUDENT MANHATTAN, KANSAS



VOL. XV  
No. 1  
OCTOBER 1935

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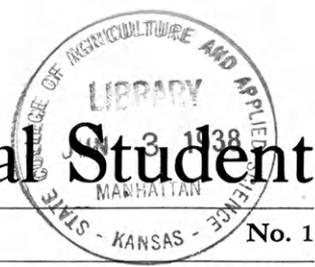
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# The Kansas Agricultural Student

VOL. XV

Manhattan, Kansas, October, 1935

No. 1



A CAMPUS VIEW SOON AFTER DISMISSAL OF COLLEGE ASSEMBLY

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PRINCIPALS IN NINTH ANNUAL AG BARNWARMER

Miss Winifred Winship, queen.

Robert T. Latta (left), assistant manager; Robert W. Kirk, treasurer; and Earl W. Parsons, manager.

# Kansas Farm Conditions<sup>1</sup>

Gerald J. Brown, '36



Indications point to a larger income for Kansas farmers from cash marketings in 1935 than was obtained in 1934. This increased income comes to the farmers in spite of the fact that the crop season of 1935 was one of many adversities. The spring was dry and windy which resulted in some of the worst dust storms in the history of the state, many acres of central western and western Kansas soils being seriously eroded. This sort of a spring was followed in eastern and northern Kansas by heavy rains and some of the most disastrous floods the people of Kansas have ever seen. Flood waters swept down the Republican and the Kaw river valleys, as well as many other river valleys in the state, destroying thousands of acres of crops and ruining many acres of land, some permanently. The floods were followed by one of the most serious of Kansas droughts, which was followed again by generous rains in late August, September, and October over most of the eastern three fourths of the state. Altogether the crop season of 1935 was most unusual.

In most parts of eastern and central Kansas, farmers obtained a heavy first cutting of alfalfa and a fair second cutting but the third cutting was practically ruined by the drought. The estimated corn crop for Kansas is 30,934,000 bushels as compared with last year's crop of 10,576,000 bushels. The winter wheat crop yielded 20 million bushels less than last year's short crop. The oats crop of 1935 was more than double that of 1934 and the estimated yield of grain sorghum is more than five times the yield of 1934.

The smaller wheat crop in 1935 will tend to reduce the crop sales for the last half of 1935 but this is partly offset by larger quantities of most crops, part of which have or will come to market either directly or indirectly during the

last half of 1935. The smaller supply of livestock to be marketed will be partly or wholly offset by better prices received by the producer. With the exception of dairy products, prices of practically all classes of livestock and livestock products have shown substantial gains over 1934. In a few cases the gains have been 100 per cent or more.

In comparing livestock marketings in Kansas in 1935 with those of 1934, the difference in the type of marketing should be kept in mind. Last year the receipts tended to be increased by inventory decreases, the selling off of breeding stock and unfinished animals as well as other types of drought-relief livestock. This year there is an opposite tendency. The cash receipts have been and may be further reduced by the holding back of young stock to replace or increase breeding herds and flocks. Income from cattle, poultry, and hogs is being especially augmented by the price situation.

Total crop returns and a larger income do not tell the whole story. The increased income was not distributed evenly throughout the state. The east central and eastern parts of the state received more than their share while the west central and the western parts of the state, where wheat is the main source of income, received less than their share. Relief for the coming winter in central western and western Kansas is a serious problem due to the fact that no income will be available to the larger percentage of the people until a wheat crop is raised. Last spring nearly every source of finance for farming operation was exhausted. This has placed quite a number of farmers upon relief in addition to those placed there through lack of business. Though the money for feed furnished through drought relief is not expected to be more than 15 to 20 per cent of last

1. The author is indebted to Prof. J. A. Hodges for assistance in preparing this article.

(Continued on page 26)

# College Notes

## NINTH ANNUAL AG BARNWARMER

The ninth annual Ag Barnwarmer, Friday, November 8, 1935, was an Ag fall festival long to be remembered. Instead of the usual hay, straw, and evergreens, fall foliage, corn, and sorghums were used in the decorations creating a spot of beauty and establishing a pleasing atmosphere. Only a glimpse at the many dancers told of the good time being had by the Ags and their dates. The music satisfied even the most critical.

The queen had been elected the previous Tuesday and Wednesday by Ag ticket holders but was not announced until the five princesses had been presented to the crowd and a beautiful little corsage pinned on each one by Miss Margaret Knerr. Dean Call announced the queen, Miss Winifred Winship, Phillipsburg, escorted her to the throne, and placed a crown of chrysanthemums on her head. The princesses attending the queen were Frances Aicher, Hays; Berta Mae Frickey, Oberlin; Rosethel Grimes, Manhattan; and Rachel Williams, Meriden.

The usual attire of overalls andingham dresses was the order of the evening. Several students of each of the other divisions were given invitations and from reports all enjoyed the informality of the party. Anna Mae Winburn and her Cotton Club Boys furnished wonderful music, and did everybody make use of it? At least the floor was always filled with enthusiastic dancers.

Refreshments of cider and doughnuts were served in the room to the west of the main floor in the gymnasium. From the enthusiasm going on around the cider barrels and doughnut boxes, it could be said that the refreshments were enjoyed.

The success of the Barnwarmer was due not only to those directly in charge but also to the entire group who took

an active part in it. Earl W. Parsons, manager, was assisted by Robert T. Latta and Robert Kirk. The decoration committee included Wayne D. Shier, Ival J. Ramsbottom, Robert D. Spencer, and Lyman C. Calahan. The lighting was in charge of Eddie R. Lamb.—A. C. A., '36.

## LIVESTOCK JUDGING TEAM IN THE AMERICAN ROYAL CONTEST

In the intercollegiate judging contest at the American Royal Livestock Show, October 19, 1935, with fifteen teams competing, the Kansas Aggie team placed fourteenth. In spite of the fact that the team didn't rank very high, much was accomplished in the contest. The scores, out of 5,000 possible points, for the first five teams were:

Oklahoma A. & M. College.....	4,578
Iowa State College.....	4,550
University of Nebraska.....	4,545
Texas A. & M. College.....	4,523
Pennsylvania State College.....	4,521

The score of the Kansas team was 4,359. This is 2.19 points per grade per man below the score of the winning team. (Each man in the contest received 20 grades.)

The members of the team were:

Howard A. Moreen.....	Salina
Philip W. Ljungdahl.....	Menlo
J. Edwin McColm.....	Emporia
L. Wayne Herring.....	Tulia, Tex.
Ned O. Thompson.....	Manhattan
Arthur C. Ausherman (alt.).....	Elmont

The Kansas team placed sixth on horses and tenth on cattle. Moreen was high man on the Aggie team, placing seventeenth among the 75 contestants.

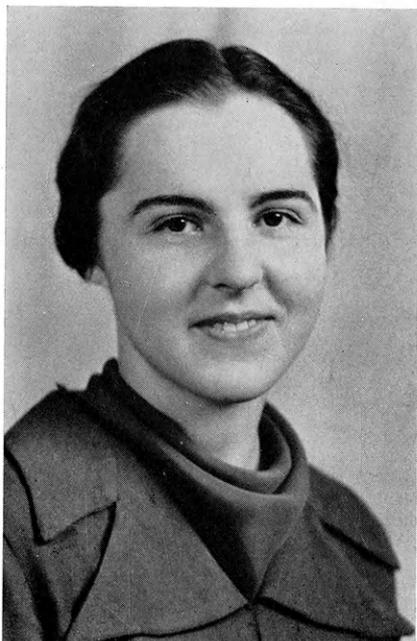
The team did some work on stock at the American Royal that was of real value to the members. They hope to use the experience gained at the show and apply it at the International contest. Prof. F. W. Bell of the Department of Animal Husbandry coached the team.—A. C. A., '36.



Rosethel Grimes



Berta Mae Frickey



Frances Aicher



Rachel Williams

PRINCESSES OF THE NINTH ANNUAL AG BARNWARMER

By a preliminary ballot five princesses were elected. From these five the queen was elected by a final ballot. The remaining four princesses were the queen's attendants.

**HONOR ROLL, 1934-'35**

For the past college year, 1934-'35, in the Division of Agriculture, 179 students are hereby commended for credit-able and satisfactory scholarship. Each of these students carried on regular assignments not less than 12 credit hours of work each semester, had practically no delinquencies throughout the year, and made a total of not less than 48



F. LOUIS BROOKS

Mr. Brooks made the highest scholarship average of any freshman in the Division of Agriculture in 1934-'35. In recognition of his achievement the honor fraternity of Alpha Zeta will award him a medal. This will be the fourteenth year Alpha Zeta has made such an award.

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

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.

winners of high honors. Both the high-honor and the honor groups are listed below:

**HIGH HONOR ROLL, 1934-'35**

Seniors	Home P. O.	Credits	Scholarship av.
Albert A. Thornbrough	Lakin	33	3.00
A. Glenn Pickett	Americus	38	2.97
Charles E. Murphy	Leoti	25	2.84
George A. Rogler	Matfield Green	31	2.74
Robert J. Danford	Hutchinson	35	2.57
Robert E. Phillips, Jr.	Joplin, Mo.	27½	2.56
Ralph D. Shipp	Agra	33	2.49
Donald R. Cornelius	Wheaton	32	2.41
Walter M. Lewis	Larned	31	2.39
Irving B. Hawk	Effingham	34	2.35
Leslie W. King	Wichita	31	2.35
Raymond J. Doll	Ellinwood	33	2.34
Harry G. Sittler	Lake City	33	2.33
William R. Yerkes	Hutchinson	35½	2.31
Verle R. Oline	Sterling	34	2.29
Armand H. Rousseau	Seattle, Wash.	31	2.29
Harold E. Grogger	Solomon	34	2.18
John R. Patton	Columbus	34	2.18
Dorwin C. Wright	Bronson	33	2.17
Clifford L. Harding	Wakefield	31	2.10
Gerald A. Simpson	Milton	33	2.09
Max E. McCluggage	Manhattan	31	2.06
Eugene E. Sundgren	Falun	31	2.03
<b>Juniors</b>			
Leon E. Wenger	Powhattan	33	2.97
Leonard F. Miller	Agra	31	2.90
Lewis S. Evans	Washington	34	2.62
L. Wayne Herring	Tulia, Tex.	36	2.61
H. Frederick Dudte	Newton	34	2.59
Emory L. Morgan	Ottawa	26	2.58
David A. Reid	Manhattan	36	2.55
Cecil O. Spencer	Lindsborg	38	2.45
J. Edwin McCollm	Emporia	31	2.45
A. Lynn Robinson	Sheffield, Ill.	28	2.39
Arthur C. Ausherman	Elmont	31	2.35
Gerald J. Brown	Cirleville	33	2.30
George W. Gerber	Oneida	31	2.29
Ival J. Ramsbottom	Munden	32	2.28
Elmer B. Winner	Topeka	30	2.27
J. Lowell Myler	Andover	32	2.25
David W. Gregory	Cheney	33	2.24
Hilton D. Hollebeak	Cimarron	34	2.24
Edwin C. Sample	Council Grove	33	2.24
Celestine C. Graham	Stockton	32	2.22
Earl W. Parsons	Manhattan	33	2.21
Royse P. Murphy	Norton	32	2.19
Ned O. Thompson	Manhattan	28	2.18
Anton S. Horn	Horton	34	2.15
Karl G. Shoemaker	Pomona	27	2.11
Virgil T. Lake	Lake City	32	2.09
Floyd L. Siegrist	Hutchinson	35	2.09
Wilmer R. Smittle	Columbus	33	2.09
Dudley E. Young	Manhattan	36	2.08
Glenn H. Dearing	Wellington	33	2.06
Emanuel Zoglin	Kansas City, Mo.	34	2.06
Howard A. Moreen	Salina	28	2.04
Lebert R. Shultz	Eureka	33	2.00
<b>Sophomores</b>			
Horton M. Laude	Manhattan	34	3.00
Robert T. Latta	Holton	29	2.79
Oren J. Reusser	Wellington	33	2.79
Carrol L. Wahl	Wheaton	33	2.61
Clarence L. Bell	McDonald	35	2.56
Wayne Tjaden	Wichita	32	2.56
Fred L. Fair	Raymond	33	2.45
Roy H. Freeland	Effingham	32	2.44
Earl F. Parsons	Max, Nebr.	30	2.37
Wilton B. Thomas	Clay Center	29	2.35
Clare R. Porter	Stafford	33	2.33
Nathan B. Shapiro	Roxbury, Mass.	38	2.21
Charles M. Loyd	Valley Center	26	2.15
Frederick G. Warren	Beverly	30	2.13
Howard V. Cheney	Grainfield	33	2.09
Lyman C. Calahan	Abilene	32	2.06
Rex E. Watts	Havensville	32	2.06
C. Peairs Wilson	Anness	32	2.00

