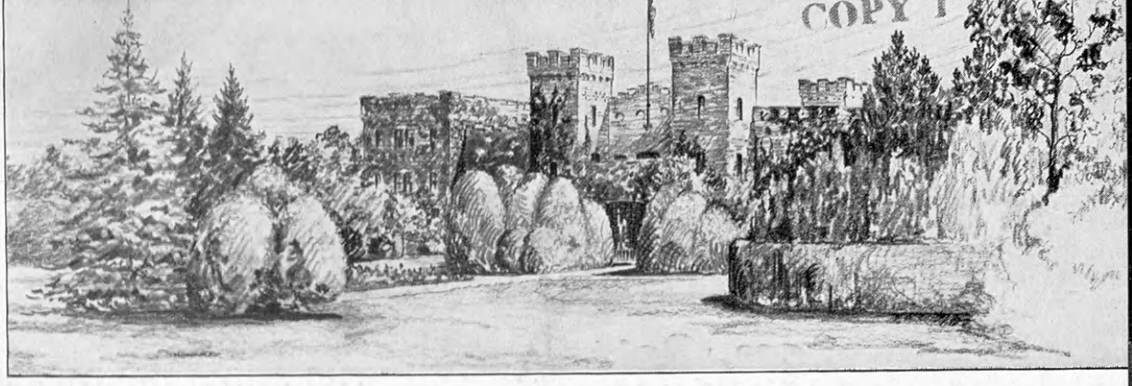
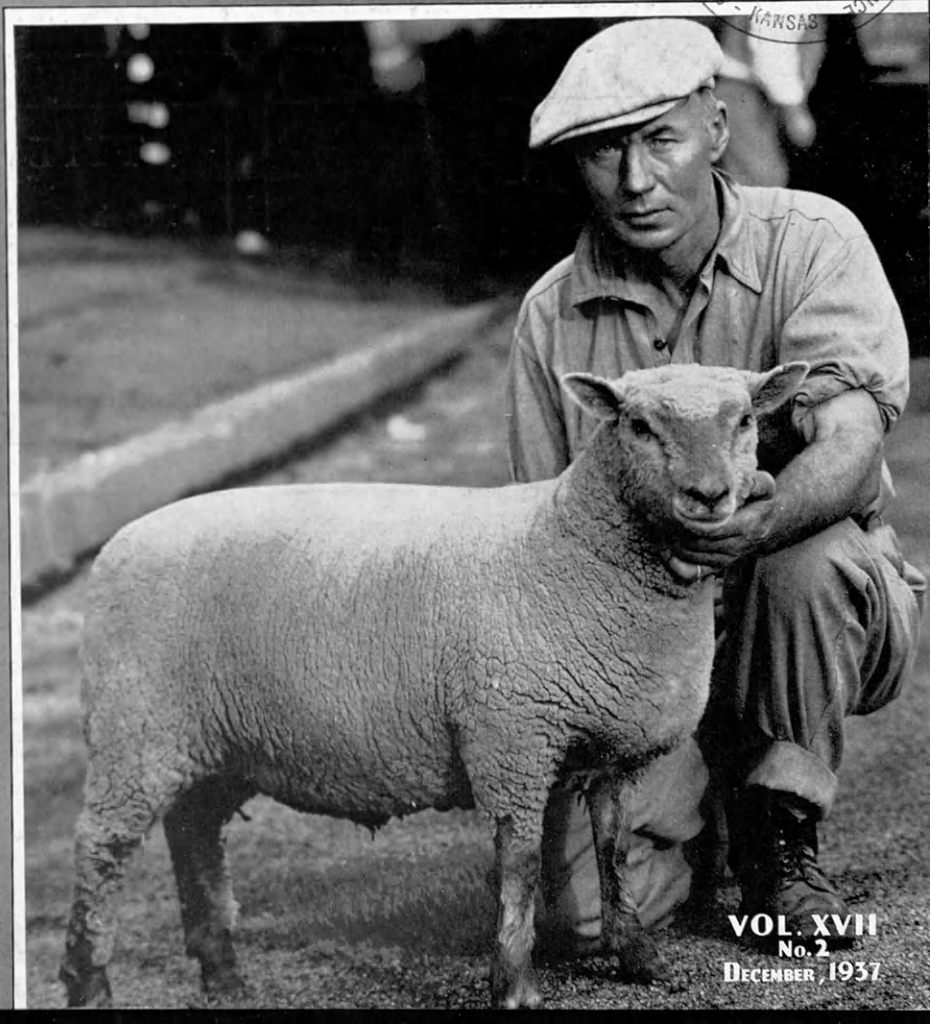


THE KANSAS AGRICULTURAL STUDENT

MANHATTAN, KANSAS



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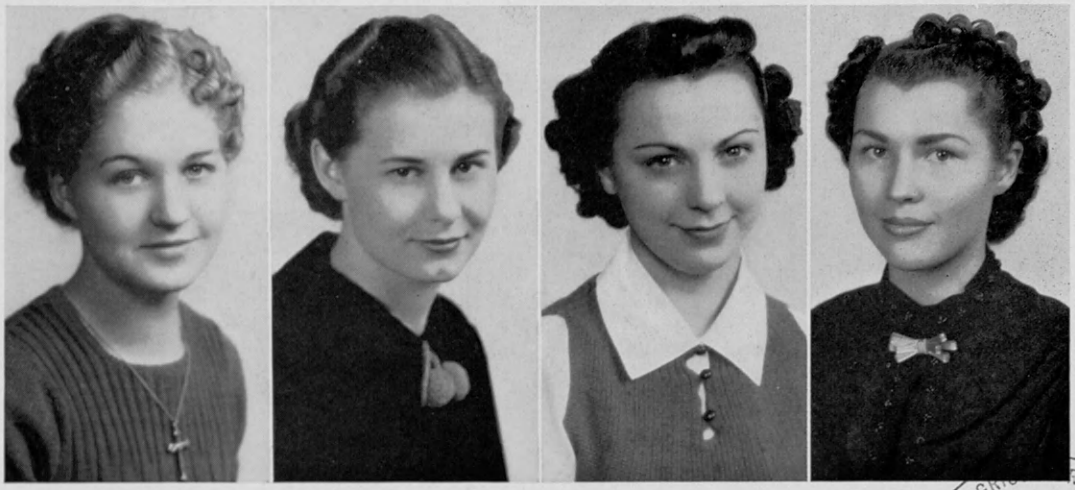

PRINCESSES OF THE 1937 AG BARNWARMER
From left to right, Misses Kathleen Porter, Ethel Haller, Miriam Wagaman, and Burneta Young.

CONTENTS

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JANET GARDNER
Queen of the 1937 Ag Barnwarmer

Tom Dean—The College Shepherd

TOM DEAN, veteran English shepherd at Kansas State College, was born at Barlestone, Leicestershire, England. His early manhood was spent in this section of England which was especially noted for its good horses and sheep.

There is nothing closer to the heart of the English farmer than his livestock, and no people in the world have surpassed the English and Scotch in breeding, feeding, and developing fine livestock. It was only natural that being born and reared in such an environment, Tom Dean would become deeply interested and very proficient in the feeding and care of livestock.

Tom attained considerable skill in feeding and fitting livestock at an early age, and from the time he was a boy until he reached young manhood he devoted his time to Shire draft horses and Shropshire sheep in England. During this time and for several years following, American importers were active in England, buying and importing various breeds of livestock in great numbers. Among the largest horse importers of the time was the firm of Watson, Woods Brothers, and Kelly of Lincoln, Nebr. Tom watched this activity with a great deal of interest and like most other young men of that time longed for a trip to America. His opportunity came in February, 1911, when Mr. Watson of the above named firm employed him to bring over to America 40 head of Shire, Percheron, and Belgian horses which he had purchased in England, France, and Belgium. Tom liked America and the firm of Watson, Woods Brothers, and Kelly liked him.

As a result, he worked for them for nearly seven years, during which time he delivered horses to nearly all parts of the United States. He also fitted and showed horses at numerous fairs and shows. In October, 1917, Tom enlisted for service in the U. S. Army. He was stationed for a time at Camp Funston, then at Camp Mills, Long Island—he then was sent to France where he served in an ambulance corps at the front. Tom returned to the United States in June, 1919, and began work for another breeder and importer of Percheron horses, W. S. Corsa of White Hall, Ill. After the close of the International Livestock Exhibition in December, 1919, he came to Kansas State College as Shepherd, the position he holds at the present time.

Tom has shown as much aptitude for handling sheep as for handling horses. The flocks have made great progress under his feeding and care. He has shown as many as five breeds at the same show on numerous occasions and the success attained has been outstanding. He has fitted and shown champions of four breeds at the International on several different occasions, and has fitted and shown the Grand Champion Wether, all breeds competing, at the American Royal on three different occasions, the latest being October, 1937. He has also shown the Grand Champion Pen of Three at the American Royal five times, three of which were consecutive. One year with hard competition Tom showed Kansas State Southdown Wethers in the lightweight class, winning first, second, third, fourth, fifth, sixth, and seventh which was every money prize offered in the class and showed Shropshire wethers, winning all the seven prizes except third. The following year the officials of the American Royal ruled that no exhibitor could win more than three money prizes in any one class.

In addition to this, sheep produced at Kansas State under the feeding and care of Tom Dean and later purchased and shown by others have won championships or first prizes during the past four years at many shows, chief of which are the following: International; American Royal; Southwestern Exposition and Fat Stock Show, Fort Worth, Tex.; Canadian National Exposition, Toronto, Ontario; National Western Livestock Show, Denver,

(Continued on page 62)

Wins Second Leg of "Bronze Bull"

THE COVETED BRONZE BULL TROPHY

This trophy is offered by the Union Stockyards Company of Chicago. It becomes the property of the first college whose team wins it for the third time. The 1936 boys made the first leg when they returned to Manhattan with the trophy. The 1937 boys made the second leg by also bringing the trophy back to Manhattan. What will the 1938 boys do? The most coveted honor a college team could win would be the permanent possession of the trophy. A win by Ohio will give that state possession. Kansas is just as near the coveted goal.

THE Spoor trophy, better known as the "bronze bull," will remain in the show case in the East Wing of Waters Hall for another year. The livestock judging team of Kansas State College won the judging contest held at the International Livestock Exposition in Chicago by scoring 26 more points than any other team in the contest. The feat of winning the contest has been accomplished only twice in succession since the trophy has been in circulation—Ohio State University won it in 1932 and 1933, Kansas State College in 1936 and 1937.

The team was coached by Prof. F. W.

Bell and was composed of the following students: Elmer Dawdy, Washington; Roland Elling, Manhattan; Charles Pence, Topeka; Waldo Poovey, Oxford; Elmore Stout, Cottonwood Falls; and Peairs Wilson, Anness (alternate).

Roland Elling was the high scoring individual of the 125 students competing in the entire contest. He scored 918 points out of a possible 1,000, thereby nosing out J. P. King of Cornell, second high man, who totaled 917 points. Charles Pence was third with 915 points. Elmer Dawdy rated tenth and Waldo Poovey and Elmore Stout tied for twenty-fifth place.

