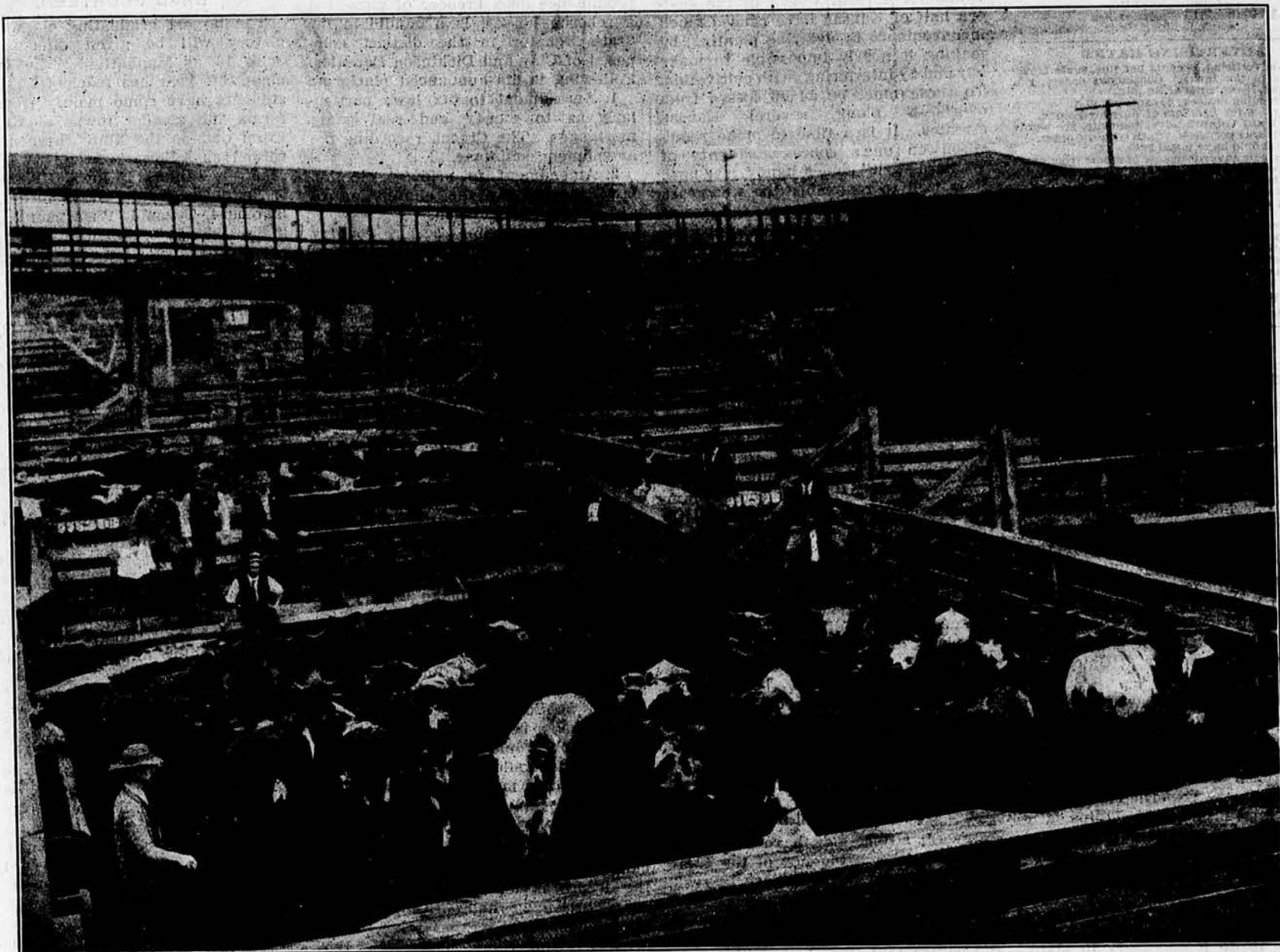


KANSAS FARMER

Volume XLVI. Number 25

TOPEKA, KANSAS, JUNE 18, 1908

Established 1863. \$1 a Year



Some of the Wood-Hagenbarth Cattle Company's Yearlings at Kansas City.

Clay, Robinson & Company's Kansas City house has been handling some of the Wood-Hagenbarth Cattle Co.'s yearlings recently, and on May 12 obtained \$6.65 for a string averaging 798 lbs. This cattle company, whose headquarters are in Salt Lake City, has a ranch in Chihuahua, Old Mexico, where these calves are raised and from thence they are sent up to the company's feeding plant at Eldorado, Kansas, which is under the supervision of E. Maple.

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KANSAS FARMER.

Established in 1868.

Published every Thursday by
THE KANSAS FARMER COMPANY
(Incorporated, January 1906).
Topeka, Kansas

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Entered at the Topeka, Kansas, postoffice as second-class matter.

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Display advertising, 20 cents per line, agate (fourteen lines to the inch). Continuous orders, run of the paper, 15 cents per agate line.

Special reading notices, 30 cents per line.
Special rates for breeders of pure-bred stock.
Special Want Column advertisements, six words per line, 10 cents per week. Cash with the order.
Electros should have metal base.

Objectionable advertisements or orders from unreliable advertisers, when such is known to be the case, will not be accepted at any price.
All new advertising orders intended for the current week should reach this office not later than Monday.

Change of copy for regular advertisement should reach this office not later than Saturday previous to publication.

