

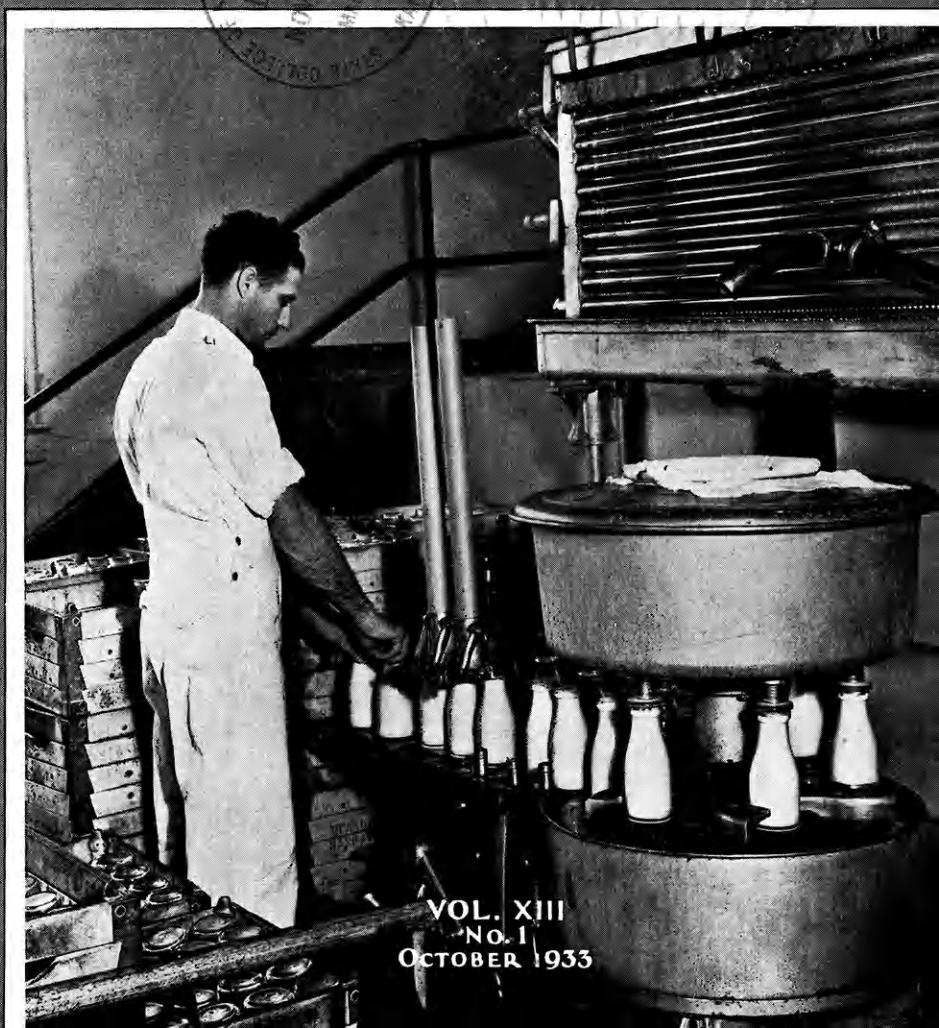


v. 13-14

OCT. 1933 - NOV. 1935

THE KANSAS AGRICULTURAL STUDENT

MANHATTAN, KANSAS



VOL. XIII
NO. 1
OCTOBER 1933

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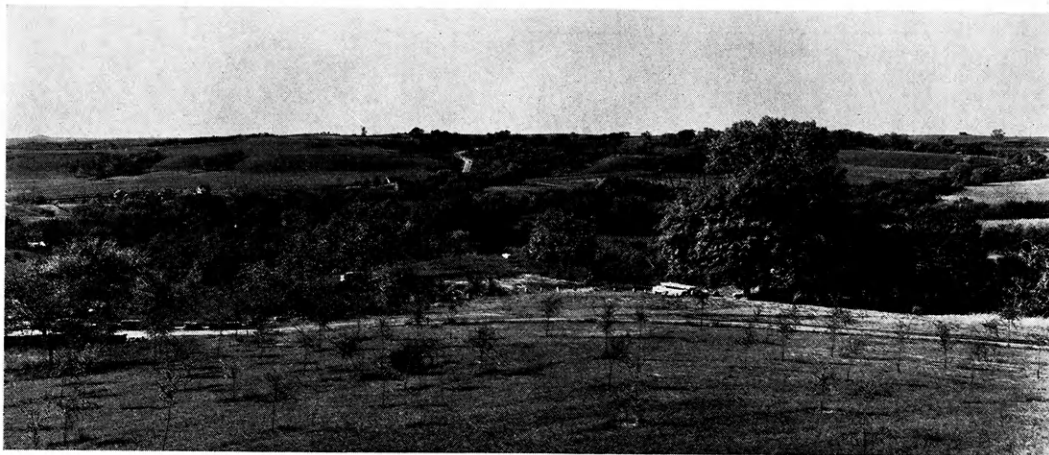
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ONE VIEW OVER WILDCAT CREEK FROM SUNSET CEMETERY HILL

This is just one of the many beautiful scenes from the hills near Manhattan—a southwest view over a portion of the City Zoo. In the distance the highway (40S) up Stag hill will be quickly recognized by all who have been over Stag hill on 40S.

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135002



MARY PORTER
QUEEN OF THE SEVENTH ANNUAL AG BARNWARMER

Miss Porter is a sophomore in the Curriculum in Commerce. Her home is Mt. Hope and she is a member of the Delta Delta Delta sorority.

The Kansas Agricultural Student

VOL. XIII

Manhattan, Kansas, October, 1933

No. 1

Farming Enterprises in 1933

J. Warren Mather, '34

The position of the Kansas farmer is as good as could be expected considering the climatic and economic factors he had to deal with the past season. However, with favorable early fall conditions for winter wheat and the cooperation given to the Agricultural Adjustment Administration, farmers are anticipating a more profitable season during the coming year. Various phases of the farming industry for the past season are briefly discussed in the following paragraphs:

Although all dairy farmers in Kansas have suffered from low prices during the past year, dairymen selling butterfat to creameries have been faced with greater difficulties than those engaged in the retail fresh milk trade. Butterfat prices dropped to the lowest level in years but prices paid for whole milk did not decline proportionately. As a result dairymen selling whole milk have been able to realize a small profit, due in part to reduced feed cost.

Faced with lower prices in the future, due to an ever increasing surplus of dairy products, dairymen have turned their attention to the problem of reducing the cost of production. Careful experiments show that the dairyman raising his own feed can afford to feed an all roughage ration even at the expense of decreased production of his herd because a hundred pounds of digestible nutrients can be grown more cheaply in the form of roughage than as concentrates.

Organization of the dairymen engaged in the whole milk trade and the adoption of a retail milk code seem to indicate more satisfactory conditions,

at least for certain sections of the dairy industry, within the next few months.
—Lewis S. Evans, '36.

Wheat in the southern portion of the Kansas wheat belt for the year of 1933 was poor, the average yield being about ten bushels per acre. However, some yields of 20 bushels per acre were reported. The quality of the wheat was poor and the tests were rather low. A few of the farmers took advantage of the dollar wheat but most of them held their wheat thinking the price would go higher. The outlook for next year is promising with a good supply of subsoil moisture and ideal planting conditions. Practically all wheat farmers have taken advantage of the A. A. A. wheat program.—Roland A. Munsell, '36.

In western Kansas wheat was poor both in quantity and quality. A majority of the farmers had to purchase seed wheat for the 1934 crop. Early fall prospects for a wheat crop in 1934, however, are good. Approximately 50 per cent of the average acreage was summer fallowed, and with six to twelve inches of slow rainfall in the month of August, wheat was seeded under very favorable conditions. With additional rainfall there will be an abundance of wheat pasture this fall.—Harry W. Coberly, '34.

The October estimate of the Kansas corn crop for 1933 is 86,354,000 bushels. This is the smallest crop since 1930, and is 41,000,000 bushels below the five-year average (1926 to 1930). The crop is a near failure in central,

west central, southwestern, and south central counties. The yield is fair in eastern Kansas and is good in Sherman and Cheyenne counties. These two counties have an estimated yield of 4,000,000 bushels each.

Corn probably will bring a higher price this year than it did last year because of the smaller 1933 crop. The small wheat crop this year, and a probable increase in the price of hogs the coming year is likely to increase the demand for corn. This increased demand, together with the short crop, should increase the price to be paid for corn. Therefore the Kansas farmers who have a fair yield of corn this year should obtain a substantial return for the crop.—John R. Latta, '34.

During the past year certain classes of beef cattle have failed to return a profit. This applies particularly to cattle marketed off of grass and heavy long-fed cattle marketed during the fall months. Light-weight well-finished quality cattle have sold at a price each month in the year that should have meant a profit if proper methods of feeding had been followed. The decline in fat cattle prices during recent months, coupled with an increase in the price of grain, has, however, narrowed the margin of profit on all classes of cattle almost to the vanishing point.—C. W. McCampbell, head, Department of Animal Husbandry.

In general not much profit was realized from hogs last season. However, the Kansas hog producer who uses up-to-date feeding methods, good management, and raises hogs of good quality can make money if he gets per 100 pounds of pork ten times the cost of a bushel of corn. Hog raisers who had corn on hand last spring had no trouble meeting the ratio of 10:1. Hogs going to market this year are heavier than those of a year ago. The average weight for Kansas hogs going on the market now is from 220 to 225 pounds.—Vernon E. Burnet, '34.

The sheep industry in Kansas embodies two definite and very different types of enterprise: (1) The keeping of a small farm flock, and (2) the feeding of western lambs. In some sections of central and eastern Kansas the farm flock of sheep is carried as a profitable side line on nearly every farm. It has been only in the last few years, however, that lamb feeding has developed on a large scale in western Kansas. This has come about through the discovery that lambs will furnish an excellent market for wheat pasture, grain sorghums, and other western Kansas feeds, portions of which have always been difficult to dispose of profitably. Unlike the farm flock industry, lamb feeding in western Kansas is not undertaken by a large percentage of farmers but is conducted on a large scale by a comparatively few operators.

In the fall of 1931, thousands of lambs were fed in western Kansas. Last year the industry declined sharply, but this fall and winter there will again be extensive feeding, affording a means of marketing great quantities of grain and roughage and furnishing employment to many Kansas farmers.—Walter M. Lewis, '35.