The ratings and scores of the 25 teams that competed in the contest are as follows:

1.	Kansas	4,523
2.	Cornell	4,497
3.	Iowa	4,467
4.	Ohio	4,427
5.	Wisconsin	4,394
6.	Texas Tech.	4,392
7.	Purdue	4,384
8.	Oklahoma	4,381
9.	Minnesota	4,377
10.	Illinois	4,359
11.	Missouri	4,347
12.	Nebraska	4,334
13.	Colorado	4,313
14.	Texas A. & M.	4,302
15.	South Dakota	4,297
16.	Pennsylvania	4,277
17.	Michigan	4,260
18.	Wyoming	4,234
19.	Montana	4,229
20.	North Dakota	4,213
21.	Mississippi	4,201
22.	W. Virginia	4,170
23.	Ontario	4,145
24.	Virginia	4,136
25.	Massachusetts	4,029

In judging different kinds of livestock—Kansas was first in hogs, third in horses, fourth in cattle, and sixth in sheep. Elling was the high man in judging horses and Dawdy was second. Pence was high in hog judging with Poovey third and Dawdy eighth. Dawdy was also second in sheep judging, and Pence ranked eighth in cattle.

The Cornell team which placed second in the contest was coached by Dr. John I. Miller, a member of the Kansas team in 1931. This is the second time Cornell has competed in the contest. Oklahoma, eighth place team, was coached by Bruce Taylor, a member of the Kansas team in 1930.

The fact that Roland Elling was high man of the contest brings to light an interesting story. Prof. Carl G. Elling, Roland's father, was a member of the Kansas team in 1913 which was the first team to represent Kansas in the International judging contest. Professor Elling was the high man of that contest. R. J. Kinzer was the head of the Department of Animal Husbandry

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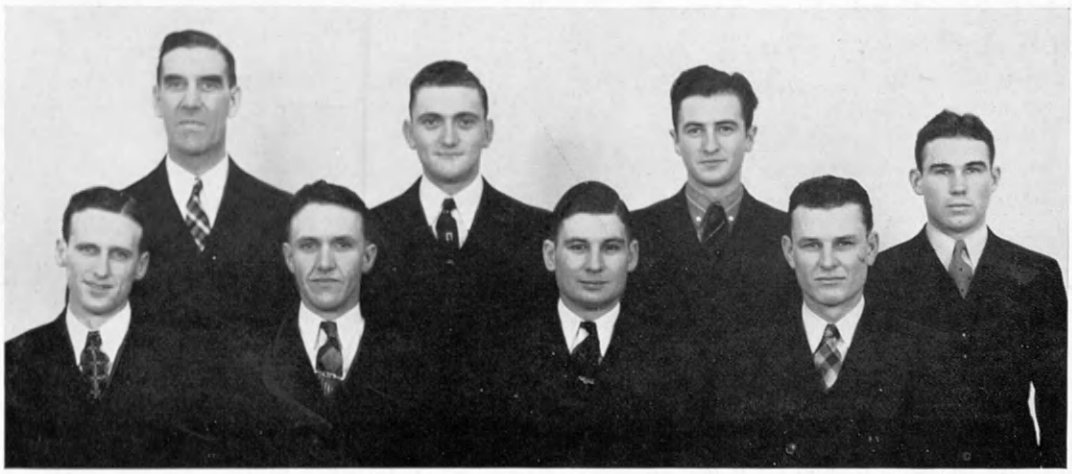

CHAMPION LIVESTOCK JUDGING TEAM OF 1937

From left to right, Elmer Dawdy, Prof. F. W. Bell, Elmore Stout, Waldo Poovey, Kenneth Fisher (alt. in K. C.), Charles Pence, Peairs Wilson (alt. in Chicago), Roland Elling.

THE KANSAS AGRICULTURAL STUDENT

KANSAS STATE COLLEGE OF AGRICULTURE AND APPLIED SCIENCE

MANHATTAN, KANSAS

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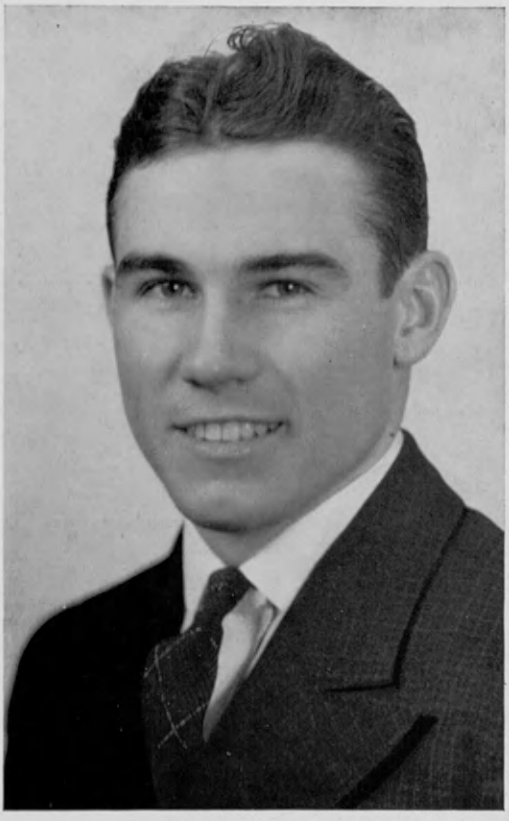


ROLAND B. ELLING
(See page 39)

Achievements of Block and Bridle

The Kansas State Chapter of Block and Bridle, a national organization, composed of students interested in Animal Husbandry, was selected as the outstanding club of the 18 units in the United States. This award was made on the basis of achievement the past year. Another honor awarded was won by Fred Fair, 1936-'37 club president, when he was named the most outstanding student of some 700 members of the national organization. Fair, who is from Alden, was graduated last spring. While in school he was prominently engaged in a wide variety of major activities — athletic, political, and departmental. He is now employed by one of the Corn Belt Dailies market papers.

The Kansas chapter received second place on their annual report, which was submitted to the National Convention. Announcement of these awards was made at the annual convention of Block and Bridle Clubs, held at the Stock Yards Inn, Chicago, Ill., during the International Livestock Show. Roland

(Continued on page 61)

Dairy Products Judging Trip

Wayne Klamm, Bonner Springs, placed first in judging butter, and Herb Davies, Manhattan, placed seventh in cheese in the Students' National Contest in judging dairy products held in conjunction with the Tenth Annual Dairy Industries Exposition at New Orleans, La., October 21-27, 1937.

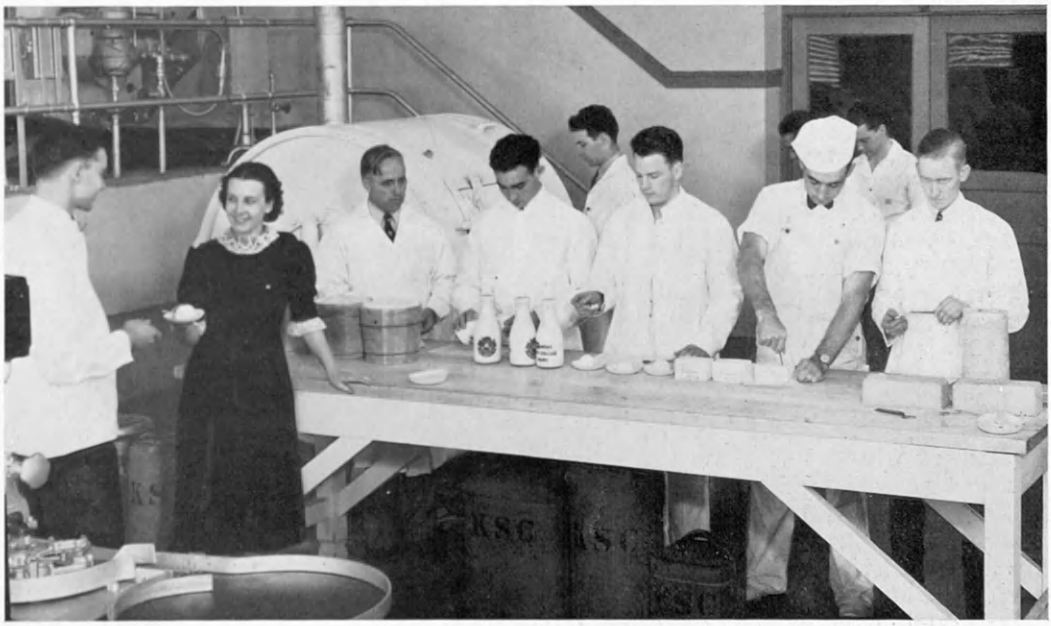
Walter Leland, Manhattan, and Willard Davies, Halstead, were the other members of this year's team which placed thirteenth with seventeen teams competing. The six high teams in judging all products in order of their rank were: Ohio, Mississippi, Massachusetts, Michigan, Minnesota, and Cornell. Each of these teams was awarded a $600 industrial fellowship by the Dairy and Ice Cream Machinery and Supplies Association.

The 2,200-mile round trip to New Orleans was made by car. While in Dallas, Tex., enroute to the contest, Tennessee Dairies and Borden Company plants were visited. It was a new and thrilling experience to ferry the Mississippi river at Baton Rouge, La., and to view the state capitol building. This structure is regarded as one of the most beautiful of all state house buildings.

While in Baton Rouge a visit was made to the campus of Louisiana State University. Last fall over 7,300 were enrolled for university training during the winter term compared with only 2,000 in 1929.

The Dairy Industries Exposition attracted dairy products manufacturers from 41 states and 6 foreign countries and a total attendance of 4,226. Its first appearance south of the Mason-Dixon line was a success. Over 200 firms exhibiting equipment, supplies, or materials were permitted one week before the show to put things in readiness. Bare walls of the exposition hall were transformed into a strikingly colorful scene which sparkled with lights reflecting the hundreds of pieces of modern equipment brought from North, East, and West for display.

New show features such as the "daily university," consisting of a short course in dairy products manufacturing and



MISS MARCEIL PREBLE ENJOYS THE WORK OF THE DAIRY JUDGING TEAM
From left to right—the coach and members of the team are: Prof. W. H. Martin, Wayne Klamm, Herb Davies, Willard Davis, and Walter Leland.

an Historical Exhibit of Dairying, attracted considerable attention. In connection with the latter, a churn of the vintage of 1894 was displayed, which won first prize of $100 in an old equipment contest sponsored by the Dairy and Ice Cream Machinery and Supplies Association last spring. The principle used in the operation of the 1894 churn is also used in operating a large all metal 1937 model which was on the exhibition floor. A marked contrast, however, exists between the size and appearance of these two churns, each of a different century.

To make the most of our trip in New Orleans we visited such places of interest as the old French Quarters, the old French Market, and an Early French Cemetery that featured above-ground burial. While seeing the freight shipping docks, located along the Mississippi river, we watched the unloading of a cargo of tea. This tea was shipped from Calcutta, India, on a seagoing vessel, the Engsley City. The team members also greatly enjoyed a 30-mile pleasure trip on the S. S. President, a Mississippi river boat.

—H. S. Davies, '38.

Poultry Judging Contest

Out of ten competing teams in the Annual Mid-west Intercollegiate Poultry Judging Contest held in Chicago, Saturday, November 27, 1937, the Kansas team placed seventh. Members of the team were James Mugglestone, Berkeley, Calif.; Irwin Miller, Oberlin; and Clyde Mueller, Sawyer. The two alternates were Doyle Reed, Lawrence, and Floyd Maynard, Kansas City, Mo. Thomas B. Avery, coach, accompanied the team on the trip.

