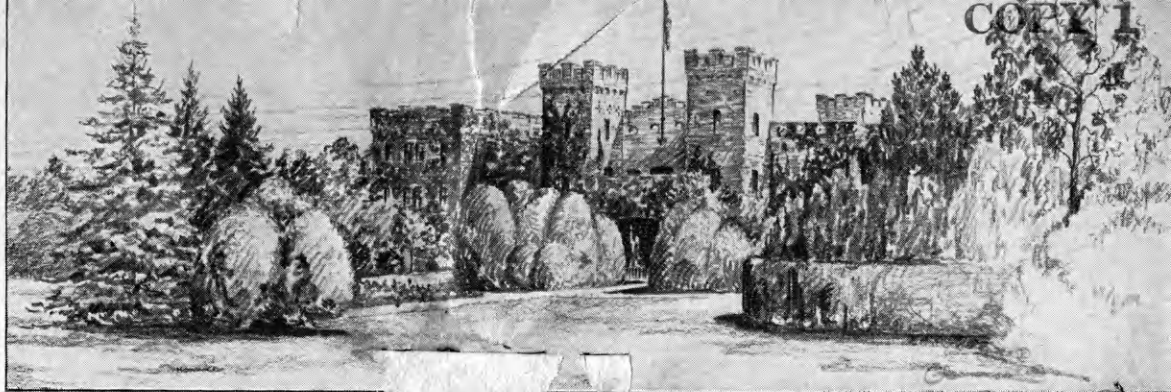


COPY 1

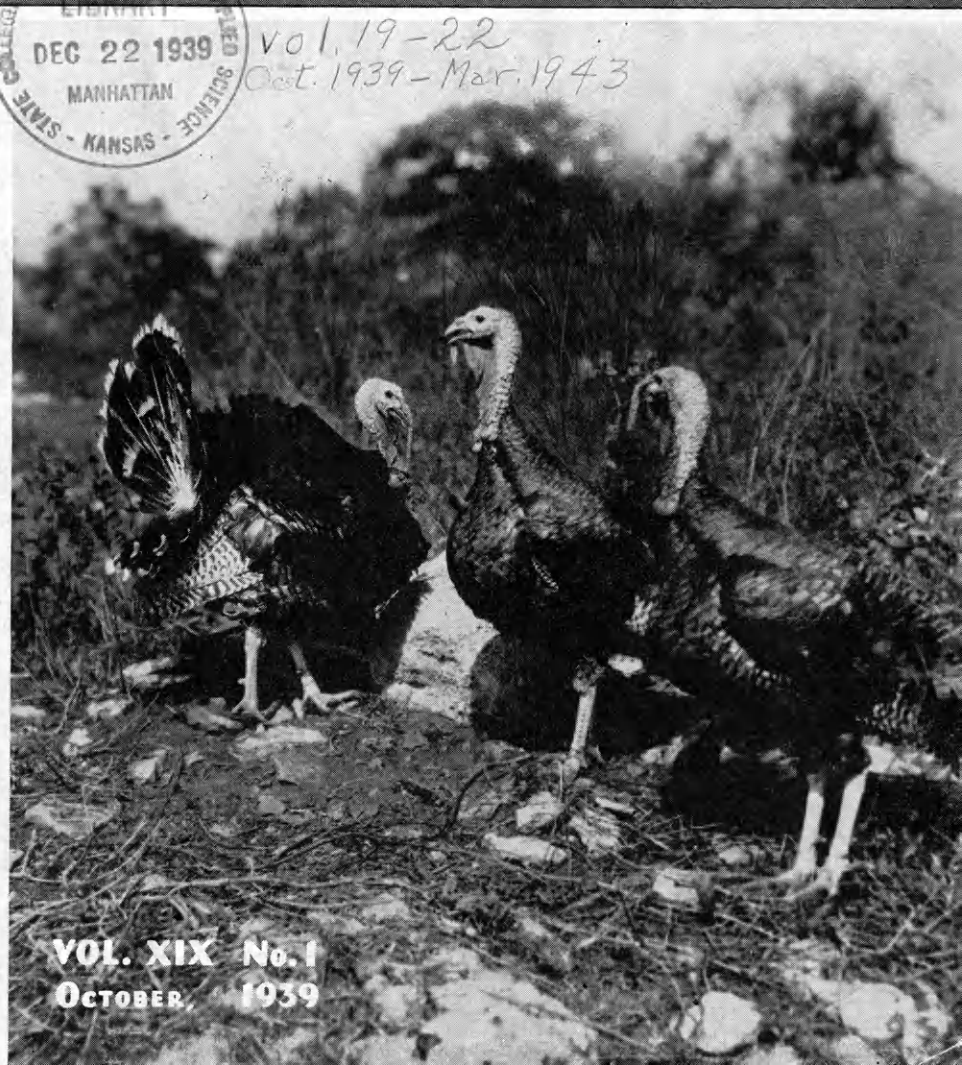


# THE KANSAS AGRICULTURAL STUDENT

MANHATTAN, KANSAS



Vol. 19-22  
Oct. 1939 - Mar. 1943



VOL. XIX No. 1  
OCTOBER, 1939



Hybrid corn may yield only ten or fifteen percent more than open-pollinated corn, yet net earnings . . . that all-important margin above the cost of land, labor and power . . . often are found to be double or triple, sometimes even ten-fold. The slightly higher investment in seed pays big returns because hybrid corn costs no more to grow than ordinary varieties.

# It's the *EXTRAS* You get that *PAY*



In farm machinery . . . and especially in farmpower . . . the same principles apply. Indeed, it goes double, for farm machinery may both add to the productivity of farming and subtract from its cost. The extra acre of work done or the extra notch of depth . . . the extra hour of time or gallon of fuel saved . . . may be but a minor fraction of the total, yet be a major factor in the profit.

Case tractors have long been famous for their consistently high working capacity, their consistent savings in time, fuel, upkeep, and annual cost of ownership. Now the new Flambeau Red tractors bring new extras—wider speed range for faster work with less fuel . . . Fuel Miser carburetion . . . more convenient for easier, quicker handling . . . a host of hidden superiorities in construction for still longer life and lower upkeep. Prepared when you have occasion to choose or to advise farmpower; look now at "More Tractor Than You Ever Saw Before." J. I. Case Co., Racine, W.

## *Lowest Cost* PER ACRE OF WORK

For the farmer who makes his living from farming and who **MUST** make farming pay, the correct measure of power economy is the total cost per acre, bushel or ton of work accomplished. Case tractors are engineered for the lowest cost per unit of work.

## Flashing New *Flambeau Red* **CASE Tractors**

630.5  
K162  
v. 19-22



# The Kansas Agricultural Student

VOL. XIX

Manhattan, Kansas, October, 1939

No. 1



“. . . And the fodder's in the shock.”

## CONTENTS THIS ISSUE

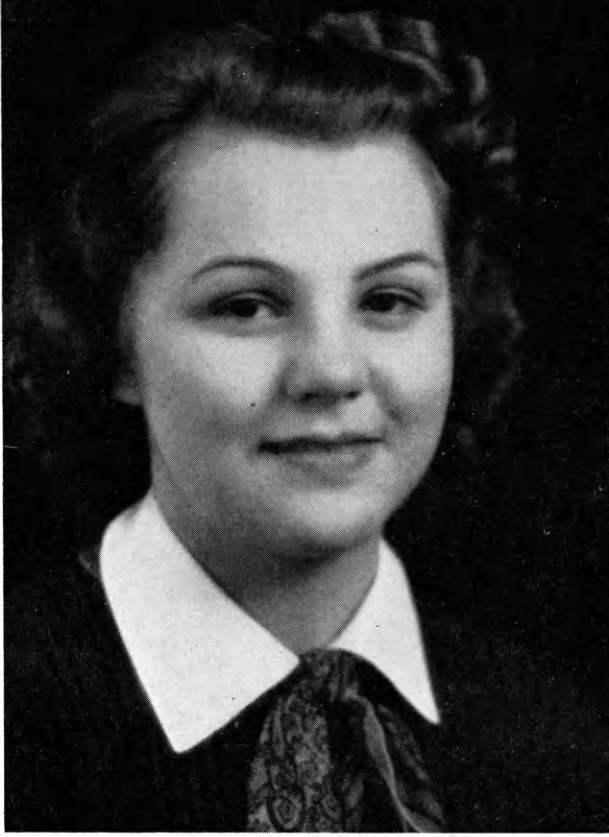
The 1939 Ag Barnwarmer.....	4	The Girls Win a Trophy.....	21
Editorials .....	6	1939 Vocational Ag Contest.....	22
23 Ags Get Cut Privileges.....	7	Kansas 4-H Clubs .....	23
Introducing Dr. E. G. Bayfield.....	8	\$107.72 per Acre from Alfalfa.....	24
Class of 1943 (pictures).....	9	Playing Valet to a Bull .....	25
Through the Third Degree.....	16	Floyd Smith Wins AZ Award.....	26
Merton Emmert at WLW.....	17	Making Hay While the Sun Shines .....	27
Kansas at the Poultry Congress .....	18	Pasture Insurance .....	28
Winnings at American Royal.....	19	Oldest Contour Furrows.....	30
Last Year's Honor Roll.....	20		

Published by the Agricultural Association of Kansas State College of Agriculture and Applied Science, Manhattan, Kansas, on or before the Twentieth Day of the months of October, December, March, and May.

Entered as Second Class Matter, May 21, 1925, at the Post Office at Manhattan, Kansas, under the Act of Congress of March 3, 1879. Accepted for mailing at special rate of postage provided for in Section 1103, Act of October 3, 1917, authorized May 21, 1925.

151725





#### THE AGS KNOW HOW TO CHOOSE 'EM

Jean Marie Knott, the 1939 Ag Barnwarmer Queen, and her Princesses. Jane Gailbraith, (upper left); Lucy Mae Botkin, (upper right); Marty Alexander, (lower left); and Mary Griswold, (lower right).

## 1939 Barnwarmer the "Party of the Year"

By GLEN BUSSET

Denim dress suits and kitchen formals were the order of the evening as 500 ag students and their dates danced to the music of Matt Betton and his boys at the 1939 Ag Barnwarmer, held in Nichols gymnasium the evening of October 21.

Bigger and better than ever may be a well worn phrase, but it certainly applies to this year's Barnwarmer, the outstanding social event of the ag division. For several days prior to the Barnwarmer, all ag non-conformists to the "wear overalls" rule were promptly and thoroughly dunked in the cold water of the stock tank, conveniently located between the ag buildings. One ducking was usually sufficient; cold water can be a powerful stimulant to the memory when properly applied. Several anti-social students of no good intent in

another division went down fighting and came up wet.

From a rustic bandstand, Matt Betton and his boys produced a combination of music and clowning that pleased everyone present. Rows of baled hay along the sidelines served as seats, and the checkroom was entered through a tunnel of baled hay. The lighting was subdued, the lights shining indirectly through the canopy of red and green leaves over the dance floor. A row of grinning pumpkins electrically lighted announced to one and all that this was the Ag Barnwarmer.

An especially attractive part of the decorations was the seven departmental booths, prepared and decorated by the respective departmental clubs, to emphasize the value of the club to the division. The decora-



## THE QUEEN IS IN HER PARLOR

tions and lighting of these booths were planned to harmonize with the general decoration, and provided a source of interest to all.

All interest was focused on the green

throne in the west end of the gymnasium when the Barnwarmer queen and her princesses were introduced and presented. Miss Jean Marie Knott, Kappa Kappa Gamma

(Concluded on page 21)

### FOUR 1939 AG BARNWARMER PHOTOGRAPHS

Upper left—The Queen and her attendants upon the throne. Upper right—Matt Betton and his laddies swinging out on a hot one. Lower left—Frank Friedli, general manager of the Barnwarmer, and his efficient group of co-workers in an informal meeting with Dean Mullen. Lower right—Dean L. E. Call crowning Jean Marie Knott.





# THE KANSAS AGRICULTURAL STUDENT

KANSAS STATE COLLEGE OF AGRICULTURE  
AND APPLIED SCIENCE

MANHATTAN, KANSAS

VOL. XIX

OCTOBER, 1939

No. 1

Published quarterly during the school year by the Agricultural Association of Kansas State College of Agriculture and Applied Science. Subscription rate: One year, 75 cents; four years, in advance, \$2.00; single copies 20 cents. Advertising rates sent on application. Address all communications to The Kansas Agricultural Student, Manhattan, Kansas.

## STAFF

MARJORIE HIGGINS ..... *Editor*  
GLEN BUSSET ..... *Associate Editor*  
JACK BOZARTH ..... *Business Manager*  
GEORGE KLEIER ..... *Asst. Business Manager*  
PROF. C. W. MULLEN ..... *Advisory Editor*

## Departmental Staff

JOHN G. DEAN ..... *Agronomy*  
WM. LJUNGDAHL ..... *Animal Husbandry*  
WM. WINNER ..... *Agric. Economics*  
FARLAND FANSHER ..... *Dairy Husbandry*  
WALTER KEITH ..... *Horticulture*  
JOE ROBERTSON ..... *Milling Industry*  
ROBERT N. SHOFFNER ..... *Poultry Husbandry*

## Success Through Cooperation

SINCE the Barnwarmer event was inaugurated 13 years ago, there has not been a larger ticket sale than the sale for the dance on the evening of October 21, 1939. In excess of 500 tickets were sold. John Dean managed the ticket sales.

There are many who believe the decorations and the background for the orchestra excelled the decorations of any former year. Bill Lobenstein, who was largely in charge of decorations both years, believes the browner colors of last year excelled the greens and reds of this year. There is room for a difference of opinion.

Our own students who assemble in the "gym" for military drill and physical education can hardly believe their own eyes when they step into the Barnwarmer dance hall. It is no longer the "gym." Guests of the evening, dates and chaperons all exclaim at the beauty of the big hall when they come through the tunnel of baled hay and behold the spectacle of color, splendid departmental booths, and effective lighting. No wonder there is a demand for tickets to the Barnwarmer by students outside the division of agriculture.