The total number of laying hens on Kansas farms on January 1, 1932, was 19,800,000. An increase of 200,000 was reported for January 1, 1933. The total receipts for eggs for 1932 were approximately 9½ million dollars compared to 15 million dollars for 1931. The increase of feed costs for October, 1933, was almost 60 per cent and the average decrease in market price of eggs, 14 per cent as compared to October, 1932. These figures do not present a very bright outlook for the near future. However, with midwestern, liner-packed, candled, U. S. Extra eggs, topping the New York market last month by 1 cent to 2½ cents, the Kansas egg producer still has hopes that "prosperity is just around the corner."—Walter R. Dudley, '34.

Due to the extreme drought in most parts of the state the sorghum crop is somewhat less than usual this year. In all sections of the state, except the extreme northwest, the northeast, and the southeast, sorghums have proved much superior to corn, while in many sections sorghums are the only crop of importance that was produced this year. Conditions have been very unfavorable for crop production, especially in southwestern Kansas, but they emphasize the fact that sorghums are the most dependable crop for the Kansas farmer.—Charles E. Murphey, '35.

The short potato crop in Kansas this year netted the potato grower more money than the larger crops of recent years. Excessive hard rains in the spring, followed by a dry June, probably account for the low yield. The price of potato seed this fall has varied, but has remained within range for farmers to purchase their usual amount.

The fall green manure crops on potato land are in good condition. Considerable alfalfa sod was broken this fall since the cost of seeding alfalfa prohibited the breaking of the usual amount of sod the fall of 1932. Seeding alfalfa on potato land has been heavy this fall.—Wilfred H. Pine, '34.

The 1933 small fruit crop of northeastern Kansas was reduced between 50 and 75 per cent from last year's crop, because of high temperatures and lack of moisture. Fairly good demand for the berries was manifest throughout the season.

Apple production in northeastern Kansas this year was over 50 per cent greater than the 1932 crop. The 10,000 acres of apple orchards in Doniphan county is the major source of income for that county. One of the largest crops of York Imperial apples ever known to the growers in that section was harvested. Some York Imperial orchards produced 50 bushels per tree.

The apple market has been fairly strong this fall. Jonathan, Utility pack (must go into immediate consumption) has been selling at \$1.35 per bushel; U. S. No. 1 Winesaps, \$1.15; and York Imperials 90 cents. The expense of washing, grading, packing, and marketing the apples amounts to 31 cents per bushel, hence the grower's profit is somewhat limited.—Wilbur M. Lehman, '35.

Barley has for some time been a very important crop for the western part of the state. The past two years, however, have been poor barley years. The past season was nearly a failure, and what was left from the 1932 crop is practically gone. It is with a great deal of apprehension that the farmers view barley planting of next spring, in as much as seed will be scarce and much of what they do have will be poor-quality seed.—W. Philip Ljungdahl, '36.

Progress of Wheat Allotment

O. B. Dryden

Assistant Extension Editor

Between 24 and 25 million dollars will be brought to Kansas wheat growers in the form of wheat adjustment payments during the coming six months according to the Agricultural Adjustment Administration.

These cash adjustment payments will be made in accordance with the government's Domestic Allotment Plan for wheat. This plan provides not only for a reduction of 15 per cent in seeded acreage of wheat, but for cash payments which will restore the wheat grower's purchasing power from wheat to a parity with the period of 1909 to 1914.

Because of decreased exports of wheat, as well as a continued heavy production within the nation, market prices of wheat in the United States have been far below normal during the

(Continued on page 22)

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WE SHOULD WIN THAT SADDLE AND SIRLOIN CLUB TROPHY

The Saddle and Sirloin Club of the Union Stock Yards, Chicago, of worldwide fame for its portrait gallery of leading live-stock men, sponsors a medal essay contest each year, which is open to all undergraduates in colleges of agriculture. The subject for the contest this year is: "The Influence of Live Stock Judging Contests." Gold, silver, and bronze medals are offered to individuals submitting the best essays. A silver trophy is given to the high-ranking team—the 20 contestants presenting the best essays from any college.

Kansas State College has entered this contest or similar contests sponsored by the Saddle and Sirloin Club for the past 20 years. During this time we have received our share of the winnings. In 1923 Mrs. Dorothy Lush-Nel-

son placed first, winning a gold medal. In 1929 Clarence M. Dunn placed third, winning a bronze medal. In 1930 Kimball L. Backus placed second, winning a silver medal. Each medal winner is given a free trip to the International Live Stock Exposition and is a guest of honor at an annual Saddle and Sirloin Club banquet.

As a team, Kansas State College placed first in 1929 and 1930, and we are the only college with two winnings on the present trophy. When the trophy has been won three times by any college team it becomes the permanent possession of that college. Kansas State College is making every possible effort to win it this year. If we do not win the contest this year, we will certainly have to make a concerted effort next year. If we win this year or even next we will become permanent owners of the trophy.—Howard A. Moreen, president, Block and Bridle Club.

College Notes

HONOR ROLL, 1932-'33

For the past college year, 1932-'33, in the Division of Agriculture, 111 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, 1932-'33

Seniors	Home P. O.	Credits	Scholarship Av.
Erwin Abmeyer	Grantville	28	2.93
John I. Miller	Prescott	33	2.79
Charles E. Fisher	Cuba	28	2.68
George A. Baldry	Neosho, Mo.	33	2.58
Orville F. Denton	Denton	29	2.55
Glen S. Fox	Rozel	33	2.48
Donald H. Bowman	Manhattan	33	2.36
Robert A. Zebold, Jr.	Little Rock, Ark.	35	2.26
Jerrold J. Wardell	Platteville, Colo.	29	2.24
W. Newell Page	Detroit	34	2.18
Martin F. Keck	Kansas City, Mo.	35	2.17
Raymond T. Harper	Manhattan	28	2.14
Herbert W. Clutter	Larned	32	2.13
Laurence R. Daniels	St. Francis	31	2.10
Robert W. Lukens	Beloit	35	2.09
Everett J. McNay	Clay Center	28	2.07
Herschel W. Weber	Novinger, Mo.	35	2.03
Juniors			
Paul W. Griffith	Edmond	36	2.72
Kenneth S. Davis	Manhattan	35	2.51
J. Warren Mather	Grinnell	37	2.49
Floyd E. Davidson	Madison	35	2.49
John R. Latta	Holton	30	2.47
Wilfred H. Pine	Lawrence	31	2.45
Pius H. Hostetler	Harper	32	2.41
James C. North	Kansas City, Mo.	35	2.29
Val W. Silkett	Downs	30	2.27
Laurence L. Kelly	Seymour, Mo.	35	2.20
Harold E. Grogger	Solomon	34	2.18
Louis B. Hanson	Jamestown	27	2.11
C. Dean McNeal	Boyle	35	2.09

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.

Sophomores

Albert A. Thornbrough	Lakin	32	3.00
Donald R. Cornelius	Wheaton	32	2.75
Frank G. Parsons	Winfield	34	2.71
George A. Rogler	Matfield Green	34	2.68
Celestine C. Graham	Stockton	32	2.63
Eugene E. Sundgren	Falun	35	2.57
Charles E. Murphy	Leoti	34	2.44
Dale S. Romine	Oswego	36	2.36
Melvin P. Rogers	Glasco	37	2.22
James H. Watson	Merriam	33	2.09
J. Raymond Dicken	Winfield	29	2.07

Freshmen

J. Edwin McCollm	Emporia	32	2.87½
L. Wayne Herring	Tulia, Tex.	32	2.81
Arthur C. Ausherman	Elmont	32	2.78
Howard J. Hias	Almena	32	2.72
Leon E. Wenger	Powhattan	32	2.72
Willard A. Challender	Sedgwick	32	2.53
Ned O. Thompson	Manhattan	32	2.53
Maurice H. Stauffer	Hymer	32	2.41
Wilmer R. Smith	Columbus	30	2.40
Royce P. Murphy	Norton	32	2.25
David W. Gregory	Cheney	32	2.16
Elmer B. Winner	Topeka	32	2.16
Earl W. Parsons	Winfield	32	2.06

HONOR ROLL, 1932-'33

Seniors	Home P. O.	Credit hours passed	Total points
Clarence H. Anderson	Richland	33	50
Frank R. Brandenburg	Riley	33	50
Francis W. Castello	McCune	34	49
Lester R. Chilson	Oberlin	33	57
Raymond J. Cohorst	Marysville	39	60
Earl C. Coulter	Willis	36	57
Harold A. Daily	Waverly	30	57
Hubert R. Hein	Washington	35½	49
Thomas C. Hinkle, Jr.	Carbondale	33	52
Harold L. Kugler	Abilene	34	61
Harold C. Love	Wasey	30	53
J. Elbert Loveless	Denton, Tex.	34	58
Gilbert C. Moore	Louisburg	31	51
Gaylord R. Munson	Junction City	34	61
Norris W. Nelson	McPherson	34	47
Carly G. Page	Norton	34	56
Leonard W. Patton	Newton	32½	61
Marion W. Pearce	Miltonvale	36	65
Olin Sandlin	Palco	34	53
Penn Thompson	Manhattan	30	49
Raymond B. Wagner	Richmond	30	57
Wilbur Wahl	Wheaton	31	52
Eugene A. Ward	Lawrence	37	73
Everett F. Yoxall	Woodston	35	50
Walter W. Zeckser	Alma	34	49

Juniors

Joseph S. Adams	Oak Mills	33	63
Vernon E. Burnet	Manchester, Okla.	35	66
W. Harley Chilson	Oberlin	31	59
Harry W. Coberly	Gore	35	60
Wesley S. Coblenz	Great Bend	32	53
John L. Duncan	Kansas City, Mo.	36	53
Wayne W. Jacobs	Harper	30	53
Clarence E. Keith	Ottawa	35	67
Eugene R. Kell	Manhattan	32	61
Margaret M. Knerr	Manhattan	34	65
Ben C. Kohrs	Dillon	27	50
John O. Miller	Meriden	30½	60
Obed E. Myrah	Story City, Iowa	32½	49
Herbert T. Niles	Olivet	35	57
Merwin E. Nixon	Manhattan	33	56
Dwight J. Thompson	Wichita	31	48
W. Telford Young	Englewood	34	56

Sophomores

Harry W. Grass III....La Crosse	29	53½
Laurence G. Harmon....Hutchinson	31	55
Edwin R. Lamb.....Manhattan	32	63
Walter M. Lewis.....Larned	32	59
Howard A. Moreen.....Salina	33	49
Willard A. Parker....Clearwater	36	49
J. Willett Taylor.....Lawrence	28	48
J. Sherman Todd.....Olathe	35	50
William A. Wishart....Manhattan	32	49

Freshmen

Howard V. Cheney....Grainfield	33	56
Kermit L. Davies.....Emporia	28	49
J. Lowell Myler.....Andover	32	54
John L. Scott.....White City	33	61
Lebert R. Schultz....Eureka	33	55
Emanuel ZoglinKansas City, Mo.	32	51



J. EDWIN MCCOLM

Mr. McColem won the Alpha Zeta freshman medal in the Division of Agriculture, 1932-'33, for having the highest scholarship average of any freshman of the division. The first semester he made 44 points on 16 credit hours and the second semester he made an "A" average adding 48 points to his record on a regular assignment. His home is on rural route No. 2 out of Emporia and he is a member of the Alpha Gamma Rho fraternity.