The contest had three divisions; namely, exhibition, production, and market products. The exhibition and production divisions each consisted of five classes of birds. The market products division consisted of two live classes, three classes of dressed birds, and the grading of fifty eggs.

Placings of the entire contest were as follows: Purdue University, first; Missouri, second; Nebraska, third; and Minnesota (last year's winner), fourth; Mueller was high individual in exhibition judging and seventh in the entire contest. Mugglestone placed twelfth in market products.

The Cold Storage Companies of Chicago cooperated in sponsoring a marketing trip for the poultry teams on Friday before the contest. A chartered bus carried the group to various places of interest, such as the fruit auctions, the U. S. Cold Storage Company, the Mercantile Exchange, and the Board of Trade. Meals were provided and capable guides accompanied the group.

A banquet was given Saturday night after the contest for the competing teams and their coaches. The winners were announced and prizes awarded.

—F. J. Maynard, '38.

Kansas State Apple Judging Team Wins

The intercollegiate apple judging contest was held this year in conjunction with the Ozark Regional Horticultural Meeting and Apple Show, December 8-11, at Springfield, Mo. The horticultural meetings, judging contest, and apple show were all held in the Shrine Mosque. The judging contest was held on December 9. Teams from four schools participated: Kansas State College, Iowa State College, University of Missouri, and Oklahoma A. and M. College.

Members of the Kansas State team are Robert E. Kitch, Winfield; Gilbert L. Terman, Columbia City, Ind.; Otto Wenger, Basehor; and Harold Fox, Rozel (alternate). The team was accompanied by the coach, Dr. W. F. Pickett.

The contest consisted of 100 apples for identification, chosen from a list of 25 varieties, and 15 classes of three plates each, which were judged on a basis of condition, uniformity, size,

color, and form. The highest possible score for each individual was 500 on the correct identification of the 100 apples, 225 for identification of the apples used in judging, and 1,500 for the correct placing of all judging classes. This makes a total possible individual score of 2,225 and a possible team score of 6,675—the score of the alternate not counting.

Final placings in the contest showed Kansas State with the highest team score and the highest individual score, as has also been the result in the 1935 and 1936 contests. Out of the possible score of 6,675, Kansas State totaled 6,380. Missouri, second with 6,230; Iowa, third, 6,070; and Oklahoma, fourth, 5,915. In the individual team member placings—Kitch of Kansas was high in the entire contest with 2,190, Terman, third with 2,125, and Wenger, fifth with 2,065.

A bronze plaque mounted on a slab of wood shaped like an apple was the trophy awarded to the winning team. This trophy now hangs in Dickens Hall along with other trophies won by apple judging teams in recent years.

A member of another judging team recently said to me, "Why, anyone can judge apples." But did he stop to consider that while the characteristics of a purebred line of cattle or poultry are fairly constant, there are nearly as many types of individual varieties of apples as there are regions where these varieties are grown? This also does not consider the fact that a specimen of one variety may be practically impossible to identify from a specimen of another variety in some cases without cutting into the apple. It takes a good vision and a knowledge of varieties and the regions in which these varieties are grown.—Gilbert L. Terman, '38.

Meat Team Judges

Two Kansas State College men's meat judging teams competed in two major intercollegiate judging contests this fall. The first contest was held at the Cudahy Packing Plant, during the American Royal, in Kansas City, Mo., October 19. Members on the team were William G. Alsop, Wakefield; Ellwood T. Baker, Abilene; Dorman C. Becker, Durham; Willis Wenrich (alternate), Oxford.

Kansas State placed third at the American Royal in a field of eight teams. The scores of the three high teams were as follows:

University of Nebraska.....2,497
Oklahoma A. & M. College.....2,472
Kansas State College.....2,471

William Alsop of the Kansas team and Lester Schmadeke, Nebraska, tied for high individual honors of the entire contest with a score of 845 out of a possible 900. Dorman Becker, Kansas, was fifth high individual of the contest with a score of 834. In recognition for being high individual, William Alsop received a handsomely engraved bronze plaque presented by the National Livestock and Meat Board.

In the second contest held in Chicago, November 30, at the Wilson Packing Company during the International Livestock Exposition, Dorman Becker was seventh high individual of 36 contestants and fifth high in judging of lamb.

The contest was won by the University of Nebraska with a score of 2,405 out of 2,700. South Dakota State College was second and the Ontario Agricultural College of Canada was third. The Kansas team placed tenth in the contest. Members of the International team were William Alsop, Dorman Becker, Willis Wenrich, and Elwyn Topliff, Jewell (alternate).

On Monday, preceding the International contest, the Swift Packing Company sponsored a preliminary workout and a free luncheon in their cafeteria for the contestants of the 12 competing teams.

These contests are sponsored annually by the National Livestock and Meat Board. The Board offers a trophy for both contests and the institution winning the trophy three years is to

have permanent possession of it. By Nebraska's winning the Americal Royal contest this year, five teams have two legs on the American Royal trophy. They are the University of Nebraska, University of Missouri, University of Minnesota, Iowa State College and Kansas State College.

The team was coached by Prof. D. L. Mackintosh who accompanied them on the trips to Kansas City and Chicago.

—Dorman C. Becker, '38.

Grain Team Places Sixth

The Kansas State College grain judging team placed sixth among eleven competing teams in the intercollegiate judging contest at Chicago, Friday and Saturday, November 26 and 27. The team placed fourth in identification, seventh in commercial grading, and eighth in judging. Nebraska University placed first, North Carolina, second, and Oklahoma A. and M., third.

Students on the team are Elbert Johnson, Winfield; Wayne Freeman, Kirwin; William Allen, Cummings; Walter Abmeyer, Grantville (alternate) in Chicago; and Rodney McCammon, Esbon (alternate) in Kansas City. Prof. J. W. Zahnley, coach, accompanied the team.

The Chicago Board of Trade, the International Grain and Hog Show, and the International Crop Improvement Association sponsored the contest. The U. S. Grain Supervision office and the U. S. Hay, Feed, and Seed Division office in Chicago assisted in conducting the contest. The sponsors entertained the contesting teams at a banquet in the Saddle and Sirloin Club Saturday evening. Mr. Axil Christensen, a Chicago business man, and Mr. Kenneth Templeton, President of the Chicago Board of Trade, were speakers. Mr. Clarence Henry, Educational Director of the Chicago Board of Trade, was master of ceremonies.

Monday morning, November 29, the teams were entertained at the Board of Trade Building and watched the process of buying and selling contract grain.—W. H. Freeman, '38.

Agricultural Resources of Kansas

A vast supply of knowledge and information about Kansas, gathered through years of experience and research, has been opened to the public through a recently published Kansas State College bulletin entitled "Agricultural Resources of Kansas."

Each county in the state is considered separately under the following heads: rainfall, growing season, topographic features and soils, land use, livestock production, business organization of agriculture, tenure of operators, land values, farm power and improvements, and the farm people.

The sections of the bulletin dealing with topographic features and soils were prepared by Prof. R. I. Throckmorton, head of the Department of Agronomy. The remaining portions were supplied by men from the Department of Economics and Sociology including Prof. J. A. Hodges, Inst. W. H. Pine, and Dr. W. E. Grimes, head of the department. Professor Throckmorton has been traveling over the state since 1911, and has written out material for each county, thus making available to the public the knowledge gained through years of experience in Kansas. Dr. Grimes has been connected with the experimental staff since 1915, and Professor Hodges since 1923. The greater part of the data used in compiling the bulletin was taken from files maintained and built up since 1918.

This bulletin was made possible by the cooperation of Kansas State College and the Kansas State Planning Board.—C. S. Warner, '38.

L. C. Aicher, '10, is Superintendent of the Branch Experiment Station, Hays, Kan., where he has developed one of the best grade Hereford herds in the state.

The 1937 Ag Barnwarmer

THE 1937 annual Ag Barnwarmer has passed into history. The Barnwarmer was held this year on Saturday evening, October 23, in Nichols Gym. Decorations followed the rustic trend, consisting of bundles of sorghum fodder, baled straw, branches bearing fall-colored leaves, pumpkins, squashes, and evergreens. Matt Betton's orchestra, which furnished the music for the party, played from a platform under a canopy thatched with cured cane stalks. Rows of baled straw around the edges of the floor served as seats, and shocks of sorghum fodder filled several corners. The lighting was mostly indirect, the lights themselves being hidden by cuttings of evergreen. The throne—the center of attraction during the crowning of the queen—occupied the northwest corner amid a background of branches of bright-colored leaves.

The main event of the evening, of course, was the introduction of the princesses and the crowning of the queen. Miss Janet Gardner of Winfield, member of Delta Delta Delta sorority, was elected queen of the Barnwarmer by the vote of the students who attended. She was attended by Ethel Haller, Alma; Kathleen Porter, Stafford; Miriam Wagaman, Manhattan; and Burneta Young, Cheney. These five girls were selected at the seminar of the Agricultural Association, and it was not known who had been elected queen until Assistant Dean Clyde Mullen of the Division of Agriculture had introduced the candidates and Dean L. E. Call introduced and crowned the queen. Each of the girls was presented with a corsage.

In a room adjacent to that where the dancing was in progress refreshments, consisting of cider and doughnuts, were served during the evening. To give an idea of the capacity of the crowd which attended, here are some figures:

430 tickets were sold.
125 gallons of cider were served.
2,160 doughnuts were consumed.

The Ag Barnwarmer is quite a unique party. It is open to all of the students in the Division of Agriculture and the only students outside the Division who may attend are those invited as special guests. All of the boys wear their "barnyard tuxedos," commonly known as overalls, and their dates wear gingham house dresses. The two days prior to the party are religiously observed by all students in the Division of Agriculture in the wearing of overalls to all classes. This custom is rigidly enforced by the use of a stock tank full of water which is conveniently placed where all Ag students who fail to don the prescribed attire are promptly and thoroughly ducked.