If the total list of students in the division who contribute of their time and hard work to make the dance a success could be published in this column, it would include

not less than 100 names. One fifth of those who buy tickets have also spent hours and hours in order that the rest of us may have an enjoyable evening. A dozen lads in the cider room scarcely know what is happening on the dance floor. Men on the door who must take tickets and issue pass-outs hardly rate the evening as an hilarious event for themselves.

Saturday at 1 o'clock 75 men begin work on the decorations and booths. Their job is finally finished after dusk. But the big job, the clean-up job, comes Sunday morning. Again 25 or 30 men report. Tearing down isn't nearly so exciting as creating. Until nearly 1 o'clock, the clean-up crew digs into the hardest work in connection with the Barnwarmer. It is a test of the stick-to-it-iveness of a loyal and determined little group.

Their reward is entirely in the satisfaction that comes from having done something to help others have a good time. It is the sort of thing that hints of successful, useful, public-spirited careers. The most important things that come out of the Barnwarmer, the Little American Royal, the judging contests and other group activities on the campus are the training and the experience in working with others. It will be worth a lot in the years ahead.

And always the last man to leave the

"gym," the man who must see that everything is returned to its proper place, is the Barnwarmer Manager. This year it was Francis Friedli, and a swell job he did. Our thanks to Frank and his staff for a remarkably well-managed party. Frank's understudy this year was Stanley Winter.

### 23 on Honor Roll

Parents of 23 agricultural students are among those of 158 freshman students at Kansas State College during the past school year who have received letters of congratulation from M. W. Furr, chairman of the committee on student honors of the college.

Each year personal letters are sent to parents whose sons or daughters made high scholastic records as freshmen during the preceding college year. This year 158 of the approximately 1,300 members of the freshman class made an average of "B" or better.

Students in the division of agriculture who made that average last year were:

Acton Brown, Sylvan Grove; Dale Brown, Manhattan; Paul Chronister, Abilene; Harry Cowman, Jr., Lost Springs; Riley Crow, Independence, Mo.; Donald Dubois, Burlingame; Gerald Fish, Neodesha; Lowell Fox, Kansas City, Mo.; Donald George, North Topeka; Oliver Jackson, Elsmore; Ray Keen, Topeka; Murray Kin-

man, Wamego; Charles Krause, Belleville; Joseph Mudge, Gridley; Oscar Norby, Jr., Pratt; Roger Phillips, Manhattan; Edward Reed, Lyons; Joseph Rogers, Horton; Raymond Rokey, Sabetha; Robert Singleton, Kansas City; Floyd Smith, Shawnee; Francis Wempe, Frankfort; Norman Whitehair, Abilene.

### Team Places Twelfth

The Kansas State College dairy products judging team placed twelfth in a field of 14 teams at the National Dairy show at San Francisco last month. The team placed eighth in judging cheese, tenth in ice cream, eleventh in butter, and fourteenth in milk. Individual placings of team members were Ronald Morton, 26; Arthur Mussett, 31; and C. Willard Davis, 36. Fellowships for outstanding work went to Iowa, Wisconsin, and Mississippi.

### Raines Heads Ag Teachers

E. L. Raines, Olathe, was elected president of the organization of vocational agriculture teachers in Kansas, at their convention on the Kansas State College campus in June. Secretary-treasurer of the organization is Harold Kugler, Manhattan, and vice-president is Leroy Melia, Coldwater.

### THE AGRICULTURAL STUDENT STAFF

The 1939-'40 Ag Student staff. From left to right: C. W. Mullen, faculty advisor; Marjorie Higgins, editor; Glen Busset, associate editor; Jack Bozarth, business manager; John Dean, agronomy; Bill Ljungdahl, animal husbandry; Walter Keith, horticulture; Joe Robertson, milling industry; George Kleier, assistant business manager; Bob Shoffner, poultry husbandry.







# Dr. Bayfield Popular with the Millers



Dr. E. G. Bayfield, head of the department of milling industry, Prof. R. O. Pence and Meade Harris watching the wheels go 'round. (Note Harris' Greek god profile and its shadow.)

**S**TUDENTS in the department of milling industry are gradually becoming acquainted with Dr. E. G. Bayfield, the new head of their department.

That "gradually becoming acquainted" doesn't mean that Dr. Bayfield is one of those cold, impersonal fellows, but, as one of the MI bunch put it, "there's a lot to him. You can't learn to know that fellow in a day or a week."

Dr. Bayfield succeeded Dr. C. O. Swanson as head of the department at the beginning of the present school year. Dr. Swanson now is devoting his full time to research and to writing.

An American by adoption, Dr. Bayfield's crisp British accent betrays the fact that he wasn't born in this country. He's from Nova Scotia—but that was a long, long time ago.

Before he accepted the headship of the MI department, Dr. Bayfield was in charge of the federal soft wheat laboratory at the Ohio Agricultural Experiment Station,

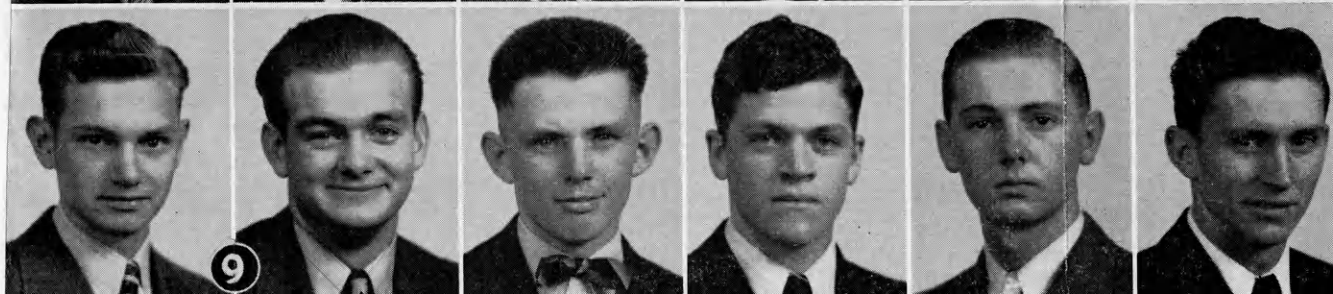
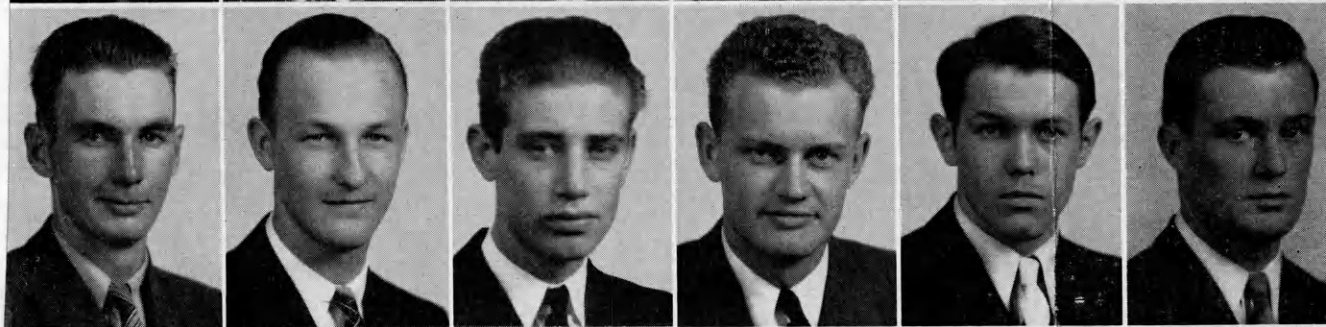
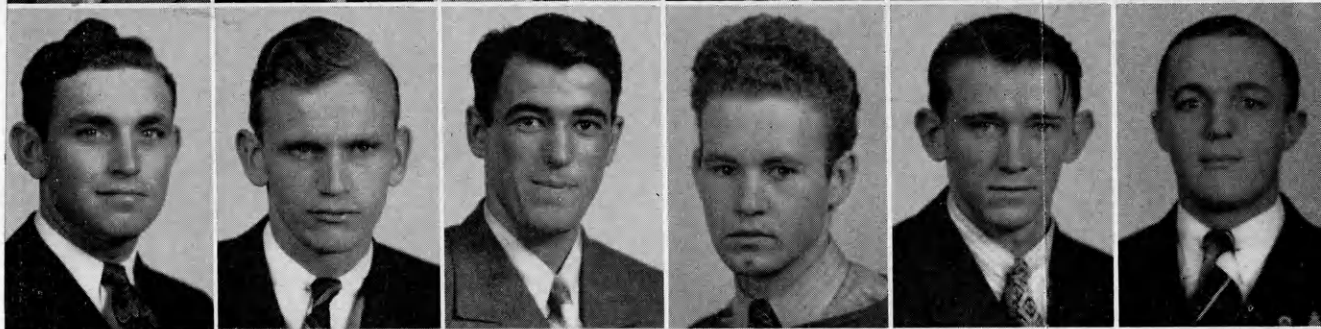
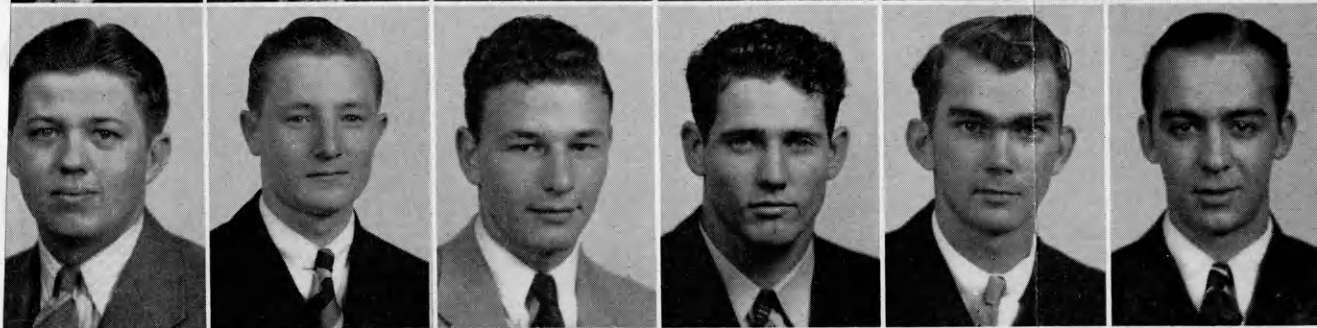
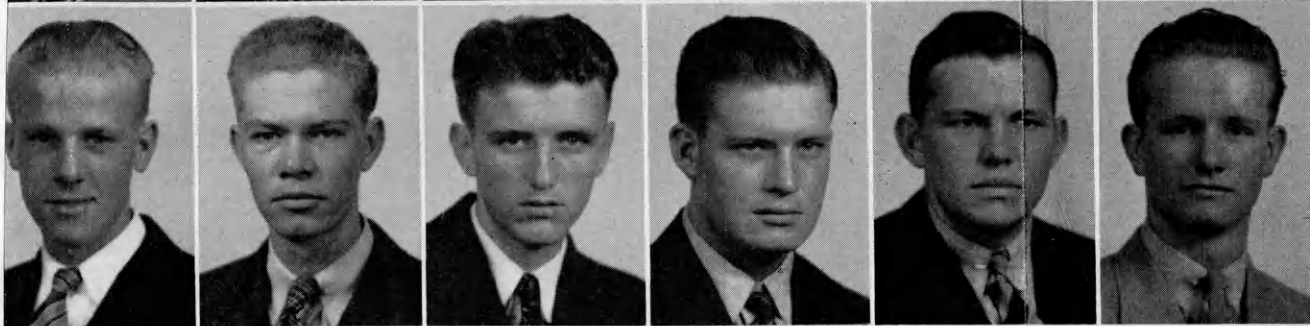
Wooster. That laboratory is similar to the hard winter wheat lab here at Kansas State.

In addition to changing jobs, Dr. Bayfield has had to change wheat varieties. Most of his work has been with soft winter wheats. His Ph. D. dissertation bore the title of "some factors influencing the quality of wheat in the soft winter wheat region," and his problem was a part of the Michigan-Ohio-Indiana Tri-State Wheat Improvement program.