**Freshmen**

F. Louis Brooks.....	Scott City	33	2.82
J. Donald Andrews.....	Bloom	32	2.81
Joe A. Weybrew.....	Wamego	32	2.81
Gilbert L. Terman.....	Columbia City, Ind.	35	2.77
Alvin G. Law.....	Hill City	32	2.75
Wayne H. Freeman.....	Kirwin	32	2.69
Floyd R. Olson.....	Minneola	32	2.66
George V. Honick.....	Morrill	28	2.64
Hugh G. Myers.....	Milo	32	2.63
Rollin C. Parsons.....	Manhattan	32	2.62
Dewey Axtell.....	Harris	31	2.61
R. Gordon Wiltse.....	Altoona	32	2.60
Elmore G. Stout.....	Cottonwood Falls	33	2.51
H. Allen Nottorf.....	Abilene	33	2.45
Charles H. Olson.....	Dwight	32	2.44
Carl S. Warner.....	Whiting	31	2.42
Walter Abmeyer.....	Grantville	32	2.41
Leroy E. Schafer.....	Valley Center	32	2.41
Russell H. Gripp.....	Hill City	32	2.22
J. Richard Moore.....	Alliance, Ohio	34	2.21
Jay H. Payne.....	Delphos	33	2.12
Roland B. Elling.....	Manhattan	32	2.09
Fred H. Muret.....	Winfield	32	2.06
L. Duane Murphy.....	Sublette	32	2.06
Houston B. Bliss.....	Kansas City, Mo.	30	2.00
Norman H. Lindbloom.....	Osaage City	31	2.00
John W. Reynolds.....	Winfield	32	2.00

**HONOR ROLL, 1934-'35**

		Credit hours	Total
		passed	points
<b>Seniors</b>	Home P. O.		
James K. Bigford.....	Manhattan	32	55
Lee J. Brewer.....	Hartford	34	54
Richard H. Campbell.....	Grenola	34	48
J. Raymond Dicken.....	Winfield	28	54
Edwin J. Gantenbein.....	Elmo	29	56
Harry W. Grass III.....	LaCrosse	34½	50
G. Homer Jameson.....	Garrison	32	51
George L. McCollm.....	Emporia	34	67
Jack D. Miller.....	St. Joseph, Mo.	35	62
Herbert T. Niles.....	Olivet	31	60
Frank G. Parsons.....	Manhattan	34	63
Floyd V. Pinnick.....	Ulysses	36	68
Lloyd J. Sconce.....	Halstead	30	50
Henry H. Stark.....	Wellington	35	59
Grover O. Steele.....	Barnes	32	63
Lewis I. Thomas.....	Garden City	33	53
J. Sherman Todd.....	Olathe	34½	68
J. Howard Watson.....	Shawnee	35	68
Maurice I. Wyckoff.....	Luray	35	63

**Juniors**

Charles R. Boggs.....	Topeka	32	55
Glenn O. Brown II.....	Kansas City, Mo.	32	54
Delbert E. Eshbaugh.....	Manhattan	32	52
Elbert L. Eshbaugh.....	Manhattan	32	60
Gilbert A. Guthrie.....	Walton	33	52
Howard J. Haas.....	LaCrosse	34	65
Laurence G. Harmon.....	Hutchinson	30	56
John C. Higginbotham.....	Herington	34½	51
Paul N. Hines.....	Ashland	30	51
J. Dean Lerew.....	Portis	33	64
Paul H. Nelson.....	McPherson	33	54
John L. Scott.....	White City	31	51
Theodore C. Stubbins.....	White City	33	62
William O. Wikoff.....	Modoc	32	63
Howard I. Wildman.....	Manhattan	34	49

**Sophomores**

Carl H. Beyer.....	Manhattan	31	53
Elon B. Boyers.....	Manchester, Okla.	29	52
J. Clayton Buster.....	Larned	32	59
Johnie P. Denton.....	Anthony	32	53
William H. Dieterich.....	Ellinwood	34	61
Carl M. Elling.....	Manhattan	32	50
Rolla B. Holland.....	Iola	29	51
Robert B. Jaccard.....	Manhattan	32	48
Harold W. Lindahl.....	Enterprise	33	65
Mary Jane McComb.....	Wichita	32½	56
Darrell Morey.....	Manhattan	32	53
J. William Patton.....	Hiawatha	33	64
Harold J. Scanlan.....	Abilene	33	48
Olive E. Schroeder.....	Frederick	34	58
Robert F. Sloan.....	Leavenworth	32	49
Clark B. Stephenson.....	Sedan	33	51

Kermit Wagner.....	Howells, Nebr.	29	52
Ralph D. Warner.....	Arlington	32	50

**Freshmen**

William R. Allen.....	Cummings	31	55
George W. Armstrong.....	Osborn, Ohio	34	67
Dale R. Bathurst.....	Abilene	32	60
Irwin V. Beal.....	Colwich	31	53
Verner E. Danielson.....	Lindsborg	31	50
Eugene P. Davies.....	Topeka	31	48
Elmer A. Dawdy.....	Washington	32	56
Clifton Dawson.....	Norcatour	32	58
Peter DeCinque.....	Woodbine, N. J.	34	58
Kenneth A. Fisher.....	Newton	32	48
Peter Germanio.....	Woodbine, N. J.	32	54
A. Eugene Harris.....	Grinnell	34½	64
Ralph J. Hathaway.....	Chase	33	49
John H. Hyde.....	Augusta	32	57
Jack W. Jones.....	Council Grove	32	52
Rodney K. McCammon.....	Esbon	27	49
L. Elizabeth Mott.....	Poplar Bluffs, Mo.	31	52
Robert F. Nuttelman.....	Great Bend	32	60
Ford A. Opdycke.....	Russell	33	49
Glen L. Osborn.....	Manhattan	32	53
J. Robb Pickett.....	Galena	32	48
Waldo W. Poovey.....	Oxford	34	56
John B. Rufener.....	Strong City	29	57
Paul S. Wallingford.....	Manhattan	32	63
Wallace M. White.....	Coldwater	31	51
Federico S. Zamora.....	Santa Maria, P. I.	30	51

**DAIRY CATTLE JUDGING TEAM WINS IN NATIONAL CONTEST**

Competing with 18 teams from the United States and Canada in the National Intercollegiate contest held in connection with the National Dairy Show at St. Louis, Mo., October 14, 1935, the Kansas State team placed first. Members of the team were Clarence L. Bell, McDonald; F. Monroe Coleman, Sylvia; Lester A. Zerbe, Salina; and Carl H. Beyer, Manhattan (alternate).

The team was second on Ayrshires, second on Guernseys, fourth on Holsteins, and twelfth on Jerseys. Clarence L. Bell was high individual on judging all breeds. He was also second on Holsteins, third on Guernseys, and tied for first on Jerseys. Zerbe was eighth on Ayrshires.

The contest consisted of judging twelve classes of the four major breeds: Holsteins, Jerseys, Guernseys, and Ayrshires. There were four classes of bulls, four classes of cows, two classes on production, and two classes of six. Oral reasons were given on the four classes of cows, one each of Holsteins, Jerseys, Guernseys, and Ayrshires.

The team made the trip by car and on the way did practice judging on the State Hospital's Holstein herd at Osa-

(Continued on page 11)

# THE KANSAS AGRICULTURAL STUDENT

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## NATIONAL HONORS TO KANSAS FUTURE FARMERS OF AMERICA

Two outstanding marks of distinction awarded each year by the National Convention of Future Farmers of America are first place in individual achievement and first place in chapter achievement. Both of these awards were given to Kansas by the Eighth Annual National Convention of Future Farmers of America which met in Kansas City, October 21 to 24, 1935.

The Kansas Agricultural Student is pleased to present the picture of Paul Leck of the Washington High School, named as the "Star Farmer of America," for 1935, and the picture of the Shawnee Mission chapter of F. F. A., winner of the national Chapter Achievement Contest.

## A NEW AG FALL FESTIVAL

The ninth annual Ag Barnwarmer differed in so many respects from practically all its predecessors as to mark the beginning of a new series of these famous fall festivals in the Division of Agriculture.

In the first place the spirit of the occasion was one of genuine friendliness and happy informality. This was the avowed purpose of the managers and apparently each one having any part in the event radiated the spirit of good will and friendliness.

The music furnished by Anna Mae Winburn and her Cotton Club Boys was all that could be desired for such an occasion. It was entertaining to all and satisfied the dancers from the best to the poorest.

The decorations were appropriate, pleasing, and simple. The committee is to be commended for their taste and excellent work. The cider and doughnuts made a satisfying contribution to the enjoyment of the group.

In only one respect did the festival fail to meet the desires and expectations of the managers. About 30 per cent of the Ags were not there, the percentage of absentees being almost uniform throughout the four classes. We hope that another year not less than 90 per cent of the Ags may have a real part in another clean, informal, joyous fall festival long to be remembered.

**DAIRY CATTLE JUDGES WIN**

(Continued from page 9)

watomie, on Hall's Jersey herd near Kansas City, and on the dairy herd at the University of Missouri. Two weeks preceding the national contest the team practiced judging on the dairy herd at the University of Nebraska, on Stephen's Brown Swiss near Fremont, Nebr., on the dairy herd of Iowa State College at Ames, and in the Dairy Cattle Congress contest at Waterloo, Iowa. Altogether the thirteen days spent on the trips were filled with practical education.

Prof. H. W. Cave of the Department of Dairy Husbandry can tell the pleasures of coaching a winning team.—C. H. B., '37.

The Kansas Agricultural Student is pleased to present this winning team in a characteristic pose on its cover page. Left to right are Coleman, Bell, Zerbe, Beyer.—Ed.

**AMERICAN ROYAL MEAT JUDGING CONTEST**

The K. S. C. men's meat judging team competed in an intercollegiate contest Tuesday, October 22, 1935, with five other teams. The contest was held in connection with the American Royal Livestock Show at Kansas City, Mo. Kansas State ranked fourth.

The team was composed of Ned O. Thompson, Manhattan; Lebert R. Shultz, Fall River; Wilton B. Thomas, Clay Center; and Donald F. Isaacson, Topeka (alternate). Prof. David L. Mackintosh was the coach.