Every advertiser will receive a copy of the paper free, during the publication of the advertisement.

Address all communications to
THE KANSAS FARMER CO.,
625 Jackson St., Topeka, Kansas

Wheat harvest has commenced in Kansas, as far north as Salina. Here is hoping for fairer skies than have frowned on the fields of late.

Wire rope has become so important an article of manufacture, commerce, and use as to lead to the publication of the American Wire Rope News, a beautiful monthly by the American Steel and Wire Co. Persons interested in any of the varied uses of wire rope will do well to write for a free copy, addressing the company at Chicago.

Allen Phillips, a Shawnee County product, who, after completing a course of study at Manhattan, added thereto a course at Cornell University, has been selected to have charge of the Kansas Experiment Station work with poultry. Mr. Phillips is a young man of energy, ability, and enthusiasm. To these he has added liberal preparation. He will do good work.

Long continued rains and high waters have made it necessary to plant large areas of corn in Kansas after this date. For the best results early-maturing varieties should be selected. Persons having good seed corn suitable for planting at this advanced season should announce the kind, the amount for sale, and the price in the special columns of THE KANSAS FARMER devoted to this kind of advertising. The rates for such notices are low.

A new publication by Parke, Davis & Co., Detroit, Mich., is Veterinary Notes. The third number has just appeared. This veterinary magazine under the care of the great manufacturers of drugs whose name is a guaranty of excellence of any product which bears it, will be found exceedingly valuable to all veterinarians. The papers presented are from the first authorities. The editorial management is able.

The Kansas River and its tributaries have behaved badly during the last week. The flood at some points, notably at Kansas City, was worse than at any time since 1903. The Union Station was surrounded. Trains got into Kansas City over only one line from the West and one or two from the East during the worst of the over-

flow. The railroads have a neighborly way of using each others tracks at such times so that the interruption of traffic was not as complete as might have been expected.

The Republican convention for the nomination of a candidate for President is in session this week at Chicago. The nomination of William H. Taft is assured. True, there are Roosevelt boomers on the ground who hope to stampede the delegates to disregard their instructions and force another term upon the President, but there is little apparent prospect of success in this movement. For Vice-President the prospects look favorable for an Iowa man, and the Hawkeye Governor seems to be in imminent need of the protection of a lightning rod. The party might easily make a worse, and could not easily make a better choice.

The excessive rains which have prevailed for several weeks in the eastern half of Kansas have caused much inconvenience by delaying planting, by making it nearly impossible to make hay and by interfering with cultivation. To these must be added losses from overflows along several Kansas streams. It is a time to make requisition on one's courage. Plenty of Western "grit" comes handy just now. It is well to remember the wet years in Kansas are far from the worst years. The great growth of crops under conditions which follow the rains more than makes amends for the losses caused by too much water. Let every one take counsel of his courage rather than of his fears.

The Democratic National convention soon to convene at Denver will without doubt nominate William J. Bryan as its standard bearer. Twice the defeated candidate of his party, Mr. Bryan is easily the most prominent Democrat in the United States to-day. Defeat has not soured him nor diminished his popularity with the people. He has thrived on defeat and has built up a business that is said to pay him more than the salary of the President. His honesty, ability, and purity of purpose are everywhere conceded. The differences between his views and those of the dominant element of the Republican party are less pronounced than before the Roosevelt modification of Republicanism became effective. The country is certain to have a good President regardless of how the election goes.

THE PRESIDENCY OF THE AGRICULTURAL COLLEGE.

Several strong men have been suggested for the presidency of the Kansas State Agricultural College. President E. R. Nichols' engagement will terminate, by agreement, at the end of the next school year. Following are the names that have been presented:

Eugene Davenport, dean of the Agricultural College of Illinois.
E. R. Heston, South Dakota Normal School.

Willett K. Hays, Washington, D. C.
E. T. Fairchild, State Superintendent of Public Instruction.

Frank D. Dyer, Wichita, former assistant State Superintendent of Public Instruction and former superintendent of the Wichita city schools.

The committee of the board of regents having in charge the consideration of the qualifications of available persons consists of A. M. Story, Manhattan; Edwin Taylor, Edwardsville; and J. S. McDowell, Smith Center.

The position pays \$5,000 per year. The man suitable for the place will consider the salary as only a necessary incident, while the great work of developing the best there is in the thousands of the best and strongest young people in the world, farmer boys and girls who seek educational development at the Agricultural College, will appeal to him as presenting opportunities worthy of his best endeavors. The right man will also appreciate the great work of the Experiment Station and will see that it maintains a position in the front rank.

The committee in charge of this se-

lection consists of men of large experience in the affairs of the world and of deep and abiding interest in the work of the Kansas State Agricultural College. This committee can be depended upon to find a leader of such executive ability that he can and will be a propelling force before and behind every worthy effort in connection with the college, whether such effort be on the part of a regent, a member of the faculty, or a student.

A man of this caliber can be found, and none is too good for Kansas.

If the selection can be made before the opening next fall some arrangement ought to be consummated to make his services available during the next school year.

A GOOD KIND TO ELECT.

H. W. Avery, who is well known to KANSAS FARMER readers on account of the vigorous papers from his pen which have appeared in these columns as well as on account of his former prominence as a breeder of pure-bred Percheron horses, is a candidate for State Senator in the district composed of Clay and Dickinson Counties. Following is his announced platform:

1. Amendment to tax law; particularly as to money and real estate mortgages. The Creech recording fee amendment suits me.