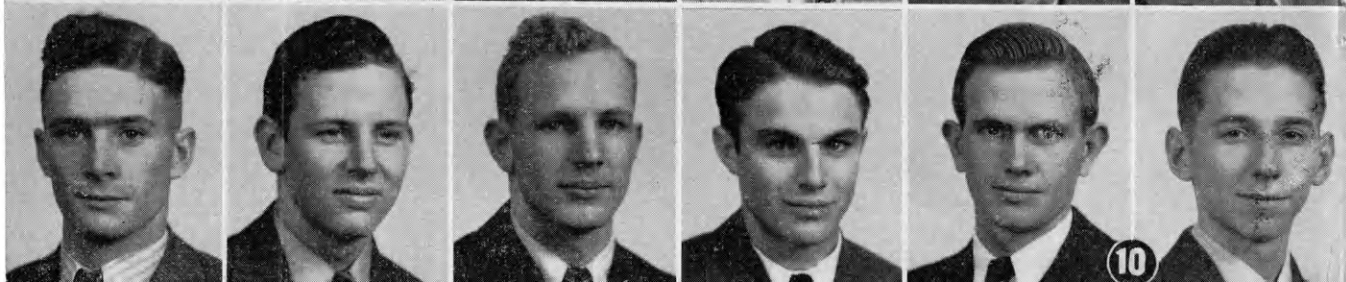
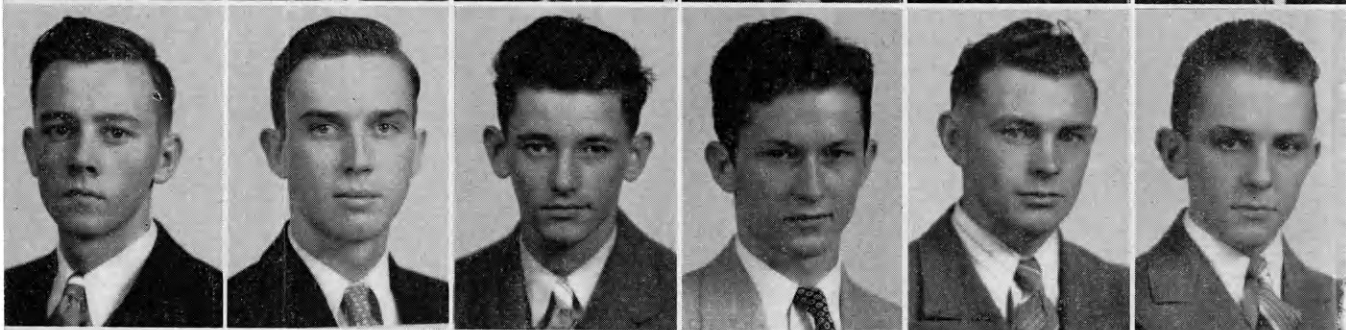
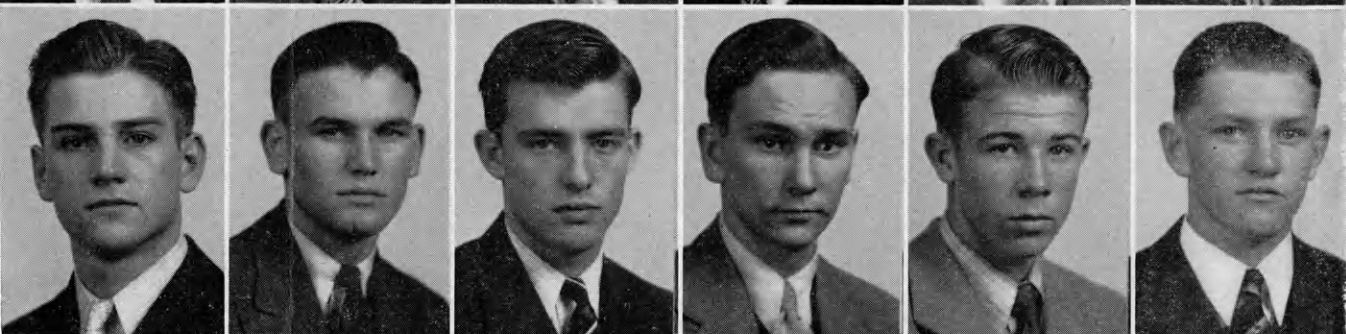
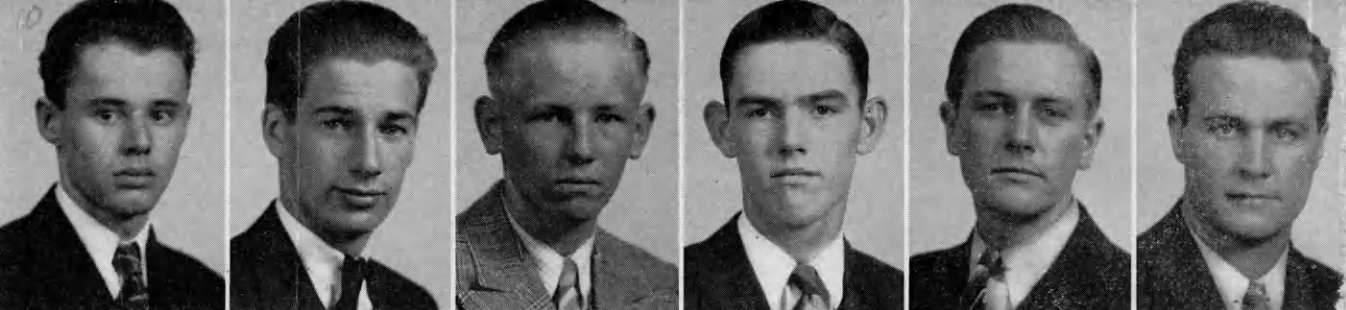
Ohio State University granted his Ph. D. degree in 1931. While he was "working on" his degree at Ohio State, Dr. Bayfield and Dr. G. A. Filing of the horticulture department were room mates.

One of Dr. Bayfield's many contributions to the knowledge of cereal chemistry was what is referred to in the textbooks as the "whole wheat meal time fermentation test." Because of that long, high-sounding name, the test is commonly referred to as "the dough-ball test." The test is based on

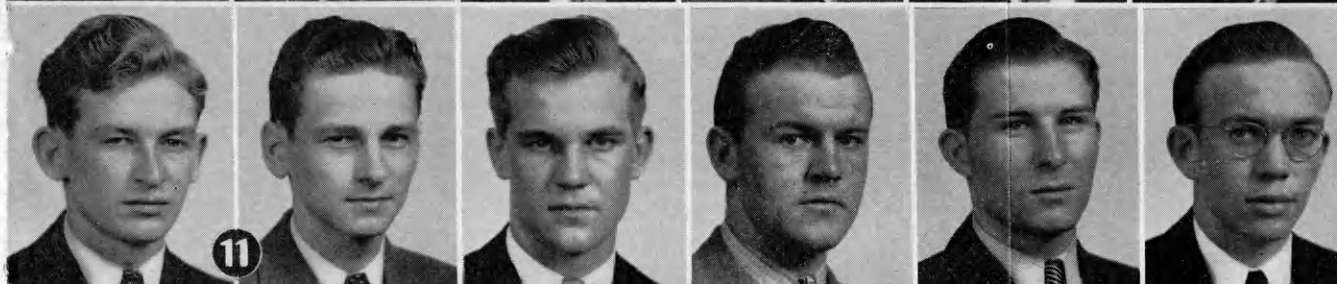
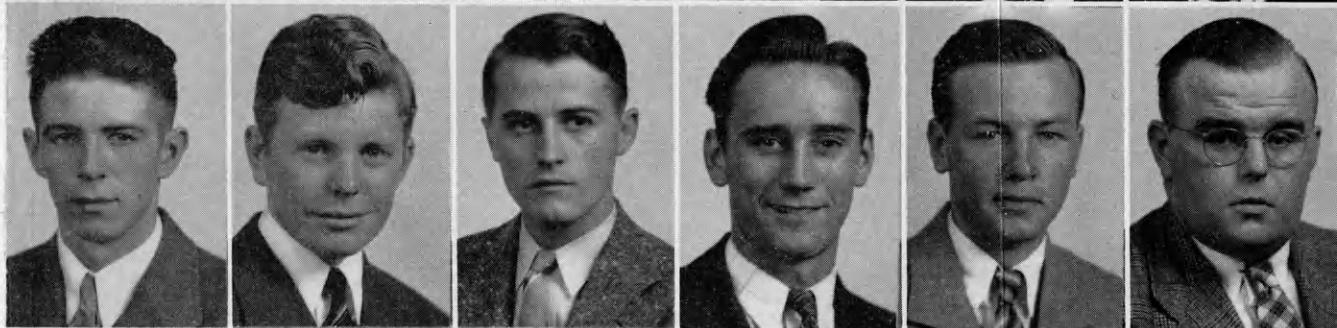
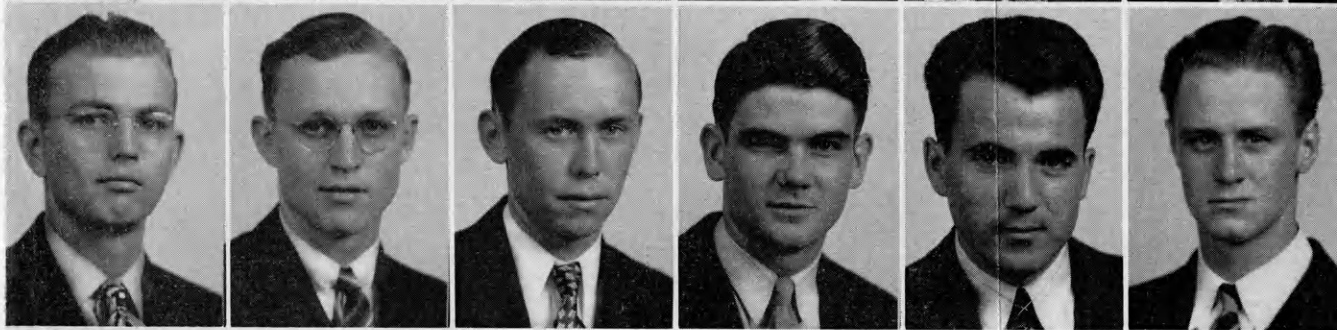
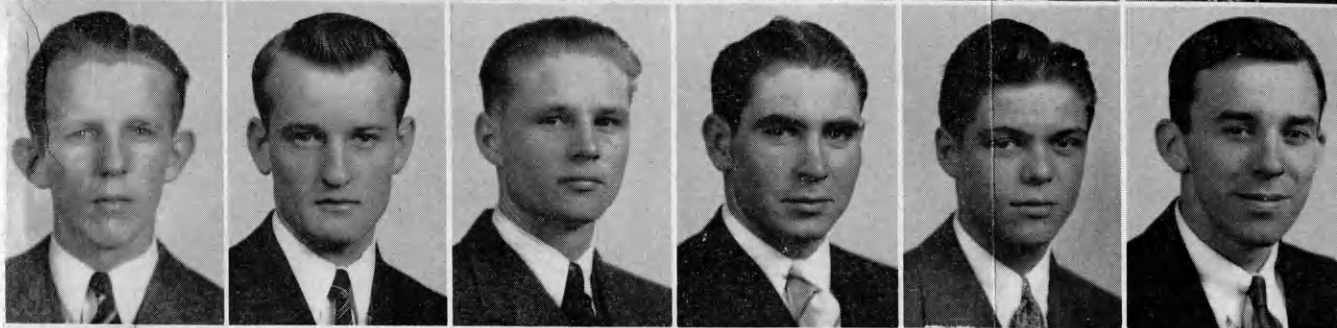
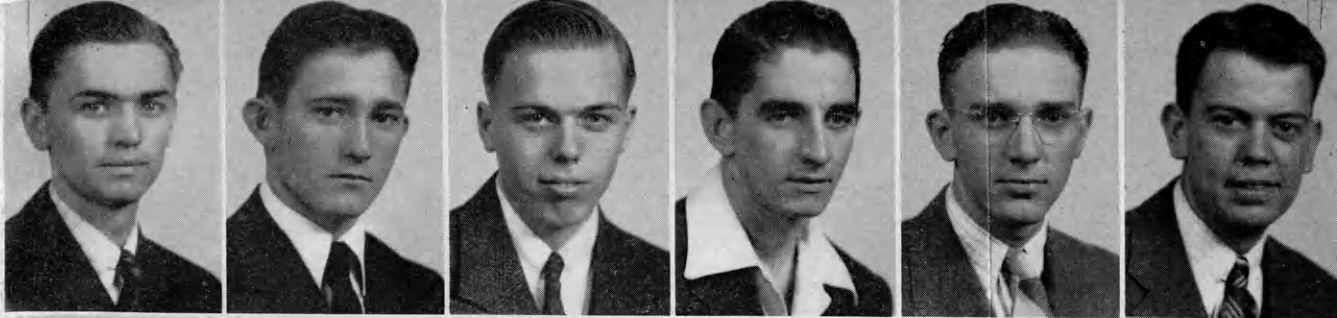
(Concluded on page 22)

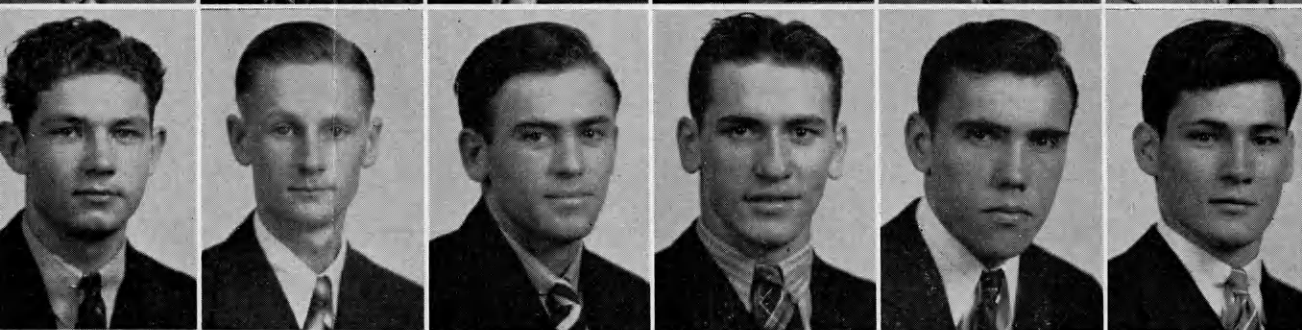
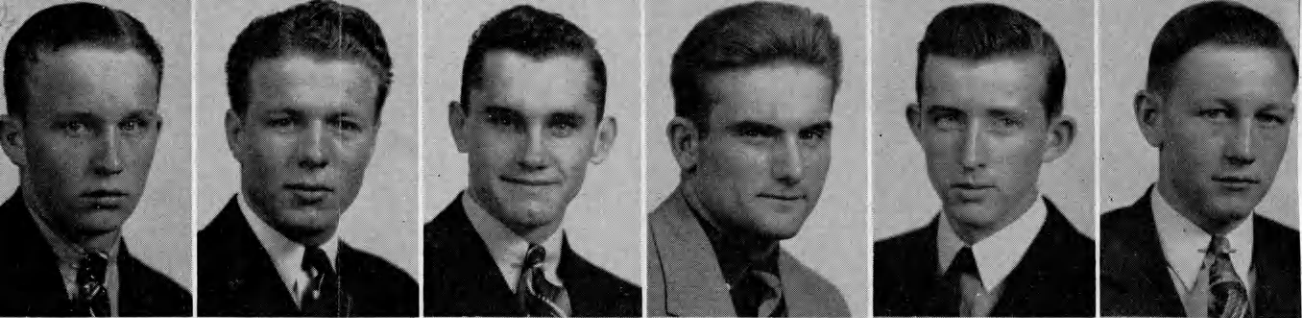