Thompson was third high individual in the contest. The team placed second in judging carcasses and wholesale cuts of beef; fourth in judging lamb carcasses; and fifth in judging wholesale cuts and carcasses of pork.

The University of Missouri placed first in the contest. Missouri, Kansas, Illinois, and Iowa now have two legs each on a circulating trophy offered by the National Livestock and Meat Board. The trophy becomes the permanent

possession of the first team to win it three times.

The total scores for the six competing teams were:

Missouri .....	2,260
Pennsylvania .....	2,247
Minnesota .....	2,237
Kansas .....	2,234
Oklahoma .....	2,221
Iowa .....	2,133

The entire advanced meat judging class, boys and girls alike, have started on an equal basis in the tryouts in efforts to be on the team that will represent K. S. C. at the International Livestock Exposition in Chicago the first week of December.—L. R. S., '36.

**DAIRY PRODUCTS JUDGING TEAM IN THE NATIONAL CONTEST**

The Annual Students' National Contest in Judging Dairy Products was held in the plant of the St. Louis Dairy Company, October 14, 1935. Prof. W. H. Martin selected and coached the following individuals to represent Kansas State College in the contest:

Laurence G. Harmon.....	Hutchinson
Lebert R. Shultz.....	Fall River
Wilmer R. Smittle.....	Columbus
Frederick G. Warren (alt.).....	Beverly

The contest, sponsored jointly by the Dairy and Ice Cream Machinery and Supplies Association, Inc., and the American Dairy Science Association, consisted of scoring, criticising, and placing seven samples of creamery butter, vanilla ice cream, market milk, and American cheddar cheese.

There were 17 teams entered in this contest. The Kansas State College team ranked 15th in the judging of all products, 13th in butter, 8th in cheese, 17th in milk, and 8th in ice cream. The individual rankings of the Kansas State students on all products were: Shultz, 28th; Harmon, 37th; and Smittle, 42d.

The Dairy and Ice Cream Machinery and Supplies Association, Inc., awards six \$600 fellowships to the six high teams in the judging of all products in this contest. This year the fellowships

were awarded to Mississippi State College, Cornell University, University of Tennessee, Ohio State University, Iowa State College, and University of Minnesota. These fellowships were first made available in 1930, and since that time 36 in all have been awarded. Four of these have been won by students representing Kansas State College in these various contests. Those who have won these fellowships are Ralph F. Germann, 1930; Pius H. Hostetler, 1933; W. Harley Chilson, 1933; and Everett L. Byers, 1934.

Besides the contest, other events of the trip made it very much worth while. Members of the team spent two days making an interesting inspection trip to several of the large ice cream and dairy plants in St. Louis.—F. G. W., '37.

#### MOORMAN RESEARCH FELLOWSHIP IN MINERAL METABOLISM

A Moorman Research Fellowship in Mineral Metabolism has been awarded the Department of Chemistry of the Agricultural Experiment Station by the Moorman Manufacturing Company of Quincy, Ill. The work will be under the supervision of Dr. J. S. Hughes and the

fellow will work with Dr. J. L. Hall on a cooperative experiment between the Departments of Chemistry and Animal Husbandry on the influence of minerals on the quality of meat. The fellowship becomes available December 1, 1935, and pays \$550 a year.

Mr. Moorman, president of the company, is especially interested in the work being done at the Kansas station on the influence of feed, particularly minerals, on the quality of meat. He hopes in establishing the fellowship to contribute to this type of work. The fellow may take full work in college but one half of the work will be of the character of research on this particular problem. He may use his research work as a thesis.

C. A. Jones, '24, is soils specialist for the J. C. Nickols Investment Co., Kansas City, Mo.

H. L. Lobenstein, '26, who has been extension horticulturist in K. S. C. during recent years, has been appointed supervisor of cultivation on the Great Plains Shelterbelt Project. His headquarters is Lincoln, Nebr.

## Freshmen, 1935-'36

A picture is taken of every student in the Division of Agriculture the first semester he enrolls in the division. Freshman pictures each fall naturally constitute a major portion of the pictures for the college year. In October, 1931, The Kansas Agricultural Student reproduced the freshman pictures of the division and has since continued that policy.

As other pictures become available during a student's college career they are added to the permanent record. Many of these other pictures are taken from the Royal Purple. This is especially true of members of the graduating class each spring. These pictures

give individuality to student records and are useful for many years of the future.

On the following pages are presented the 157 college freshmen who are beginning their college careers in the Division of Agriculture this semester. Besides these there are five second-semester freshmen in the group, making a total of 162 freshmen. The names and addresses of these 162 freshmen presented on pages 14 to 20 are as follows:

#### PAGE FOURTEEN

##### Top Row

W. DEAN ABRAHAM, Wayne  
 GEORGE W. AICHER, Hays  
 SANTIAGO D. ALEJO, St. Maria, P. I.  
 A. FORREST ALLEN, Allamuchy, N. J.

**Second Row**

WILLIAM G. ALSOP, Wakefield  
 WILBUR L. ALVEY, Kansas City  
 VICTOR P. ARCHER, Berryton  
 EDNA MAY ARNOLD, Wichita

**Third Row**

LOUIS C. ATE, Wellington  
 ROBERT O. BABER, Abilene  
 HAROLD L. BAIR, Ruleton  
 ELLWOOD T. BAKER, Abilene

**PAGE FIFTEEN****Top Row**

LAWRENCE N. BARKER, Louisburg  
 DALE F. BARRETT, Belleville  
 WILLARD M. BARRY, Manhattan  
 JACK BLANKE, Atchison  
 WILLIAM F. BLAUFUSS, Olpe

**Second Row**

JOE M. BONFIELD, Elmo  
 GLENN I. BOOTH, Paradise  
 LLOYD T. BOOTH, Osage City  
 FRANK BOTT, Zion, Ill.  
 ANDREW J. BOZARTH, JR., Liberal

**Third Row**

R. DeLORE BRENT, Alton  
 GILMAN W. BROTHERTON, Topeka  
 RICHARD L. BROWN, Hugoton  
 WALLACE A. BUCK, Derby  
 ELMER T. BURSON, Monument

**Fourth Row**

LINUS H. BURTON, Belle Plaine  
 J. LAVOE CAMPBELL, Elkhart  
 EDWARD H. CHRISTOPHER, Bucklin  
 JOHN Y. CHRISTY, Meriden  
 FRANKLIN D. CLARK, Onaga

**Fifth Row**

EARL J. COOK, Parker  
 PAUL L. COOL, Webster Springs, W. Va.  
 JESSE R. COOPER, Preston  
 EDWIN COURTNEY, Danville  
 DELBERT C. CREIGHTON, Denison

**PAGE SIXTEEN****Top Row**

EMERSON L. CYPHERS, Fairview  
 THOMAS K. DARRAH, Marquette  
 H. LYNNE DAVIDSON, Manhattan  
 C. WILLARD DAVIS, Halstead  
 ALVIN D. DEAVER, Alliance, Nebr.

**Second Row**

ERNEST W. DECKER, Tecumseh  
 WILBURN M. DICKEN, Winfield  
 THOMAS J. DICKSON, Admire  
 LAWRENCE V. DILLER, Morrowville  
 ALVIN M. DRISCOLL, Salina

**Third Row**

JOHN P. EARLE, Washington  
 RONALD R. EDELBLUTE, Manhattan  
 WILLIAM C. EDWARDS, Jewell  
 ROBERT W. EDWARDSON, Hiawatha  
 F. DALE ENGLER, Topeka

**Fourth Row**

EARL A. ERICKSON, Wilson, Pa.  
 HOY B. ETLING, Copeland  
 KENNETH M. FARNSWORTH, Topeka  
 WILLIS B. FAULKENDER, Circleville  
 BEATTIE H. FLEENOR, Manhattan

**Fifth Row**

REED C. FLEURY, Jamestown  
 CHARLES H. GIDDINGS, Dalhart, Tex.  
 HUGH H. GILLESPIE, Arkansas City  
 J. WAYNE GOLDSMITH, Melvern  
 TRUMAN D. GREGORY, Woodston

**PAGE SEVENTEEN****Top Row**

PAUL L. HABIGER, Bushton  
 EMMETT B. HANNAWALD, Pratt  
 JOHN V. HANSEN, Hiawatha  
 JOHN HARRIS, JR., Havensville  
 MEADE C. HARRIS, JR., Tecumseh

**Second Row**

WILLIAM W. HEER, Topeka  
 EARL F. HERTACH, Claflin  
 JAMES H. HICKERT, Bird City  
 PAUL W. HODLER, Beloit  
 CHARLES H. HOLM, Dwight

**Third Row**

EARL C. HORNBUCKLE, Hillsdale  
 HOWARD N. HUNT, Belle Plaine  
 CLIFFORD C. ISOM, Toledo, Ohio  
 ARTHUR O. JACOBS, Harper  
 DALE E. JOHNSON, Manhattan

**Fourth Row**

KEITH C. JOHNSON, Sylvia  
 PAUL C. JOHNSON, Farlington  
 G. EDWIN JORDAN, Beloit  
 ROBERT A. JORDAN, Holton  
 C. ISAAC KERN, Cedar

**Fifth Row**

HORTON E. KIMBLE, Kansas City, Mo.  
 WAYNE KLAMM, Bonner Springs  
 RALPH E. KRENZIN, Kinsley  
 KENNETH E. KRUSE, Barnes  
 ROSS F. LATIMER, Kansas City, Mo.

**PAGE EIGHTEEN****Top Row**

GEORGE L. LEE, Downs  
 FRED W. LEIMBROCK, Wichita  
 WALTER J. LELAND, Manhattan  
 JAMES R. LEMONS, Topeka  
 ARTHUR F. LEONHARD, Lawrence

**Second Row**

JOE W. LEWIS, Larned  
 WAYNE A. LINVILLE, Chase  
 CHARLES W. LOBENSTEIN, Edwardsville  
 TED O. McANINCH, Neodesha  
 DALE E. McCARTY, Oneida

**Third Row**

ROBERT A. McCREERY, Savannah, Ga.  
 CHARLES W. MARTIN, Admire  
 T. VERNON MARTIN, Bucklin  
 IRWIN A. MILLER, Oberlin  
 LEROY D. MILLER, Manhattan

**Fourth Row**

LEE ROY MITCHELL, Auburn  
 DONALD S. MOLONEY, Monte Vista, Colo.  
 W. HUGH MOORE, Munden  
 VIRGIL F. MORFORD, Olsburg  
 CLYDE D. MUELLER, Sawyer

**Fifth Row**

JAMES F. MUGGLESTONE, Berkeley, Calif.  
 CHARLES A. MURDOCK III, Kansas City, Mo.  
 GRAYSON E. MURPHY, Norton  
 BUD MUSSON, Geuda Springs  
 ROBERT D. NAFZIGER, Narka

**PAGE NINETEEN****Top Row**

G. LAWRENCE NEWCOMB, Morrowville  
 KENNETH L. NORDSTROM, Norton  
 ROBERT D. O'CONNOR, Macksville  
 WILLIAM D. PASKE, Toronto  
 KENYON T. PAYNE, Manhattan

**Second Row**

HARVEY L. PETERSON, Wellington  
 MELVIN U. R. PETERSON, Riley  
 W. JAMES PETR, Waterville  
 MORRIS W. PHILLIPS, Stockton  
 GERALD E. PIERCE, Garrison

THE KANSAS AGRICULTURAL STUDENT

**Third Row**

MAGE N. PUCKKEE, Mayetta  
 CLYDE C. REED, Kanopolis  
 CHARLES G. REED, Stockton  
 HERMAN J. REITZ, Belle Plaine  
 NOEL N. ROBB, Dodge City