SEVENTH ANNUAL AG BARNWARMER

The seventh annual Ag Barnwarmer was held in Nichols Gymnasium Friday evening, October 20, 1933. Students in agriculture, agricultural engineering, and veterinary medicine reported they had a good time. Jack Pickering

and his orchestra started the "ball rolling" soon after 8:30. Refreshments of cider and doughnuts were served.

The decorations were made up of straw, evergreens, fall leaves, and other fall decorations. The throne was constructed of straw with trimmings of fall foliage. The lighting was in the form of lanterns hung across the gymnasium. A new attraction this year was a rock garden in the southeast corner of the gymnasium. This was a very beautiful setting, built under the leadership of Hilbrand D. Chilen. Earl H. Regnier had charge of the decorations which made the gym look unusually attractive and appropriate for the occasion.

Practically all Ags appeared on the campus Thursday and Friday in their barnyard tuxes, though a few had to be reminded of the regular Ag costume by one trip to the horse tank or lily pool. No second trips were necessary.

Ten candidates were nominated for princesses. The following six were elected at Ag Seminar Thursday, October 12: Pauline Crawford HE4, Luray; Sarah Ann Grimes HE2, Manhattan; Helen Hanson HE4, Clifton; Mary Porter, C2, Mt. Hope; Eleanor Smith HE&D1, Shreveport, La.; and Virginia Wagner, HE1, Richmond.

At the regular formal election held Thursday, October 19, Miss Mary Porter was elected Queen. She was formally crowned at 9:30 the evening of the Barnwarmer by Dean L. E. Call. Miss Porter is a member of Delta Delta Delta sorority.

Altogether the Barnwarmer was an exceptionally pleasant and successful event. Of those invited, 267 paid admissions. These included more than 50 per cent of the Ags and agricultural engineers and 25 per cent of the students of veterinary medicine.

Officers this year were: Manager, Robert R. Teagarden; assistant manager, Frank Parsons; secretary-treasurer, Frank S. Burson, Jr. Committeemen were: Decorations, Earl H.



HELEN HANSON
Princess, 1933 Ag Barnwarmer



SARAH ANN GRIMES
Princess, 1933 Ag Barnwarmer



PAULINE CRAWFORD
Princess, 1933 Ag Barnwarmer



VIRGINIA WAGNER
Princess, 1933 Ag Barnwarmer

Regnier; tickets, Frank S. Burson, Jr.; refreshments, J. Warren Mather; music, James R. Ketchersid; chief of police, Wayne W. Jacobs; and clean-up, Frank G. Parsons,—R. R. T., '34.



ELEANOR SMITH
Princess, 1933 Ag Barnwarmer

DAIRY PRODUCTS JUDGING CONTEST

The annual Students' National Contest in the Judging of Dairy Products was held in the Blue Valley Creamery plant in Chicago, September 18, 1933. The Kansas State team composed of W. Harley Chilson, Oberlin; Pius H. Hostetler, Harper; Wayne W. Jacobs, Harper; and Everett L. Byers (alternate), Hepler, placed second with 17 teams competing. Hostetler and Chilson each also won an industrial fellowship of \$600. These contests are sponsored jointly by the Dairy and Ice Cream Machinery and Supplies Association, Inc., and the American Dairy Science Association, and are supervised by the Bureau of Dairy Industry, Washington, D. C.

Seven samples each of creamery butter, vanilla ice cream, American cheese, and milk were judged. Ohio State University placed first; South Dakota State, third; Michigan State, fourth; and University of Minnesota, fifth.

The awards given were as follows: Six Dairy Products Industrial Fellowships, valued at \$600 each, awarded to the six high individuals in judging all products; silver loving cups to the high team in each and all products; gold, silver, and bronze medals to the high individuals in each and all products. The six fellowships went to W. I. Corbett, University of Illinois, first; Pius H. Hostetler, Kansas State, second; W. Harley Chilson, Kansas State, third; R. L. Carithers, Mississippi State, fourth; C. M. Sorensen, University of Minnesota, fifth; and Delmar Spicer, South Dakota State, sixth.

Besides the contest other events of the trip made a real treat. The trip by steamer to Michigan City, the two days spent in A Century of Progress, and the visit to the Field Museum near the fair grounds were experiences long to be remembered. Prof. W. H. Martin, the efficient coach of the team, can tell any students interested how to prepare for such a trip.—W. W. J., '34.

DAIRY CATTLE JUDGING CONTEST

Competing Monday, October 2, 1933, in the intercollegiate judging contest at Waterloo, Iowa, the Kansas State dairy cattle judging team placed seventh in a field of 18 competitors from the United States and Canada. The contest was held in connection with the annual Dairy Cattle Congress at Waterloo.

The Kansas State team ranked fifth in judging Jerseys, eighth on Brown Swiss, and tenth on Holsteins. Walter M. Lewis, Larned, was second high individual in judging Ayrshires and J. Willett Taylor, Lawrence, was eighth on Jerseys. The third member of the team was Frank J. Burson, Jr., Monu-

ment. J. Warren Mather, Grinnell, was alternate.

The contest consisted of judging five classes each of cows and bulls representing the major dairy breeds: Holstein, Jersey, Guernsey, Ayrshire, and Brown Swiss. Reasons were given on two classes of bulls, Ayrshire and Brown Swiss, and on three classes of cows, Holsteins, Jerseys, and Guernseys.

On the way to Waterloo, the Kansas State team stopped at Lincoln and Fremont, Nebr., and at Des Moines and Ames, Iowa, for practice judging on state and private herds. The team returned to Manhattan Wednesday night, October 4.

Prof. H. W. Cave of the Department of Dairy Husbandry was coach of the team.—F. S. B., '34, and W. M. L., '35.

POULTRY JUDGING CONTEST

The 1933 poultry judging team, coached by Prof. H. M. Scott, won first place in the fourteenth annual inter-collegiate poultry judging contest held on Saturday, October 14, 1933, in connection with the Coliseum Poultry Show at Chicago. By winning this contest for the third time since 1929 the team gained permanent possession of the rotating trophy awarded by the Institute of American Poultry Industries. Members on the team were Thomas B. Avery, Coldwater; Nevlyn R. Nelson, Belle Plaine; and Clarence L. Gish, Abilene. John O. Miller, Meriden, and Melvin L. Wilson, East St. Louis, Ill., were alternates.

There were nine college teams entered in the contest. The Missouri and Pennsylvania teams placed second and third, respectively.

The contest was divided into three parts—exhibition, production, and market egg and market poultry judging. Avery was high individual in the entire contest and also high in exhibition. Nelson was fourth high individual in the entire contest and high in pro-

duction judging. Gish was tied with three other students for high individual honors in market poultry judging. The team as a whole placed first in production, second in exhibition, third in



OFFICERS OF THE 1933 AG BARNWARMER

Dressed in their barnyard tuxedos the officers of the Seventh Annual Ag Barnwarmer pose a moment before the camera of the college photographer, Mr. F. J. Hanna. Left to right they are: Robert R. Teagarden, manager; Frank S. Burson, secretary-treasurer; and Frank G. Parsons, assistant manager.

market eggs, and fifth in market poultry judging. The average scores of the winning teams for the entire contest this year were somewhat higher than in previous years.

Members of the team spent one day making an interesting marketing tour of Chicago and one day attending the world's fair, A Century of Progress.

—C. L. G., '34.

Margaret M. Knerr, '33, is taking graduate work in landscape gardening.

Atlas and Kansas Orange Sorgos¹

Donald M. Atkins, '35

Atlas and Kansas Orange are two varieties of sorgo grown extensively in Kansas, about which there is considerable inquiry. The purpose of this article is to present some of the facts about the varieties, and some of the data collected in tests at the Kansas Agricultural Experiment Station and in co-operative variety tests on farms throughout the state, in such a way as to give fair comparison of the two varieties.

A brief history is given of Atlas, which is rather new as compared with Kansas Orange, an old standard variety. Atlas sorgo is a pedigree selection from a cross between Blackhull kafir and Sourless "cane" or sorgo. The original cross was made by I. N. Farr, a farmer and sorghum breeder of Stockton, Kan. The hybrid heads were sent to the Fort Hays Branch Agricultural Experiment Station at Hays and were planted there in a plot. This hybrid population contained many types. A large number of head selections were made for planting in head rows at Manhattan. The most promising one of this group of pedigree lines was selected by the agricultural experiment station plant breeder in 1923 and was later named Atlas. This selection was extensively tested and in 1929 was approved for distribution by the Kansas Crop Improvement Association. Since that time more than 200,000 pounds of certified seed of Atlas sorgo have been distributed by the Kansas station and the variety is now widely grown in eastern Kansas, where it is very popular as a silage and feed crop.

Kansas Orange and Atlas are alike in that they are adapted to practically the same region. They are very well adapted in eastern Kansas and are

also grown successfully in south central Kansas. They will not ordinarily mature seed in the north central, northwestern, and extreme western sections of the state. However, creditable yields of forage of both varieties have been reported in these sections of the state.

Plants of Kansas Orange are leafy and have juicy, sweet stalks, but produce brown, bitter, unpalatable seed. Atlas also has sweet, juicy stalks and has the distinct advantage of white, palatable seed that is classed on the market as white kafir.