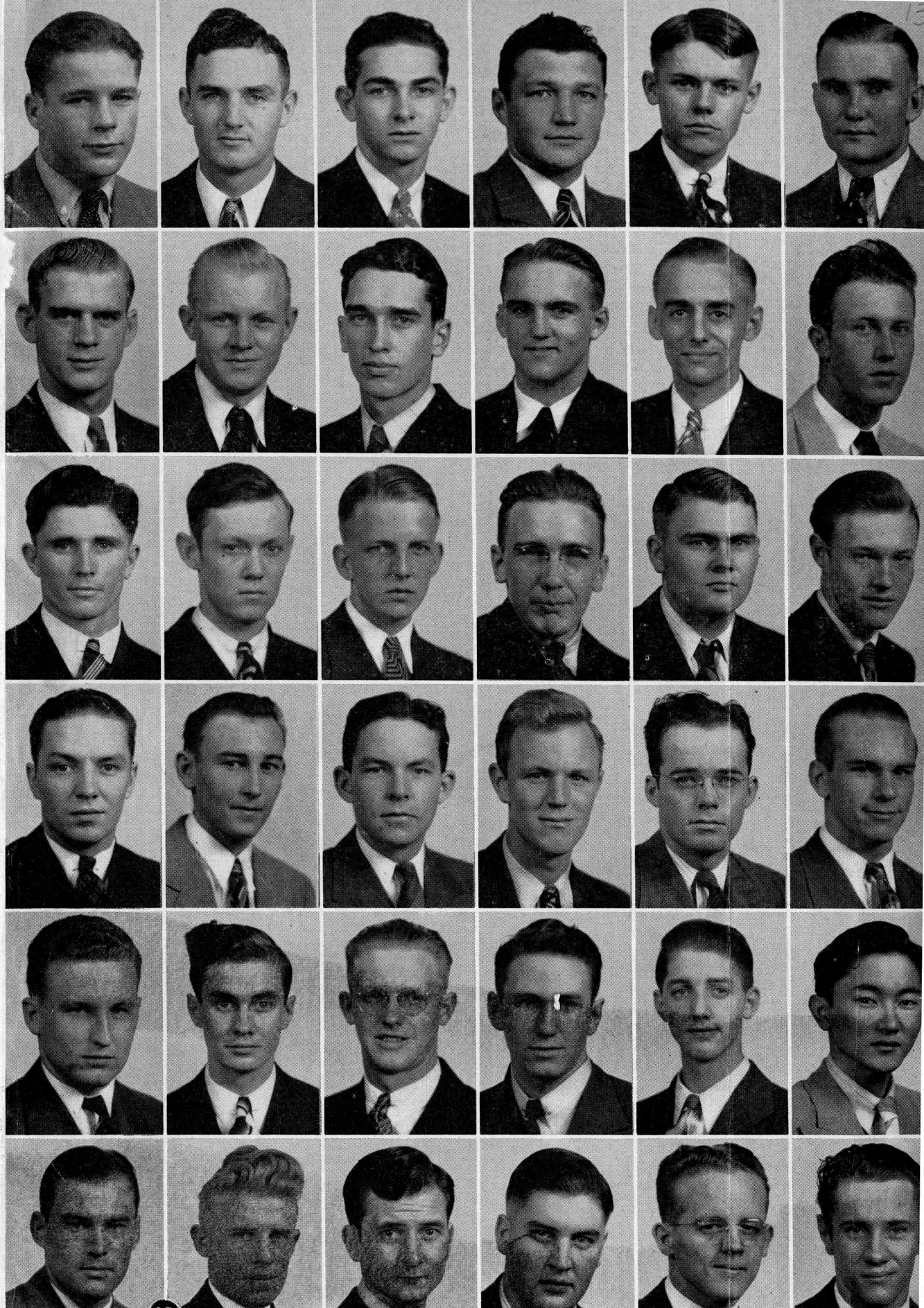




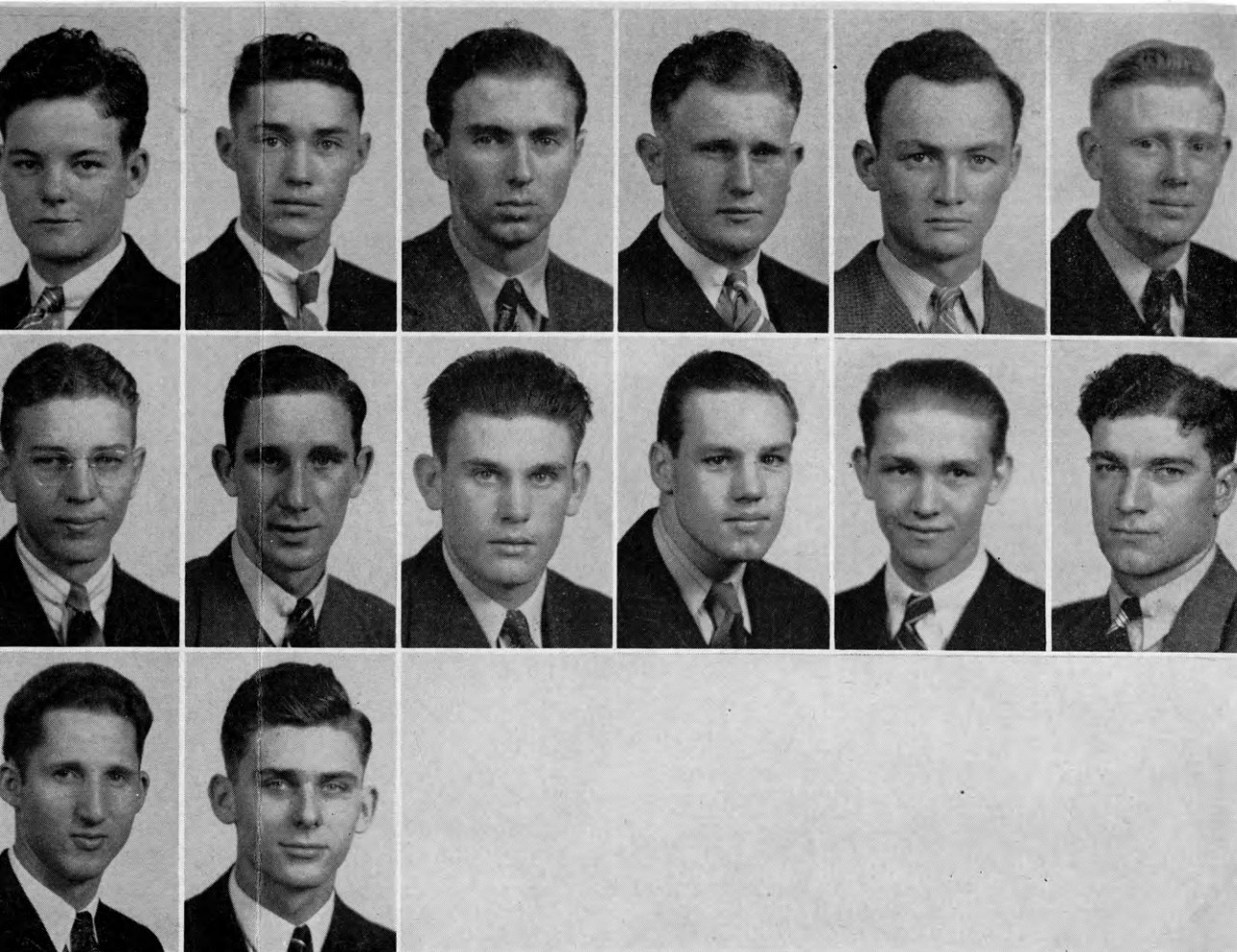












# PAGE 9

## Top Row

EUGENE M. ADAMS, Osborne  
 CARL L. ANDERSON, Longton  
 MERRITT C. ATWELL, Utica  
 MERLIN J. BAKER, Salina  
 GORDON L. BARTHOLOMEW, Alton  
 RALPH G. BEACH, Marysville

## Second Row

JAMES E. BEESLEY, Gove  
 HAROLD L. BELLAIRS, Wakeeney  
 MAX B. BENNE, Morrowville  
 LEO G. BERG, Harper  
 ROBERT A. BERGSTEN, Randolph  
 FREEMAN E. BIERY, Stockton

## Third Row

JACK D. BIGHAM, Muncie  
 LLOYD C. BILLINGS, McLouth  
 WENDELL D. BOETTCHER, Holton  
 WARREN J. BORING, Kansas City  
 MONT O. BOWER, Hazelton  
 GALE E. BREED, Havensville

## Fourth Row

RICHARD M. BREWER, Mount Hope  
 T. RAGAN BROWN, Manhattan  
 EUGENE C. BRUNNER, Oneida  
 ROBERT B. BRUNSON, Leavenworth  
 MORRIS E. BUCKMAN, Olathe  
 EDWARD G. BUSS, Holton

## Fifth Row

RALPH M. CANFIELD, Miltonvale  
 MERLE D. CARR, Goddard  
 JOHN W. CARTER, Paola  
 VICTOR B. CARTER, Fairview  
 MARVIN B. CLARK, Belvue  
 CLARENCE O. CLOSSON, Kingman

## Sixth Row

IVAN A. COOPER, Lyons  
 JACK CORNWELL, St. John  
 ROY G. CURRIE, Manhattan  
 GEORGE W. CURTIS, Toronto  
 CHESTER E. DALE, Coldwater  
 VANCE L. DARLAND, Codell

# PAGE 10

## Top Row

JOHN H. DeFORD, Alton  
 MELVIN H. DEWEES, Greenleaf  
 CARL DOWNING, JR., Wichita  
 LEE W. DOYEN, Rice  
 HARRY G. DUCKERS, JR., Netawaka  
 LAWRENCE A. DUNCAN, Lucas

## Second Row

DANIEL DURNIAK, Germantown, N. Y.  
 WILLIAM K. DYSON, Hutchinson  
 JOHN D. EASTER, Abilene  
 CLEATUS F. EBAUGH, Stockdale  
 ROSCOE ELLIS, JR., Havensville  
 GLEN E. ENGLER, Topeka

## Third Row

MERL W. EVERHART, Gypsum  
 JOHN H. FITZGERALD, Silver Lake  
 HARRY J. FLATTRE, Lancaster  
 W. VERNON FORD, Johnson  
 JOHN O. FRANKLIN, Amarillo, Tex.  
 CORWIN E. FREEMAN, Simpson

## Fourth Row

EDWIN F. GARBE, Valley Stream, N. Y.  
 ROBERT C. GARRISON, Goodland  
 PHILIP W. GEORGE, Lebo  
 FREDERICK C. GERMANN, Manhattan  
 JOHN J. GILKISON, Larned  
 WAYNE L. GODSEY, Netawaka



#### Fifth Row

KENNETH E. GRIFFITH, Larned  
ALBERT W. HACKEROTT, JR., Bloomington  
ROBERT J. HADORN, Wellington  
EDWIN C. HAKE, Salina  
LESLIE E. HAM, Marysville  
LAVERNE C. HAROLD, Parker

#### Sixth Row

CHARLES S. HARRIS, Garrison  
LOUIS D. HARRIS, Pratt  
WARREN G. HARRIS, Havensville  
EUGENE F. HART, Williamsburg  
JOHN R. HARTMAN, Hoxie  
EARL J. HAVEL, Cuba

#### PAGE 11

##### Top Row

PHILLIP A. HEDMAN, Kansas City  
THOMAS M. HESS, South Haven  
WALTER HICKS, Valley Stream, N. Y.  
GLENN F. HILTS, Kansas City, Mo.  
CLAYTON R. HILYARD, Severy  
LEE T. HINKLE, Powhattan

##### Second Row

GORDON E. HOATH, Anthony  
THEODORE L. HOLCOMB, Zenda  
HARRY K. HUGHES, Salina  
ROBERT A. HUSER, Deerfield  
ALFRED C. HUTTIG, Kansas City  
JOSEPH E. JAGGER, Minneapolis

##### Third Row

WAYNE D. JAYNES, Yates Center  
MALVIN G. JOHNSON, Moran  
KEITH G. JONES, Penalosa  
PAUL L. KELLEY, Solomon  
ABDUL-RAHIM M. KHALOF, New York City  
HARRY L. KIRK, JR., Topeka

##### Fourth Row

CHARLES W. KJELLIN, Garrison  
JOHN H. KNOCHE, Paola  
GEORGE E. KRUSE, JR., Manhattan  
NORMAN L. KRUSE, Barnes  
A. RAYMOND KUTINA, Ellis  
THEODORE R. LANGDELL, Wilton, N. H.