**Fourth Row**

CECIL R. ROBINSON, Nashville  
 VERLIN ROSENKRANZ, Washington  
 MAYNARD W. RUDOLPH, Riley  
 E. DALE SADLER, Wagner, S. Dak.  
 L. WILLIAM SCHRUBEN, Dresden

**Fifth Row**

WALTER O'D. SCOTT, Westmoreland  
 ROBERT B. SHEPHERD, Raymond  
 RALPH V. SHERER, Mullinville  
 JOHN A. SHETLAR, Bayard  
 J. CLYDE SHORT, Topeka

**PAGE TWENTY**

**Top Row**

HAROLD D. SHULL, Manhattan  
 J. HENRY SKINNER, Topeka  
 FRED B. SMITH, Highland  
 MARION E. SMITH, Mound City  
 BERTEL E. SODERBLOM, Delphos

**Second Row**

OTTO F. SPENCER, Kickapoo  
 JOSEPH B. STEELE, Barnes  
 THEODORE E. STIVERS, JR., Rome, Ga.  
 JOSEPH J. STRAUB, Wathena  
 E. MALCOLM STROM, Dwight

**Third Row**

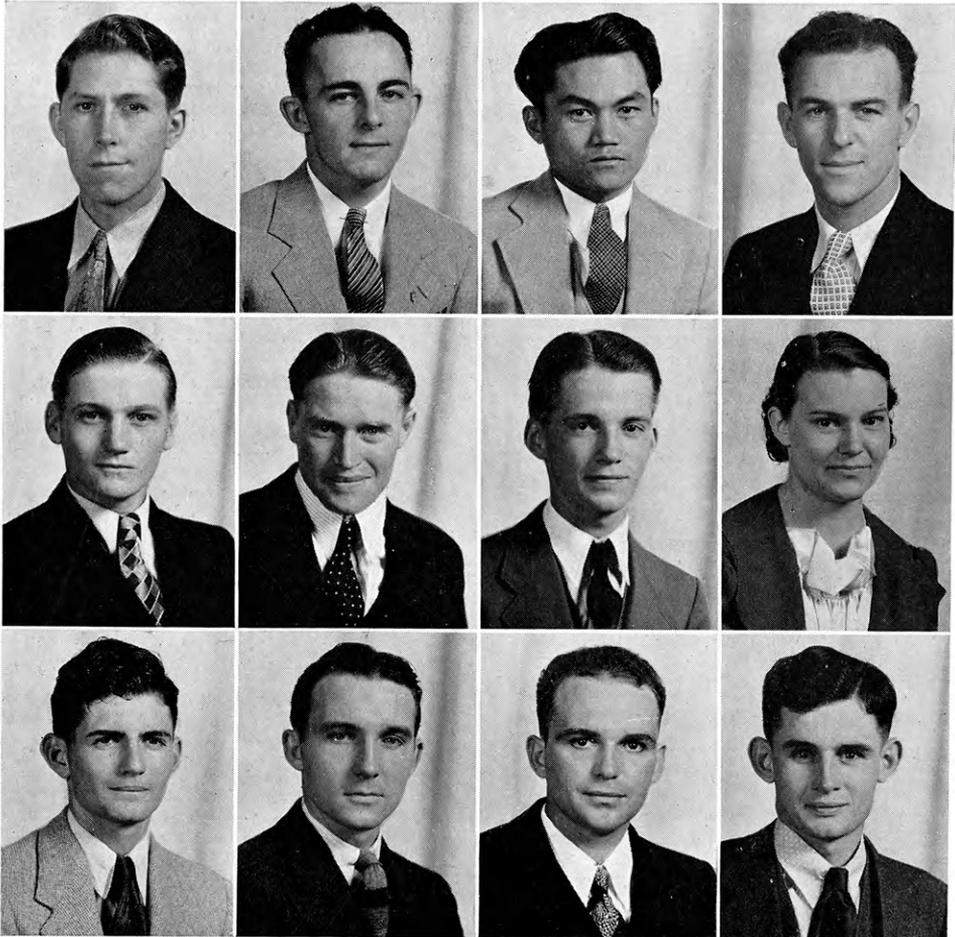
CHARLES E. SWEENEY, Coldwater  
 WILBUR B. TENDICK, Kismet  
 JAMES M. THOMAS, Garnett  
 J. ELWYN TOPLIFF, Jewell  
 GAY S. TUIS, Fredonia

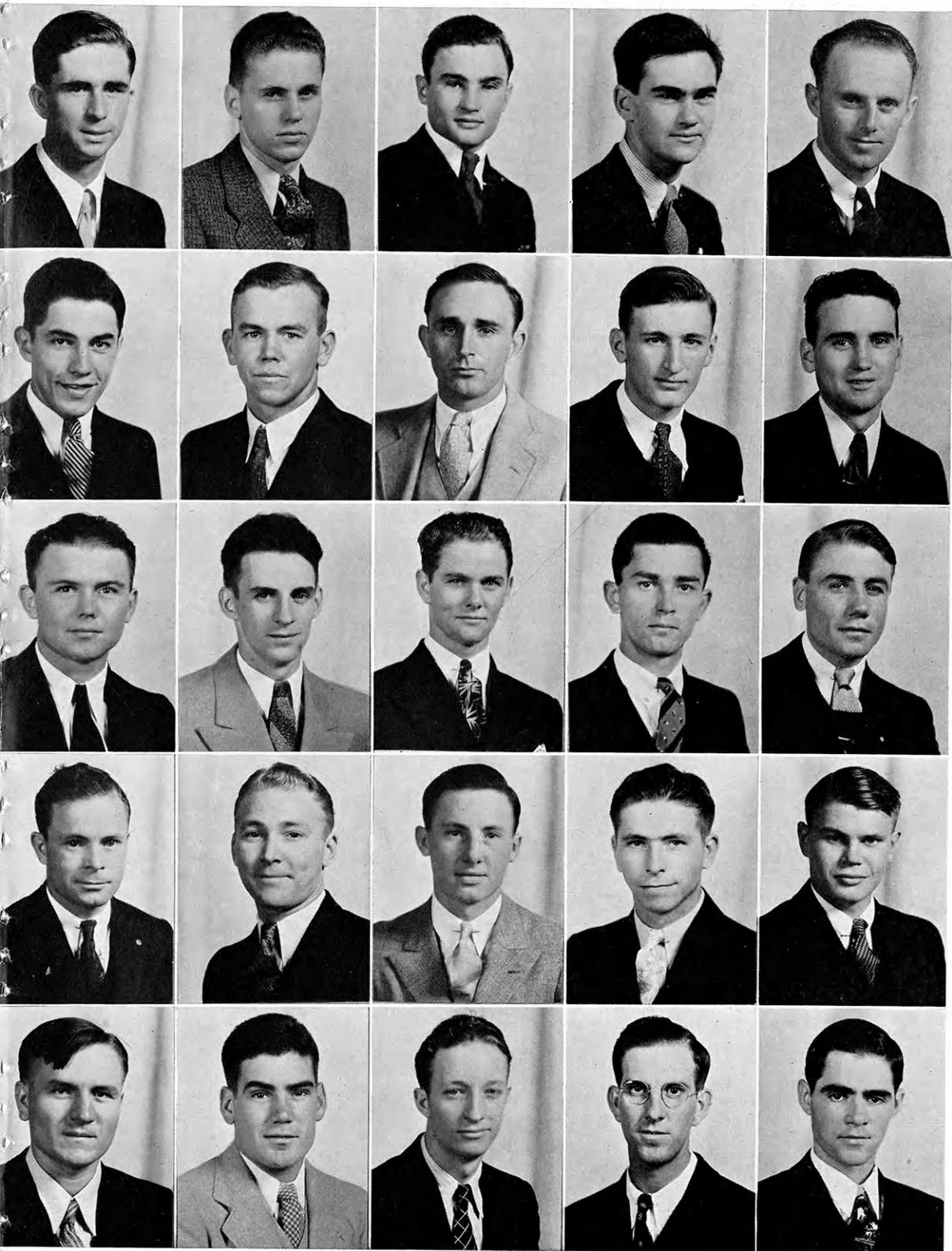
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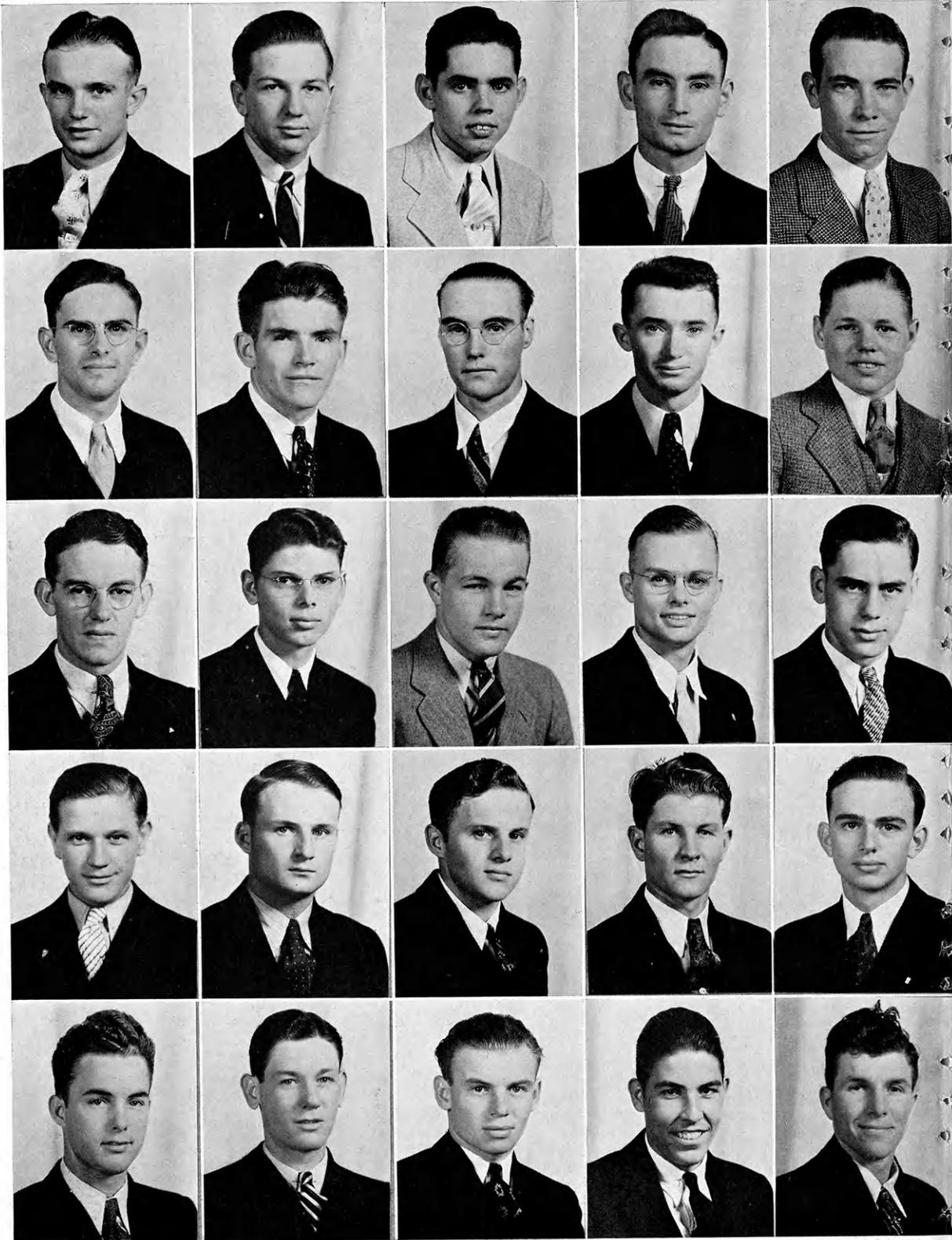
ROBERT L. TURNER, Oskaloosa  
 FRANK W. VIAULT, Los Angeles, Calif.  
 JAMES H. WALKER, McPherson  
 THEODORE P. WALTON, Manhattan  
 BERYL M. WHITEHEAD, Topeka