2. Amendment to primary election law; particularly the elimination of the nominating petition.

3. Legislation for better country schools; consolidation is necessary.

4. A permanent State fair for Kansas.

Personally, I believe that a candidate can show more useful courage by standing for some certain legislation than trying to boost the interest of some senatorial candidate that he may later, on account of the primary instructions, have to help defeat. more than that, if I read the signs aright, the people want to know what a man stands for, and I feel that they have a right to such information before the primary and before they vote for his indorsement. The man who has not the courage to stand for something before his nomination can not be expected to make a very aggressive fight after his election.

Mr. Avery is a graduate of the Kansas State Agricultural College. He is a strong man who helps on the right side of public questions. Unless the district has a better man for the place—and such would be hard to find—Mr. Avery should be nominated and elected by big majorities.

THE SIN OF LAND-MURDER.

The deterioration of fertility under cultivation that is lacking in care for the future is far more noticeable in some portions of the South than in the Middle West. The Progressive Farmer, recognizing the seriousness of the situation, speaks as follows:

"The truth is, that it is time now to see that a man who wears out a piece of land sins—just as a man sins who wears out a human body with drunkenness or dissipation. We are coming to the time when a man will be as much ashamed of owning a gullied hillside as of owning a skin- and-bones horse. As James J. Hill, than whom there is hardly a greater American living, declared in Washington:

"North Carolina was, a century ago, one of the great agricultural States of the country and one of the wealthiest. To-day as you ride through the South you see everywhere land gullied by torrential rains, red and yellow clay banks exposed where once were fertile fields; and agriculture reduced because its main support has been washed away. Millions of acres, in places to the extent of one-tenth of the entire arable area, have been so injured that no industry and no care can restore them."

"And the seriousness of this land-murder is not appreciated by one man in a thousand. You see an acre of land ruined and you say, Well, there is \$10, \$20, or \$50 loss, according to the price of the land in your community. But the truth is, that the merely

temporary estimate put upon land values, as indicated by present prices, does not indicate at all the far-reaching extent of the damage. Three hundred years ago you could have bought that land from the Indians at ten cents an acre, but if an acre of it had been ruined then, would the damage, as we see it now, have amounted to only ten cents? A hundred years ago the same land may have been worth only a dollar an acre; but we know now that to have ruined an acre would have meant more than a dollar's loss. And so the price of land to-day is no criterion by which to judge the damage and the sin against posterity wrought by the man who murders an acre of God's heritage to the human race—a heritage He meant to last as long as time itself. The Nation does well to give the matter serious thought."

KANSAS AGRICULTURAL COLLEGE GRADUATES ONE HUNDRED FOURTEEN.

The largest graduating class in its history will be given diplomas on June 18 at Manhattan. The enrollment this year has reached 2,187 and students have come mainly from the farms and smaller towns of Kansas. From outside the State there are recorded as follows: Arkansas 1, Colorado 1, Illinois 1, Iowa 1, Missouri 5, Nebraska 1, New Hampshire 1, Oklahoma 4, Texas 1, Wisconsin 1, Philippine Islands 8, Japan 2. Only four counties are not represented, Scott, Sheridan, Stanton, and Hamilton. After Riley County, Shawnee has the highest enrollment, 81, then Marshall with 49, and Pottawatomie with 46, and then a dozen counties are in the thirty column and so on down to fifteen counties each with one student.

The graduates are represented as follows in the courses: Domestic science, 46; general science, 15; agriculture, 17; electrical engineering, 22; mechanical engineering, 6; architectural, 4; veterinary, 4.

Of the twenty-two electrical engineers, nearly all are farm boys and the kind that succeed because they are not afraid to work. Sixteen of this class already have permanent positions in professional work. Two of the other hope to teach and the others are looking for a special kind of work.

Of the seventeen graduates from the agricultural course, a majority turn to the farms, others are to teach sciences, including agriculture in Kansas high schools, some are to go into the Government service, while two or three have been employed by the college as laboratory assistants.

The veterinary graduates will go into active practice as soon as they can decide where their services are likely to be in greatest demand.

The domestic science graduates have many things in mind. Some will teach domestic science and art in high schools and colleges, some will teach other subjects in high schools, some will teach in the grades, some will return to their homes, and it is rumored that some will soon preside over homes of their own.

The mechanical engineering graduates will all go into shops or manufacturing concerns.

Several of the general science graduates will teach in high schools, some will return to their homes, while others will take post-graduate work here or elsewhere.

The class president, W. T. McCall, is of the agricultural course and will return to the big home farm in Trego County, taking special charge of the live stock. Mr. McCall has been working on an experiment of great value to the stock interests of Kansas, the digestibility of different feeds, including prairie hay and alfalfa, using sheep in the experiment. This is the first experiment of the kind ever undertaken in the West and will be continued for several years. Mr. McCall may probably continue the feeding experiments on the home farm next year but of course without the delicate tests and scales.

This class has been noted during its whole course as a working class and

has not developed many athletes. Probably no class ever did a greater amount of original work in the several courses. If this great college of agriculture and mechanic arts can continue to send out every year such a strong class, the State may well be gratified with its investment at Manhattan. The surprising thing about the representation in the courses of study is that out of 114 only 17 are credited to the agricultural course.

INCREASING DRINK BILL.