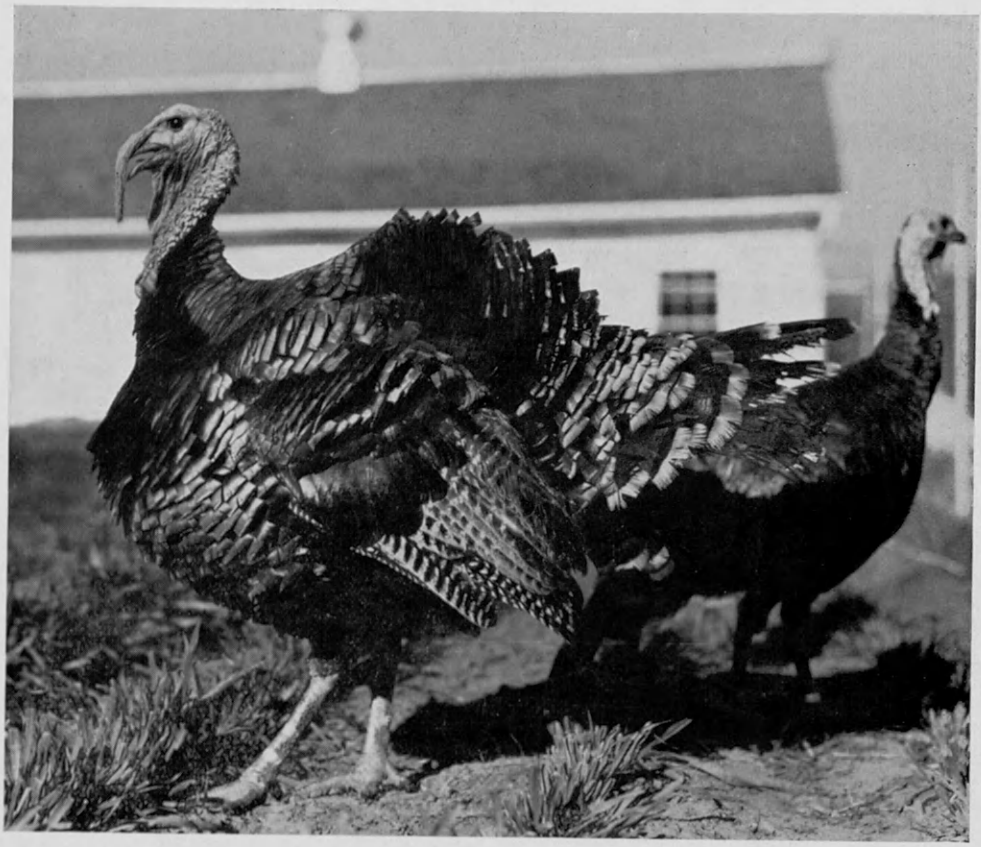
Plans are already under way for the 1938 Ag Barnwarmer and it should be still bigger, still better than any previous one. Practically all of the work in connection with putting on this party is donated by the students themselves, and it is in this way that so much entertainment is obtained at so reasonable a price.—F. L. B., '38.

Joseph D. Smerchek, '32, is County Agricultural Agent, Sumner county, Wellington, Kan.

Royse Murphy, '36, and David Reid, '36, are doing graduate work in the University of Minnesota. They attended the meeting of the American Society of Agronomy during the International Livestock Show.

H. R. Guilbert, '20, professor of Animal Husbandry at the University of California, Davis, Calif., spent a few days visiting at Kansas State on his way home from the International Livestock Show, Chicago. While in Chicago he presented a paper at a meeting of the American Society of Animal Production. This was the first time Mr. Guilbert had attended the "International" since 1919 when he was a member of the livestock judging team representing Kansas State College.

Green Grass for Turkeys



KING OF THE FLOCK AND HIS LADIES

Exceptionally good results obtained with the turkeys at the College Poultry Farm this year are accredited largely to the practice of feeding chopped fresh green grasses to the flock during most of the growing period. The flock of 149 Bronze turkeys were hatched from eggs shipped from Oregon. They were hatched in two groups, the first group of 76 being hatched April 29, and the second group of 73 one week later. The first three weeks the poults were brooded in a battery brooder, after which they were moved to a 14 by 14 foot shed roof type brooder house with sand on a wood floor. This house was heated by a radiant type oil brooder stove and was provided with a sanitary runway on the south side. At six weeks of age the poults were transferred to a Sudan and oat grass range.

These turkeys were fed fresh chopped green grass twice daily from the time they were one week old until 20 weeks of age. Oat grass was fed until the Sudan grass became available about the first of June. They were fed an all-mash ration until six weeks of age, at which time whole wheat was placed before them. At the time that the feeding of chopped green feed was discontinued, whole yellow corn was placed before them, semi-solid buttermilk was fed at the rate of 5 pounds daily per 100 birds, and the alfalfa leaf meal in the mash was increased by 5 percent.

The average weight of the toms at 24 weeks of age was 18.08 pounds, and the average weight of the hens at the same age was 11.97 pounds. They consumed on the average 3.17 pounds of

(Continued on page 62)

Former Head of Department of Animal Husbandry Honored

WM. A. COCHEL, former head of the Department of Animal Husbandry in Kansas State College, now editor of the Weekly Kansas City Star, was honored by the Society of Animal Production at its annual meeting during the International Livestock Show at Chicago. His portrait was presented to the Saddle and Sirloin Club by the Society of Animal Production at its thirtieth annual dinner.

Each year the society presents a portrait of an outstanding figure in the field of animal production to hang in the picture gallery of agriculture's immortals in the Saddle and Sirloin Club, which has had quarters for more than a third of a century in the Stock Yards Inn. Mr. Cochel was one of the founders of the Society of Animal Production and has served as its president. In 1912 he came to Kansas State College as head of the Department of Animal Husbandry. In Mr. Cochel we find the rare combination of the successful practical farmer and competent surveyor of the whole field of agricultural statesmanship. He knows the farmer's problem from first-hand experience, but he has consistently refused to be swept off his feet by panaceas, or by blittering short run policies that he believed would be harmful in the long run. In the confusion of the depression he has urged well considered constructive programs for farm welfare and progress.

Prof. E. A. Trowbridge, head of the Department of Animal Husbandry of the University of Missouri, was toastmaster at the dinner. He presented the portrait and it was accepted by the club president, Charles E. Snyder of the Chicago Daily Drovers Journal. The Kansas winning team in the intercollegiate livestock contest was presented by President J. H. Sheppard of North Dakota Agricultural College. The judging teams from the various schools were praised by Mr. Cochel in his address when he stated that in looking over the field of extension and experimental workers, one finds a very large percent of them being former members of judging teams.

Dan D. Casement, Manhattan, Kan., a close personal friend of Mr. Cochel, described the man honored as one of whose character had been wrought by hard work. Prof. H. P. Rusk of the University of Illinois talked on Mr. Cochel's vision in the work of Agricultural Education. He said that early investigations of Mr. Cochel's at Purdue, Penn., and Kansas still were considered classics in the profession. While at Purdue he inaugurated livestock feeders' days. Professor Rusk also emphasized Mr. Cochel's interest in young people on farms and said that he has continued to foster the work of the Future Farmers of America and the 4-H Clubs.

In replying, Mr. Cochel stressed the key of his career, as teacher and editor, to that of a sound system of agriculture based on livestock and that grass is the most important single item in successful livestock management. He also believes that a farming career could be made a success through the wide use of available knowledge and careful management.

—Charles W. Pence, '38.

Frank Parsons, '35, is head of cooperative experimental work in agronomy at the University of California, Davis, Calif.

Hilton D. Hollembeak, '37, is in charge of the Kansas State Agronomy farm and is assistant to Prof. A. L. Clapp in cooperative experiments.

Robert Latta, '37, attended the American Society of Agronomy meeting at Chicago, during the week of the International Livestock Show. He is doing graduate work at the University of Wisconsin.

National Corn Husking Contest

SEVENTY thousand persons witnessed the world's heavyweight boxing championship bout last night at Madison Square Garden. Eighty-five thousand persons were present to see California take a 13-0 win from Stanford. Seventy-five thousand enthusiastic sport fans were seated in the Yankee stadium to see the opening game of the World's Series. The National Air Races attracted an immense crowd of curious spectators. These are examples of headlines we see daily in sports sections of our newspapers. Little have we ever realized that one of the annual duties, of most of the American farmers, that of harvesting the corn crop, would become one of the biggest sporting events in history, attracting crowds next to the largest in size of any sport, being surpassed only by the auto races at Indianapolis.

Several years ago the question was asked, "Just how much corn can an individual husk in a given amount of time?" Henry A. Wallace, now Secretary of Agriculture, became interested in this question and it was decided to hold a contest in order to determine the answer. So interesting was this contest, that the idea has spread until now there are individual county and state contests to serve as elimination grounds for a big national event to determine the National Corn Husking champion.

In a corn husking contest, a contestant is assigned a land of corn, a wagon, team, and driver. He is expected to get as large an amount of corn as possible during a period of 80 minutes. It is very essential that care be taken to not leave husks attached to the ears as the contestant is penalized for excessively dirty corn.

During the 80 minute period of the contest, the entrant is under the most grueling strain of any athlete. For the full 80 minute period, he is exerting every possible amount of energy; he is making plans for every move; every muscle of his body is in use; he is constantly urging himself to move on. There are no rest periods as in other sports; there is no chance to take time out to bandage a nose or face that might get cut with a sharp corn leaf, or is there a chance to get a drink of water to quench a parched throat. During a contest, an entrant will throw from 30 to 50 ears a minute, while big league baseball pitchers seldom throw over 120 balls in a game. It takes nerve, stamina, and strength in order to stand an event like this. It is bound to require an individual that will equal the most outstanding athletes.

These are factors that have tended to increase the interest in this activity as a national sporting event.

The 1937 National Corn Husking contest was held on November 4 at Marshall, Mo., in which 10 states were represented by 20 contestants, each husker being a state champion or a runner-up. The states represented were Iowa, Nebraska, Missouri, Kansas, South Dakota, Minnesota, Wisconsin, Illinois, Ohio, and Indiana.

This year, for the first time in history, the complete event was broadcast by radio. The contest was officially opened and closed, being opened by a bomb set off by wire from Washington, D. C., and closed by a bomb set off by Governor Stark of Missouri. The contest was attended by a great many notables and it was estimated the crowd totaled nearly 100,000.

After the contest and the judges had taken all weights and made the necessary deductions, it was decided Ray Hanson, 6 foot 2 inch Viking from Bingham Lake, Minn., had qualified for the title of 1937 National Corn Husking Champion. Hanson was credited with having husked 21.3 bushels of corn in the required 80 minutes. Runner-up for the title was Cecil Vining of Baldwin, Kansas, with 17.84 bushels to his credit.

Our hats are off to these new champions as their rating is equal to the other outstanding athletes of the nation.—L. A. Rees, '32.

Problems in Crop Production in S. C. Kansas

WHEREVER crops are grown, farms are continually exposed to plant and insect pests which, if combated while in the first stages of development, are usually easily controlled; but if allowed to propagate, become a problem of major importance to the farmer. South-central Kansas is no exception to this rule and good farming stands out clearly as evidenced by the measures that the farmer has taken to control the weeds and insects which are a constant menace to his crops.

Rye has become a problem of major importance in the wheat fields of this section in the past few years. It is a hardy winter annual which seeds freely and, while not important when found only in small quantities, becomes a problem when fields contain so much of it that wheat is docked at the elevator. Scattered plants may easily be rogued out by hand as soon as the heads appear above the wheat. However, many fields in this section are now filled with so much rye that the eradication may be accomplished only by a system of summer fallowing, followed by the continuous planting of rye-free seed.

In the past season much Aegelops or "goat grass" has been growing along the highways in this part of the state. This has been scattered to some extent from loads of wheat and care should be taken when buying bran for grasshopper poison that it does not contain this seed. Goat grass is also a hardy winter annual which spreads rapidly and can be controlled only by summer fallowing or rotation with an inter-till crop if once started in wheat fields. Spread of this noxious weed from roadside to wheat field is only a matter of time unless control measures are taken soon. The weed reaches a height of one to two feet, and is characterized by a long, slender head which breaks, when ripe, into sections—each bearing a seed. As the plant matures a reddish-brown color is attained, which changes to straw color when the seed ripens.