##### Fifth Row

MURRAY E. LAWSON, Baldwin  
FRED W. LEIMKUHLER, Tonganoxie  
GEORGE W. LEWIS, Conway Springs  
MERVIN C. LINE, Sabetha  
WARREN LINVILLE, Eskridge  
PAUL M. LUKERT, Sabetha

##### Sixth Row

NORMAN G. McASEY, Effingham  
JOHNNY McCAMMON, Americus  
DONLEY V. McCARTY, Ashland  
ROBERT B. McILRATH, Kingman  
MERVIN R. McKINSEY, Soldier  
WILLIAM R. McMILLAN, Quenemo

#### PAGE 12

##### Top Row

ALVIN H. MEIER, Hanover  
WILLIAM H. MILFORD, Kingman  
MAX M. MILLER, Newton  
WILLIAM B. MILLER, Arlington, Va.  
BERTRAND H. MILLIARD, Manhattan  
GLENN C. MILLS, Mulvane

##### Second Row

WALTER A. MOORE, Dresden  
MORRIS P. MORGENSEN, Junction City  
JOHN W. MULLINIX, Kansas City  
PAUL W. MURPHEY, Cheney  
JOHN B. MURPHY, Long Beach, Calif.  
ROGER G. MURPHY, Norton

##### Third Row

JOHN R. NASH, Lakin  
ALLAN B. NEELY, Minneapolis  
JAMES M. NIELSON, Marysville  
LAVERNE R. NOVAK, Herington  
GEORGE Q. NOWELS, Glasco  
JACK O. NUTTER, Morrowville

#### Fourth Row

RICHARD C. ODGERS, Salina  
DEAN H. OREM, Meade  
CARL B. OVERLEY, Belle Plaine  
WARNER PAPE, JR., Robinson  
FRANK E. PATTEN, Atwood  
LOWELL H. PENNY, Lawrence

#### Fifth Row

DALE E. PERCIVAL, Beverly  
LEO W. PETERMAN, Beattie  
KENNETH A. PFAFF, Hazelton  
GLEN W. PISHNY, Waterville  
JAMES S. PRIDEAUX, Manhattan  
ROBERT J. PURINTON, Overland Park

#### Sixth Row

DALE W. RAKE, Tecumseh  
ROBERT F. RANDLE, Riley  
WILLIAM B. ROBERTSON, Barnard  
LEONARD G. ROBINSON, Viola  
NICHOLAS B. ROBSON, Salina  
EARL W. ROGERS, St. Francis

#### PAGE 13

##### Top Row

RUSSELL M. ROTH, Emporia  
ALMON L. ROWE, Manhattan  
CHARLES H. ROY, Overland Park  
FRANK R. RUDA, Atwood  
DARRELL A. RUSSEL, Canton  
ROBERT M. SANNEMAN, Idana

##### Second Row

PATRICK H. SAUBLE, Newton  
BERNARD P. SCHLIM, New Almelo  
EDWIN A. SCHOEN, Lenora  
CHARLES B. SCHWAB, Morrowville  
ORVILLE A. SCHWANKE, Maple Hill  
EDWARD G. SEUFERT, Tonganoxie

##### Third Row

CLARENCE L. SHANDY, Wakefield  
ROY R. SHRIVER, Gardner  
LYNN H. SIMONS, Garnett  
DALBERT O. SMITH, Macksville  
WILBUR W. SOEKEN, Claflin  
GEORGE E. STEIN, Smith Center

##### Fourth Row

ROY E. STEINHOFF, Osage City  
THOMAS E. STOCKEBRAND, Yates Center  
JOHN W. SYMNS, Archison  
WALLACE TEMPLETON, Chicago, Ill.  
MELVIN M. THOMPSON, Cheney  
WAYNE W. THOMPSON, Larned

##### Fifth Row

JOHN W. TILLMAN, Topeka  
ELWIN TODD, Collyer  
L. KEITH TOLSON, Johnson  
DELBERT L. TOWNSEND, Danbury, Nebr.  
ARTHUR N. TUNISON, Olathe  
CHARLES Y. UCHIMA, Kekaha Kauai, Hawaii

##### Sixth Row

JAMES A. UPHAM, Junction City  
MORRIS VAN DAELE, Olathe  
JOHN W. VAWTER, Oakley  
JOHN R. VETTER, Beloit  
GEORGE B. VINCENT, Ottawa  
WARREN W. WAKEMAN, Wathena

#### PAGE 14

##### Top Row

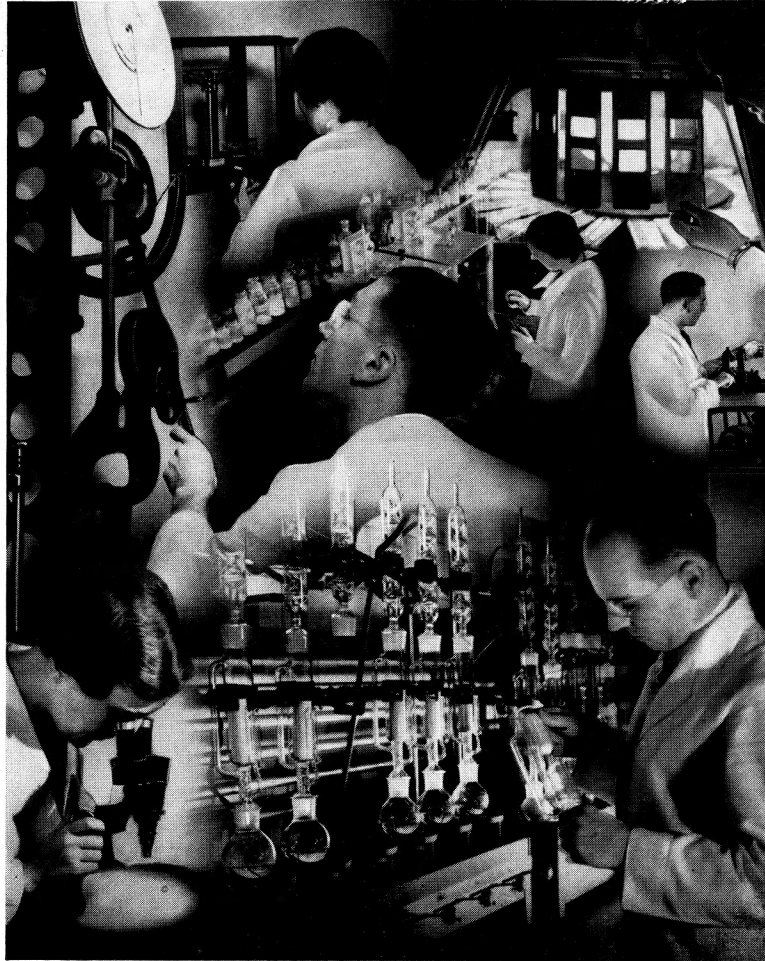
ORVILLE S. WALKER, Eskridge  
ROBERT L. WALLACE, Colby  
MILTON WEINSTOCK, Brooklyn, N. Y.  
EUGENE F. WIELAND, Oakley  
ALLEN S. WILLIAMS, Alma  
AMOS WILSON, Manhattan

##### Second Row

CHASE C. WILSON, JR., Mulvane  
JACK H. WILSON, Burrton  
OID L. WINELAND, Manhattan  
ARCH WOLFFING, Manhattan  
DONALD R. WOOD, Trousdale  
G. DALE WOOLSEY, Parker

##### Third Row

ROBERT J. WRIGHT, Manhattan  
ROBERT L. WRIGHT, Holton



# Through the Third Degree

By GLEN BUSSET

A photomontage of some of the various tests which fabrics receive in the Sears laboratories.

"**B**REAK it up! Wear it out! Put it to the most severe tests possible!" Those are the orders sent to the testing laboratories of Sears, Roebuck and Company with a representative sample of each of many incoming shipments of merchandise. The Sears testing laboratory is similar to those maintained by many other firms, and last spring the Sears students who went to Chicago were taken through the laboratory.

Because of a national reputation for quality and to protect customers, Sears maintains a technical laboratory to test samples of all merchandise to be purchased. Not only are new products tested before being advertised in the company catalogs, but old standard-line products are tested regularly. The laboratory is staffed with physicists, chemists, and engineering specialists for each job.

While the chief function is to take the guesswork out of buying, and to be sure the merchandise is of the specified quality, the laboratory strives continually to im-

prove the technical design and to aid in the development of new merchandise. By working in close co-operation with manufacturers, the laboratory often suggests changes in design or manufacturing process to improve the product.

A visit to the laboratory reveals some amazing differences in products that appear to be exactly alike. Two samples of cotton print are tested for color fastness. At the end of 48 hours under the strong "daylight" lamps, one of them is bleached almost white, while the other has retained full color. Rayon, wool, and cotton materials are tested for wear, stretch, color-fastness, and percentage purity.

A door-slamming machine to test the door latch on refrigerators works with the regularity and force of a family of in-laws on a month's visit. A modern kitchen to test the latest in kitchen equipment is used just as a prospective customer's own kitchen is likely to be used.

(Concluded on page 26)



# How to Win Customers and Influence People



Merton Emmert, '39, needs no introduction to upper class ag students at K-State. Active in all campus activities during his four years in school, he met most of the students at some time or other. He is now working for Radio Station WLW in Cincinnati. Here is part of a letter he wrote to Dean Mullen:

"However, my radio scholarship training here at Station WLW in Cincinnati is very interesting. There really aren't very many dull moments. Writing for various farm programs originating here takes up a good deal of my time. Then microphone work comes in for its share, too. Broadcasts of special events, such as state and county fairs, farm bureau picnics, experiment station field days, and so on, are frequent occurrences.

"The chief appeal of radio to me is: It's so new that no one 'knows all the answers.' It's come a long way in the short time we've had it, of course; but everyone agrees that radio is still in the experimental stage.

"Everybody is human. Everyone likes to be entertained. If a radio program isn't interesting, it's so very easy for a listener to turn the dial to find one that is. (And people do it without the slightest embarrassment!) Any so-called 'educational' radio program *can and must be* dressed up or 'sugar-coated' for the audience. The assumption that everyone wants to be educated, so *any* method of presentation is permissible, is proving to be a gross fallacy. People *say* that, but they *listen* to programs that have enough showmanship to hold their interest!

"So I'm thoroughly convinced that there's going to be an ever-increasing need for men with a degree in agriculture and an interest in radio to get into the game and train themselves in the field of agricultural radio as a life's work.

"My training here at Station WLW gives

me a chance to pick up various pointers of general value in the whole radio field. Behind the scenes in a large radio station, I've found many departments—legal, publicity, traffic, production, research, news, and writing—all necessary in the smooth operation of a top-ranking commercial station



Merton Emmert behind the mike at the WLW central studio in Cincinnati.

such as WLW, that exists not in spite of—but because of—stiff competition.

"If any K-State students who happen to be interested in radio wish to drop me a line, I'll be more than glad to hear from them and furnish any information which I can in regard to radio.

"I sincerely hope that this year will be the best yet for Kansas State College—and especially for the Agricultural Division!"

# Kansas a Leader in Billion Dollar Industry

By ROBT. SHOFFNER

THE Seventh World Poultry Congress, July 28 to August 7 in Cleveland, Ohio, was by far the largest congress ever held. There was a total attendance of 850,000 people in 11 days. Over 500 of these were people from Kansas, including 100 youths of the 4-H Clubs, Future Farmers, and college students. All of the 48 states, three of the Insular Possessions, and 46 foreign countries were represented. It was a success, not only in attendance, but the foreign participation poultry exhibition, displays of equipment and allied industries, entertainment features, and heavily attended business and technical sessions were of the highest caliber. Financially, it was a success which paid off all the cost of the immense undertaking and left a surplus to be used for educational work in behalf of the industry. The main purpose of the congress was education in behalf of poultry and poultry products, especially in the consumption phase.

It took 20 acres of floor space to house the exhibits. The commercial exhibits were in the "Hall of Industry." Here were the displays of poultry farms and poultry or-

ganizations. Exhibits of poultry papers, farm equipment, incubators, and disease remedies presented a large choice for the poultryman to pick from. The packing companies with their glass-enclosed processing rooms killed, dressed, and packed poultry in cellophane ready to be sold over the counter. The transparent kitchens demonstrating the various ways of preparing poultry and poultry products attracted a great deal of attention. Entertainment for the delegates and visitors to the congress was provided by the various organization dinners and banquets. An Ice Carnival was sponsored by the city of Cleveland for the amusement of those attending.

The "Hall of Nations and States" offered exhibits which highlighted the poultry work of many foreign countries as well as the U. S. Federal government, 30 states, and possessions. Foreign countries which had individual displays were Canada, Cuba, England, Germany, Hungary, Italy, Japan, and The Netherlands. In addition there were 19 other countries represented by group displays. Of the state exhibits none

(Concluded on page 27)



The Kansas Exhibit at the World's Poultry Congress in Cleveland last Summer. This exhibit ranked with the most attractive at the Congress.





MEMBERS OF DAIRY FACULTY

Dr. A. O. Shaw and Dr. H. Ernest Bechtel, new members of the faculty in the department of dairy husbandry, succeeding Dr. W. H. Riddell and Prof. H. W. Cave.

## Animal Husbandry Department Wins at American Royal Show



THE Animal Husbandry Department of Kansas State College showed cattle, hogs, and sheep at this year's American Royal and was one of the leading winners in these sections of the show.

Its chief winnings in the cattle classes include first on junior yearling Angus steer; first on senior Angus steer calf; second on junior yearling Hereford steer and third on senior Shorthorn calf.

Its more important hog winnings were first prize in the heavy weight, the medium weight, and the light weight classes for Poland China barrows; first prize in the heavy weight, the medium weight, and the light weight classes for pens of Poland China barrows; first prize middle weight Duroc Jersey barrow; first prize pen middle weight Duroc Jersey barrows; first prize pen light weight Hampshire barrows; first prize light weight Berkshire barrow. Kansas State also won three of the six individual breed championships in the bar-

row classes—Poland China, Duroc Jersey, and Spotted Poland China. It also won the Poland China pen of barrows championship.

Kansas State College sheep added new laurels to their already remarkable record of recent years by again winning the grand championship on individuals and the grand championship on pens with all breeds competing. This is the third successive year Kansas State College has won this honor which is a record that has never been equaled or even approached by any other breeder. Some of the other more important sheep winnings are: First prize heavy weight crossbred wether; first prize light weight crossbred wether; champion crossbred wether; first prize pen of heavy weight crossbred wethers; first prize pen light weight crossbred wethers; champion pen crossbred wethers; first prize pen Rambouillet wethers; second prize Shropshire

(Concluded on page 27)

## IS YOUR NAME ON THE HONOR ROLL?

### These Have Earned Honors

ONCE again the infallible computations of the slide rule have brought to light the order of rank among 670 students in the division of agriculture for the year 1938-'39. This time 260 students in the division have earned the distinction of having their names appear on the honor rolls of the division—133 on the high honor roll, 127 on the honor roll.

One of the encouragements to students to earn commendable records in the division of agriculture is the reward of seeing their names appear among the best of their respective classes. Each year The Kansas Agricultural Student publishes this list. Each year every student in the division scans the long columns of names in search of his own name. If it isn't there, he resolves to make the grade the following year.