The plot tests of these two varieties at the agronomy farm, Manhattan, over an eight-year period, from 1924 to 1931, show that Kansas Orange is superior to Atlas in yield of grain per acre. The yields of cured stover of the two varieties do not differ widely, though Kansas Orange has a slight advantage over Atlas. These average eight-year yields of grain and forage are as follows:

	GRAIN Bus. per acre	CURED STOVER Tons per acre
Kansas Orange	52.8	8.54
Atlas	46.3	8.16

Plot tests at the Fort Hays Agricultural Experiment Station have shown that in this section of the state, Atlas has the advantage, in yield of forage, over the more widely grown varieties of this region. However, the average grain yield of Atlas is low. This low yield probably is due to the fact that this variety does not fully mature seed in the shorter growing seasons. Average yields at Hays for nine years, 1924 to 1932, are as follows:

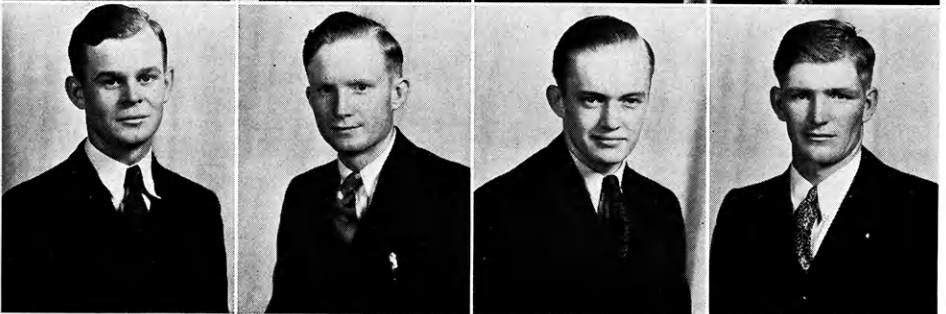
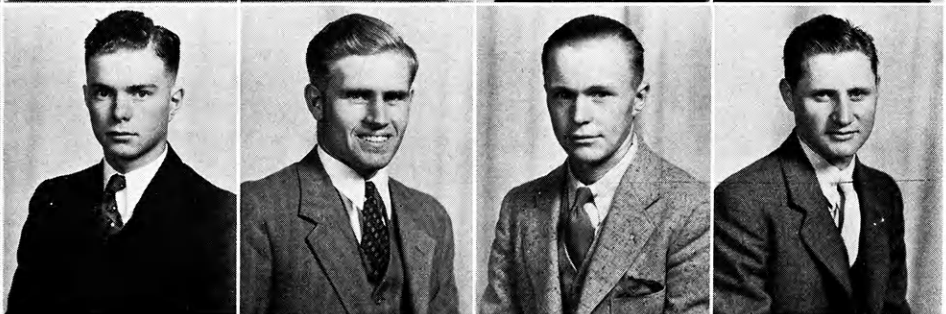
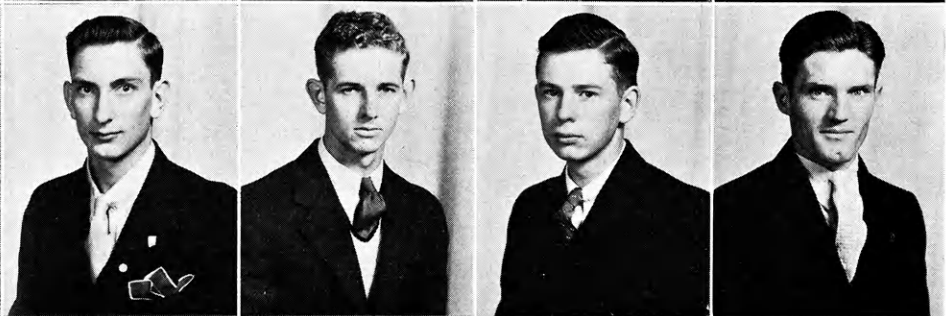
	GRAIN Bus. per acre	FORAGE Tons per acre
Atlas	22.3	4.35
Standard sumac	22.6	4.31
Early sumac	29.5	3.55

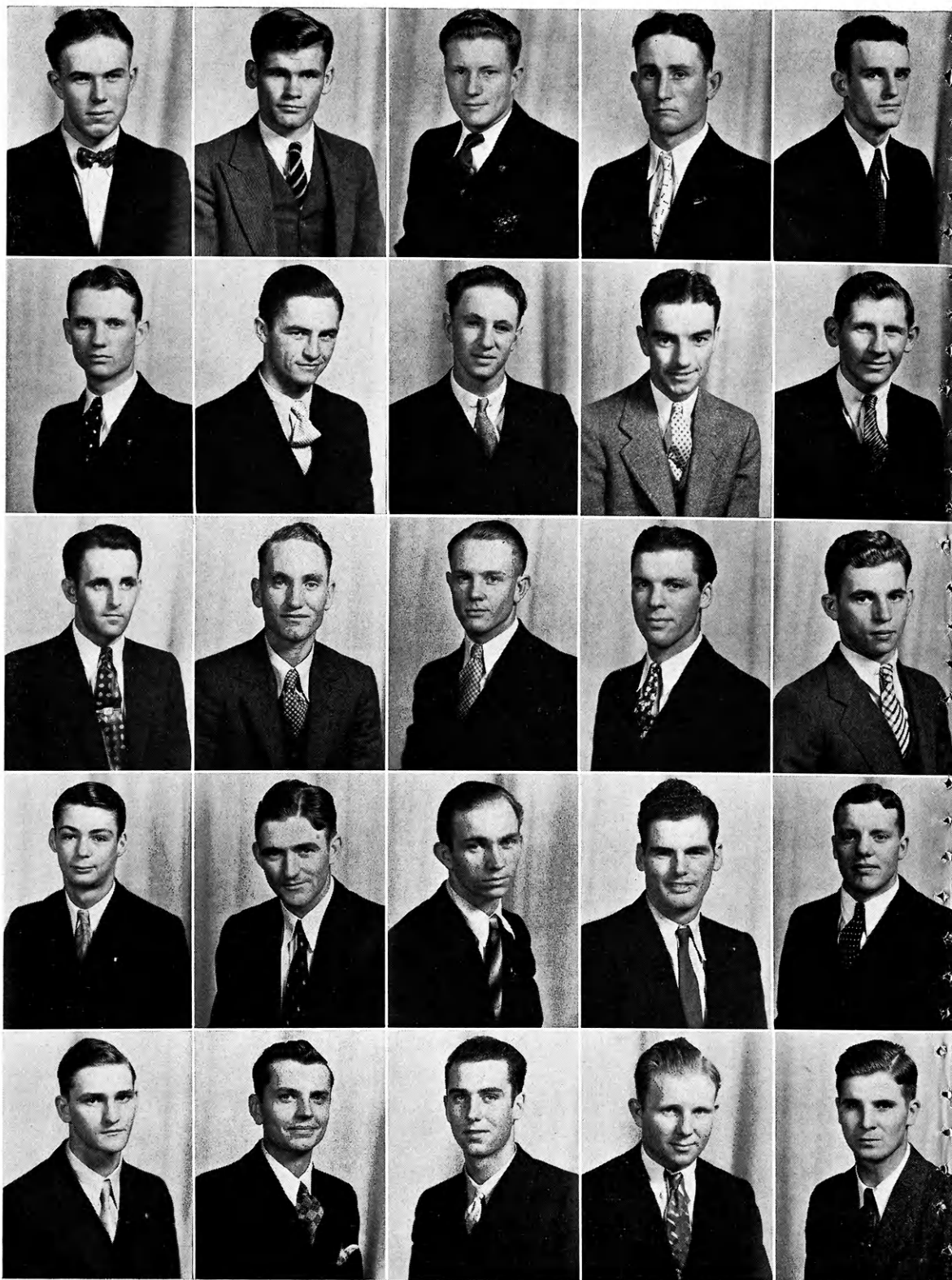
1. The author is indebted to Dr. John H. Parker, plant breeder, and to Profs. H. H. Laude and A. L. Clapp, agronomists, for material used in this article.

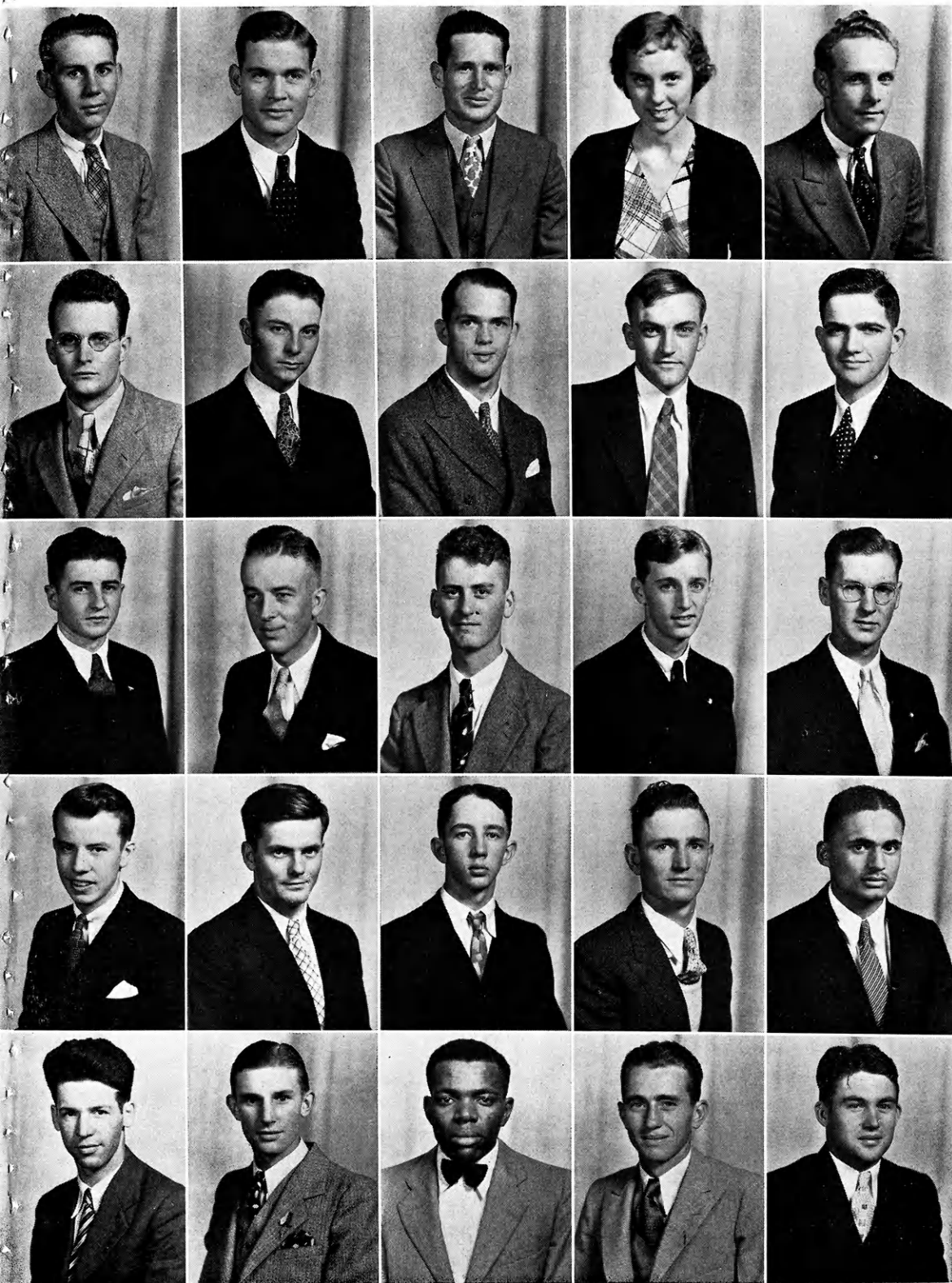
Note.—The yield used for each year is the average for three dates of planting.