Bindweed is a problem in scattered sections of this region. If covering a large area, it may be best controlled by a system of cultivation; if only in small patches, the application of sodium chlorate sprays is most practical.

The presence of hills of red ants in many fields cuts the yield considerably. These may be destroyed by sprinkling calcium cyanide at the entrance to the hill and applying a layer of dirt over it to conserve the gas which is given off. This process must be followed by another application in ten days to two weeks because the gas does not destroy the eggs and as these hatch, the adults must be destroyed before more are laid.

Grasshoppers have presented a major problem for the past two years. They are especially destructive to young crops and a young stand may be protected to a certain extent by the application of poisoned bran or sawdust **at the time of seeding.** Two or three days are required for the poison to take effect: thus if it is not spread until the crop is up, the grasshoppers have time to clip it off before they are killed. Hopper-dozers have been used effectively in alfalfa fields, and a flock of turkeys will consume large quantities of the insects.

Reduction in yields of wheat due to Hessian fly occurs in years of ample rainfall. This insect is combated by deep plowing following harvest, by destruction of volunteer wheat, and by not drilling in the fall until **after** the fly-free date, which is October 5 to 10, being later farther south.

Different pests present different problems in other sections of the state but the farmer can familiarize himself with the latest control measures by frequently consulting his county agricultural agent and by a practical application of the methods prescribed.

—Kenyon Payne, '39.

Edward A. Stephenson, '28, is manager of the Fritzlin Hereford Ranch, Kingsdown, Kan. He had a load of feeder steers that placed fourth at the American Royal Livestock Show this year.

Milling Research As an Aid to Wheat Growers

THE World's greatest wheatfield is the state of Kansas; yet here in the heart of America's richest agricultural district, the typical Kansas wheat farmer is growing wheat year after year without due consideration to the variety of wheat he is raising, and without proper knowledge of the true marketing value of his crop.

It is commonly known to the wheat grower that the ultimate end of his wheat is in the bag of flour, and it is just as widely known that it takes good wheat to make good flour. In the past the basis of wheat judging has been upon its test weight, moisture content, and protein—the latter two qualities being comparatively recent—but since the start of the last decade it has been found that the true measure of wheat quality is the baking value of the flour it will produce.

At the present, the larger milling and baking companies all over the United States are turning a great deal of attention and spending fabulous sums of money in order that they may determine what constitutes a wheat of good baking characteristics. As a result of the findings in their research laboratories, they are segregating certain sections of the country as areas where premiums may be paid or "docking" applied accordingly.

As this research progresses, it becomes evident that in the near future differentiation of wheat prices will become more pronounced, and the farmer who continues to grow his variety because it produces "a sound kernel in a well-filled head" will find his profits dwindling year by year.

However, such ignorance regarding baking characteristics of flour produced by various wheats is no longer necessary. Since the establishment of the flour milling department in Kansas State College in 1912, extensive research has been carried on to determine what varieties of wheat grown under Kansas conditions will be of greatest value to the miller, thereby determining what varieties will be the most profitable for the wheat grower to raise.

One project, started in 1935 by Prof. R. J. Clark, has as its objective the study of colloidal properties of dough produced by different varieties of wheat. It is known that the colloidal properties of a dough are definite factors in determining its baking value, and the recording dough mixer was selected as a means of revealing these inherent protein qualities of the varieties. This machine automatically plots a curve which has been proved to forecast valuable information regarding different doughs, and it was indicated that it might be possible to assign definite baking characteristics to a curve of a certain shape. The work therefore was confined to observing colloidal properties as revealed by the mixer, and attempting to interpret them into baking characteristics. This consideration divided the research into two procedures: (1) the mixing of flours in the recording dough mixer to determine their consistency curves; and (2) the baking of these flours to determine their best baking abilities. The curves show that each variety has definite colloidal characteristics which are peculiar to that specific variety and although these qualities may be modified by soil and climatic conditions, each variety produces its own type curve. The baking of the doughs proves which variety, under certain conditions, produces the best loaf of bread.

Although this project is only one of the many experiments being conducted in the milling laboratory at the present time, it can be of value to the wheat grower by showing him which type of wheat will produce the best bread flour and thereby command a higher price from the miller. At present, these tests

(Continued on page 63)

Weather-Crops Seminar

IT is said that everybody talks about the weather—but little is ever done about it. Last November 5, the fourth annual Weather Crops Seminar of Kansas was held at the Jayhawk Hotel in Topeka, Kan., to talk about the weather and perhaps eventually to do something about it.

The meeting was attended by about 130 men. In this group of men, there were grain men, officials from the Weather Bureau, U. S. D. A., Soil Conservation Service, and the Farm Security Administration. There were also a few from the University of Kansas and quite a number from Kansas State College.

Mr. S. D. Flora, U. S. Weather Bureau, Topeka, was chairman of the meeting. Mr. J. C. Mohler, Secretary of the Kansas State Board of Agriculture, made the statement that the soils of Kansas had not lost their fertility but that yields had been lower only during periods in which moisture had been deficient.

The Federal Agricultural Statistician for Kansas, Mr. H. L. Collins, followed with a paper on "State-Federal Crop Reports in Kansas." In dealing with the subject, he traced the history of the gathering of the statistical data concerning crops from 1839 to the present system which is based on: (1) reports received regularly from 2,400 voluntary crop reporters, (2) check of crop acreages made each year with the crop meter, an instrument built on the principle of a speedometer attached to the crop observer's automobile, and (3) special statistical studies such as those showing the rather high correlation between soil moisture at the time of planting and yield of winter wheat in central and western Kansas. In cooperation with the Kansas Board of Agriculture, Mr. Collins prepared a map on October 10, 1937, showing the soil moisture situation in Kansas. At the time of this survey, there was a greater deficiency of moisture than in the fall of 1936 in all but one of the 9 crop reporting districts. The area in which a favorable supply of subsoil moisture was present is located in south central Kansas.

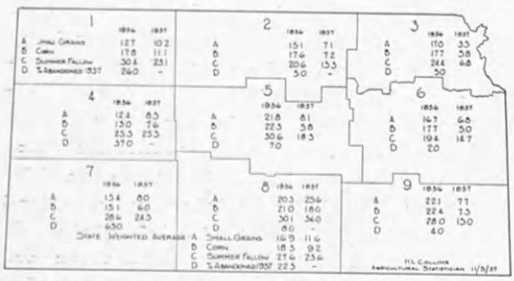
Mr. B. W. Snow, veteran crop reporter for Bartlett-Frazier Company of Chicago, gave a very interesting talk on "Rainfall Records and Crop Estimating." He pointed out that one third of this country's wheat acreage lies in the semiarid belt of the Great Plains, between the 100th and 105th meridian, where deficiencies in rainfall cause frequent partial or complete failures. In his paper he pointed out the fact that the July-September period of 1937 shows a slightly smaller rainfall than 1936. Since this follows four years of deficient rains these figures give a strong implication of another wheat shortage in the Western Great Plains.

An illustrated talk on "Secular Trend and Cyclic Aspects of Crop Yields in the Southwest" was given by C. J. Bollinger, Associate Professor of Geography, University of Oklahoma. In his statistical studies of (1) water temperatures in the Gulf of Mexico and the Caribbean Sea, (2) sun-spot cycles, (3) radiant energy values, (4) dew point readings, (5) rainfall, and (6) crop yields he has found a correlation between these various factors. He explains this correlation in the following way. In seasons when radiant energy is abundant, which in turn shows correlation with sun-spot cycles, water temperatures are higher, evaporation is greater, air inland is more humid, and rain falls more often and more abundantly with consequently better crop yields. Professor Bollinger has had some success in predicting the seasonal weather and crop conditions from the water temperature readings, but he makes no claim of infallibility in his long range weather forecasting.

From Rothamsted Experimental Station, Harpenden, England, came Mr. F. Yates, Chief Statistician, who talked on the subject, "The British Meteorological Scheme." This scheme, as explained by Mr. Yates, incorporates detailed study of the plant, its height,

number of shoots, date of heading, and other characters. These observations and measurements of the plant are carefully compared with current weather data so as to aid in crop predictions. The crop predictions in England are of quite a different nature from the wheat yield predictions in Kansas. In England, wheat is rarely injured by drought, but frequently by too generous rainfall during winter and spring months.

Dr. Ellsworth Huntington, research associate in geography at Yale University and now serving as visiting professor of geography at the University of Chicago, gave an illustrated address on "The Determination of Climatic Optima of Crops." By the use of maps and charts, Dr. Huntington showed that maximum yields are usually obtained in the northern portions of the producing area. He showed this to be true of wheat, corn, rice, potatoes, and other crops. The best yields of corn are found where summer mean temperatures range between 68° and 72° F. This was illustrated by the fact that corn yield in Connecticut was 44 bushels per acre, while in Iowa and Kansas where soil fertility is higher the yields were 38 bushels and 18 bushels per acre, respectively. He pointed out the fact that insect pests suffer more from climatic conditions near the northern limits of the heavy crop yielding areas. The optimum climate for human beings, as well as for crops, tends to be in northern rather than southern latitudes.—Rodney McCammon, '38.



A STUDY OF WEATHER-CROP REPORTS FOR KANSAS

A Leading Kansan

"The Future Farmers of America" is a national organization consisting of boys enrolled in Vocational Agriculture. It is the largest organization for farm boys of high school age in the world.

There are four degrees attainable in the organization. They are Green Hand, Future Farmer, State Farmer, and the American Farmer degrees. The first two are attainable in the local chapter after certain qualifications have been met. The State Farmers are picked from the outstanding Future Farmers of the state and the American Farmers are picked from the outstanding State Farmers. Each state is permitted to recommend one State Farmer, for the American Farmer degree, for every 1,000 members or major fraction thereof that they have. Kansas had three American Farmers this year.

The basis used for selection of boys for State Farmer and American Farmer degrees includes scholarship, leadership, project records, and character.

Along with 75 other boys in the United States, Hawaii, and Porto Rico (three of which were Kansans), Thello Dodd, a freshman in the Division of Agriculture, was awarded the coveted honor. Thello is 20 years old and attended Linn Rural High School. While in Future Farmer work his major projects, on which the award was based, were poultry, swine, and sheep. Dodd carried on his projects under the supervision of C. C. Milligan, the Vocational Agricultural teacher at Linn.

Thello's attainment is not only an honor for him, but also for Mr. Milligan, and for the Linn Rural High School.—A. F. Leonhard, '38.

Thomas Potter, '37, works in the sheep department of John Clay Commission Co., Kansas City, Mo.

B. M. Anderson, '16, M. S. '23, is assistant Secretary of the American Hereford Association, Kansas City, Mo.

New Field of Work for Students

THE Statistical Laboratory of the Department of Economics and Sociology at Kansas State College serves three purposes. It is a clearing house for agricultural economic statistics; it provides experience in agricultural research; and it provides work for 32 students.

The statistical laboratory, as it is known at the college, is merely a special room, set off from the rest of the Economics and Sociology Department. It is equipped with machines valued at approximately $3,000 which include adding machines and rapid calculators. There are also various sorts of records on file for reference in all kinds of agricultural research work.