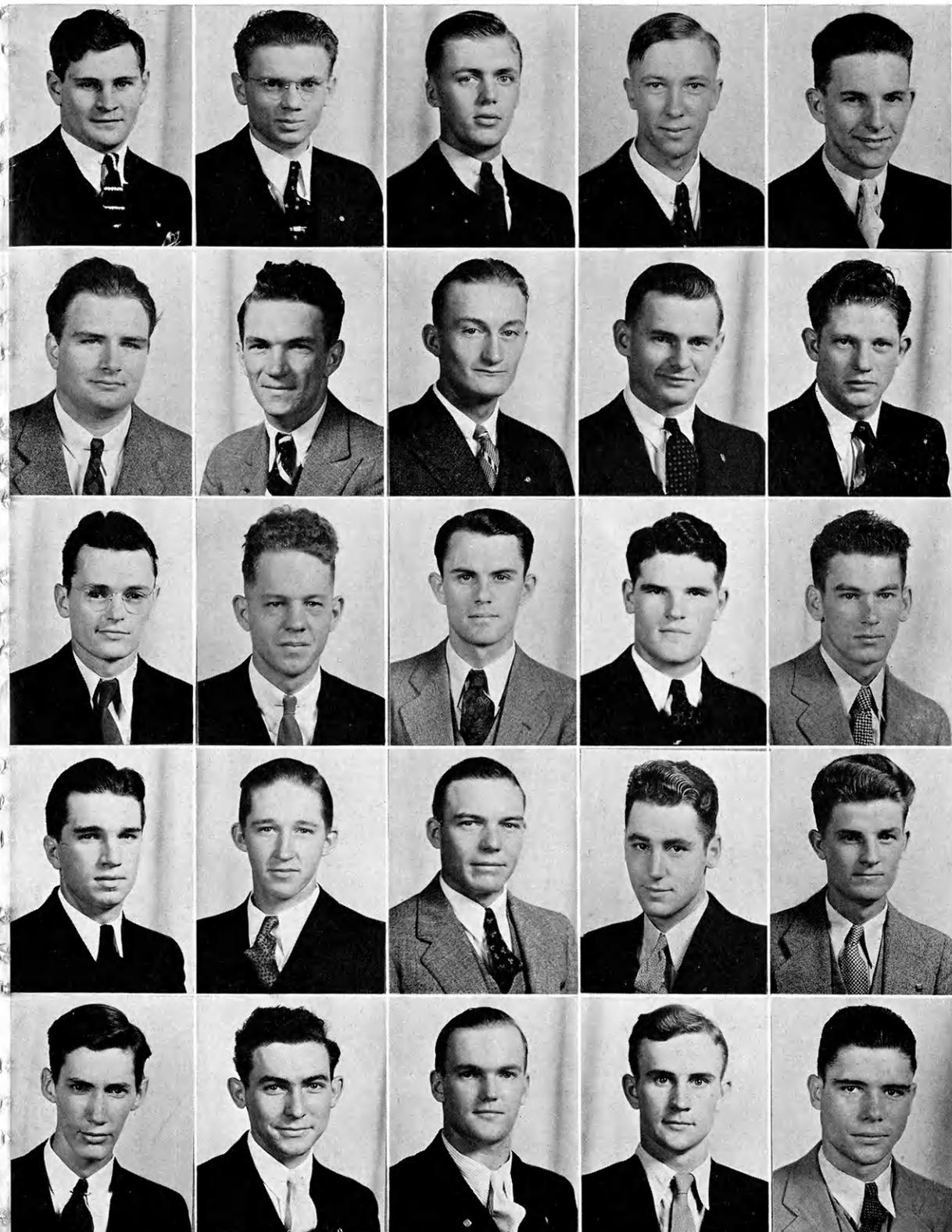
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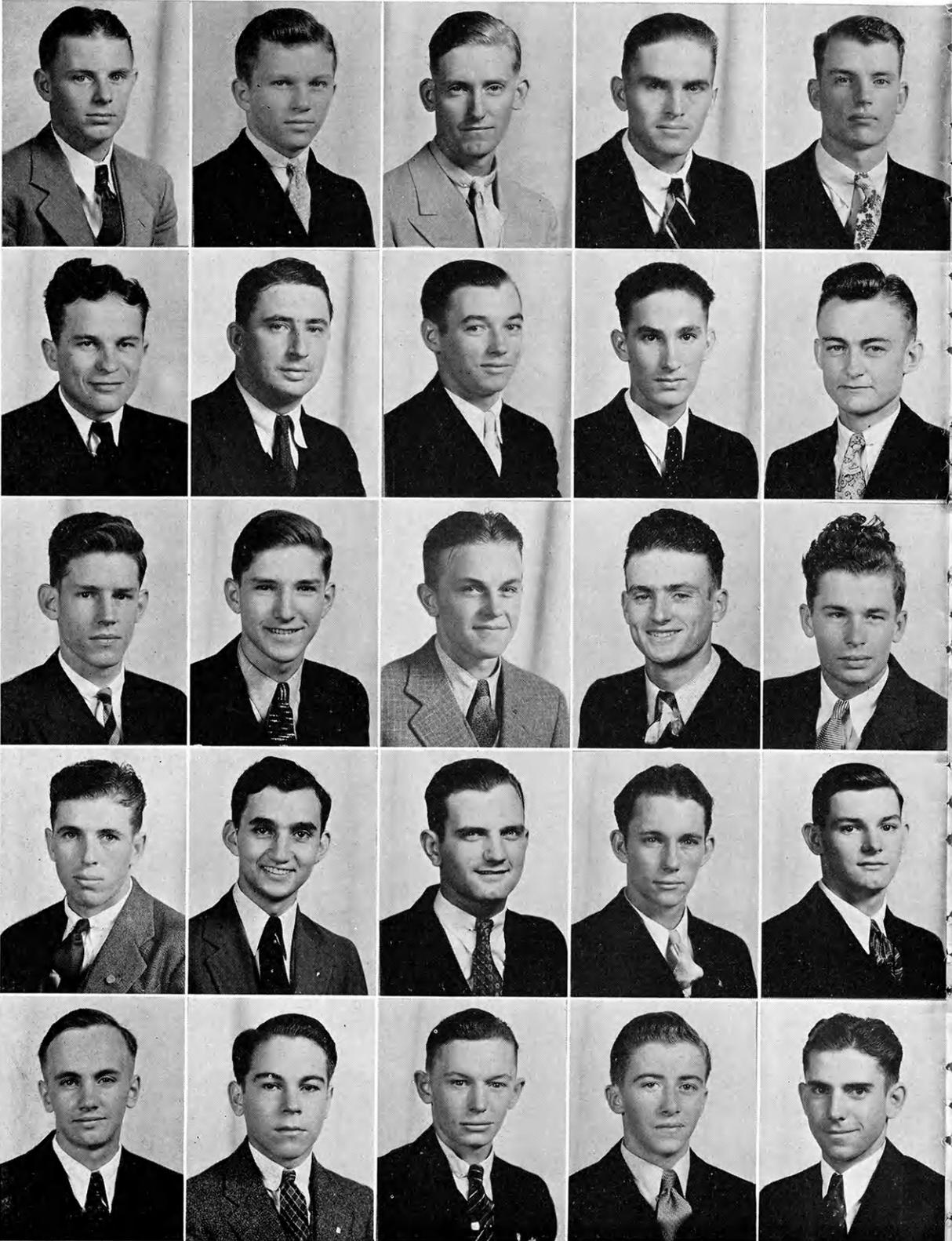
CHARLES C. WILKINSON, Coleman, Tex.  
 MARION C. WILSON, Wichita  
 R. LAVERNE WOODHEAD, Hoyt  
 JACK WYATT, Kansas City, Mo.  
 EDWARD B. ZAHN, Miltonvale