EDITOR KANSAS FARMER:—Some of us out here are anxious to know whether the figures in the enclosed newspaper clipping about drink are correct. We can not believe that the consumption of liquor has increased 1.27 gallons per capita and that it amounts to 23.53 gallons per capita. Is not this overestimated? Let us know through THE KANSAS FARMER.

W. W. WHITE.

McPherson County.

Following is the clipping enclosed: "Washington, May 31.—The estimated annual cost of the drink bill of the Nation for 1906-7 is \$1,680,085,444, of which \$1,466,584,327 was spent on spirituous beverages and only \$213,501,117 on non-alcoholic stimulants. The figures are printed in the last issue of the 'American Grocer.' They show that the per capital consumption of spirituous liquors for the year ending June 30, 1907, is the highest on record, reaching 23.53 gallons per capita, an increase over 1906 of 1.27 gallons. The paper also makes the following comment:

"We must leave to the students of social economy the question of a great Nation spending an average of over one and one-half billions annually for stimulating beverages; a sum about as great as the appropriations of the Congress for a session. Nearly double as much per capita is spent for drink as is spent for the maintenance of public schools. It nearly equals the value of exports of merchandise per capita. It is double the amount of the public debt. It is more than the farm value of the corn crop, which exceeds 2,500 million bushels; three times the value of the wheat grown; more than double the worth of the cotton crop. The indirect cost is beyond estimate, and so great is the waste and misery created that States are fighting the evil and endeavoring to banish the saloon as a distributing factor."

From the statistical abstract of the United States it is shown that the consumption of liquors in this country in 1906, stated in gallons, was:



One woman speaks of her telephone as "the friend on the wall;" an errand runner, a protector, a friend in need and a companion when alone. Needless to say, her telephone is

Western Electric Co.

Apparatus and Equipment

the kind that has the true friend qualities of faithfulness and reliability.

Booklet, "Rural Telephone Equipments," Sent Free.

WESTERN ELECTRIC COMPANY

Standard "Bell" Apparatus
New York Chicago Dallas
Philadelphia St. Paul Denver
Atlanta Des Moines Salt Lake City
Pittsburg St. Louis Seattle
Cincinnati Kansas City San Francisco
Indianapolis Omaha Los Angeles
Use Address Nearest You

Distilled spirits, 127,851,583; wines, 46,485,223; malt liquors, 1,699,984,582; total for 1906—1,874,321,388; average per capita, 22.26 gallons.

The consumption in 1907 by the same authority was: Distilled spirits, 140,084,436; wines, 57,738,948; malt liquors, 1,821,867,627; total for 1907—2,019,691,011; average per capital 23.53; increase per capita, 1.27 gallons.

LAND SOLD FOR TAXES CAN NOT BE RECOVERED AFTER EXPIRATION OF FIVE YEARS.

EDITOR KANSAS FARMER:—I have observed that you have taken special care to call the attention of your readers to the fact that they are at perfect liberty to refer to the editor in cases where they desire information. I, therefore, write you concerning the following matter: About twenty-five years ago my father traded for 320 acres of land in Shannon County, Missouri. He paid taxes on the land for six or seven years, then, having some trouble in getting his taxes paid, he sent the money to Shannon County and they did not give him credit for it. So he quit paying the taxes on the land and it was sold for taxes to a lumber company. The lumber company has the tax title to the land. My father has turned the original warranty deed to the land over to me to get what I can out of it. The land is worth big money now. Would there be any use to try to get the land back? Would there be any use to sue for it?

Butler County. C. J. Foy.

The right to recover land sold for taxes twenty-five years ago, has long since expired. It is useless to attempt in any way to recover such land, except by a regular purchase. The law of Missouri in regard to this covers the case very definitely. It is as follows:

"Any suit, or proceeding, against the purchaser at a tax sale, his heirs or assigns, for the recovery of the real property or any interest therein sold for taxes, or to defeat or avoid a sale or conveyance of real property sold for taxes under the provisions of this article, shall be commenced within three years from the time of recording the tax deed, and not thereafter; provided, that when the person claiming to own such real property, or any interest therein, shall be an infant or lunatic, such suit may be brought at any time within one year of the removal of such disability, to recover the interest only of such infant or lunatic in such real property." See Missouri Annotated Statutes, 1906, section 5629.

Even a vital error in the proceedings under which the tax title was obtained would be barred by the Missouri General Statutes of limitations which provides that no action for the recovery of land shall be brought unless the owner was deprived of his land "within ten years before the commencement of such action."

Persons holding land under a tax title or under any title which is not perfectly clear are generally anxious to get the title cleared up. The man in possession of this land may be willing to buy a quitclaim deed in case such would clear the title. The amount that may be expected from this depends somewhat upon the value of the land.

In Kansas the laws covering cases of this kind differ from the Missouri laws only in the length of time allowed for recovery. The Kansas statute regarding the recovery of land sold for taxes allows five years for the owner to reclaim his land, and the General Statute of limitations allows fifteen years in which suit may be brought for recovery of land.

GET READY FOR THE FAIR.

The county and State fairs afford, with their competitive exhibits, important object lessons to the people and advertise to the world the high excellence and superior and varied products and resources of Kansas.

The best specimens should be carefully preserved in their season ready

WHEN YOUR SUBSCRIPTION EXPIRES

One month before a subscription expires we enclose a renewal blank on which you may write your order for the renewal, and in the last copy sent on the old subscription we again enclose a similar blank.