A large part of the work done in the laboratory is the tabulation of data collected by the field men of the department, or by the extension division. Numerous studies, for instance, are made on the systems used by farmers for operating their farms. The information is obtained directly from the farmer by the field men, and is then sent in to the laboratory for collection and tabulation in an organized and comprehensive form. This tabular form of information is invaluable to the department in its studies and monthly publications of the general outlook, general farm conditions, and the recording of farm accounts. This, in general, is the type of work done.

This information was formerly compiled by full time clerks, but in recent years, the department has tended to employ more student help and fewer full time men. The students employed in the laboratory receive a number of benefits from the work they do. By doing such work, the student finds that he gets a fundamental knowledge of how research work is carried on. Some of the basic principles of economics are also learned. He not only gains a knowledge of statistical and research work, but he is of valuable assistance, many times, in ironing out some small detail in the routine tasks with which the men in the department may not be acquainted.

Alumni of Kansas State say that the value of the work in the laboratory by a student might well be compared to the training received in a business college.—Roy R. Green, '39.

STUDENTS BENEFIT BY STATISTICAL WORK

Phosphorus in Eastern Kansas

COMMERCIAL fertilizers have been used to some extent in Kansas for over 40 years, but until recently their use has been limited. They were first used in southeastern Kansas, and were mostly in the form of bone meal. Now their need and value is recognized and they are very much on the increase throughout the eastern one third of the state. It is a well known fact that plants require certain nutrient elements in order to grow. When any one of these elements is lacking in the soil, the plant will not grow and produce as it should, much the same as a young calf is stunted if it does not obtain proper and sufficient food. Plants are closely related to animals in this respect.

Some of the elements that are found to be lacking most commonly in this region are: nitrogen, phosphorus, potassium, and calcium. Calcium usually is applied in some form of ground limestone; nitrogen is added to the soil mainly by the following methods: by applications of manure and commercial fertilizers, by green manure crops, and by growing leguminous plants. The only way phosphorus and potassium can be supplied to the soil is through commercial fertilizers. Potassium is found in sufficient quantities in practically all of our soils, but occasionally causes some increase in crop yields when used in mixed fertilizers, as compared to the yields produced by superphosphate alone. This leaves phosphorus our main concern, since it is lacking to a more or less degree in most soils of eastern Kansas. Therefore phosphate fertilizers are being applied much more extensively than any other at the present time. As far as fertilizers are concerned, farming in eastern Kansas is slowly undergoing change. This is shown by some comparative data, the main features of which are as follows: the total tonnage (45 percent superphosphate) applied in Kansas in 1937 was approximately 3,500 tons, an increase of 300 percent over 1936 and 400 percent over 1935. Some of the leading counties in the use of phosphorus fertilizers in 1937 were: Jackson county with approximately 300 tons; Shawnee, 200 tons; Jefferson, 150 tons; Atchison, 115 tons; Anderson, 120 tons; and Butler, 120 tons.

Some of the crops for which phosphorus may be used most profitably in Kansas are: wheat, oats, alfalfa, sweet clover, and perhaps red clover. Corn and sorghums encounter too many summer droughts to make fertilization with commercial fertilizers profitable over a period of years.

Phosphorus has given good results on Southeastern and Northeastern Kansas Experiment Fields and in Cooperative Fertility Tests on farms throughout the eastern two fifths of the state. Crops show greater response to phosphate on the Agronomy Farm, at Manhattan, than they did 27 years ago when the experiment was started. Much of eastern Kansas soil was low in phosphorus when broken from sod, and this in addition to continuous crop production since that time accounts for the small amounts of available phosphorus at the present. Reduction of the fertility of the soil by continuous crop production is characteristic of American agriculture with its "unlimited resources." However, the resources of the soil are limited, and as sure as we expect to keep on taking from the soil we will have to add to the soil. These additions will have to be in some form of fertilizers.

There are several kinds of fertilizers and several things to consider in choosing one. If land has been heavily farmed to grain crops and had no manure applied, a mixed fertilizer carrying 2 to 4 percent of nitrogen, 14 percent of phosphoric acid, and 2 percent of potash may be desirable for wheat or alfalfa. In most soils of Kansas the potash may be omitted and one of the ammonium phosphates available on the market may be used. One such material has the formula 11-53-0 (11 percent nitrogen, 53 percent phosphorus, and no potash) and another 12-48-0. These are also good for fertilizing

grass and may be used to start an alfalfa stand on very poor soil. By far the most extensively used fertilizer at present carries phosphorus alone, the nitrogen and potash both being omitted. These phosphate fertilizers vary in the amount of phosphorus they carry, but the one most used is the 45 percent superphosphate.

For alfalfa an application of 150 pounds per acre of 16 percent superphosphate, 120 pounds of 20 percent superphosphate or 55 pounds of 45 percent superphosphate gives best results. This should be applied at the time of seeding and every second year following. Sweet clover and red clover should be fertilized similarly to alfalfa. For wheat 125 pounds of 16 percent or a correspondingly smaller amount of the higher analysis grades, proves most profitable. Oats need about four fifths as much as wheat.

By far the most effective method of application is to drill in the row with the seed. A fertilizer attachment to the drill is necessary for this. Sometimes it has been mixed with the grain and drilled through the seed box, but this method has been much less satisfactory. Broad-casting on top of the soil is not recommended.

Farmers using fertilizer for the first time should have an unfertilized strip in each field in order to provide an opportunity to see how much good the fertilizer will do. From this can be determined usually, whether or not it is profitable on that particular soil.

Some farmers believe that when fertilizer is once used it damages the soil and must always be used thereafter. This is not true. If needed once it will be needed again, not because it harms the soil, but because the crop fertilized uses up most of what was applied and more must be applied to take care of the next crop. Again for illustration, a calf will not live forever on one meal, neither will the soil keep on producing simply because it obtained one application of fertilizer. There is some carry-over effect from year to year, but it usually is not great until after several applications have been made.

Phosphorus hastens the development of the wheat plants in the fall, increases the rate of root development, causes a heavier stooling of the plants, and hastens maturity. During the past year this was an important factor in evading the rust epidemic that slaughtered eastern Kansas wheat fields. The final

(Continued on page 60)

PHOSPHORUS ON THE LEFT—NO FERTILIZER ON THE RIGHT

Serious Livestock Diseases in Kansas

LIVESTOCK growers throughout the state of Kansas, as well as all over the United States, are troubled by diseases of livestock and in most cases do not know any remedy for them. Some of these diseases are more prevalent in certain sections than in others. This article will deal with diseases causing considerable loss to Kansas farmers.

One of the most important diseases from the viewpoint of number of animals infected is Bang's disease—commonly known as contagious abortion. Bang's disease affects nearly all classes of livestock but is more often found in cattle. This disease is caused by the bacterium "Brucella abortus" which localizes in the reproductive organs of the affected animal. This bacterium may gain entrance either through the digestive tract or the reproductive system. Animals in their prime of life are usually affected rather than young or aged animals. Affected cows will generally abort or lose their calves during the sixth or seventh month of pregnancy.

An estimate would indicate that about 9/10 percent of all cattle are affected. Tests for contagious abortion are made by blood agglutination and best results are obtained by retesting herds showing any contagious abortion. These tests are made by the Federal Bureau of Animal Industry and by various states cooperating with them. A very limited indemnity is allowed on all reacting animals that are retired from the herd and slaughtered.

The most effective means of control in use at the present time, is to retire all affected animals from the breeding herd and to make no additions to the herd without first testing for the presence of the organism. Vaccination has been tried, but to date no faultless vaccine has been found. However, at the present time a vaccine has been prepared and is being used for experimental work that appears to answer all of the requirements for a faultless vaccine. In most previous vaccines protection was imparted to some degree but the treated animals were made reactors in all tests after vaccination.

Another disease that is becoming more serious is Anaplasmosis. The first appearance of this disease in the United States was in 1925. However, it is widely distributed throughout the world, especially in the warmer portions of South America. In the light of present knowledge it seems that Anaplasmosis is carried by flies and ticks. These insects carry a protozoan organism "Anaplasma marginale" from affected to unaffected animals. This disease is usually more prevalent in the warm months when the transmitting insects are more common and active.

The protozoan organism enters the blood stream and centers in the blood cells. This causes a breakdown of the blood cells and not enough oxygen is carried in the blood to maintain body metabolism. This results in suffocation. The mortality rate varies: some outbreaks of Anaplasmosis will result in as high as 40 percent death loss. Animals recovering from Anaplasmosis are rendered permanently immune, but frequently remain as carriers, which is a menace to the health of other animals in the herd. Anaplasmosis is especially fatal and quick-acting in the case of dairy cattle, death coming in only a very few hours after the first symptoms become evident. Fortunately, up to the present time all outbreaks in Kansas have been restricted to the southeast corner of the state.

There is no sure, effective treatment for Anaplasmosis at the present time. However, work is being carried on by this college in an attempt to develop a successful as well as a preventive treatment.—Wendell Dickhut, '38.

J. Alfred McMurtry, '37, is manager of his father's cattle ranch at Clarendon, Tex.

Vernon E. Burnet, '34, is working with the Resettlement Administration at Boise City, Okla.

Community Auction Sales

A RELATIVELY new development in the method of marketing some farm products has been made in Kansas during recent years by the establishment of community auction sales throughout the state. In October of 1936, there were 148 active auction sales and there are now about 143. These sales are distributed evenly over the entire state, generally with one in each county seat town. In some of the eastern counties and some of the central counties there are two or three auctions in a county.

Community auction sales have been classified into three general types—the feeder, the general, and the inventory types. The feeder type is common in western Kansas where feeder cattle are assembled from the range territories and bought up by speculators and sale managers who move them eastward, to other auctions, where they are sold to farmers. This type may also be thought of as assembly sales and assembling of feeder cattle may be considered as their most important function.

The general type auction is the most common and typical. It also serves the greatest number of farmers. Farmers bring in livestock, grain, hay, fence posts, stove wood, etc., to these auctions to be sold to the highest bidder. About 90 percent of the cash sales volume is livestock and 80 to 90 percent of the livestock is brought in by farmers within 20 miles of the auction.

At the inventory type auction, most of the livestock is brought in by speculators, and consists mostly of feeder cattle and terminal market stock. The speculators buy the livestock in the western part of the state and move them toward the terminal markets, especially Kansas City and St. Joseph. They determine a price they must have to make a profit and if offered as much as this inventory price, they sell and take their profits. If no one bids high enough the livestock is moved to another sale the following day and put up for sale again. Some speculators may do this several times, trying to sell their stock for more than they cost, to anyone who is not well posted on prices. They often sell livestock by the head, knowing the weights, thereby taking advantage of farmers who do not know the weights.

Most auction sales are privately owned. During the period 1932 to 1936 auctions changed hands frequently, but the tendency now is for the ownership to be stabilized. Some auctioneers and sales managers now own a chain of auctions, going from one to another on successive days of the week. There are also a few cooperatively-owned auctions, most of which are more or less sponsored and supervised by civic organizations as a service to the community and a drawing card for local merchants.