Nothing pleases Dad and Mother more than to have Son send home a copy of the Agricultural magazine with their boy's name among the high-ranking students in agriculture. It is a hint that he is making good use of his time at college and it is strong indication he is on his way to a successful career. Many who make the honor rolls also are selected to Alpha Zeta, Gamma Sigma Delta, and Phi Kappa Phi.

Students who earn the distinction of having their names listed on the honor roll carried not less than 12 credit hours of work each semester of last year, had no serious delinquencies against them, and made a total of not less than 48 points.

The honor roll in the order of rank follows:

Senior—High Honor			
	Cr.	Pt.	Av.
Clyde D. Mueller	29	2.93	
Hilding A. Anderson	35	2.83	
Herman J. Reitz	30	2.80	
Phillip T. Allen	32	2.75	
Arthur F. Leonard	32	2.66	
Leonard W. Schruben	31	2.61	
Clifford W. Stone	33	2.61	
Earl J. Cook	29	2.48	
Henry Schweiter	33	2.45	
Dale E. McCarty	34	2.44	
George W. Aicher	35	2.37	
John Harris, Jr.	25	2.32	
John V. Hansen	32	2.31	
Kenneth E. Kruse	28	2.29	
Morris W. Phillips	33	2.27	
Raymond E. Bert	31	2.26	
Dwight S. Tolle	34	2.26	
Donald E. Hall	38	2.18	
Carroll W. Brooks	35	2.17	
Meade C. Harris	25	2.16	
Merton V. Emmert	31	2.13	
H. Earl Molzen	32½	2.09	
Lloyd E. Wildman	32	2.09	
Edward L. Leland	32	2.06	
James F. Mugglestone	34	2.03	
Eugene V. Payer	30	2.03	
R. Glenn Raines	35	2.03	
W. John Wilson	37	2.03	
Joe W. Lewis	33	2.00	

#### Junior—High Honor

Melvin R. Peterson	35	2.83
Harold E. Jones	34	2.79
Donald I. McCoy	33	2.76
Delbert E. McCune	34	2.74
Lester J. Hoffman	32	2.72
John G. Dean	35	2.71

John H. McCoy	31	2.71
J. Leslie Clow	30	2.70
Henry J. Meenen	34	2.65
Joe E. Robertson	33	2.61
John A. Shaw	37	2.59
Marvin R. Shetlar	30	2.57
W. Ormond Breeden	32	2.56
Elwood C. King	35	2.51
Richard M. Bullock	34	2.50
John W. Geddis	27	2.48
Clifton E. Jackson	33	2.45
Charles O. Carter	35	2.43
Alfred E. Anderson	34½	2.42
Dwight K. Ellison	34	2.41
Glenn A. West	29	2.41
Aaron K. Schmidt	28	2.39
A. Wade Brant	36	2.36
William B. Ackley	31	2.35
C. Wm. Lobenstein	34	2.35
Robert N. Shoffner	31	2.35
Marjorie L. Higgins	34	2.29
J. Thomas Neill	29	2.24
I. Keith Harrison	32	2.23
Mack Yenzler	26	2.23
Evans E. Banbury	32	2.19
Ronald B. King	34	2.18
Wilbert W. Duitsman	30	2.17
Kenneth B. Porter	33	2.15
Don E. Crumbaker	28	2.11
Charles L. Streeter	36	2.11
Marcel D. McVay	33	2.09
Floyd W. Berger	32	2.06
Travis E. Brooks	33	2.03
Walter J. Campbell	34	2.03
Glenn H. Kruse	33	2.03
William B. Bezley	35	2.00
A. Jack Bozarth	31	2.00
Thaine A. Clark	32	2.00
Roland A. Kruse	34	2.00
Charles E. Krause	29½	2.47
Acton R. Brown	32	2.44
Harry Cowman, Jr.	33	2.42
Donald K. Dubois	32	2.38
Murray L. Kinman	33	2.36
Joseph S. Rogers	31	2.35
Edward A. Reed	33	2.33
Frank O. Good	26	2.31
Roger N. Phillips	32	2.28
R. Tieman Crow	35	2.23
G. Keith Fish	33	2.18
Dale Brown	32	2.16
Francis R. Wempe	33	2.15
Norman V. Whitehair	33	2.03

#### Senior—Honor

	Cr.	Pts.
William G. Alsop	33	66
Robert O. Baber	36	60
Jess R. Cooper	35	50
Edwin G. Courtney	34	48
Delbert C. Creighton	30	57
Ernest W. Decker	34	58
Forrest L. Duncan	28	49
Willard H. Eyestone	32	60
Willis B. Faulkender	29	56
Roy R. Green	30	52
Norman W. Hildwein	32	62
Keith C. Johnson	35	49
Kenneth Ed. Johnson	35	55
Kenneth E. Johnson	33	49
Vergil R. Kelley	32	58
Lewis A. Kidder	35	53
Wayne Klamm	30	51
Ralph E. Krenzin	33	56
Robert M. Lay	38	71
M. Neal McVay	32	52
Clayton W. Marker	35	49
W. Hugh Moore	40	54
Grayson E. Murphy	31	57
Merle J. Parsons	35	48
William D. Paske	35	48
Kenyon T. Payne	34	62
Verlin Rosenkranz	35	64
Walter O. Scott	34	50
Ralph D. Sherer	32	59
John A. Shetlar	33	62
Edward G. Smerchek	33	55
Bertel E. Soderblom	34	51
Alfons A. Stiebe	34	54
J. Elwyn Topliff	33	55
Gay S. Tuis	38	60
Irwin Wayne	37	60
Federico S. Zamora	34	50

#### Junior—Honor

William P. Bacon	37	56
William J. Ball	28	54
Ralph A. Boehner	34	53
James C. Brock	36	54
C. Eugene Cleland	33	56
Louis W. Cooper	33	52
Ray E. Cudney	30	49
F. Dale Engler	35	58
Gaylord G. Green	33	63
Gordon C. Green	33	52
Ralph L. Gross	33	62
Powell H. Heide	37	51
Richard W. Heikes	34	63
F. Elizabeth Holman	36	48
Donald B. Kinkaid	32	51
J. Wallace Kirkbride	32	56
George W. Kleier	32	55
Lewis E. Landsberg	33	55
Robert B. Lank	34	65
John W. Livingston	34	59
Wm. A. Ljungdahl	30	58
Harry W. Longberg	32	50
Manford E. Mansfield	32	51
Wayne D. Morgan	31	56
E. Dale Mustoe	34½	68½
Leslie C. Nash	31	52
Melvin C. Poland	33	64
Wilbur A. Rawson	33	55
Noel N. Robb	31	51
Kenneth T. Sherrill	33	49
Milan W. Smerchek	33	63
Beverly D. Stagg	33	64
Raymond S. Tanner	31¼	56½
Arden Reiman	31	2.10
Roscoe D. Long	32	2.09
Willard H. Meinecke	27	2.07
Orville B. Burtis	32	2.06
Taylor L. Fitzgerald	32	2.06
Perrin K. Symms	32	2.06
Robert C. Gilliford	32	2.00
Cecil M. Wenkheimer	29½	2.12
Arden Reiman	31	2.10
Roscoe D. Long	32	2.09
Willard H. Meinecke	27	2.07
Orville B. Burtis	32	2.06
Taylor L. Fitzgerald	32	2.06
Perrin K. Symms	32	2.06
Robert C. Gilliford	32	2.00
Floyd W. Smith	33	3.00
J. William Mudge	33	2.88
Lowell E. Fox	31	2.81
Oscar W. Norby	33	2.76
Robert R. Singleton	29	2.66
Ray A. Keen	28	2.64
O. Conrad Jackson	34½	2.57
Donald W. George	33	2.55
Raymond R. Rokey	33	2.52
Paul Q. Chronister	33	2.48

#### Freshman—High Honor

Floyd W. Smith	33	3.00
J. William Mudge	33	2.88
Lowell E. Fox	31	2.81
Oscar W. Norby	33	2.76
Robert R. Singleton	29	2.66
Ray A. Keen	28	2.64
O. Conrad Jackson	34½	2.57
Donald W. George	33	2.55
Raymond R. Rokey	33	2.52
Paul Q. Chronister	33	2.48



## MACKINTOSH AND GIRLS' TEAM WIN AGAIN

John L. Urquhart	34	50
Keith B. Wagoner	32	49
William W. Wempe	33	48
W. Robert Wichser	34	55
John R. Works	33	62
Donald A. Yost	30½	57½

### Sophomore—Honor

DeWitt B. Ahlerich	34	61
Richard E. Atkins	32	63
Lester E. Brown	32	50
Harold Clay	32	62
Paul S. Danielson	32	60
Jack Featheringill	32	54
James R. Foster	28	48
Hobart W. Frederick	32	62
Bertrand W. Gardner	28	49
Jackson George	32	51
Wilbert Greer	30	51
Kenneth R. Jameson	32	52
Elgie G. Jones	33	51
Mary E. Kennedy	28	55
Roy W. Kiser	33	51
David H. Long	32	59
Julius H. Mai	32	62
Frederick E. Meenen	31	57
Arthur T. Mussett	32	55
Robert B. Norton	31	51
Gerald E. Pierce	33	56
G. Dale Russell	32	51
Ralph W. Rhodes	31	58

Lyman H. Singer	31	59
John F. Smith	31	54
Rollin M. Starosta	33	50
George L. Sundgren	33	64
Benj. W. Tempero	31	52
Joseph Uhrin	34	56
John R. Weddle	30	55
Dean D. Whitmore	33	48

### Freshman—Honor

Ralph E. Barker	33	55
James A. Bower	32	55
Darrell R. Bozarth	33	62
Gilbert Branda	33	48
Leonard A. Deets	33	56
Edward H. Elling	32	58
Eldon D. Gladow	33	61
Eugene C. Hersche	34	65
George N. Inskip	33	50
Robert J. Jones	30	49
William G. Kelly	32	63
Scott W. Kelsey	33	59
Arlan W. McClurkin	32	51
Dale F. McCune	33	64
A. C. Mangelsdorf	30	55
Warren D. Nelson	33	51
Dean K. Weckman	33	63
Richard G. Wellman	38	66
George C. Wreath	33	64
Robert O. Yungmans	26	49

## Girls Win Trophy

The girls' meats judging team of Kansas State College gained permanent possession of the National Livestock and Meat Board trophy by winning, for the third consecutive year, first place in the meats judging contest at the 1939 American Royal Livestock Show.

Jessie Collins was high individual in the entire contest. Other members of the Kansas State team were Anna Scholz, Genevieve Scheier and Wilma Evans.

The Livestock Judging team placed third with seventeen teams competing. Kansas

## 1939 AG BARNWARMER

(Continued from page 5)

from Independence, was crowned by Dean Call to reign as queen over the dance. The four charming princesses who made the selection so difficult for ag students were Marty Alexander, Hutchinson; Lucy Mae Botkin, Harper; Jane Galbraith, Cottonwood Falls; and Mary Griswold of Marysville.

One hundred seventy-five dozen doughnuts were washed down with 150 gallons of cider by the hungry dancers. Three full truckloads of hay were used to decorate the gymnasium, with a large part of the ag division helping. Several hundred gallons of water were used to keep the stock tank full for the benefit of offenders. No accurate estimate of the number of tomatoes used to protect the tank can be made.

To the students of the division goes the credit for making this Barnwarmer an unqualified success. Especial credit is due Francis Friedli as manager, Bill Lobenstein for decorations, and Ronald Campbell for the cider and doughnuts. The willingness and co-operation of the entire ag division combined to make the 1939 Barnwarmer outstanding.

*"Not wide reading, but useful reading, tends to excellence."*—Diogenes.



Prof. D. L. Mackintosh and his girls' meats judging team at the American Royal. Just in case you don't know their names: Jessie Collins, Wilma Evans, Professor Mackintosh, Anna Scholz and Genevieve Scheier. The gals did right well by Kansas State, winning first. That's getting to be a habit with Kansas State teams.

State was high team on horse judging and second on hogs. Team members were: F. Dale Engler, Evans F. Banbury, F. Dale Mustoe, Marcel McVay, William A. Ljungdahl, and George W. Kleier.

In the men's meat judging contest, Eugene Watson was high man on the Kansas team which ranked fifth.

# Chase County Team Wins Annual Vocational Ag Contest

FIRST place in the State High School Judging and Farm Mechanics Contest this year went to the team from the Chase County Community High School, of Cottonwood Falls. L. E. Croy is vocational agriculture teacher at the school. The contest, held May 1 and 2, was under the supervision of the various departments in the Division of Agriculture.

The Chase County team did not win a first in any department, but was consistently high in the placings in all departments. Second place went to the team from Newton High School. Newton has rated high for several years, and has placed first on two occasions. The team is coached by R. M. "Shorty" Karns, a graduate of Kansas State College.

Third place in the contest went to Highland Park High School of Topeka. F. E. Carpenter is coach of the Topeka team.

In the agronomy section first place in team competition was won by La Cygne High School, coached by W. J. Braun with a total of 1,991. Second place went to Newton High School with 1,983 points; third, Waterville High School, coached by H. E. Frank, 1,862 points. Individual winners were: Howard Johnston, Wamego High School, first place with 725 points; second, Dale White, Newton High School, 716 points; third, Harry Kyle, La Cygne High School, 711 points.

A close race determined first and second places in the animal husbandry section. Medicine Lodge High School, coached by Marion W. Pearce, won first place with 1,535 points, closely followed by Smith Center High School, coached by Paul Gilpin, with 1,534 points. Highland Park High School won third with 1,523 points. Two neighbors of northeast Kansas won first and second individual honors. Willard Baker, Sabetha High School, was first with 545 points; Dale Lance, Fairview High School, was second with 543 points. Third

place went to Glenn Spafford, Belleville High School, 536 points.