When we first notify you that your subscription has expired you should send your renewal at once. Should you receive a renewal blank after having sent your order for renewal, please disregard the notice. Owing to the fact that our circulation is growing so very rapidly we are obliged to make up our lists several days in advance of publication day, hence orders for change of address must reach us not later than Monday of any one week in order to become effective with that week's issue. New subscriptions which are received by us on or before Wednesday of any week will begin with that week's issue.

Kansas Farmer Special Offers.

The following combination offers are made as suggestions to our subscribers. If this list does not contain what you want write us. We guarantee the lowest publishers' price, postpaid to any address in the United States on any book or magazine published in the United States.

Remittances made for these combination offers can not apply on back subscription accounts.

Special Offer No. 1.

The Great Magazine Bargain of the year. A saving of 40 per cent on the publishers' prices.

Review of Reviews.....	\$3.00
Woman's Home Companion.....	1.00
Success Magazine.....	1.00
The Kansas Farmer.....	1.00
Regular price.....	\$4.00

Our Price \$3.75

Special Offer No. 2.

Another great offer which includes Country Life in America, the most beautiful magazine published.

Country Life in America.....	\$4.00
The Garden Magazine.....	1.00
McClure's Magazine.....	1.00
The Kansas Farmer.....	1.00
Regular price.....	\$7.00

Our Price \$5.35

Special Offer No. 3.

Campbell's Manual Soil Culture.....	\$2.50
The Kansas Farmer.....	1.00
Regular price.....	\$3.50

Our Price \$2.50

Special Offer No. 4.

Metropolitan Magazine.....	\$1.50
Reliable Poultry Journal.....	.50
Weekly Capital.....	.25
The Kansas Farmer.....	1.00
Regular price.....	\$3.25

Our Price \$2 00

Special Offer No. 5.

Review of Reviews.....	\$3.00
Success Magazine.....	1.00
The Kansas Farmer.....	1.00
Regular price.....	\$5.00

Our Price \$3.00

Special Offer No. 6.

Vick's Magazine.....	\$.50
Green's Fruit Grower.....	.50
The Kansas Farmer.....	1.00
Regular price.....	\$2.00

Our Price \$1.50

Special Offer No. 7.

The American Magazine.....	\$1.00
Review of Reviews.....	.50
Woman's Home Companion.....	1.00
The Kansas Farmer.....	1.00
Regular price.....	\$3.50

Our Price \$3.75

Special Offer on Dailies.

The Kansas Farmer one year and any one of the following dailies for the price named.

Topeka Daily Capital.....	\$4.50	Kansas City Daily Star and Times.....	\$5.50
Topeka Daily State Journal.....	4.60		

Special Offer on Weeklies.

The Kansas Farmer one year and any one of the following weeklies for the price named below:

Breeders' Gazette.....	\$2.00	Inter-Ocean.....	1.25
Scientific American.....	4.00	Western Swine Breeder.....	1.75
The Commoner.....	1.60	American Swine Herd.....	1.00
Hoard's Dairyman.....	1.60		

Special Long Time Offer.

The regular subscription price of THE KANSAS FARMER is One Dollar per year. Some prefer to take a cash discount by paying for a longer time in advance. To meet the views of such we will send:

Two years' subscription, in advance, to one address.....\$1.50
or, five years' subscription, in advance, to one address.....\$3.00
or, subscription for life, in advance.....\$9.00

We will accept as payment for all arrearages and one or more years in advance, your check, your note, postage stamps, or currency, which ever best suits your convenience.

Address THE KANSAS FARMER CO., Topeka, Kans.

for exhibition and display. Just now the products of the farm, field, garden, and orchard present some of their best specimens. Sheaf exhibits of alfalfa, timothy, clover, grains, and grasses of all kinds should now be collected for exhibition.

Good farmers who are patriotic and public-spirited citizens are expected and urged to now heed the timely suggestion of getting ready for the fairs.

Miscellany

Cesspools.

DR. S. J. CRUMBINE, SECRETARY KANSAS STATE BOARD OF HEALTH.

Numerous inquiries have been received by this department concerning the cesspool method of disposal of house sewage. The questions involve the following propositions, viz.:

1. Does the uncemented cesspool menace the purity of the neighboring ground-water supply used for domestic purposes?

2. If so, how may a cesspool be constructed so as to be sanitariously safe?

3. Should abandoned wells be used as cesspools?

4. What are the dangers, if any, from the open-vault cesspool?

The first proposition must be answered in the negative. Naturally, the degree of pollution of a ground-water supply depends upon the nature of the

fore it is asserted that, while a newly constructed cesspool will for a time adequately filter or purify the sewage in a comparatively short distance, the actual distance in which purification takes place is increased in direct proportion to the length of time it has been in use, assuming the sewage to be constant and similar in character.

The second question is a pertinent one, in that the cesspool seems to be a necessity in the towns and cities that are without a sewage system, for the modern house requires some system of sewage disposal. This may be accomplished by the construction of a water-tight cesspool from four to six feet wide and eight to ten feet deep, with several drains of perforated tile near the top and running in different directions and placed immediately below the frost line. Such a cesspool would operate in the nature of a septic tank, much of the organic material being broken up by anaerobic bacterial action, the liquid portion of the sewage draining away through the perforated tile drains, making a fine system of subirrigation for grass, trees, etc., and at the same time protecting the water-bearing stratum from pollution.