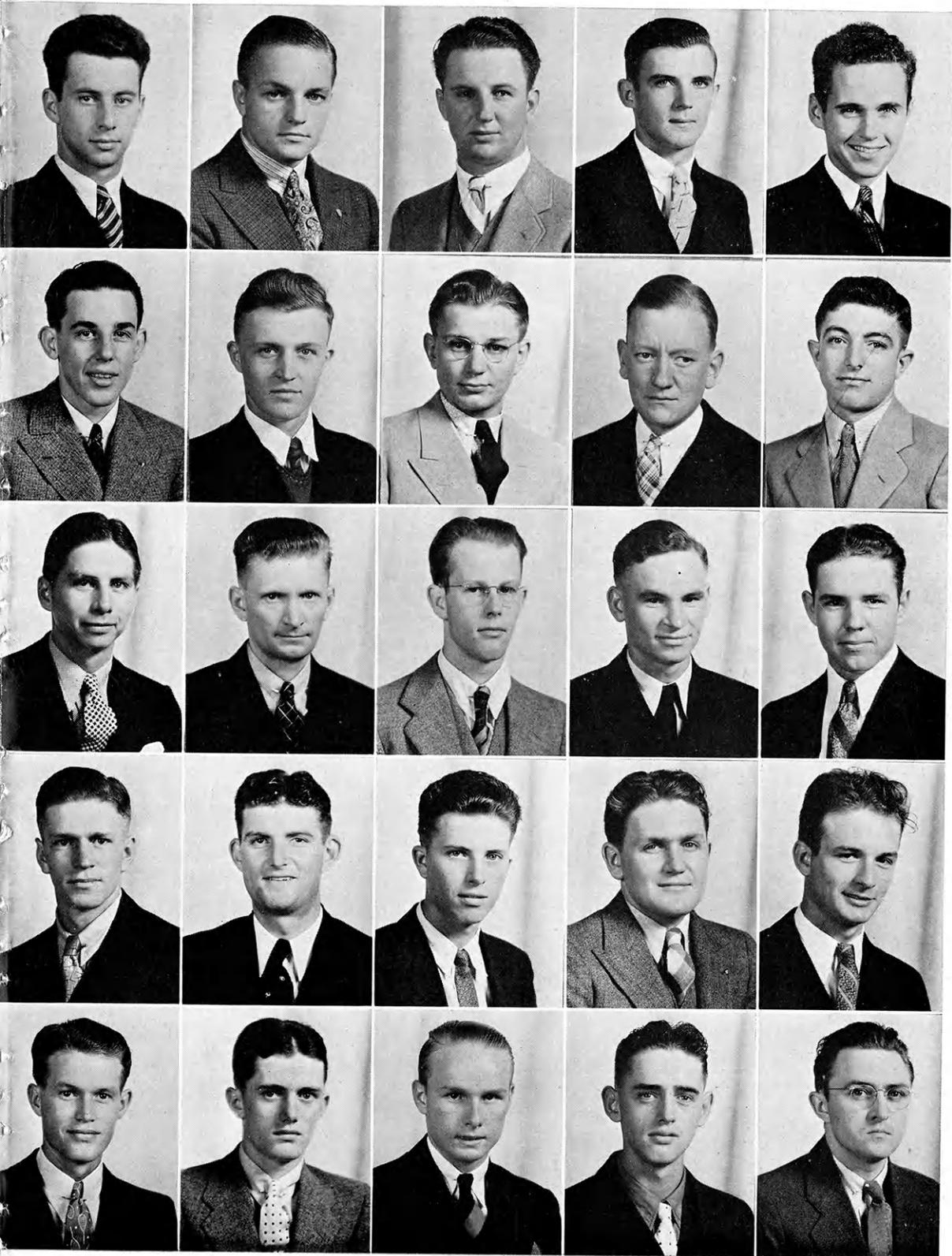


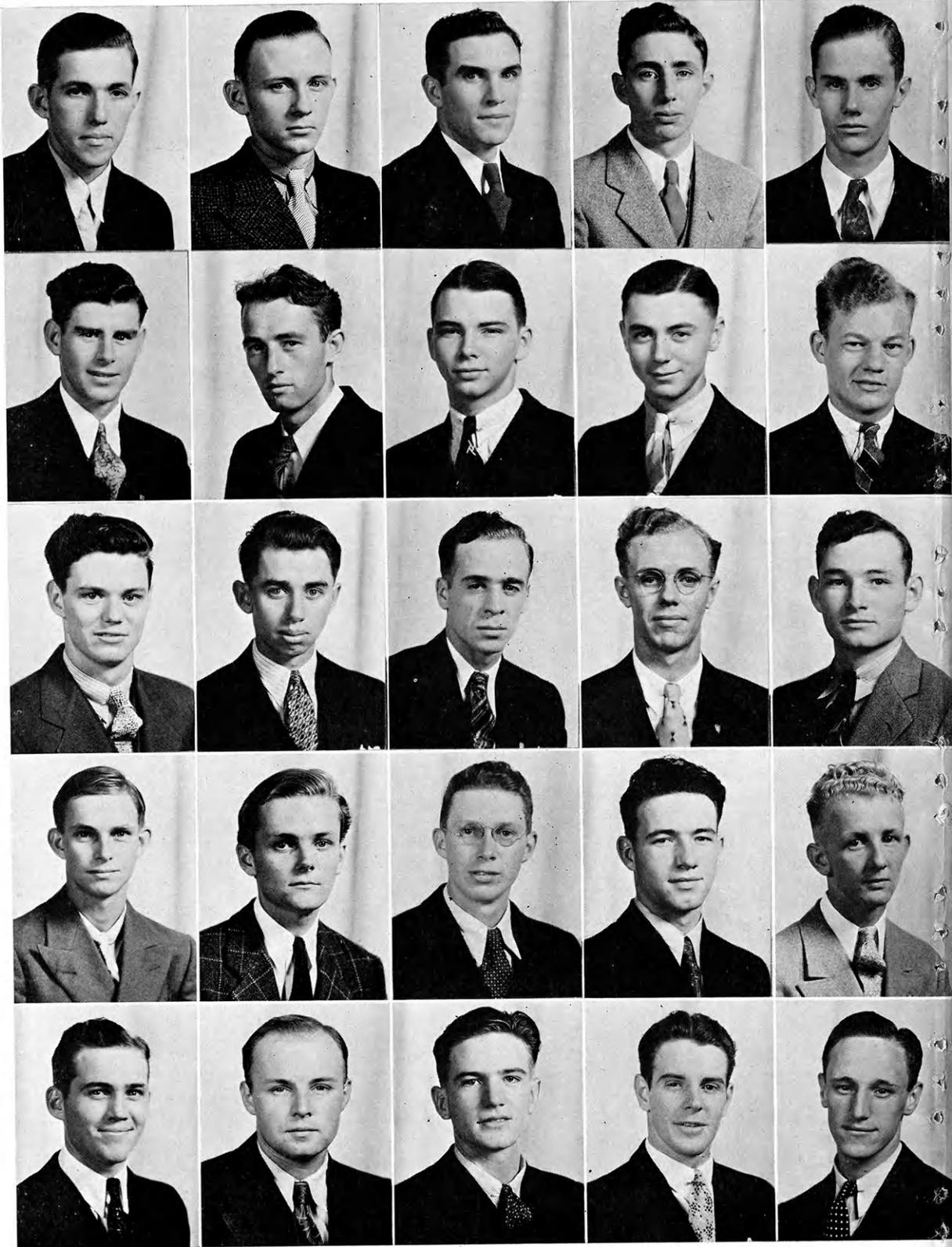












# Regional Agricultural Adjustment

W. H. Pine, '34

There are approximately 6,500,000 farms in the United States. On each of these farms a certain quantity of agricultural goods is produced. By adding the production of each of the farms the total production in the United States is secured. Whenever there is a change in the total production, it has been due to changes made on part or all of the 6,500,000 farms. A production program the purpose of which is to bring about a change in the total production must take the individual farms into consideration.

The present agricultural adjustment programs have taken the above facts into consideration by contracting with individual farmers to adjust their production. In general each of the programs requires the cooperating farmers to adjust their production to the same percentage of their historical bases. It has been assumed that the most desirable agricultural production can be secured in this way. This is undoubtedly true, but it still may not go far enough. One farmer may need to adjust to an entirely different percentage of his base than another farmer would to secure a desirable production on his own farm. Any agricultural program should encourage an organization for each farm that will give each farmer the maximum net returns over a long period of years.

The question, therefore, is what changes in the present acreage and production of crops and numbers and production of each class of livestock on the individual farms in the United States are necessary in order that soil fertility be maintained, erosion controlled, and an efficient and sound farm organization promoted.

The Kansas Agricultural Experiment Station is cooperating with the Production Planning Section of the AAA in making a study of this problem. The Department of Agricultural Economics is in charge of the project. The type-

of-farming areas as presented in Bulletin 251 of the Agricultural Experiment Station have been revised and by the revision the state is divided into 15 type-of-farming areas, each area having a characteristic type of agriculture. The study is being made on the basis of this revision. The purpose of this article is to give a brief description of the methods and procedure used in this study of agricultural adjustment in Kansas by type-of-farming areas. Other states have used somewhat different methods.

The 1931 assessors' rolls were used as the best source of information needed on the individual farms. It was then necessary to tabulate the acres in each crop and numbers of each class of livestock for each farm. To do this a KERC project was set up in December, 1934. Work on this project was continued until September, 1935. Farms in each of the 81 counties worked up were numbered. Each number was placed on a card along with the size of the farm and the acreage of the predominating crop—wheat, if it was a western Kansas farm, or corn, if it was an eastern Kansas farm. These cards were then sorted into size-of-farm groups such as 40-, 80-, 160-acre farms. Again the cards within each sized group were re-sorted for the acres of wheat or corn, such as 0, 10, 20, 40, 60, etc., acres of wheat or corn. In this way, the farms of a certain size having a certain acreage of the main crop were together for each county. Each group was considered as a type-of-farming. Those groups having too few farms were eliminated as being insignificant to the total. By tabulating the actual acreage of crops and numbers of livestock from the farms within each type, an average or range could be secured for the type. This average could then be used as typical of the group, thus eliminating a great deal of work that would have been necessary if each farm

had been worked up completely.

By the use of a budget, the normal production, costs, and disposal of products could be secured for the typical set-up. After making the adjustments that seemed necessary for a good organization for each type of farming, the budget method was again used. In this way, a comparison could be made of the typical set-up and the adjusted set-up. The percentage adjustments either up or down were then determined and applied to all the farms within the type being used. This was done for each type until the adjustments for each crop and each class of livestock for each county studied were secured. The percentage adjustments of all the types within a county were combined to secure the county adjustments.

The counties studied in the project were then grouped into their respective areas and a summary of the adjustments was made for each area. The area adjustments were then summarized to give the adjustments for the state. No adjustments were made before a conference was held including several members of the staff of the Agricultural Experiment Station to secure recommendations for the suggested set-ups.

Two sets of prices were used to make a comparison in net income between the typical set-ups and the adjusted set-ups. One price is that which could be expected, if no material change would be made in the total production within the United States. The other price is that which might be expected if a more balanced production was adopted. These prices were furnished by the Production Planning Section of the AAA in Washington.

Nearly 1,200 budgets were used to represent the types-of-farming for the state. A total of 61 counties distributed through the state were completed in all respects by September 15 and a report sent to Washington. A further study is being made to include more counties.

## The 1936 Seed Situation<sup>1</sup>

In many respects Kansas is facing a seed situation for 1936 that is more critical than the seed situation in the spring of 1935. With the exception of oats and flax, there is a serious shortage of seed of adapted varieties of all crops that will be planted next spring. The seed reserve is practically negligible as most farmers drew heavily on the reserve last spring thinking surely a crop would be harvested in 1935. This extreme shortage will necessitate the bringing of seed from outside the state—a practice that is not generally successful because many varieties available are not adapted to Kansas.

Some localities in eastern Kansas may have produced enough seed corn of adapted varieties to meet the demand for spring planting. It will be necessary, however, to supply other localities with seed as the corn was entirely too late. These localities represent some of the bottom lands that were inundated last spring and areas in the eastern part of the state where planting was delayed until the latter part of June. In central and western Kansas most of the corn was burned up entirely or so badly injured by drought that it was put in the silo.

The sorghum seed situation is more serious than that of the corn. Due to adverse climatic conditions, both forage and grain sorghums were extremely late and did not produce suitable seed. The large acreage, planted to nonadapted varieties of sorghums from out of the state, lacks uniformity, but in practically all cases failed to mature seed. The state will produce more Sudan grass seed than in 1934, but not enough to meet the normal demand for planting next spring.

The adapted varieties of grain sorghum of which there will undoubtedly be a shortage next spring include Pink, Red, Blackhull, and Western Black-

1. The author is indebted to Prof. R. I. Throckmorton for much of the information contained in this article.

hull kafir. The adapted varieties of sweet or forage sorghum of which there will be a shortage of seed include Atlas, Kansas Orange, Early Sumac, and Leoti Red.

The small barley acreage together with low yields will necessitate the bringing of barley seed in from some other state, provided conditions are favorable for seeding barley next spring.

There will undoubtedly be an insufficient quantity of the adapted varieties of soybeans such as A. K. and Laredo because both the 1934 and 1935 seed crops were small.

Because of the extreme seed shortage the college is urging that every possible method be employed to help relieve the situation. All seed of adapted varieties that is of good quality should be saved for planting.

The effort to secure good seed should not end with selecting the seed because the farmer must know more before planting time next spring. He must know whether or not the seed will grow and how well it will grow. As soon as the seed is thoroughly dry, a sample should be sent to the State Seed-testing Laboratory for a germination test, unless the farmer wants to test it himself. This is to insure protection against poor stands or being entirely without suitable seed.

If the farmer is entirely without seed for the spring planting of any crop, he should find out from the county agricultural agent, a reliable seedsman, or from the college the closest source of recommended seed. This will be insurance, both from the standpoint of securing enough seed and from the standpoint of securing seed that is of a known or adapted variety.—Leon E. Wenger, '36.

A. C. Thomson, '33, formerly dairy agent specialist in Washington county, has taken a job as field man with the Wisconsin Dairymen's Association with headquarters at Fort Atkinson, Wis.

## A Local Agricultural Program

The class in vocational agriculture in the Webster Rural High School have undertaken the development of a long-time agricultural program for the Webster community. In doing this they have chosen an agricultural advisory committee from leaders of the community including local boards of education, a representative banker, the county agricultural agent, three farmers whom they selected as being among the most successful farmers in the community, a representative minister, the school custodian, and their own teacher of vocational agriculture.