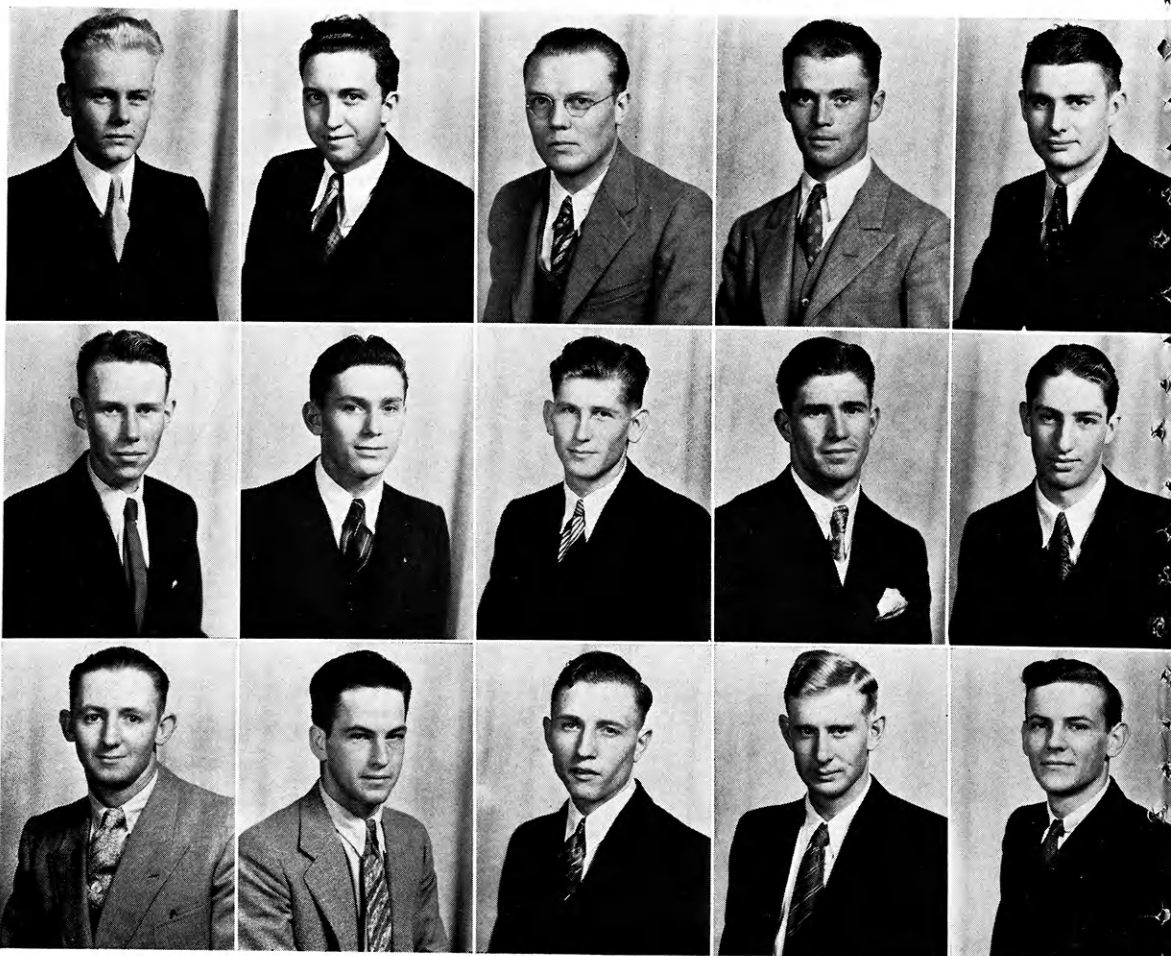
(Continued on page 23)

A row of four black and white head-and-shoulders portraits of young men. From left to right: the first man has short, dark hair and is wearing a light-colored, textured suit jacket over a white shirt and dark tie; the second man has short, dark hair and is wearing a dark suit jacket over a white shirt and dark tie; the third man has short, dark hair and is wearing a dark suit jacket over a white shirt and a patterned tie; the fourth man has short, dark hair and is wearing a dark suit jacket over a white shirt and a patterned tie. All four men are looking directly at the camera with neutral expressions.









Freshmen, 1933-'34

The picture of each freshman student in the Division of Agriculture is taken and a photographic print filed as a part of his permanent record in the dean's office. This is the third year that The Kansas Agricultural Student has reproduced these pictures in its fall issue. The names and home addresses of these beginning freshmen this semester are as follows:

PAGE FIFTEEN

Top Row

A. ROBERT ADAMS, Leavenworth
RALPH W. ARNOLD, Manhattan
CHARLES E. BARE, Douglass
CHARLES W. BEER, Larned

Second Row

CLARENCE L. BELL, McDonald
CARL H. BEYER, Fairview
ELON B. BOYERS, Manchester, Okla.
CHARLES F. BREDAHL, Fairview
GERALD J. BROWN, Circleville

Third Row

ORAN F. BURNS, Topeka
J. CLAYTON BUSTER, Larned
WALTER M. CARLETON, Coldwater
ROBERT G. CARTER, Meriden
DONALD E. CHARLES, Republic

Fourth Row

CLARENCE E. COOK, Effingham
FRANK H. COOLEY, Goff
LOREN A. DAVIDSON, Yates Center
HERBERT S. DAVIES, Topeka
I. HAROLD DAVIES, Lebo

Fifth Row

FRANK E. DECOURSEY, Kansas City
RALPH R. DENT, Bavaria
JOHNIE P. DENTON, Anthony
CHARLES M. DICK, Topeka
D. DEAN DICKEN, Winfield

PAGE SIXTEEN

Top Row

CHARLES E. EIBES, Tonganoxie
 CARL M. ELLING, Manhattan
 FRED L. FAIR, Raymond
 PAUL K. FANNING, Melvern
 FORREST R. FANSHER, Hutchinson

Second Row

ROY H. FREELAND, Effingham
 WALDO D. HAFlich, Fairview
 JOHN S. HALEY, Delphos
 ROBERT H. HARVEY, Schenectady, N. Y.
 RAY V. HAUCK, Miltonvale

Third Row

CHAUNCEY A. HAWKE, Irving
 DWIGHT K. HENRY, Leocompton
 MAURICE W. HENRY, Nortonville
 DALE G. HIGLEY, Muscotah
 R. BUSKIRK HOLLAND, JR., Iola

Fourth Row

ROBERT B. JACCARD, Manhattan
 ROSCOE E. JENKINS, Selden
 RUSSELL JOHNS, Ellsworth
 KENNETH E. JOHNSON, Norton
 FRANK W. JORDAN, Beloit

Fifth Row

FRANK B. KESSLER, Newton
 RICHARD F. KING, JR., Manhattan
 F. BRYCE LAMB, Macksville
 JOHN W. LAMB, Dunlap
 ROBERT T. LATTI, Holton

PAGE SEVENTEEN

Top Row

HAROLD W. LINDAHL, Enterprise
 SAM R. LUNGREN, Osage City
 DONALD R. MCCOLLUM, Blue Springs, Mo.
 MARY JANE MCCOMB, Wichita
 ALBERT C. MEINKE, Linwood

Second Row

HOWARD O. MEYER, Basehor
 BURRIS E. MILES, Cunningham
 WILLIAM L. MOORE, Bridgeton, N. J.
 DARRELL MOREY, Manhattan
 GUSTAF C. OVERLEY, Belle Plaine

Third Row

CHARLES W. PENCE, Elmont
 RAYMOND O. PETERSEN, Manhattan
 MARION V. PHILLIPS, Newton
 THOMAS M. POTTER, Peabody
 OREN J. REUSSER, Wellington

Fourth Row

DELBERT C. RICHARDSON, Lawrence
 ARTHUR L. ROBINSON, Sheffield, Ill.
 ROGER V. ROSENKRANS, Dorsey, Nebr.
 HAROLD J. SCANLAN, Manhattan
 MARION D. SCOTT, Cottonwood Falls

Fifth Row

DEANE R. SEATON, Abilene
 MAX F. SHOEMAKER, Pomona
 LEROY C. SMITH, Frankfort
 ROBERT J. STEELE, Manhattan
 CLARK B. STEPHENSON, Sedan

PAGE EIGHTEEN

Top Row

VERNON M. STEVENS, Abilene
 HAROLD B. SWANBERG, Clay Center
 E. ORAN TALBOT, Manhattan
 WILTON B. THOMAS, Clay Center
 KERMIT WAGNER, Howells, Nebr.