Prof. William C. Hoad, the Board's sanitary and civil engineer, has kindly drawn plans for a sanitary residential sewage-disposal plant, which are herewith reproduced. It is confidently hoped that these plans may be generally adopted throughout the State, particularly in those towns located in the

water-tight, and the inlet and outlet pipes should be set accurately to the elevations shown. The tipping tray in the dosing chamber can be made by any tinner, while the automatic flushing siphon, which may be used in place of the tipping tray if a somewhat better and more permanent form of construction is desired, can be secured from the manufacturers of automatic flushing appliances.* Whether the flushing siphon or the tipping tray is used for flushing the sewage out into the distribution pipes, the device should be tested after being set in position, to make sure that it is in good working order.

The connection from the house to the septic tank should be of four-inch vitrified clay pipe with bell and spigot joints, carefully laid to a uniform grade, and having the joints well filled with cement mortar. This careful cementing of the joints is particularly important in case the house connection is carried through a grove of trees. The pipes for the distribution system should be sound, hard-burned, three-inch agricultural drain-pipe, in foot lengths. They should be laid from a foot to 18 inches below the surface of the ground, and should be laid on a grade of 3 inches to 100 feet. The pipes should be carefully laid so that the ends match. The matter of grade or "fall" should receive careful attention, since, if the grade be too great the lower end of the pipe will receive more than its fair proportion of sewage, while if the grade be too

frequency depending largely upon the character of the sewage. The sludge taken from the tank at these cleaning periods is relatively small in amount, and may be best disposed of by running it into a trench or furrow and covering it over with soil. This cleaning out should be done in the fall of the year, if possible, as at this season the sludge in the tank possesses less odor and is less objectionable to handle than at other times.

Particularly for those parts of the State where the rainfall is so small that the water of the sewage, as well as its fertilizing constituents, has an appreciable value, the disposal scheme outlined above may have a considerable economic as well as sanitary value. It is quite possible by this method to maintain in the driest region a large, well-fertilized and well-watered lawn. The process should be carried on entirely without odor, though, of course, the septic tank should be located at some little distance from the house—say a hundred feet or more, if possible. Particularly the disposal plant should not be near to any open well which is used as a source of water supply.

Third. The use of abandoned wells as cesspools is an extremely dangerous practise, as the sewage is discharged directly into the water-bearing stratum. Certainly there is no argument necessary to support the contention that under no condition should an abandoned well be used as a cesspool or sewage discharged directly into water-bearing stratum.

Fourth. The dangers from the open-vault cesspool include all those of the deep cesspool, and in addition thereto it affords a breeding- and feeding-place for the house-fly, and the very great and real danger of flies carrying infection from such places to articles of food and drink. It is true that the distance to ground-water is greater and therefore a greater degree of filtration purification is obtained than in the deep cesspool, but, on the other hand, the opportunities of direct infection by the fly are so great and numerous as to very greatly outweigh the evils of the pollution of the water.

In many of the smaller towns of this State the cesspool is coming to be a very serious menace to the health of the community. During the past year there is good reason to believe that in several instances the local epidemic of typhoid fever might be attributed to the pollution of the common ground-water supply by the discharge of the contents of cesspools directly into the water-bearing stratum. Individuals and communities are warned of the danger of this practise, and cities are urged to pass such ordinances as will at least regulate the cesspools in accordance with the above suggestions.

The Where of Wheat.

BY F. D. CORBURN, SECRETARY KANSAS STATE DEPARTMENT OF AGRICULTURE, TOPEKA.

In 1900 the yield of wheat in Kansas was sixty per cent greater than that of any other State, and but little less than one-sixth of the total wheat crop of the United States.

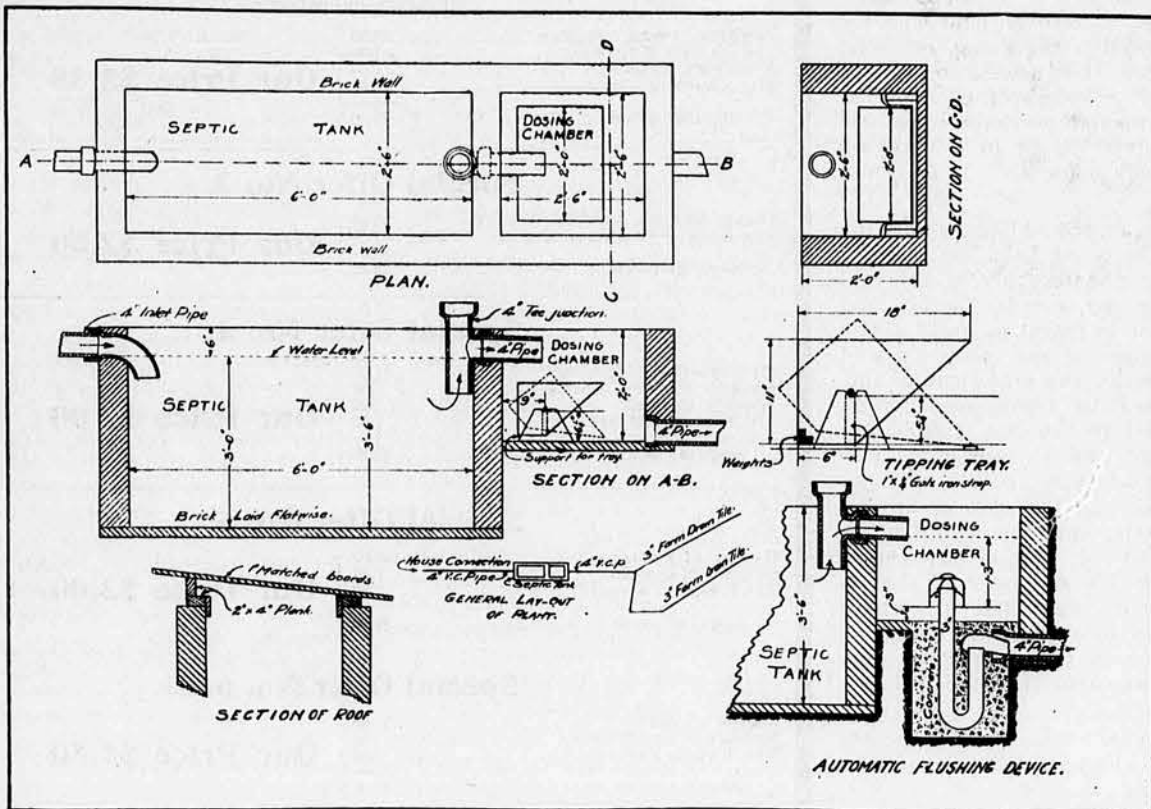
In 1907 Kansas produced more wheat than all New England, Illinois, Iowa, and eleven additional States and territories.