This committee was called together for their first meeting and informal discussion of problems Friday evening, October 4, in the high school. Dinner was served the group by the foods class of the high school under the direction of their teacher, Miss Lillian Brychta. Each adult present made an informal statement concerning that phase of agriculture which he was best qualified to discuss. A round-table discussion was then participated in by practically all persons present. Important objectives were then approved by the entire committee which in their belief would result in improvement in agricultural practices and regular progress and prosperity for the community for many years in the future.

One of their outstanding objectives is to make education a fundamental part of their long-time program. In doing this they hope in the near future to have a chapter of Future Farmers of America organized in their class in vocational agriculture; to have a 4-H Club organized in the community; to provide evening schools for adults; and to provide class projects for their work in vocational agriculture. The guest of honor for the evening was Mr. D. W. Osborne of Rexford, Kansas Master Farmer in 1934. He read a paper pre-

pared for the occasion on "How I Became a Master Farmer."

The get-together of local and agricultural leaders for the entire community was thus intended to consolidate their purposes and to promote unanimous cooperation on worth-while objectives.

Reports indicate interest and enthusiasm were characteristic of this first get-together meeting and banquet of the local agricultural leaders of this

## Shawnee Mission Chapter of F. F. A. Wins

The chapter achievement contest of the Future Farmers of America was won by the Shawnee Mission chapter of Merriam, Kan. This chapter is one of the oldest and largest in the state. H. D. Garver, '29, director of vocational agriculture in the high school there for the past six years, is chapter adviser



SHAWNEE MISSION CHAPTER OF FUTURE FARMERS OF AMERICA

This chapter won the national chapter achievement contest for 1934-'35. Mr. H. D. Garver, standing at the reader's left, director of vocational agriculture in Shawnee Mission Rural High School, is the chapter's sponsor.

community. The plan of helping each other should really boost the most worth-while agricultural projects for the community. The boys in the class of vocational agriculture should be greatly benefited thereby and being the youngest farmers in the community they are in the best situation to promote real long-time agricultural development.

J. Oscar Brown, '20, is director of vocational agriculture in the Webster Rural High School.

C. B. Irwin, '10, is farming at Kimberly, Idaho.

and leader in the progress the chapter has made which won it national recognition. This year is the first time a Kansas chapter has won the national achievement contest. With the honor went an award of \$300 for the placing.

The members of the Shawnee Mission chapter carried 97 agricultural projects including the raising of 25 cows, 9 heifers, 29 fat steers, 33 sheep, 49 hogs, 379 chickens, 4 acres of potatoes, and 20 acres of corn. Nearly 90 percent of the projects were fully owned by the boys undertaking them.

Among the cooperative activities in which the chapter engaged were: The

operation of electric incubators and one of the finest electric hot beds in this region; organization of a cow-testing association which not only tested the cows of the chapter members but also ran tests on three herds of dairy cattle in the neighborhood; the conducting of egg-laying contest and battery-brooding contests; the publication of a chapter magazine; and the operation of a fruit and truck garden project for which members manufactured the necessary crates and boxes in the school workshop.



A SWINE PROJECT

The above shows a group of Paul Leck's pigs in one of his swine projects. Paul is in the background.

## Kansas Farm Boy Wins National Recognition

The American Farmer degree was awarded 69 Future Farmers at the recent national convention of the Future Farmers of America in Kansas City. Paul Leck of Washington, Kan., was awarded highest honors in the group, the title "Star Farmer of America," and a first-prize cash award of \$500 given by the Weekly Kansas City Star, W. A. Cochel, editor.

Paul's supervised farming has been done under the direction of H. H. Brown, director of vocational agriculture in the Washington High School. His farming program was of a general farm nature. He produced poultry, beef cattle, and swine and grew corn, sor-

ghums, and other feed crops. He remodeled farm buildings and built new buildings including a model farm shop, a straw-loft, open-front, laying house for 200 hens, and two individual hog houses to care for his swine projects.

Paul also landscaped the home grounds and modernized the home. Last year he started a garden and fruit project in which he plans to install an irrigation plant. His labor income dur-



PAUL LECK

Mr. Leck, a member of the Washington chapter of F. F. A., was high man in the national achievement contest. He was awarded a prize of \$500 in cash and named the "Star Farmer of America."

ing his four years of supervised farming was \$1,685.

Prof. A. P. Davidson, executive advisor of the Kansas Association of the Future Farmers of America, speaks of Paul Leck's work as follows: "Paul's story does not include anything but his supervised farming experience. Paul was president of his high school class and captain of the high school football team. He ranked second in scholarship; had a successful show record in

local and county competition; was a member of the judging team that represented Kansas in the livestock judging contest at the American Royal in 1933 and a member of the winning team in the milk judging contest at the American Royal in 1934, being high individual in the contest. He was president of the Kansas Association of F. F. A. in 1934. In addition to an excellent livestock and crops supervised farming program Paul has tangible evidence on his home farm of the finest farm shop carryover that it has been my pleasure to observe in the eight years I have been reviewing State Farmer and American Farmer degree applications. Paul is a modest and unassuming farm lad who possesses that fine characteristic of doing thoroughly and well whatever he elects to do."

#### KANSAS FARM CONDITIONS

(Continued from page 5)

year's drought relief funds, the work relief, if funds are available, will be more than 100 per cent greater.

Farm conditions in the various sections of the state are described briefly by K. S. C. students of agriculture in the following paragraphs.

From Brown county, Leon E. Wenger and Charles A. Hageman report the early corn was injured by drought and a large percentage of the late corn, although helped by late rains, is soft. Wheat yields were low and a lot of the wheat was of low quality. The first cutting of hay was heavy but dry weather caused a light second crop. Early fall rains were very beneficial to plowing and wheat-seeding preparations, to last cutting of alfalfa, and to the pastures. The farmers are rather optimistic as indicated by a larger wheat acreage, larger pig crop, and more cattle going into the feed lot.

William R. Allen of Atchison county says that most of northeastern Kansas farmers after having a very wet spring followed by a dry and hot summer at least have plenty of feed. Most of this

feed, however, is forage crops. Wheat and the AAA checks were the chief sources of income as they were last year.

Caldwell Davis, Jr., reports that most farmers of southeastern Kansas will have enough feed to carry their livestock through the winter. A large part of the corn was cut for fodder, although some farmers report a yield of 15 to 20 bushels per acre, which is much better than last year. Sorghums and other row crops matured late but made feed and some grain. Fall pastures were good and wheat will provide plenty of winter pasture. It is quite evident that with the AAA program and better farm prices generally, the farmers will be better off than they have been for several years.

According to Emory L. Morgan, crops are fair to good in Franklin county. Corn made considerable feed. Some fields made a fair yield. Pastures are quite poor because of last year's drought. Alfalfa yielded well and the hay was of good quality. Livestock should go through the winter in good condition as there will be a lot of rye and wheat pasture.

Wilton B. Thomas says that the 1935 crop year in Clay county was poor but much better than 1934 when nothing was produced. A fair crop of wheat, a good oats crop, and a corn failure sum up the situation. Clay county was hard hit by the flood in early June that swept down the Republican river valley destroying thousands of acres of crops. The wheat goes into winter in an uneven condition because it was too dry to plow the ground until about September 1.

J. Raymond Dicken of Cowley county reports alfalfa was the best money-making crop the farmers had. Quite a few farmers seeded more land to alfalfa this fall. Bottom land will make an average of 20 bushels of corn to the acre. Sorghums were late, being severely hit by the dry weather.

H. Frederick Dudte says that south

central Kansas has led the state in wheat yields for the past two years. Although corn and forage crops were almost a complete failure, oats was excellent, which will greatly relieve the feed situation. Prospects are also good for a wheat crop next year with most of the acreage planted and plenty of moisture for fall growth.

Wayne D. Shier reports that the majority of Saline county farmers came through the past summer in fairly good shape, in spite of serious losses due to both floods and drought. Feed for the winter will be sufficient but not plentiful. Some grain sorghum crops matured where local showers provided sufficient moisture for growth. Corn did not mature grain but provided silage and fodder. Early alfalfa yields were good. Wheat benefit payments to the amount of a quarter of a million dollars will help many farmers through the winter.

Virgil T. Lake says that the agricultural situation in Barber county has attained a level much above that of a year ago. Moisture in the wheat seedbed was above the average. Farmers have received their wheat allotment checks, and some have received cash from oil leases. Present conditions make farmers optimistic for next season.

According to Charles W. Beer most row crops in Pawnee county did not make grain this year because of the dry weather but will make plenty of feed as a result of late rains. There is an abundance of alfalfa in the county as a result of the rains in early summer. Early fall rains put the ground in good condition for wheat seeding. Although the 1935 wheat crop was poor, farmers are optimistic over the 1936 crop.

Leonard F. Miller says that although many farmers of Phillips and surrounding counties find themselves without any cash grain crop for the second successive year, the outlook at present is quite optimistic, because of general soaking fall rains that produced a light

corn crop in some sections, provided an abundance of rough feed, and at the same time made a good wheat seedbed possible.

F. Louis Brooks reports that some moisture in western Kansas improved wheat prospects for 1936 and produced some needed wheat pasture. Wheat seeding was late. A frost September 27, cutting short the filling of the heads of the late sorghum crops, made wheat pasture very necessary as feed for livestock.

For Rooks county Celestine C. Graham reports that the grain crop of 1935 was practically a total failure. Late rains during the fore part of September along with favorable growing weather later resulted in a fair crop of sorghum feed. The seeding of crops was financed by government money from seed loans. Benefit payments from reduction contracts were the largest source of cash income for the season.

Harold A. Borgelt says the majority of farmers feel satisfied in Kingman county over agricultural conditions. Rainfall was sufficient to produce feed. The county raised on the average about an 8-bushel wheat crop. Not many of the farmers were forced to sacrifice a great number of their livestock in 1934 because of the drought, so consequently they have livestock to feed during the winter. Farmers received their last 1934 and first 1935 wheat checks amounting to \$285,000, making the total received close to a million dollars.

Fred L. Fair says in Rice county pastures were weedy and short. Sorghum feeds were fair as were first and second cuttings of alfalfa. Wheat sowing was late because of the lack of moisture, and wheat pasture was consequently reduced. These conditions coupled with a large amount of livestock in Rice county, make the feed problem acute for the second year.

According to A. Eugene Harris central western Kansas farmers again have something to hope for. Besides wheat pasture and a limited amount of

roughage, the recent rains have greatly reduced the danger of soil blowing and have started a wheat crop which probably means more to the farmers than any other single thing.

According to Philip W. Ljungdahl this summer's drought in Thomas county completely ruined the farmers' chances of having anything for the year's work. The fall rains were slow in coming but during the last week of September a soaking of the ground made the most hopeful outlook since 1932.

Southwestern Kansas has suffered from severe drought for the past three seasons. In 1934 most stock cattle were shipped out of the area, according to J. E. Taylor, '30, county agricultural agent. In the spring of 1935, however, a large acreage of feed crops was planted. Again adverse conditions so nearly destroyed these crops that but few cattle will be returned to the area this fall. In some limited districts there is feed enough for subsistence animals.

This fall it was too dry to plant wheat in most of the areas south and west of Dodge City, including more than eight Kansas counties. There are some small districts, however, in each of these counties where sufficient moisture fell to encourage wheat planting. What the outcome will be is very problematical.

The conclusions from these reports from various parts of the state are that farming conditions in Kansas in general are better for the year 1935 than they were for the year 1934. But certain spots, because of drought or both drought and floods in 1935 or drought for two or more years, present serious situations. Southwestern Kansas has been the hardest hit by drought.