Chanute High School team, coached by E. L. Collins, won the dairy division with 688 total points, closely followed by Washington High School, coached by C. R. Bradley, with 673 points. Third was Reading High School, 661 points. Individual winners: Paul Grieveldinger, Hanover High School, 249 points; second, Merle Tennis, Chanute High School, 246 points; and third, John Aiken, La Harpe High School, with 238 points.

In the poultry section, Wamego High School, coached by H. P. Walker, carried off top with 2,160 total points. Second went to Clay County Community High School, coached by R. H. Perrill, 2,120 points. Third was Belleville High School, coached by R. W. Russell, 2,110 points. Edward Buss, Holton High School, won individual honors with 780 points; second, LaVerne Harold, Parker High School, 770 points; third, Ronald Livers, Waterville High School, 760 points.

---

## INTRODUCING DR. BAYFIELD

(Continued from page 8)

the fact that there is a definite correlation between the gluten quality or strength of a wheat and the time required for its dough-ball to "fall to pieces" when suspended in water.

Dr. Bayfield is a member of the American Association for the Advancement of Science, American Association of Cereal Chemists, American Society of Agronomy, American Genetic Association, Canadian Society of Technical Agriculturists, Soil Science Society of America, Sigma Xi, Phi Lambda Upsilon, Gamma Sigma Delta, and recently the MI fraternity, Alpha Mu, elected him to membership.

Dr. and Mrs. Bayfield live at 922 Bertrand. They have one child, a girl.





# Kansas 4-H Clubs Train Tomorrow's Farm Leaders

Under the banner of the 4-H Club, Kansas rural youth now march more than 22,850 strong, in clubs numbering 1,049 representing every county in the state. 4-H Club work originated about 35 years ago as a result of very evident needs of the farm boys and girls. Many incidents early in the history of club work that seemed insignificant at the time, have broadened out and expanded and have exerted a most helpful and far-reaching effect on this great movement.

In the yellowing files of history may be found the historical events that first brought breath to the present rural youth movement that we see going forward today. The first reference to an organization of this kind is found in the corn clubs for boys started under the supervision of the Farmers' Institutes, and the home culture clubs for girls formed first in Lincoln County to study home questions and homemaking. In its early history the 4-H Club underwent the miseries of any new organization, but since 1914 the expansion of boys' and girls' club work has been rapid. By 1917 more than 5,000 boys and girls were members of the organizations in the state of Kansas.

Today these young folk are training themselves, under the guidance of competent leaders, to carry the burdens of the agricultural industry. These leaders who are "outside" the immediate 4-H Club organization include the county extension agents in 103 organized Farm Bureau counties, six county club agents, a staff of state leaders, directed by M. H. Coe, Kansas State College, and a host of loyal friends of the organization, who without thought of compensation voluntarily offer their services that this youth program might carry on.

In the vanguard of this youthful rural Americanism, the Collegiate 4-H Club, with a membership of over 400 at Kansas State College, helps guide the progress of

the state's rural youth program. This Collegiate 4-H Club was organized in December, 1927, with about 60 members. Each year the group sponsors radio programs and acts as host to many campus meetings. The club also takes an active part in the Round-up plans for the entire week each year. Ever since the club was organized it has increased in size until it is now recognized as one of the most important on the campus. In 1928 the Collegiate group assumed the responsibility of publishing the Who's Who, the annual yearbook of 4-H Club work. The club now has available a \$1,500 loan fund available for needy 4-H Club members, which is administered by the Alumni Association of Kansas State College.

## Attends Marketing School

William Ljungdahl, Menlo, student at Kansas State, winner of the Livestock Marketing School Scholarship, and Robert J. Eggert, assistant professor of Agricultural Economics, attended the Marketing School in Chicago June 19 to July 2. The scholarship is given by the Union Stockyards and Transit Company of Chicago to students majoring in Animal Husbandry or Livestock Marketing. Representatives were from 18 states in the Chicago marketing area, as well as a student from the University of Wales.

**Guaranteed Cleaning**  
**BACHELOR BUNDLE**  
**LAUNDRY SERVICE**

**Campus Cleaners**

*and*  
**Wash Shop**

1206 Moro

Dial 4340



YEARLING WETHERS READY FOR MARKET

✻

\$107.72  
Per  
Acre  
from  
Alfalfa

By  
GEORGE  
KLEIER

**I**RRIGATED alfalfa hay, when fed to sheep, showed a net profit of \$107.72 per acre at the Garden City branch experiment station last fall, according to results compiled in lamb feeding experiments by Prof. Rufus Cox of the department of animal husbandry.

With irrigated alfalfa hay producing seven tons an acre annually at last fall's price of \$6.50 a ton, the cash return per acre would be \$45.50.

When fed to lambs this hay would produce 3,060 pounds of fat lamb worth \$237.15 less a deduction of \$79.93 for cottonseed cake and milo needed to balance the ration. This is a gross return of \$163.22 an acre or an advantage of \$107.72 over the cash return of the crop at the then prevailing market price.

#### SORGHUMS INCLUDED IN TESTS

The lamb feeding experiments included sorghums also. Dry land at the Garden City experiment station has yielded, over a 10-year period of continuous cropping, 22 bushels an acre of milo grain and 1.33 tons of forage. With the price of milo at 55 cents a hundred and forage at \$2 a ton in Garden City, last fall, the cash value would be \$14.76 per acre.

The same amount of grain and forage fed in five separate tests has produced an average of 361 pounds of fat lamb. The lambs used in the year's experiment brought \$7.75 a hundred at Kansas City

after the freight was deducted. A further reduction of \$467 for cottonseed cake and ground limestone brings the gross return to \$23.31. This is an advantage of \$8.55 an acre over marketing the grain and forage directly. Interest on investment on the lambs and equipment could be deducted to give a net profit.

#### IRRIGATION PAYS MORE

Irrigated sorghums respond even better to lamb feeding. Over a 10-year period, a rotation of alfalfa and milo sorghums averaged 80.2 bushels an acre and four tons of forage. The cash value at prices last fall was 52.11. This amount of grain and forage would produce 1,234 pounds of lamb. After the deductions were made this would be a profit of \$79.76 an acre or an advantage of \$27.65 over the cash return of the crop.

#### Secretary of Yearbook

James F. Cavanaugh, of Dodge City, student in Kansas State College at Manhattan, has been elected secretary of the yearbook to be published by the 57 collegians employed by the Borden exhibit, "The Dairy World of Tomorrow," at the New York World's Fair. Cavanaugh is on leave of absence from college. The exhibit includes 150 purebred cows from American and Canadian farms. He was on the Agricultural Student staff two years ago.

# Playing Valet to an \$8,000 Hereford Bull

THE Premier Hereford Ranch at Barnard is known for well-bred cattle. Here's how Bruce Robertson, who has worked there, says to raise a prize breeding bull.

"It is my good fortune to be employed during the summer on the Premier Hereford Ranch at Barnard, Kansas. There I had a hand in the responsibility of taking care of a Hereford bull purchased for \$8,000.

"That is a lot of money to have wrapped up in one skin on four legs. A ranchman may have \$8,000 invested in new automobiles and if one of them is destroyed or seriously damaged it can be replaced.

"But if a valuable bull is killed or injured seriously, his breeding value cannot be replaced. And that is the reason a great deal of unusual care is centered on Prince Domino Premier.

"At the time of his purchase at the spring auction of Harrisdale Hereford Farms at Fort Worth, this bull was in the pink of show condition. It at once became necessary to get him into breeding condition.

"This was done by gradually removing his feed, giving him plenty of exercise, and allowing him all the grass and hay that he desired. At the present time to keep him in this condition he is fed once a day a ration consisting of rolled oats, bran, linseed meal, and salt.

"He is brushed off daily and sprayed to keep him free of cattle flies. He is dipped about three times a year to keep him free from cattle lice and ticks. Special attention is paid to the condition of his feet. His feet are trimmed often enough so that they do not become long and uneven. Many a fine bull has been lost to service because proper attention was not given their feet. We clean between the toes of his feet quite often as a precaution against "foul feet" which impairs the thrift of an animal. Often the fine delicate tissues between the toes become infected by bacteria from mud, ma-

nure, and other foreign matter, and oftentimes the horn of the sole and wall of the foot become under run and rotten, causing deformed toes. Manifestly, it is important to exercise all precautions in the upkeep of the herd bull's feet.

"Special attention is also paid to the condition of the breeding lot. This bull is hand-bred and never allowed to run with the cows. More cows can be settled per year, and the average breeding life of a bull that is hand-bred is longer than one that is pasture-bred. The lot is kept free of large stones which might hinder the work of the bull. He is never used when conditions are bad and there is danger of him slipping and causing injury. Often a bull may slip and throw his stifle out or may injure him so that he may never serve another cow.

"Shortly after his purchase he was insured for \$50,000. He is already a proven sire and every effort is being made to give this bull every possible chance to prove himself one of the greatest bulls of the Hereford breed."

Carl Claassen has been appointed to a position with Farm Security Administration with offices at Winfield. He reported for duty March 15. New appointees serve as assistants for two or three months before assuming full responsibility for a county.

HOME MADE PIE

NOW 5c

Yeager Dairy Lunch

OPEN

*Evenings and Sundays*



## FLOYD SMITH WINS AZ AWARD

### THE THIRD DEGREE

(Continued from page 16)

A mattress-bouncing device that bears a strong resemblance to a hippopotamus with insomnia rocks and rolls unceasingly for weeks on the mattress in an attempt to break down the mattress construction. In the electrical department light bulbs of different makes burn continuously until they burn out, and other lights flash on and off as pull switches are tested. The practical value and probable life of any electrical appliance or device are tested here.

Paints, varnishes, roofings, and ceramics are tested for wear, heat and cold resistance, and probable life in the chemical and metallurgical laboratory. Strains and stresses of farm machinery, tools, farm equipment, and household furnishings are tested in a laboratory by men familiar with farm machinery problems. Even screw drivers are submitted to a twisting test. Tire wear is tested on a grindstone affair that can wear the average tire out in a day. Lubricating oil is broken down with excessive abuse to determine how long it will stand up in the customer's car.

The laboratories are complete, even down to the sporting goods department, where a football is rolled and scraped about over a bed of broken glass and sandpaper. A batting machine with a batting average that makes Joe DiMaggio look like a piker swats a baseball every 10 seconds to determine how long the baseball can take it. This machine bats 1.000 and no fouls.

Many kinds of merchandise are carefully tested before being released to customers. Of course the customers can be depended on to test the new goods, but it is an expensive process for both the customers and the company. A single test may require many weeks. The tests are designed to simulate as closely as possible the conditions in actual use. The whole intent is to learn accurately and as rapidly as possible what could otherwise be learned only by weeks of perhaps costly experience.

### Alpha Zeta Award

Floyd Smith of Shawnee won the Alpha Zeta scholastic award for the school year of 1938-'39. The medal is given each year to the man in the Division of Agriculture who makes the highest scholastic average during his freshman year.

While attending Shawnee Mission High School at Merriam, Floyd was active in F. F. A. work. He was a member of the judging team that represented his school in the State Vocational Agriculture Judging Contest at Kansas State College in 1938 and ranked ninth in individual placings. At the same time, Floyd won fourth in the F. F. A. Public Speaking Contest and received his State Farmer Degree. The next fall he was a member of the meat team that represented Kansas in the National Vocational Agriculture Meat Judging Contest held in conjunction with the American Royal. During his senior year in high school, he was elected to the National Honor Society.

Floyd entered Kansas State with the aid of the Sears Scholarship and has been working part time in the Department of Agricultural Economics ever since. He is enrolled in agricultural administration and is a member of the Sears Club, the Agricultural Economics Club, and the Y. M. C. A.

Warren Teel, who completed his requirements for a degree at the end of January, reported to Shawnee county March 13 for duty as assistant to county agent Preston Hale.

### ELECTRICAL APPLIANCES AND HARDWARE

Study Lamps      Waffle Irons  
Flash Lights      Batteries  
Ammunition and Guns

### THE AGGIE HARDWARE AND ELECTRIC CO.

Phone 2993    AGGIEVILLE    1205 Moro

## SPEEDING UP HAY-CURING

### Making Hay While the Sun Shines

Some of the hazards and losses in hay production will be overcome if hay-crushing machines, now being developed by the department of agricultural engineering, University of Illinois, come up to expectations.

A manufacturing concern which holds the patents is sponsoring the work of developing the machine and supplying the funds. The agricultural engineering department has developed a crusher that is attached to an ordinary mowing machine.

The hay-crushing attachment consists of two large rollers through which the hay is rolled as it is cut. The stems are crushed and dry almost almost as quickly as the leaves.

The advantage in crushing the hay as it is cut is that the natural curing process is speeded up. This reduces the length of time the hay remains in the field unprotected.

### WIN AT AMERICAN ROYAL

(Continued from page 19)

wether; second prize pen Shropshire wethers; second prize Southdown wether; second prize pen Southdown wethers.

The Kansas State College Livestock Judging Team ranked third; the Girls' Meat Judging Team, first; and the Men's Meat Judging Team, sixth.

In addition to looking after the exhibits of the college, several members of the Department of Animal Husbandry served the American Royal in different ways. Dr. C. W. McCampbell, head of the department, not only served as director in charge of the draft horse and mule department, but also as one of the judges in the carlot feeder cattle classes; Dr. C. E. Aubel judged the Poland China and Berkshire breeding classes and the 4-H Club barrow classes; Professor R. F. Cox judged the Rambouillet and Corriedale sheep classes; Professor D. L. Mackintosh served as superintendent of the draft horse and mule show; Shepherd Tom Dean judged the 4-H Club and Vocational Agriculture fat lambs.

### WORLD'S POULTRY CONGRESS

(Continued from page 18)

attracted more attention than did the one from Kansas. The Boy Scouts of America, 4-H Clubs, and the Future Farmers each had displays of their work and accomplishments.