Second Row

CARROL L. WAHL, Wheaton
 DALE F. WALKER, Hardy, Nebr.
 RALPH D. WARNER, Arlington
 FREDERICK G. WARREN, Beverly
 REX E. WATTS, Havensville

Third Row

MERLE A. WEBB, Meriden
 HILARY J. WENTZ, Ames
 JOE L. WETTA, Colwich
 W. JOHN WILSON, Alta Vista
 FRED S. ZUTAVERN, Great Bend

Swine Feeders' Day

Nearly two hundred Kansas hog producers, feeders, and others interested in the hog industry attended the swine feeders' day program at the college Saturday, October 14, 1933, the primary object of the event being to review the results of experimental work conducted by the college during the past year.

In the morning Prof. C. E. Aubel took the visitors to the hog barns to see the experimental hogs and the types of sunshades and farrowing houses. The comparison of types of sunshades and farrowing houses was of real interest to many.

In the afternoon program, with Dean L. E. Call presiding, Professor Aubel explained the results obtained in various experiments conducted during the past year. Prof. R. M. Green of the Department of Agricultural Economics spoke on the factors affecting the hog market in 1934. Dr. O. O. Wolf, member of the national corn-hog committee, explained the purpose of the government control program. He stated that an emergency program by itself is insufficient and that a program embodying both corn and hogs is necessary. Dr. C. W. McCampbell, head of the Department of Animal Husbandry, conducted the question box as the last feature of the program.

Professor Aubel explained that wheat is a palatable feed for hogs. Three lots of hogs were fed. One lot was fed corn, one whole wheat, and one ground wheat. The lots fed wheat ate more daily than the lot fed corn. This shows that for hogs corn is slightly in-

ferior to wheat in regard to palatability. The fact that wheat contains more protein than corn probably explains the fact that the corn lot consumed the most tankage. A partial explanation of the large consumption per 100 pounds of gain of the whole wheat lot lies in the fact that much of the whole wheat passed through the pigs unchanged.

There is no justification for reducing the protein in the ration. In an experiment conducted last summer with two lots of hogs, both lots were self-fed corn, tankage, and alfalfa hay for 56 days. The gain was nearly identical for the two lots for that period. At the end of this period one lot was put on a strictly corn ration with no protein feed. For the ensuing 44 days this lot gained only 0.94 of a pound per hog per day, while the lot receiving corn, tankage, and alfalfa hay gained 1.68 pounds daily. This is an outstanding appreciable gain and the experiment shows that protein is absolutely essential in a hog ration.

Another experiment reported on showed the advantage of alfalfa pasture for fattening hogs. In comparing pigs fed alfalfa hay, corn, and tankage with pigs on alfalfa pasture, corn, and tankage, the latter made a daily gain of 1.55 pounds per head, while the former gained only 1.43 pounds per head. Along with making greater daily gains, the hogs on alfalfa pasture consumed less feed per 100 pounds gain and made more economical gains. Alfalfa pasture should be more generally used in the production of pork.—V. E. B., '34.

E. H. "Duke" Regnier, '31, who was with the National Playground Association, New York City, last winter, is taking graduate work in agricultural economics.

J. E. Anderson, M. S., '33, is employed as assistant in the Department of Milling Industry. He is working in research on moisture and humidity problems in relation to milling.

Effective Land Utilization in Kansas

In the closing session of the land utilization conference held at the college Friday and Saturday, October 20 and 21, a 12-point program for fuller utilization of Kansas land was unanimously adopted. The following are the specific lines of action included in the program:

1. Complete an adequate inventory of land resources at an early date.
2. Secure wider use of farming practices that will conserve soil fertility and avoid soil erosion.
3. Adopt credit policies and practices, both private and governmental, which will promote effective use of the land.
4. Establish taxation systems and practices which will encourage the conservation of land resources.
5. Secure general use of farm leases that will make possible effective land use.
6. Promote types of farming that will result in the most effective use of land.
7. Definitely relate land use to the demand for Kansas products in domestic and foreign markets.
8. Develop and support transportation systems that will facilitate efficient land utilization.
9. Develop farm wood lots and shelter belts and where practicable, reestablish grass.
10. Conserve the fish and game of the state.
11. Utilize land for recreational purposes that are in keeping with the needs and financial resources of the people.
12. Direct all land utilization policies and practices toward the development of a satisfying life for those who use Kansas land and toward safeguarding the general welfare of Kansas people.

Committees were appointed on taxation in relation to land use, inventory of Kansas land resources, and land utilization policies. These committees are at work. The conference realized that public sentiment must be developed in support of land utilization before effective action can be secured.

B. R. Leak, f. s., '31, Colby, and W. V. Gibbs, f. s., '31, Gem, are farming in the Colby community.



SCENES AT THE CASEMENT BARBECUE

Above, distant view of the crowd being served. Note Kinzer, Anderson, and Mackintosh cutting meat at the tables; a 20-pound piece of the barbecued beef lifted just out of the pit; and the coffee boiling at the right.

Below, a close-up view of the men cutting the beef with Mr. and Mrs. Dan Casement in the center.

The Casement Barbecue

Nice weather and delicious barbecued beef cooked frontier style resulted in a large attendance at the Casement bar-

becue and field day Thursday, October 5, 1933, held on Juniata ranch, four miles north of Manhattan, Kan. Approximately 1,000 people, many of whom came long distances, attended

the barbecue and program. One group came from Colorado Springs, Colo.

R. J. Kinzer and B. M. Anderson of the American Hereford Breeders Association of Kansas City, Mo., and formerly K. S. C. faculty members, with the aid of Prof. D. L. Mackintosh, meats team coach and faculty member of K. S. C., barbecued the beef. The prime show steer, "Clarence," was supplied by Mr. Casement for the occasion.

Following the dinner, the crowd gathered at the bleachers, which had been erected under a few trees, the site of the old Juniata postoffice, and listened to an informal program. President F. D. Farrell of K. S. C. presided. Talks were given by several prominent out-of-town men including Robert Hazlett, Eldorado, one of the world's leading Hereford breeders; E. N. Wentworth, Chicago, who is in charge of the live stock bureau of Armour and Company, and who was a former K. S. C. faculty member; Frank Tomson of Dover, Kan., Shorthorn cattle breeder; Senator Arthur Capper; and Dr. W. M. Jardine, former president of K. S. C. and secretary of agriculture.

Following the program Mr. Casement invited everyone to go down to the feed lots where four carlots of prime fat steers were cut out into separate pens. These steers will compete in the carlot division for fat steers at the following shows: Ak-Sar-Ben, Omaha, Nebr.; American Royal Live Stock Show, Kansas City, Mo.; International Live Stock Exposition, Chicago, Ill.; and the National Western Live Stock Show, Denver, Colo.

A glorious fall day, a fine Kansas crowd, a noted live-stock ranch on a historic site, a prime show steer barbecued by experts to make the most tender and delicious beef possible, the presence of a number of famous live-stock men and other leaders, including the sponsor of the occasion, Dan Casement, combined to make the occasion inspiring and memorable.—Paul W. Griffith, '34.

PROGRESS OF WHEAT ALLOTMENT

(Continued from page 7)

past few years. Since world conditions prevent any immediate increase in exports of American wheat, the secretary of agriculture, Henry A. Wallace, has approved a plan for reducing domestic production to somewhere near domestic demand.

To bring about this reduction, wheat growers are being asked to sign contracts agreeing to reduce their seeded acreage for the 1934 crop by 15 per cent of their average seeded acreage during the past three years. The provisions of the contract also provide for a reduction on the 1935 crop such as the secretary of agriculture may deem advisable.

Two purposes are served by the cash adjustment payments. They are being made, first, to restore the wheat grower's purchasing power on the 1933, 1934, and 1935 wheat crops, thus hastening national economic recovery. Secondly, they serve as compensation for acres taken out of wheat production according to the provisions of the allotment contracts.

A rate of 30 cents per bushel, less administrative costs, is being paid on the 1933 crop based on the average annual production of the growers during the base years. This will probably amount to about 28 cents per bushel, less local county association costs, on the 1933 crop. Rate per bushel for the 1934 and 1935 adjustment payments will be governed by the market price of wheat, that is, the difference between the purchasing power of that market price and the purchasing power of wheat during 1909 to 1914.

Kansas wheat growers have shown their approval of the allotment plan by signing contract applications representing 95 per cent of the wheat land of the state.

Carl E. Elling, '32, is resident manager of a commercial orchard, Belle Plaine, Kan.



FIELDS OF ATLAS AND KANSAS ORANGE

Harvesting scenes on the Agronomy farm, Manhattan, October, 1933. Upper, Atlas—strong stalks, erect. Lower, Kansas Orange—weak stalks, badly lodged.

ATLAS AND KANSAS ORANGE SORGOS

(Continued from page 14)

Atlas and Kansas Orange sorghos have been compared in cooperative tests conducted on Kansas farms since 1925. The results as given in the following table show that the grain yield of these two varieties is about equal in all sections with the exception of south-

eastern Kansas where Atlas outyields Kansas Orange. The forage yields are approximately equal in the two eastern sections of the state, but the Kansas Orange forage yields are greater than those of Atlas in the central and western sections. These average grain and forage yields in the various sections of the state are as follows:

Average Yields of Grain			
SECTION OF KANSAS	BUSHEL PER ACRE		
	Number of tests	Kansas	Orange Atlas
Northeastern	23	34.8	34.0
Southeastern	34	23.3	29.2
East South-central	19	25.4	27.1
North Central	9	12.3	13.1
West South-central	12	24.0	23.4
Northwestern	4	8.1	9.5
Southwestern	3	24.4	24.4

Average Yields of Forage			
	TONS PER ACRE		
		Kansas	Orange Atlas
Northeastern	28	6.7	6.2
Southeastern	31	8.8	8.6
East South-central	26	7.4	6.0
North Central	11	5.1	4.7
West South-central	17	5.4	4.6
Northwestern	1	8.2	6.5
Southwestern	7	6.2	5.0

Tests on the agronomy farm at Manhattan, both in plots and on a field scale, have shown that Atlas is much more resistant to lodging than Kansas Orange, which often goes down badly. I. K. Landon, assistant agronomist in charge of the Southeastern Kansas Experiment Fields, also reports that Atlas stands up much better than Kansas Orange.

During the season of 1933, Atlas has shown its ability to withstand dry weather conditions in eastern Kansas by enduring the severe drouth and then completing its growth and in many cases maturing seed after the rains and before frost.

Kansas Orange has long been popular as a sirup sorghum. Little information is available regarding the value of Atlas for sirup. Several farmers in eastern Kansas, however, have used this new variety for sirup and have reported satisfactory results. Chemical analyses have shown that the sugar content of stalks of Atlas is about the same as Kansas Orange.