Allotment checks and oil-lease money have been a great help in many local sections of the state but if a comparison is made between the 1934 and 1935 income exclusive of these, improvement is still shown. The fact that the yield of most crops was better in

1935 than 1934 and the price in general was higher for both crops and livestock is encouraging. The farmers' morale has been improved. It is remarkable that Kansas farmers could endure a year like 1935 and still report a more profitable year than 1934.

## A Quality Test for Ice Cream

During the past few years the consuming public has seen the development of various quality tests used on dairy products in their behalf. Today milk that is delivered on the doorstep must conform to standards in regard to bacteria count, sanitary methods of production, sediment test, and butter-fat content.

The past summer has seen the development of another test which may prove to be of value to the consuming public. The test is for use on ice cream and is an adaptation of the sediment tests now used on milk, cream, and butter. Former attempts to filter ice cream have met with only partial success as some ice creams will filter readily and others not at all.

Everett L. Byers, '35, working under the direction of Prof. W. H. Martin of the Department of Dairy Husbandry, found that the addition of approximately 5 cubic centimeters of an alkaline solution sold commercially as Minnesota Babcock test reagent, to a 100-gram sample of melted ice cream, and diluting the mix with an equal weight of distilled water (previously filtered) made filtering easy. The filtering is done with the regular milk sediment test apparatus. The sediment is caught upon standard cotton discs 1 inch in diameter.

Byers made this test upon 150 samples of ice cream from various sections of Kansas during the summer. From the results he obtained it seems evident that further investigation of the possibilities and value of such a test would be advisable.—W. R. S., '36.

# Become Acquainted with Brome Grass

Clarence E. Cook, '37

Brome grass, also called smooth brome, awnless brome, Hungarian brome, Russian brome, and Austrian brome, was first cultivated as a pasture grass in 1769 in Europe and Asia, being grown mainly in Hungary and Russia. It was introduced into the United States prior to 1884 by the California Agricultural Experiment Station. It has met with favor in the region west of the 95th meridian and north of latitude 36, especially as a grass for unirrigated lands.

Brome grass is a long-lived perennial grass, very drought resistant and winter hardy. The plants spread by root stalks and seed, thus solid mats sometimes a foot in diameter are formed. Single plants under ordinary conditions will grow 5 feet high and each plant may possess from 100 to 200 culms. The plants thicken very rapidly, even though they may be thin at first. They form a thick tough sod which is very beneficial in the control of sheet erosion. The root stems produce numerous shoots and a very dense fibrous root growth that often fill the soil completely to a depth of 5 or 6 feet.

The leaves are numerous and large, furnishing a dense mass of foliage which completely covers and shades the ground. The lower half of each culm may bear from five to six leaves. These add greatly to the value of the grass for hay and pasture, though it is mainly a pasture grass. Livestock of all kinds are fond of brome grass. Under favorable conditions it will furnish continuous grazing from early spring until late in the autumn. In this respect it exceeds all other grasses and even after frost, when the leaves have turned a brownish cast, it does not lose its palatability.

As a hay crop brome grass is equal to timothy in food value but timothy exceeds it in commercial value. Brome grass exceeds timothy in hardiness and in drought resistance and it may be

grown where the annual rainfall does not exceed 23 to 26 inches. It will exist under dry conditions that would destroy most other cultivated grasses, and when rains come it will respond vigorously. Its great drought resistance is undoubtedly due in part to its fine fibrous and deep root system.

As compared with other grasses brome grass succeeds well on the lighter, sandier soils and drier lands; but like other grasses it grows better on deep, rich, fertile loam soils well supplied with moisture.

Brome grass is especially adapted to regions having moderate rainfall, being therefore a grass well suited to the climatic conditions of the eastern third of Kansas. In the southeastern part of the state the yields are somewhat lower and it is not so long-lived as in the northeastern part of the state. But due to work being done by Dr. A. E. Aldous, in charge of pasture improvement on the staff of the Kansas Agricultural Experiment Station, it is hoped that selections will be made to provide a wider range of adaptability in the state.

In seeding brome grass following cultivated crops which have been kept free from weeds, it is best not to plow in preparing the seedbed. Such land well disked and harrowed will give a better seedbed than can be secured by plowing. Brome grass may be seeded on summer fallowed land which has been cultivated all or part of the season. Land from which wheat, barley, or oats has been cut, if plowed immediately after harvest, makes a good seedbed if the soil is kept well cultivated with a harrow or acme harrow until the weeds have been killed and the subsurface soil has become moist and well settled.

When a seedbed is prepared by plowing, the land should be plowed several weeks before seeding time and should be cultivated at intervals to clear it of

(Continued on page 31)

# Estimating Future Wheat Production by Rainfall Distribution

Leonard F. Miller, '36

Of what value are rainfall records in estimating wheat production? Correlation studies show that month-to-month wheat-price changes, especially in the spring months, are closely associated with changes in the estimates of winter wheat production in the Southwest. Be-

of using rainfall data in estimating wheat production. He concludes that fairly reliable estimates can be made six to ten months prior to harvest, and that there is a possibility of using weather records in indicating desirable adjustment in wheat production. His studies verify by statistical procedure the general opinion that above-normal rainfall is directly associated with above-normal yields in the Great Plains area and with below-normal yields in the eastern part of Kansas or that part which is similar to the soft winter wheat belt.

Professor Henney's work began with an effort to correlate the subsoil moisture data for land used in the experiments at the Fort Hays Agricultural Experiment Station with the yields of wheat secured in the county in which the Fort Hays station is located. The study was later expanded into correlation analysis of the relation between rainfall and wheat yields in the nine crop-reporting districts that are set up by the government crop-reporting service.

Some recent studies of rainfall and crop yields made by Production Credit Association areas indicate that the state of Kansas might be more logically divided into type-of-farming areas. Soil types are one of the important factors in determining the type-of-farming areas and the soil reaction to rainfall distribution varies greatly within the present crop-reporting districts. But as stated above, this study was based on data from crop-reporting districts, not type-of-farming areas.

The state of Kansas is divided into thirds from west to east and from north to south, making nine districts. The northern three districts are numbered 1, 2, 3 from west to east; the middle three, 4, 5, 6 from west to east; and the

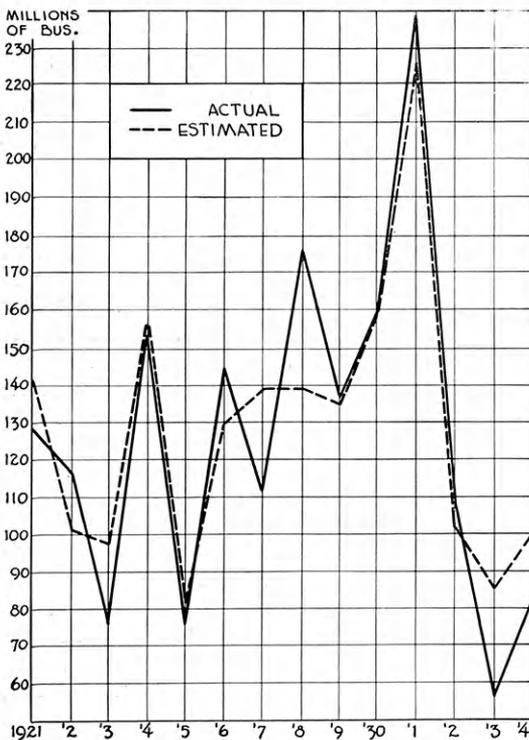


Chart showing the comparison of estimated annual wheat production for Kansas based on rainfall distribution alone with actual production for the years 1921 to 1934.

cause of this close correlation, anyone interested in the price changes would be interested also in any factor which could be used in estimating future wheat production.

Prof. Homer J. Henney of the Department of Agricultural Economics has made a study of the practicability



**BROME GRASS**

(Continued from page 29)

southern three, 7, 8, and 9 from west to east. The months during which the amount of rain received has the greatest effect on the following wheat yields are indicated in the accompanying tabulation.

Crop-reporting district	Precipitation period	Relationship
1	3 mos.—Sept. to Nov. Previous fall	Direct
2	3 mos.—Sept. to Nov. Previous fall	Direct
3	5 mos.—June to Oct. Previous fall	Indirect
4	2 mos.—Oct. and Nov. Previous fall	Direct
5	4 mos.—Sept. to Dec. Previous fall	Direct
6	12 mos.—Jan. to Dec. Year before	Indirect
7	3 mos.—August to Oct. Previous fall	Direct
8	3 mos.—Aug. to Oct. Previous fall	Direct
9	12 mos.—Jan. to Dec. Prior to previous harvest	Indirect

It is common knowledge that there are variable factors other than rainfall which have decided effect on the winter wheat crop, but the use of data on rainfall distribution alone in estimating future production gives fairly accurate results as is shown by the accompanying graph which is an average estimate arrived at by using all the important rainfall periods. The Index of correlation for the years, 1921 to 1934, inclusive, is  $+ .93$  with a standard error of estimate of 18 million bushels for the state.

If the winter wheat production is to be adjusted in such a way that the total production will not vary widely, a fairly accurate estimate of possible production should be available before seeding. Studies show that by using cumulative rainfall data over a 12-month period prior to the previous harvest, a fairly reliable forecast can be made before seeding as to next year's crop.

Since a high percentage of the United States winter wheat crop is produced under conditions similar to those in various sections of Kansas, it appears that there is a possibility of using weather records for indicating desired adjustments in wheat acreage.

weeds, to conserve moisture, and to put the soil in the best possible condition. The seedbed should have a level mellow surface but a compact subsurface in order that the seed may be evenly covered and brought into contact with the moist soil. If necessary to plow shortly before seeding, the ground should be made firm by the use of a subsurface packer or a heavy pulverizing roller.

Brome grass seed is sown broadcast and one light harrowing after seeding is usually sufficient to cover the seed properly. The harrowing should follow the seeding at once because under favorable conditions the seed germinate very quickly, and harrowing after germination has begun is apt to destroy many plants.

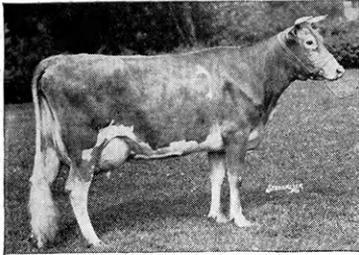
Brome grass may be seeded in either fall or spring. Fall seeding is usually preferable, about September 10 being best if the season permits. The seeding should be at the rate of about 18 pounds to the acre, though this depends upon the purity and germination of the seed. The old Scotchman when asked how much seed to sow for a good stand, answered, "Weel, in a gude season a very leetle will do, and in a bad season it don't make no difference."

J. O. Miller, '34, is extension pathologist in the K. S. C. Extension Service.

S. M. Raleigh, '27, is assistant professor of agronomy in the University of Maine, Orono.

C. M. Carlson, '27, is with the farm management department of the John Hancock Mutual Life Insurance Co., 1030 Badgeron Bldg., Sioux City, Iowa.

J. L. Farrand, '24, is head of the Department of Animal Husbandry, University of Nebraska. He was a member of the Aggie livestock judging team which won in the International contest in 1923.



# “Guernsey”

*a household word*

Anywhere, anytime, “Guernsey” immediately brings into one’s mind a mental picture of renowned cattle, rich yellow-colored milk. Breeders, retailers, consumers all realize the true value of this breed of dairy cattle.

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*This advertisement written by Jack Schinagl, University of Wisconsin, won first place in the Agricultural College Magazines Association contest sponsored by the American Guernsey Cattle Club.*