The "Hall of Live Poultry" was devoted principally to the competitive live bird show. There were 400 exhibitors with about 5,000 birds. Practically all varieties of chickens, ducks, geese, turkeys, pigeons, and game birds were represented. The best birds of this and other countries were there to compete for the prizes. The center of attraction was pond and garden displays in which novelty birds were presented in natural habitat scenes.

The Kansas State poultry judging team received the rating of excellent. Paul Sanford and Bob Shoffner rated excellent, and Clyde Mueller rated superior. Wade Brant was alternate.

At the general meetings were discussed the many problems that are now confronting the poultryman. At the same time meetings of a special nature were going on, such as the I. B. C. A., Consumers, and Poultry Science meetings. The various youth organizations were active in judging contests, demonstration contests, and the like.

Paul Hensleigh, '38, is with the welfare department at Concordia. He is investigating cases making application for farm security grants.

### Slim's Shamrock

#### TRY

a Ground Steak Meal in a Bun

Drinks—Smokers' Supplies

Watch for the NEW DEAL

619 N. 12th

Ph. 4184

# Life Insurance for Our Pastures

By PHIL ALLEN

INDIANS were the originators of the practice of burning Kansas pastures. The Indians believed that firing the prairies early in the year attracted game animals to the areas which apparently greened up at an earlier date. The practice was adopted by the early settlers and has been continued.

Today the principal reason for burning is to remove old dead growth. Cattle avoid areas where old grass remains and this causes patchy grazing. Burning corrects this undesirable condition, is of value in controlling weeds, and it causes the grass to start earlier in the spring.

## BURNING CAN DO MUCH DAMAGE

Stockmen in the bluestem area burn their ranges regularly. It is at times necessary and may actually be beneficial. Caution in burning is important and, while occasional burning is necessary, annual burning, uncontrolled burning, or burning at the wrong season can do much damage to the pasture.

The recent experiments of the late Dr. A. E. Aldous are the bases of recommendations for successful burning practices. Until his untimely death last spring, Doctor Aldous was a member of the agronomy department faculty at Kansas State College and in charge of pasture improvement.

Doctor Aldous began research on pasture burning in 1928 on two pastures located near Manhattan. One of the important questions he investigated was the effect of burning at different times of the year. Is spring or fall burning better? What date of spring burning gives the best results? To answer these questions Doctor Aldous tried burning at four different periods. Burning was done in the fall during the first half of December, in early spring about March 20, medium spring April 10, and late spring the first week in May. In each experiment unburned check plots were observed for comparison. Both the check plots and the burned plots were pro-

tected from grazing. Under grazing the results might have been different.

## BURNING IN FALL UNDESIRABLE

Doctor Aldous found there was much to be learned about burning pastures. His first discovery was that burning decreased yields of vegetation. The reduction, he found, depended upon the season when the pasture was burned. The earliest date of burning gave the lowest yield. Thus fall burning greatly reduced pasture yields; late spring burning to a much less extent.

Late spring burning has another advantage. Weed numbers were decreased to the largest extent on the late spring-burned plots. While other burning dates also decreased the weed population, this tendency was much more marked on the late spring-burned areas. On these plots weeds remaining were negligible, while quite a number of weeds remained on the fall- and early spring-burned areas. The weed population on the unburned plots was also decreased as a result of the competition afforded by the grasses which under protection from grazing were able to crowd out weed growth.

## MORE PLANTS WITH EARLY SPRING BURNING

The early-burned plots had more plants per unit area than the late-burned plots. The reason for this increase of the early-over the late-burned areas is that early burning favors the fine-stemmed grasses such as little bluestem, while the late burning favors the coarse-stemmed grasses, particularly big bluestem and Indian grass. Buffalo grass, grama grass, and other short grasses will not tolerate burning.

Kentucky bluegrass is even more sensitive to burning and was completely eliminated from the burned plots. The loss of bluegrass, however, is not serious if it can be replaced by the bluestems. Such replacement is desirable, since bluegrass tends to go into a semi-dormant period during the hot part of the summer when the bluestems



## HINTS ON PASTURE MANAGEMENT

are making their greatest growth and grazing is the heaviest. The bluestems also out-yield bluegrass.

### OVERGRAZING HARMS PASTURES

By substituting various intensities of clipping for grazing, Doctor Aldous demonstrated the damaging effect of overgrazing and early grazing in the spring on pastures. There is a twofold danger from overgrazing. In the first place it lowers pasture yields considerably. Second, the desirable grasses are replaced by annual species and weeds. On plots clipped every two weeks, weeds increased in three seasons from 5 percent to 40 percent, while the population of big and little bluestem was reduced nearly half.

On the plots not clipped until the end of the growing season, the stand of native species was maintained and there was no increase of weeds and annual grasses.

When perennial grasses are replaced by annual species and weeds many undesirable features are introduced. Weeds and annual grasses are not as efficient from the standpoint of erosion control as the native, perennial grasses. On plots clipped every two weeks a two-inch layer of top soil was washed away by a single torrential rain. No appreciable amount of soil was lost from the area clipped only at maturity. Such soil losses cause further disappearance of desirable grasses and the appearance of gullies, until finally the pasture becomes practically worthless.

### GIVE YOUR PASTURES A REST

Overgrazing, particularly in the spring, has caused a reduction in the carrying capacity of pastures in the bluestem area. In the early 1900s one to three acres were required for each animal, whereas it now takes five to seven acres.

Early spring grazing is especially injurious. It is hoped a system can be inaugurated whereby a pasture is not grazed early each year. This can be accomplished by a system of deferred grazing. Under this system the pasture is divided into three units, one of which is left ungrazed each

year until about June 15. The livestock are then all transferred to the deferred pasture, and the other two pastures which were grazed early are allowed to recover during the summer. Later in the season it may be necessary to use the two undeferred pastures again along with the pasture that has been deferred. The three pastures receive this early protection in turn so that each is deferred once in three years. Such a system makes possible more intensive grazing and more complete utilization of the forage. Increases of 30 percent in the production of meat products may be expected. Milk production is also increased by this system.

### Girls' Meat Judging Team Win

These Kansas State College girls won the National Meat Identification and Judging Contest held at Wichita October 11 under the auspices of the National Livestock and Meat Board. The girls cinched the sixth Kansas State victory at Wichita and also placed first at the American Royal in Kansas City by winning the first three individual honors. Jessie Collins, Dwight, ranked first; Anna Scholz, Huron, second; Genevieve Scheier, Manhattan, third; and Wilma Evans, alternate, Hutchinson, fifth.

Edward Moody, '39, reported to farm security February 15. Ed was on the 1938 meat judging team. He completed requirements for a bachelor's degree at the end of the first semester, 1938-39. But, old standby that he is, Ed couldn't resist getting in and helping with the decorations for the Little American Royal, though, officially, no longer a student at Kansas State.

Waldo Poovey, '38, now employed by the Bruce-Jones Livestock Commission Company at Wichita, writes to suggest the name "Beau Beauty" for the bronze which will be shipped from Ames to Manhattan next fall. The name "Beau Beauty" is after the famous bull owned by Foster farms.



## Oldest Contour Furrows

IN the watershed of Stillwater Creek, Oklahoma, an acreage of contour furrows was laid out in the summer of 1925. These may be the oldest contour furrows in the mid-western states plowed along surveyed lines in grassland for the purpose of moisture conservation. Thirteen years have brought about some interesting developments in connection with the vegetative covering over this contoured area.

moisture conservation was conceived.

Surveyed contour furrows were plowed about six inches deep. Trees were planted in the furrows.

Eventually the contour furrows were covered with sufficient weeds and grass to hide them. The land was not grazed. By 1933 the vegetative cover was so dense that the eye of the camera failed to reveal the contour furrows when aerial photographs



This picture shows the beneficial effects of contour furrows to stop soil erosion. Notice the good stand of native grass.

When the city of Stillwater built Boomer Lake dam in 1925, the committee in charge of the work planned to set trees on a part of the badly eroded pasture adjoining the lakeside. The original scheme was to construct waterpocket dams on the lower side of each spot where a tree was to be set.

### DIFFICULTIES CHANGE PLANS

But difficulties developed. It turned out that business men, who were doing their civic duty by contributing work to the project, were not accustomed to such hard work. After 10 or 12 water pockets were constructed, the men were mostly exhausted and it seemed advisable to change the plan. The idea of contour furrows for

of the Stillwater Creek watershed were made. For 13 years they remained without maintenance. They now offer an interest-

Shoes Fixed the Ideal Way

### IDEAL SHOE SHOP

Shoes Cleaned, Dyed,  
and Repaired

615 North Manhattan  
PERRY SCANLAND, Prop.

ing study in plant ecology and successions of plant growth, and in erosion control.

The removal of grass, whether by overgrazing, drought, or by plowing, quite definitely leads to a succession of weed stages. Contour furrows and ridges do permit weeds to grow readily on the disturbed areas, especially when stimulated by increased moisture accumulation. For that reason, newly developed grassland furrow machines attempt to reduce the disturbance to a minimum.

#### GRASS VS. FORBS

After 13 years of grass and forb (any herb other than grass) competition on the contoured field without mowing or grazing, little bluestem is decidedly dominant in one portion of the field; Indian grass is dominant in a second portion; blue grama is dominant in another portion. Fall witchgrass won in the competition for survival in another portion, and triple awn grass in still another. Many forbs are present, but in no place are they dominant.

One of the greatest hazards of level terracing or contour furrowing is the possible damage from slight inaccuracies in contour lines which will surely cause water concentration. Concentrated water released by breaks at points where vegetation is sparse forms gullies.

#### DEFECTS IN CONTOUR FURROWS

At one point in this field, the contour furrows crossed a slight depression. The furrows did not bend up the hill in a manner to maintain a true level contour line. Water concentrating in the furrows overtopped them at this defective low point. A gully was started, with an overfall at each furrow which gradually worked its way up the incline.

Curiously enough, the furrows and vegetative growth below this area caught and held much of the material washed from above and the lower end of the eroded spot has become completely grassed over. Head erosion at each furrow has widened the gully with the result that it now presents the appearance of a typical alkali spot.

This damage could have been avoided by more accurate contouring or by the use of

small dams across the low places, plus some maintenance. The importance of such small dams and proper maintenance cannot be overemphasized.

#### TRACE CONTOURS BY GRASS SPECIES

The contour furrows can be traced by the Indian grass growing on them. In other portions of the area it is apparent that triple awn grass is being replaced by fall witchgrass, which, being perennial, may prove to be an important intermediate stage in the succession from triple awn grass to the short grasses. However, little bluestem occurs in or near many of the furrows, indicating that this grass rather than the short grasses may follow fall witchgrass.

Preliminary observations indicate that the cover of vegetation developed by each major species on the contoured area is decidedly greater than that developed on an adjoining area of like slope, soil, and history.

Little bluestem is denser on the contoured part of the field than in any comparable area in the field. Indian grass is also very noticeable and on the contoured field is taller and thicker than on any comparable area. Apparently more blue grama is present on the contour-furrowed field.

The one grass which seems to be just as dense on the check area as on the contoured field is fall witchgrass.

The conclusion is that the contour furrows have been well worth while in the maintenance and spread of the more desirable grass species and in the control of erosion at all points except where there were defects in contour lines.<sup>1</sup>

1. Adapted from Soil Conservation, Sept., 1938.

Diamonds — Watches

College Jewelry

Silverware

We Repair

**PAUL C. DOOLEY, Jeweler**

25 Years Service in Aggieville





# Here They Are . . .

## THE WHOLE FAMILY OF

# NEW FARMALLS

### Features of the New "H" and "M" Farmalls

- ① Comfort—sitting or standing. Adjustable sponge-rubber upholstered seat.
- ② Clear vision—smooth, streamlined design enables you to see your work.
- ③ Balanced power. Smooth-running 4-cylinder, valve-in-head engine, with Tocco-hardened crankshaft, full force-feed lubrication, and replaceable cylinder sleeves. Brilliant performance and amazing economy on No. 1 tractor distillate and other tractor fuels.
- ④ Five-speed transmission. Four field speeds, plus a 16-mile road speed (on rubber). Variable governor—you can control driving speeds within "inches per hour."
- ⑤ Patented automatic steering-wheel cultivator gang shift. Clean cross cultivation at 4 or 5 miles an hour.
- ⑥ Finger-tip auto-steering. Brakes can be operated separately for making short or pivot turns—or as a unit on the road.
- ⑦ More than 30 high-grade ball and roller bearings. 19 rawhide spring-loaded dust and oil seals.
- ⑧ Can be equipped with "Lift-All," which lifts and lowers machines, or front or rear sections, on either side.
- ⑨ Adjustable wheel tread—for all row-crop requirements.
- ⑩ Most complete line of quick-attachable machines.



### THE NEW SMALL FARMALL-A with "CULTI-VISION"

Here is Harvester's new Farmall, with features you've been waiting for: power, economy, and "Culti-Vision." Built to do all the work of the small farm, or to replace last team on the big farm, it sells at a new low price. Direct-attachable machines are available for crops, including vegetables. Ask us for complete details.

FOR 17 years the FARMALL idea has been setting the pace in power. FARMALL is today the No. 1 farm tractor in the land. The whole power farming picture has been changed by half a million FARMALL tractors on the job . . . And NOW comes a brand-new family of FARMALLS to step up farm power efficiency all over again!

Last month we introduced the FARMALL-A with its great new feature, "Culti-Vision."

Here's your first view of the little fellow's big Brothers—FARMALL-H and FARMALL-M—spic and span from the Harvester factories, raring to go!

First view shows you up-to-the-minute appearance—the handsome lines of farm power that is *practical for the fields*—modern styling in the famous FARMALL red. But the real thrill will come when you get hold of one of these steering wheels, give the smooth 4-cylinder engine the go-ahead, and put a new FARMALL through its paces.

Here are three bears for work—big size, middle size, small size! You'll find each one a go-getter in every inch and ounce. Catalogs and complete information will be sent to you on request.

**INTERNATIONAL HARVESTER COMPANY**  
(INCORPORATED)

180 North Michigan Avenue

Chicago, Illinois