Of the States producing winter wheats, Kansas has been first in output for each of the past five years, and in eight of the past ten years has likewise occupied first place.

Uncle Sam's valuation of the wheat crop of the year 1905 in each of the leading ten States, placed in proper rank, is thus:

Rank.	State.	Val. Year's Wheat.
1.	Kansas.	\$54,670,784
2.	North Dakota.	52,179,900
3.	Minnesota.	51,428,896
4.	Nebraska.	31,681,718
5.	South Dakota.	29,569,432
6.	Indiana.	28,988,200
7.	Ohio.	26,402,122
8.	Illinois.	24,260,783
9.	Pennsylvania.	24,238,784
10.	Missouri.	22,137,647

It will be noted that the combined value of the wheat in the two States last named amounts to considerably less than that of the Kansas crop.



soil into which the sewage discharges. If the soil is a close sand or clay, the filtration of the liquid portions of the sewage would be slow and a greater degree of purification obtained than if the soil were a loose sand and gravel, permitting the cesspool to be rapidly emptied with comparatively little filtration directly into the water-bearing stratum. So, also, if there is an intervening stratum of clay or rock and the water-bearing stratum, there might be an impervious barrier to the sewage reaching the water below such formation. It must be borne in mind, however, that the piercing of such presumably impervious stratum in boring or digging a well, and the constant possibility of a natural fault or fissure, subjects such barrier to a doubt, or at least indicates the possibility of the sewage finding its way to the underlying water. It seems, therefore, that the only safe cesspool in a community that uses the underground water as its source of supply is the cemented, water-tight one.

It has been proven that sewage from cesspools will in time percolate over 200 feet horizontally, and it must be self-evident that as time goes on the area of infection of the surrounding soil constantly increases; there-

valleys where the ground-water supply lies close to the surface.

NOTES ON A RESIDENTIAL SEWAGE-DISPOSAL PLANT.

The disposal plant shown in the drawing is planned for an ordinary residence, and is designed to treat the liquid wastes from the kitchen sink, bath-room, laundry, and all other waste water coming from the house. The principle of purification employed is that of the septic tank followed by subsurface irrigation. The sewage first enters the septic tank, where suspended matter is held until it is disintegrated by the intense bacterial activity in the tank. The clarified effluent then flows out into the dosing chamber where, by means of either the tipping tray or the automatic siphon (depending upon which device is used) it is flushed out into the distribution pipes of the subsurface irrigation system. Here the sewage trickles out through the open joints of the pipes into the surrounding soil, where it becomes food material for the plant-life of the lawn or field.

The drawing shows a tank built of brick, though it could be constructed of either stone masonry or concrete just as well. The tank should be carefully plastered on the inside so as to be

small the upper end will receive too much. The length of this three-inch pipe should be proportioned according to the nature of the soil. If the soil is open and sandy, approximately 200 feet is sufficient for the sewage from an ordinary residence, while if the soil is of a closer texture 300 or 400 feet will be necessary. The system is not well adapted to very tight and retentive clay soils, though it has been used successfully in soils of this character.

A plain board roof can be built over the tank, as shown in the drawing, a trap-door being left by which the interior of the tank may be inspected. Or, if a more permanent form of construction is desired and can be afforded, the walls of the tank may be made thicker, and the whole structure arched over and covered with earth. In this case, however, a large manhole should be left, through which the operation of the tank and dosing chamber may be inspected, and by means of which the tank may be cleaned out.

It should be the expectation that once in from one to four or five years the tank will require cleaning out, the

*A three-inch siphon, arranged to discharge under a head of fifteen inches of sewage, can be purchased of the Pacific Flush Tank Company, of Chicago, for fifteen dollars.

In the ten years ending with 1907, Kansas raised more wheat, hard, soft, winter, and spring, than any other State, or an aggregate of 730,609,479 bushels. This far exceeded the yield of her nearest competitor, and was worth at home \$446,758,791.00.

The Government rates Missouri, California, and Michigan among the crack winter wheat-producers of the world, but in 1907 Kansas raised more than was raised by those three States together.