Livestock of all classes are taken in to the auctions in trucks and trailers. Adequate pens, loading docks, and a scale are necessary for efficient management. A sizable pavilion with plenty of seating capacity is also essential, so that in bad weather potential buyers can be inside. If the farmers' wives and families have room to wait at the auction after doing their shopping, the farmers tend to stay longer than if they must go down town to meet the family. Usually the pavilion is located as conveniently as possible, adjoining the local railroad stockyards, thus taking advantage of the privilege of using the yards as holding pens. This is an advantage as stock shipped toward the terminal market may be held over a day with railroad stop-over privileges and put up for sale. If they do not sell, the stock may be shipped on to the terminal market or to another auction sale. The cost of these facilities, hired help, and the auctioneer expense is met by charging a commission on all commodities that pass through the sale ring.

There are certain desirable practices of management that are adhered to by the more successful auctions in establishing and maintaining the confidence of both the buyer and seller customers.

(a) Concessions to sell miscellaneous articles such as fruits and vegetables are popular at community auction sales.

(b) A typical sale day at Dodge City with seats and auto parking space for all. Note the loading dock and holding pens to the right.

(c) Adequate loading chutes and holding pens are essential at community auction sales. The cashier's office is on the left.

(d) This large heated sales pavilion at Bucklin, Kan., has room for all potential buyers.

Sale managers of different towns get together and have their sales on different days of the week with the auction furthest from the terminal market being held in the fore part of the week, so that feeder cattle may be moved toward the terminal market. Also it is easier for truckers and traders to make up full loads to take to the terminal market.

Sales are started promptly instead of waiting for the crowd to come, so that large volumes of sales may be run through the ring in the short winter days before the farmers go home to chore. Each class of stock should always be sold in the same consecutive order, and the first of each class brought in by the farmers should be the first sold, so the farmers know what time to bring in each class of livestock. The classes of livestock and commodities farmers buy are sold first, and then the slaughter stuff which is purchased by a few packer buyers and speculators is usually sold last. Sales continue way into the night if necessary and this is often done in the larger auctions.

Large parking areas for cars, trucks, and trailers by a highway or good street, and adequate unloading chutes and pens for both trucks and trailers are essential.

Bidding is usually started by an auctioneer or an assistant who is working the ring. By so doing, the auctioneer may start the bidding close to the final price which saves much time. Also, farmers like to have the bid started close to the final price because it tends to eliminate by-bidding and psychological swings in bidding, which are common when bids are started ridiculously low. The final bid and its bidder are usually announced so the farmers may know who is buying the products, thus avoiding suspicion among farmers that the auctioneer or some friend or favored speculator bids in the article at a low price.

The auction sales companies do not take responsibility of animals in meeting any requirements, but the owner often gives a guarantee. In such cases, the final payment should not be made until the end of a guarantee period (usually one week).

A cashier's office, luncheon, and con-

cession spaces are often provided, and are so built that they do not disturb the bidding in the sale ring. A cashier's office makes possible the settlement of sales immediately and the prompt payment to farmers without disturbing bidding in the ring. Concessions are popular and add to the attractions for the crowd. Fruits, nuts, neckties, and such numerous articles are often sold by peddlers.

Auction sales have their bad practices as do other marketing institutions. One of the most detrimental practices is that of so called scalper speculators attempting to buy from farmers outside the auction sale premises at a seemingly good price, and thus eliminate the competition present at the sale ring. Farmers seldom get as high a price by selling this way as by selling in the sale ring.

Farmers in general do not approve the practice of speculators, running their cattle through the sale ring without paying any commission, and often bidding them in if dissatisfied with the price. The farmers then carry all the burden of paying the overhead expenses through their commissions. Selling the same livestock at several auctions by speculators is also objectionable because too often an animal is sold for more than its value, to some uninformed farmer.

There are several advantages of the community auction sale on the net prices the producer receives.

1. Prices received by farmers in the auction ring tend to be nearer the terminal market price minus marketing expenses than do prices paid by country traders at the farm. The auction sales have caused a marked decrease in the number of hogs sold direct to packer buyers at the farm.

2. Full truckloads of animals are assembled at an auction or from several auctions and can be shipped to the terminal market at a lower cost per hundredweight.

3. Farmers may buy stocker and feeder cattle slightly cheaper through auctions than if they were first shipped to Kansas City and then back to the feeder. Some freight is saved and the marketing expense in the auctions is less than the total expense to the terminal market and the return freight.

4. Individuals who buy a hog or a calf to butcher for their own use, local butchers, and interior packers are often forced to pay a little more than the net terminal market price.

5. Speculators often buy cattle by drawing a draft on a commission firm and in selling them at the terminal market seem to get higher prices than if the farmer had shipped the cattle directly. This slight price advantage in the long run is passed on to the farmer.

6. Those animals that are of the stocker and feeder or breeding classes tend to bring higher prices at auctions, and the farmer who buys them, gets them for less than the net terminal market price. Animals of the distinctly terminal market type, which only the big packers will buy, usually net the farmers less when sold at auctions than if shipped to the terminal market.

There is one long time economic social disadvantage or ill effect of the auction sales. Farmers find the auctions an easy and convenient method of selling farm goods and many of them sell off some of their calves, pigs, etc., each week as a source of cash. Before they realize it, they have sold off most of their working capital and then find themselves reduced from owners to tenants or from tenants to laborers.

The conclusions and data given in this article are taken from the report of a study and survey made during 1936-'37 by Prof. Homer J. Henney of the Department of Economics and Sociology in cooperation with the Farm Credit Administration.

Robert W. Kirk, '37, is farming near Scott City, Kan.

Fred B. Cromer, '16, is County Agricultural Agent at Kingman, Kan.

Luther A. Jacobson, '32, works with Soil Conservation at Ottawa, Kan.

Unnecessary To Plow Under Alfalfa Tops To Increase Soil Nitrogen

The importance of legumes as a practical method of maintaining the nitrogen supply of the soil is coming to be recognized. In this connection, it has been a general belief that legumes store little or no nitrogen in the soil unless the crop is plowed under. This may be nearly true with annual legumes such as soybeans and cowpeas but it is probably less true with biennials such as sweet clover and red clover. It may be even less true with perennials such as alfalfa. Experiments conducted by the Kansas Agricultural Experiment Station at Manhattan indicate that alfalfa increases the nitrogen supply of the soil even when all top growth is removed from the land.

In a fertilizer experiment, alfalfa was grown continuously on poor land for twenty-four years. Four plots of the series were unfertilized and all of the top growth for each of the twenty-four years was removed as hay. In order to maintain the stand it was necessary to re-seed the plots twice during this period. There was no top growth turned under in the plowing before each seeding since it was done in both cases just after the second cutting of alfalfa had been removed. Only stubble and roots of the old stand were therefore incorporated with the soil.

In 1915, nitrogen determinations of the top soil to plow depth showed that the four unfertilized plots had, on the average, 2,550 pounds of nitrogen per acre. The soil was again sampled in 1923 and the nitrogen content of the same four plots was found to be 2,840 pounds per acre. This represents a gain of 290 pounds, or an average yearly increase of 36 pounds per acre. Later, in 1934, the nitrogen content was found to be 2,910 pounds per acre. The total gain for the 19 years was therefore 360 pounds or an average yearly increase of approximately 19 pounds per acre. These data indicate an average yearly gain of six pounds per acre for the period 1923 to 1934. Although the yearly increase of 36 pounds per acre from 1915 to 1923 is much greater than the increase from 1923 to 1934 there was still a definite gain in the latter period.

In another experiment conducted at this station alfalfa was grown for lengths of time varying from one to nine years. Although top growth was entirely removed as hay, the nitrogen content was increased in all plots. The periods of one to four years showed substantial increases while periods of five to nine years produced increases from 250 to 350 pounds per acre.

Recent evidence from other stations indicates that growing legumes may liberate nitrogen from the nodules into the soil surrounding them. This explains why alfalfa will increase the growth of a crop such as brome grass when the two are grown together. It also partially explains how alfalfa can add nitrogen to the soil even though all top growth is removed as hay.

Legumes bring about the greatest storage of nitrogen on soils which are very low in that element. Soils containing an abundance of nitrogen may not gain more from the growing of legumes. For this reason, alfalfa or other good legumes should be grown on the poorest land upon which a good stand can be established.

—H. G. Myers, '38.

PHOSPHORUS IN EASTERN KANSAS

(Continued from page 55)

results are higher yields of wheat having a heavier test weight, and more money in the pockets of the more progressive farmers.

The author wishes to acknowledge the help and cooperation of the following men in preparing this article: Dr. W. H. Metzger, Associate Professor of Soils, Department of Agronomy, Kansas State College, and Mr. J. A. Wolfram of the Anaconda Sales Company, who furnished the information on tonnage.—W. R. Allen, '38.

American Royal Contest

In the intercollegiate livestock judging contest at the American Royal Livestock Show, October 16, 1937, with 15 teams competing, the Kansas State team placed eighth. In judging horses, Kansas placed second and in sheep judging, fourth. The scores out of 5,000 possible points for the eight high teams were:

Texas Tech.	4,560
Oklahoma	4,514
Michigan	4,460
A. & M. College of Texas	4,460
Wisconsin	4,445
Iowa	4,443
Purdue	4,411
Kansas State College	4,404

The Kansas State team was coached by Prof. F. W. Bell of the Department of Animal Husbandry and was composed of the following men: Elmer Dawdy, Washington; Roland B. Elling, Manhattan; Charles Pence, North Topeka; Waldo Poovey, Oxford; Elmore G. Stout, Cottonwood Falls; Kenneth A. Fisher (alternate), Newton. Elmer A. Dawdy was high man on the Kansas team and placed fourth in judging sheep in the contest.—Kenneth A. Fisher, '38.

ACHIEVEMENTS OF BLOCK AND BRIDLE

(Continued from page 40)

Elling, Manhattan, and Elmore Stout, Cottonwood Falls, were delegates representing the Kansas chapter at the national convention.

The local Block and Bridle Club carries on many activities. They are one of the sponsors of "The Little American Royal," which holds a livestock judging contest each spring for all college students; they sponsor the girls' meat judging contest, maintain a picture gallery of outstanding livestock men of the state, hold a steak fry each fall for actives and freshmen, hold an annual banquet, have charge of serving lunch to guests attending Feeders' Day, and a number of other activities.

—W. R. Wenrich, '39.

Breeders Hear About Health and Disease of Dairy Cattle

The third annual Kansas Purebred Dairy Breeders' School was held November 19-20 at Kansas State College. The theme of this year's program was "Dairy Cattle in Health and Disease." A special feature was the exhibits which consisted of fresh specimens of reproductive organs and udders, showing different diseased conditions: Bang's disease tests, Mastitis tests, stained and live bull spermatozoa.

Dr. W. M. McLeod of the Division of Veterinary Medicine showed by an illustrated lecture the growth and development, anatomy, attachment, blood circulation, and diseased conditions of the udder.

The different tests for mastitis were described by Prof. V. D. Foltz, Department of Bacteriology. He mentioned that as yet no entirely effective test for this disease nor a cure for it has been discovered. Prof. H. W. Cave, Department of Dairy Husbandry, summarized the results obtained in the mastitis control program being carried out in the college herd.

The visiting dairymen were especially interested in Dr. Fred W. Miller's artificial insemination demonstration and the process of obtaining spermatozoa from the bull by mechanical stimulation. Dr. Miller was formerly Senior Veterinarian and Physiologist with the Bureau of Dairy Industry.