SUMMARY

Both Kansas Orange and Atlas are good varieties of forage sorgo for eastern Kansas. Atlas has two important advantages: (1) Its ability to resist lodging, and (2) its white, palatable seed. The latter characteristic enables the farmer to grow Atlas for a dual purpose, that is, as a forage and grain

crop. The grain of Atlas is classed on the terminal markets as white kafir and for feeding purposes is equal to the white kafirs.

A Summer on the K. S. C. Horticultural Farm

One who has not had a summer on the college Horticultural Farm has missed a great opportunity of gaining experience in practical and technical fruit production. Some of the most valuable things learned are proper methods of spraying; amount of spray to use; orchard soil management; methods of making codling moth counts; methods of fertilizing the soil; methods of sowing cover crops; and a multitude of minor orchard operations.

The first job for new men is spraying. This is very strenuous work, for the gun weighs 8¾ pounds and it is necessary to drag 40 feet of one-half-inch hose. Dragging all this equipment for eight hours in dust ankle deep is enough to make one tired. Instructions are given on the proper way to hold the gun so as to cover leaves and fruit thoroughly with spray. Sprays are applied every two or three weeks throughout the summer.

The apple grower is interested primarily in two sprays, one for controlling the codling moth and the other for controlling scab and blotch. Arsenate of lead is considered the best chemical for controlling the codling moth, although calcium arsenate and magnesium arsenate are showing some promise. If these compounds prove successful, arsenate of lead will be replaced by them as lead is a cumulative poison in the human body. The laws are such at present that it is necessary for apples sprayed with arsenate of lead to be washed and packed before being sold as No. 1.

The timing of sprays has baffled many growers. This is in part over-

come by the use of traps or "hooch pots." There were twelve of these traps scattered throughout the college horticultural orchard. Hooch pots were constructed by using one-pound coffee cans with a wire fastened at opposite sides of each can long enough to make a convenient handle. These cans were filled with a solution of molasses, oil of rose geranium, and water and were

for a few days' delay means poor control.

The June drop is generally over by June 15, and apple thinning follows. This is done to increase the size of the apples and prevent an over abundance of apples on the trees. In thinning an apple is left every six to eight inches and all clusters must be broken.

Possibly the most interesting work



PICKING APPLES ON THE "HORT" FARM

suspended on strings. They were pulled into the tops of apple trees. Each morning these traps were visited and all moths removed. All types of moths will accumulate in these traps, but by careful observation the codling moth can be distinguished from other moths. These traps are filled every other day. A few moths are emerging all through the summer but the main brood comes out over a period only a few days long. As soon as the codling moth number starts to increase it is time to spray,

is picking and taking records on grapes. Records are taken on a certain number of vines of each variety and require counting the number of bunches on each vine and weighing the grapes. This is very beneficial in that it impresses on one's mind those varieties that are best suited for Kansas.

The cover crops are put in during the latter part of the month of August. Hairy vetch is by far the most popular cover and generally gives the best results, but rye and oats have their place

(Continued on page 31)

The 1934 Hog Market Outlook¹

R. M. Green

Professor of Agricultural Economics

A rapid increase in hog slaughter since last April, a small corn crop, and an inflation period in the making are favorable to improve hog prices in 1934. These influences are at work in addition to any consciously regulated control of supplies. The partially offsetting influences are large supplies of pork and lard in storage and fall breeding operations planned on the basis of a promised higher price rather than on the basis of a low price actually received.

Hog slaughter under federal inspection has generally jumped six to ten million head from one year to the next when hog numbers have reached their peak. The usual rate of increase in slaughter is one to three million head a year. A sudden increase in slaughter of six to ten million head is enough to cut off the increase in hog numbers.

As hog numbers reached a peak on January 1, 1908, hog slaughter in 1908 compared with 1907 jumped about six million head. This big increase in slaughter was enough to assure reduction in hog numbers by January 1, 1909. Likewise between 1927 and 1928 the federally inspected slaughter of hogs jumped six million head. This was enough to leave January 1, 1928, hog numbers the next high point following the peak numbers of January 1, 1923.

The point of interest in all this is that since April, 1933, inspected slaughter of hogs independent of the government buying program had increased, by the last of August, 3.5 per cent over 1932 slaughter. This is the first year since 1930 that hog slaughter has shown other than a small, steady increase. On top of this came the buying of six million pigs and 200,000 sows by the federal government. Such an increase in slaughter has ordinarily been

enough to stop the increase in hog numbers. This suggests a decrease in hog numbers by January 1, 1934 or 1935.

Since 1892 there have been 19 years of small United States corn crops. In 11 years, or about half of the time, top hog price the following year was higher than for the year producing the small corn crop. The eight exceptions were years when a depression was in the making rather than on the mend or there had been two or three years of small corn crops in succession so that prices had already become adjusted to such a situation. The corn crop of 1933 will be the smallest since 1930 and that crop was the smallest since 1901. Furthermore, consumption of corn on farms during 1933 has been heavy. Hog numbers are at or near their peak, cattle numbers are perhaps the largest since 1918, and summer cattle feeding was extensive.

With a small corn crop, reduced supplies, and higher prices, there is a strong tendency for an increased percentage of hogs to come to market November to March, and a decreased percentage from April to October. Whatever the number of hogs marketed, the percentage marketed in the forepart of the season tends to be larger after a small corn crop, and especially if corn prices advance much. The chances are good for corn prices going to 50 cents and above over a large territory by the spring of 1934. This will contribute to marketing a larger percentage of hogs November to March and a smaller percentage April to October.

Corn prices of 50 to 60 cents a bushel have generally been associated with \$6 and \$7 hogs. Following the low prices of 1896, Kansas City top hogs remained under \$5 until March, 1900. Corn prices at Kansas City went above 35 cents a bushel in March, 1900, and remained

1. From an address delivered on swine feeders' day program, K. S. C., October 14, 1933.

above for a number of months for the first time since 1895. Six to twelve months of higher corn prices have been enough in the past to begin to have effect upon hog supplies and prices.

From this it will be seen that there is a strong tendency for hog prices to be higher following a small corn crop, if there is not an offsetting decline in the general level of all prices. The maximum influence of a small corn crop in reducing hog supplies during the next year is most likely to come between April and October. Corn at 50 cents or above at Kansas City has usually meant Kansas City top hogs \$5 and up, unless offset by a general decline in prices. This makes the period, July to September, 1934, look the most favorable of any period for several years.

Inflation and Hog Prices

In both of the previous major depressions there were inflationary periods of four to five years duration. In the period of declining prices, 1814 to 1843, there was a period of inflation following 1834 and extending through 1835 to 1839, inclusive, a period of five years. Likewise during the period of major price decline from 1864 to 1897 there was a period following 1879, including 1880, 1881, 1882, and 1883, in which the general level of prices was distinctly higher than for years on either side of this period. Top hog prices at Kansas City were at \$4.05 a hundred in June, 1880, the first year of inflation. By August, 1882, or the third year of inflation, the Kansas City top on hogs was \$8.80. The full effects of the inflationary movement starting in 1879 and reduced hog numbers did not come until the third year of price inflation, namely 1882. With wholesale prices around 100 per cent of what they were in the 1910 to 1914 period and hog numbers at a peak as at present, Chicago average price of hogs has most frequently run \$5.50 to \$7 a hundred. In years of reduced supplies, improved

demand, and a price level near the 1910 to 1914 average, the Chicago average has run closer to \$7 to \$8.50 a hundred.

In the first of two previous inflationary periods in the midst of major depressions, wholesale commodity prices expressed as a percentage of the 1910 to 1914 average prices, advanced from 100 per cent in the first year of inflation to 115 per cent in the third year of inflation. This was the peak of the advance but prices remained above 100 per cent of the 1910 to 1914 average for two more years. In the second inflationary period in the midst of depression, wholesale prices advanced from 100 per cent of the 1910 to 1914 average in the first year of inflation to 108 per cent in the third year, with prices remaining above 100 per cent of the 1910 to 1914 average for one more year.

Other Considerations

While the situations described work in the direction of higher hog prices for 1934, it is important to take note of the following circumstances:

1. Producers this time have been fairly well notified ahead of fall breeding operations that an effort will be made to raise their hog prices. Heretofore, the producer has been told what to do mainly by the price he received for the last crop of hogs he sold. The changed situation has encouraged some increase in fall breeding where feed supplies are available.

2. It will take a little time to work off the extra storage supplies.

3. Since there is a strong tendency to feed short supplies of grain heaviest in the forepart of the season, remnants of the spring pig crop should be well cleaned up this year by April.

4. The fall pig crop produced in largest numbers in the eastern corn belt where corn supplies are cut heavy, should be smaller in total and a larger percentage of marketings should

(Continued on page 31)

The Agricultural Outlook in Alaska

Donald H. Bowman, '33

The area available for agricultural purposes in Alaska is greatly restricted by the mountainous topography. Notwithstanding its restrictions, Alaska has about 100,000 square miles on which there are possibilities of farming or grazing. The agricultural land can be divided into three regions: 80,000 square miles in the interior—a region of low, detached mountains; 1,000 square miles along the southern coast; and about 18,000 square miles along the west coast and the nearby islands.

Climate is one of the important factors influencing agriculture. Along the southern coast of Alaska the temperatures are very uniform throughout the year, rarely going above 80° F. in the summer and seldom reaching zero in the winter. Offsetting the favorable temperature we find a very heavy precipitation ranging from 90 to 150 inches. At the bases of the mountains there is a mild climate and on their tops there is the greatest permanent snow and ice field in the world outside the polar region. This range in climatic conditions is due to the influence of the warm moisture-laden winds blowing from the Pacific ocean across the coast to the mountains where they are suddenly chilled.

The climate in the interior is not influenced by the Pacific winds. As a result the winters are long and cold with temperatures dropping as low as 68° F. below zero, and the summers are short and quite warm with temperatures reaching as high as 96° F. The rainfall is light there, only 8 to 28 inches falling during the year. Bright sunny days of 18 to 20 hours make possible the necessary rapid growth of crops. Because of the cold winters the major portion of the land in the interior is frozen to unknown depths. Where the surface is cleared and exposed to the sun in the summer this line of ice will recede 3 or 4 feet. As

it melts it furnishes an underground source of water for growing crops.

In most of Alaska the land is covered with mosses which often accumulate to a depth of several feet. They reflect heat and hold water like a sponge. In the summer the water melts a little but does not escape, the moss forming a sort of morass which is practically impassable for wheeled vehicles and almost so for horses. The moss must be removed, either by burning it during a dry season or by hauling it off, before farming can take place.

The soils of Alaska have their origin for the most part in material formed by glacial action. Most of them, with the exception of bottom land along the rivers, are not very high in available plant food. It will be necessary to apply fertilizer from time to time. Liming will be beneficial in overcoming the sour condition of the soil. Most of the land outside the narrow coastal region must be drained to some extent before any form of agriculture is attempted.

There are many native grasses which make fine hay and pasture for live stock. Several tame grasses, as well as wheat, oats, rye, and barley, are also used for hay and do quite well. It is not thought to be profitable to grow small grains at present except as feed for live stock, because of the competition offered by Canada and the United States. Many vegetables can be grown on southern exposures of hills and are one of the main sources of agricultural wealth.

The reindeer industry is the largest agricultural industry in Alaska. Reindeer do well north of the farming region, feeding on a continuous food supply of moss. Excellent meat and hides are produced with the only requirement that the reindeer be kept from wandering.

Cattle do fairly well especially in the southwestern part of Alaska and on the islands along the south and west coast.

Other live stock do not do so well either because of the cold winters or the lack of suitable food. Oxen are generally used for farm work because they do better on the available food and seem to be more adapted to the prevailing conditions.

Agriculture in general will be slow to develop. Most of the work must be accomplished in the short outdoor season and usually by the unaided homesteader, as high living expenses and wages make it almost prohibitive to hire labor. Lack of general transportation, local roads, schools, churches, markets, and reasonable freight rates also hold back agricultural advancement. In the vicinity of mining camps or towns, however, prices for produce are generally high and farmers so located are doing very well.

Small towns are the rule in Alaska. It is no place for capitalists to invest in land and expensive machinery, but is a country which will furnish a home to the man who can withstand pioneer hardships and who is willing to do his own work.

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M. E. Vautravers, '33, is resident manager of the Robbins Ranch, Belvidere, Kan.

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THE K. S. C. ROCK GARDEN

Alfalfa as a Hog Feed

W. E. Connell

Instructor in Animal Husbandry

Unlike most other farm animals, the hog is unable to utilize large quantities of roughage and consequently the greater part of its ration must be made up of concentrate feeds, such as corn and other farm grains, supplemented with some protein-rich concentrate such as tankage. Such a ration, because of its concentrated nature, must of necessity be more costly than a ration to which a bulkier, and consequently a cheaper, feed can be added. The hog, however, is able to handle a limited amount of roughage, and alfalfa, either green or cured, has no superior as the roughage portion of the ration.

Alfalfa is our greatest permanent pasture crop for swine. It provides pasturage during a longer season than most other forage crops, starting early in the spring and remaining green and succulent until fall when most other forage crops have either dried up or become tough and woody. If properly managed a good stand of alfalfa will give pasturage for several years. Too heavy pasturing is injurious to the stand, so the number of hogs allowed on alfalfa should be restricted to the point where the alfalfa growth can stay ahead of them enough to furnish a cutting of hay during the season. Usually from 15 to 20 spring pigs or two sows and litters per acre on an old stand are recommended. On new seeding, this should be restricted to about 10 spring pigs or one sow and litter. Care should be taken not to pasture too late in the fall, especially where the winters are severe, as there is danger of "winterkilling" unless sufficient growth is left standing to catch the snow and protect the plants.

The green alfalfa plant is valuable from a hog feeding standpoint for several reasons. It is rich in proteins of the right kind for growing pigs. It is

rich in the minerals essential for growth, especially calcium. It is rich in the vitamins essential for growth and health. It is a feed highly palatable to swine. For these reasons, good alfalfa pasture is almost invaluable for keeping up the health and thrift of a herd, especially a herd of young growing pigs. By turning sows with their spring litters on alfalfa pasture, the amount of high-priced feeds needed to balance the ration may be reduced, thereby making cheaper gains. After the pigs are weaned, there is nothing better for carrying sows through the summer than alfalfa pasture supplemented with enough grain to keep them in good breeding condition. Little or no protein supplement is needed for them.

Good results have been secured in fattening pigs on alfalfa pasture. In direct comparison with spring pigs fattened in the dry lot, it has been found that pigs fattened on alfalfa pasture will make as good or better gains and do it cheaper because of the smaller amount of concentrate feed necessary. This is especially true of the protein supplements necessary, as pigs fattened on alfalfa pasture require about half the protein feeds needed by pigs fattened in a dry lot. Then, too, there is the added advantage of better sanitary conditions. Pigs full-fed on alfalfa pasture with a small amount of some protein-rich supplement such as tankage, will make excellent gains, be ready for the market as soon as will dry-lot-fed pigs, and produce as firm carcasses.

During the winter when pasture is not available, bright, green, leafy, well-cured alfalfa hay makes a very good substitute. Alfalfa hay is high in protein and minerals, and if it is bright and green, is also high in vitamins. Alfalfa hay alone will not entirely balance the ration with corn as the hogs

cannot consume enough of it to satisfy the requirement. It does, however, lower the amount of protein-rich feeds needed to balance the ration. Third and fourth cuttings of hay are more desirable for hog feeding than earlier cuttings because they are finer stemmed and leafier as a rule, and consequently more palatable. The leaves are also higher in feeding value than the stems.

Perhaps the best way to feed alfalfa hay is to keep a slatted rack full under a shelter where the pigs can have access to it. If it is bright and leafy, enough will be eaten to lower materially the amount of concentrate feeds needed in the rations. Sometimes chopping or grinding coarse and stemmy hay in a hammer mill will make pigs take it better. If they eat the hay readily and seem to relish it, there is little or no advantage, however, in chopping or grinding.

Where good alfalfa hay is not available, alfalfa meal may be purchased on the market and fed to advantage. Alfalfa meal is finely ground alfalfa hay and has the same nutritive value as the hay from which it was produced. Therefore, it is a good practice when buying alfalfa meal to examine the tag on the sack to be sure of its quality. To avoid waste, a good way to feed alfalfa meal is to mix it with the tankage and self-feed the mixture. A mixture of three parts of tankage and one part of alfalfa meal has proved to be most satisfactory and when self-fed with corn is superior to tankage alone. Increasing the proportion of alfalfa meal above this point tends to lower the efficiency of the mix because of increased bulkiness.

Alfalfa leaf meal is another alfalfa product on the market and contains only the ground alfalfa leaves. Being higher in total nutrients and lower in fiber, it has greater feeding value than straight alfalfa meal, but it is also higher in price. Its economy in a hog ration compared to straight alfalfa

meal is therefore determined by its relative market cost.

Alfalfa in all its forms, whether pasture, hay, or meal, has no superior in its class as a feed for hogs, and no hog producer can afford to do without it if at all available. It is high in feeding value, palatable, and its comparative low cost makes it an important factor in economical hog production.

A SUMMER ON THE "HORT" FARM

(Continued from page 25)

under certain conditions. A firm seed bed is most desirable for a cover crop and can be obtained by regular disking through the summer and leveling and harrowing before planting the cover crop.

The enjoyment of the past summer's work on the K. S. C. Horticultural Farm was seriously reduced by a hail storm which came during the latter part of June and made it impossible to get perfect experimental records because of heavy hail injury of fruit and leaves. —K. R. H., '34.

THE HOG MARKET OUTLOOK

(Continued from page 27)

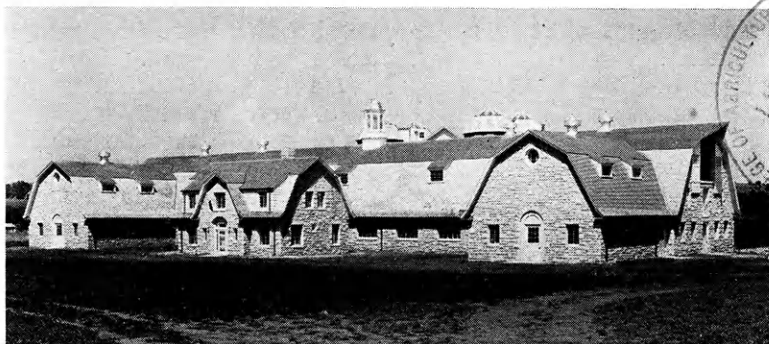
come May to July with a smaller percentage July to September.

Consequently, laying aside anything the government may do to consciously control hog prices in a direct way, the industry is now in a position itself to generate some price improvement especially in approximately the April and August or September periods of 1934.

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NEW DAIRY BARN AND EXPERIMENTAL LABORATORY

This new barn, completed last August, was provided from an appropriation of \$60,000 by the 1931 legislature. Only \$45,000 was used in its erection. The building is located a short distance north of the north-west corner of the campus. It faces west along a north and south highway, and when landscaped will present a beautiful as well as a useful addition to the Kansas State College equipment.

The New Barn

The barn is constructed with native stone, the inside walls being finished with glazed tile. It is a two-story structure with a central portion 41 by 215 feet with two wings each 30 by 35 feet. Seventy head of cattle can be housed in the central portion of the barn which is conveniently arranged for handling four breeds and the wings provide facilities for young stock, box stalls for mature animals, and room for digestion stalls for experimental work. Midway and to the front of the main barn and connected with it by a vestibule is a milk house which contains facilities for handling the milk from the herd, a milk-testing laboratory, an office for the herdsman, sleeping rooms for student caretakers, and a locker room with shower baths.

Midway and to the back of the main barn is the feed storage room that consists of four 16- by 40-foot cement stave silos, 11 bins for grain, and a feed elevator, grinder, and mixer. Mow space to hold approximately 200 tons of loose hay and 100 tons of baled straw is available. The barn is equipped with an automatic-control forced ventilating system. The barn is designed not primarily as a model dairy barn, but to provide facilities for the college herd and for experimental work with dairy cattle.

With the new dairy barn added to the dairy equipment of K. S. C., college work, both in dairy production and dairy manufactures, is on a plane with the importance of the dairy industry in Kansas.

The Division of Agriculture in K. S. C. provides training in every phase of agriculture of economic importance in Kansas.

For farming and for business and professional work closely related to farming, the Division of Agriculture in K. S. C. provides curricula for Kansas high school graduates.