Other speakers were: Doctors R. R. Dykstra and C. H. Kitselman, Division of Veterinary Medicine; W. H. Riddell, Department of Dairy Husbandry, and Mr. D. M. Seath, Extension Dairyman.

Prof. F. W. Atkeson, Head of the Department of Dairy Husbandry, was instrumental in starting these breeding schools because he recognized the needs of Kansas breeders of purebred dairy cattle. He realized that dairy cattle in Kansas will be improved largely through the efforts of the purebred breeders. All Kansas dairy cattle breeders are urged to attend this school where prominent leaders and authorities present the latest practices for ef-

ficiently handling the dairy herd.

In 1935, the first year of the dairy school, the program dealt mainly with genetics, while last year practical herd management was stressed. The fact that approximately 150 dairymen, veterinarians and others interested in dairying, attended the school this year is proof of its popularity. Several neighboring states were represented.

—Deane Seaton, '38.

WINS SECOND LEG OF "BRONZE BULL"

(Continued from page 39)

at Kansas at that time. The story goes that these two men became great friends and Professor Elling agreed to name a son after Roland J. Kinzer. Thirty-four years later this son is the high man of the International contest.

This is the third winning team from Kansas State in 32 contests which they have entered at Chicago. The other winning teams were in 1923 and 1936.

From a background identical to that of the team of 1936, the 1937 team duplicated last year's victory. Every member of the Chicago team competed in a Junior contest last year. Poovey, Dawdy, Pence, and Elling were members of the team that judged at the Southwestern Exposition and Fat Stock Show at Ft. Worth last year. The team was high in judging sheep and hogs and third in the entire contest. Elling was second in judging all classes and Poovey fourth. Pence was high in sheep and Dawdy high in hogs. Stout, Poovey, and Wilson judged in the contest at the National Western Livestock Show at Denver last year. The team placed third in this contest. Poovey placed ninth and Wilson tenth in judging all classes of livestock.

Kansas now has two legs on this famous trophy. One more must be won before it can be permanently owned by the college. Will it be done?—Pearis Wilson, '38.

GREEN GRASS FOR TURKEYS

(Continued from page 46)

grain per pound of gain for the entire 24 weeks at a cost of approximately $.07 per pound. This is a better gain at a lower cost than has been obtained in recent years at the Poultry Farm. These results may be due partly to the fact that a different strain of turkeys was used this year, but a large part of the credit is undoubtedly due to the chopped fresh green grasses fed during most of the growing period.

They were housed December 1, and will have electric lights from 4:30 A. M. until daylight throughout the winter. This lengthening of the day should bring the turkey hens into production in January, several weeks sooner than they would normally begin to lay without the artificial lights.

—Jim Mugglestone, '39.

TOM DEAN—THE COLLEGE SHEPHERD

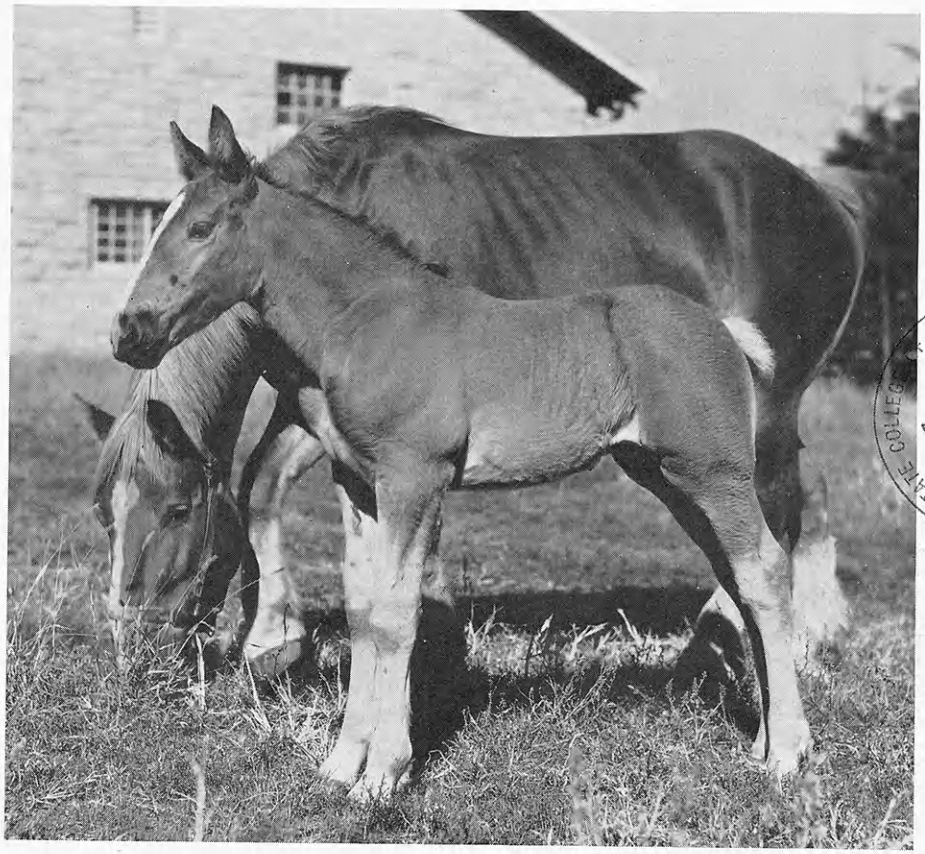
(Continued from page 37)

Colo.; Ogden Livestock Show, Ogden, Utah.

Not only has Tom been eminently successful in the show ring but also in the less conspicuous role of good management of his flocks at home. The keeping of five distinct and separate breeds of sheep which is deemed advisable for the benefit of students, greatly complicates management problems. On many occasions Tom has lambed the various flocks in January and February when weather conditions were extremely unfavorable, and managed to save a much higher than average percent of the lambs. His advice and assistance are frequently sought by farmers and sheepmen.

In addition to the successful feeding, management, fitting, and showing of three breeds of draft horses and five breeds of sheep, Tom Dean's versatility is further shown by the fact that he is considered an excellent judge of horses and sheep and has recently officiated as judge at a number of state fairs and national shows. With all of his duties, Tom is never too busy to help farmers, students, or others who come to the sheep barn for information and practice, and he is widely known and loved at the college as well as nationally.—R. F. Cox.

F's Juludine



THE accompanying picture shows the Belgian mare, F's Juludine, and her 1937 fall stallion foal grazing south of the college horse barn.

An interesting item about this foal is the line-breeding that appears in his pedigree in that his sire, Colgo 11942, is likewise his great great grandsire. Colgo himself was foaled at Kansas State College, June 20, 1919, and before his sale as a three-year-old was mated with some of the college mares. His son, Colgodine, in turn sired Colgodine's Farceur, 1928 American Royal grand champion stallion. F's Juludine, the mare in the picture, was sired by Colgodine's Farceur.

Because Colgo's descendants have given such a good account of themselves, he was re-purchased in October, 1936. At the present time three of his foals may be seen at the college horse barn.

Because of his advanced age it is planned to keep Colgo for the remainder of his life at his birthplace.—R. B. Cathcart, '33.

MILLING RESEARCH AS AN AID TO WHEAT GROWERS

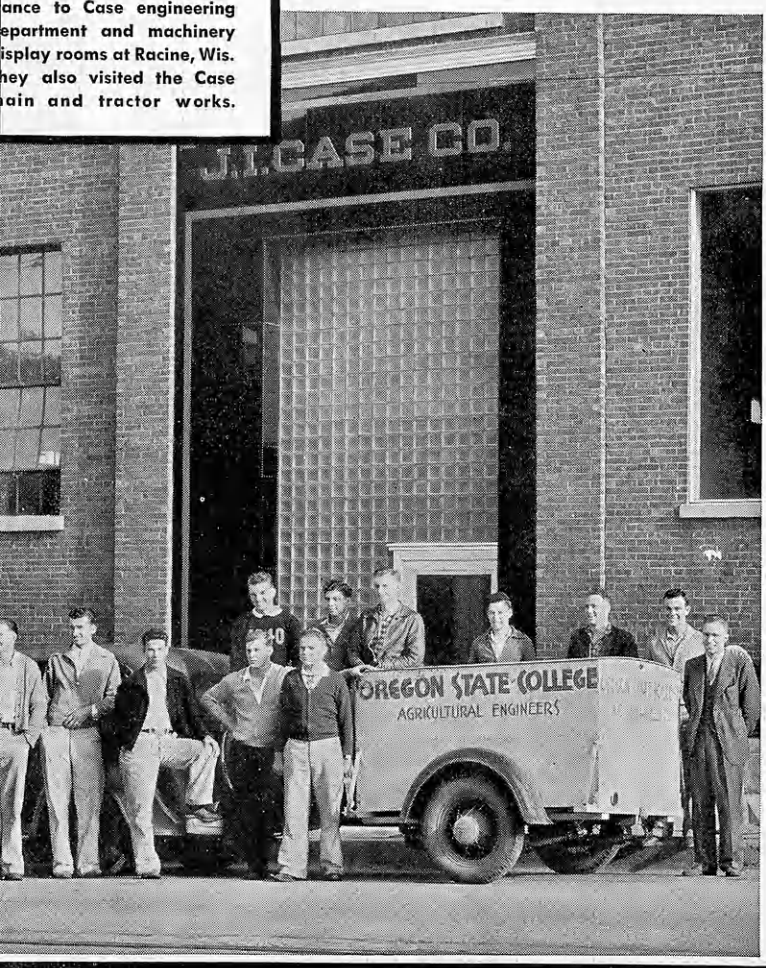
(Continued from page 50)

indicate that Tenmarq—a wheat developed by Kansas State, and Turkey—the Kansas standard—may be milled into the most desirable baking flour, and therefore may be considered by the wheat farmer to be his "best bets."

Wheat raisers should begin to realize the importance of the research related to their industry, and by devoting a little attention to the publishings regarding the experiments of the milling department of Kansas State, should be able to assure themselves of the proper wheat variety selection and make their crop more profitable.—Joe E. Robertson, '40.

Dealers OF THE NEXT Decade

gricultural engineering stu-
ents of Oregon State Col-
ge, enroute to the 1937
SAE annual meeting, at en-
ance to Case engineering
epartment and machinery
isplay rooms at Racine, Wis.
hey also visited the Case
ain and tractor works.



When your father stood where now you stand, at the threshold of his career, the typical farm implement dealer was a more or less retired farmer. His practical farm experience was training enough to sell the simple tools of his time. For expert service, for handling of credits, and even for capital, he relied mainly on his manufacturer. He was, in fact, and often in name, an "agent."

Since then has come a quiet revolution, now nearly completed. As the power age in agriculture has taken toil from the back of the farmer, so has it added burdens to the brain of the farm equipment dealer. He has become an independent business man, with correspondingly greater responsibilities and rewards. Already the better dealer takes care of his own expert service, arranges financing of credit sales, has his own working capital.

No longer is it a chance for older men to take things easy, but a career for young men to tackle. It calls for trained familiarity with farm practice and farm management — not the agriculture of yesterday, but of tomorrow. Most of the dealers of the next decade will come from the campus of today.

College-trained men already are achieving conspicuous success as Case dealers. Like them, you may find in Case quality — outstanding performance, easy operation, long life and low upkeep — worthy material for your life work. J. I. CASE CO., Racine, Wis.