Much of the Kansas wheat goes to mills in other States for mixing with and toning up the products made from the famous soft wheats of the Northwest.

Here are the annual yields of winter wheat in two Kansas counties in the five years ending with 1907:

	Bushels.
Barton County—	
1903.	4,869,054
1904.	3,414,671
1905.	4,099,335
1906.	4,105,024
1907.	2,748,320
Total.	19,236,404
Sumner County—	
1903.	3,803,760
1904.	3,827,642
1905.	2,343,654
1906.	4,390,665
1907.	1,908,949
Total.	16,274,670

The acreage of wheat in Kansas in 1907 was more than the entire area of Massachusetts, New Hampshire, or of Vermont; greater than the land surface of Maryland, and more than the land areas of Rhode Island, Delaware, Connecticut, and Porto Rico combined.

Official statistics annually gathered by the State Board of Agriculture reveal that in 1887 the area of wheat in Kansas was 1,373,915 acres; in 1897 it was 3,444,364 acres, and in 1907, 7,235,283 acres—the largest ever recorded, and nearly 40 per cent of the State's cultivated area.

In 1901 one Kansas county (Sumner) was credited with a yield of 6,812,102 bushels of wheat, or more than was produced the same year in the whole State of Texas, or in North Carolina, or in any one of the twenty-two other States and territories, and exceeding by over 1,000,000 bushels the aggregated wheat of New England, Mississippi, Alabama, New Jersey, Nevada, New Mexico, and Wyoming.

Kansas raised six wheat crops larger than that of 1907, but no other wheat crop had so great a value—\$56,787,511.85.

The year 1907 was not one of her biggest in that line, yet Kansas raised more wheat than California, Oregon, Missouri, Arkansas, and Tennessee.

According to the year-books of the United States Department of Agriculture the four largest crops of wheat in America were matured in Kansas, as follows:

Year.	Bushels.
1901.	99,079,304
1903.	87,249,557
1906.	82,488,655
1906.	81,830,611

The fifth largest output was 80,102,627 bushels, by Minnesota, in 1901.

The records of the State Board of Agriculture show that in the five years ending with 1907, Kansans put in their bins something more than 400,000,000 bushels of wheat, worth on the farms where grown, over \$269,000,000.

The diagram below shows the relative aggregate productions of wheat by the leading States as named, and the total number of bushels for each, for five years, 1902—1906, inclusive, compiled from the year-books of the United States Department of Agriculture:

	Bushels.
Kansas.	356,928,238
Minnesota.	346,985,082
North Dakota.	325,524,058
Nebraska.	226,629,249
South Dakota.	208,871,692

Other States grow winter wheat, but the unapproachable specialty of Kansas is her hard winter wheat, and in its annual production the State has led for years, to such extent, in fact, as to be well-nigh monopolistic, and the flour from this is superior to

others, whosoever made in America, and conceded equal to those of Hungary.

The wheat grown in Kansas in twenty years ending with 1907, amounted to 1,092,360,595 bushels, with a farm value of \$662,909,719, and "whosoever will may come!"

Agricultural Colleges

AS SEEN BY WM. LOUDEN.

William Loudon, of Fairfield, Iowa, was selected by Governor Cummins of that State as one of the three men to represent the State of Iowa in the conference called by President Roosevelt, to discuss the conservation of the national resources of the country. Mr. Loudon was formerly a farmer, but is now head of the Loudon Machinery Company, of Fairfield, Iowa. He is one of the members of the committee of three of the Iowa Manufacturers' Association on Industrial Education. He has given this subject extensive study—an author of considerable note, intensely interested in the matters which were the chief consideration of the conference at Washington.

As a successful farmer and manufacturer, Mr. Loudon is interested in all that pertains to the agricultural resources of the country. He is an enthusiastic friend of agricultural and industrial schools, and believes they should be of vital interest to farmers.

EDUCATION ESSENTIAL IN EVERY BRANCH OF HUMAN ENDEAVOR.

In an address delivered at the Iowa Manufacturers' meeting at Council Bluffs, Mr. Loudon said:

"It is a well recognized fact that a special education is essential in every branch of human endeavor. If a young man wishes to be a lawyer, he should go to law school; if a doctor, to a medical college; if a preacher, to a theological seminary, and so on. A rudimentary education is necessary for all and has been provided for by our public school system. After that, whatever additional branches may be taken up by the few who have the time and money to spare, there should be provided for the many a practical education, which will properly fit them for the active duties of life. In this government the majority is supposed to rule, hence the importance of educating the masses. It is not possible, however, for everyone to learn everything. Life is too short, and the average capacity and endurance is not sufficient for that. Therefore, selection in the after studies to be pursued has to be made. In my opinion, after the rudiments have been mastered, the studies should be arranged mainly with a view to the avocation which the pupil is to follow, which should, as nearly as practicable, be in line with his natural inclination.

"There is probably not more than one-tenth of the people engaged in what is known as the 'Learned Professions,' but to make a conservative estimate and including persons of leisure, I will call it one-fourth. This leaves three-fourths of the entire population engaged in the business of agriculture, mechanics, arts, housekeeping and kindred occupations. If those engaged in these occupations are to have as good an education in their respective lines as those engaged in the professions, you can readily see what will be required. The general idea appears to be that persons engaged in these avocations do not need to be as well educated as those engaged in the professions; in other words, that almost anyone can be a farmer, a me-

chanic, a cook, or general housekeeper without any special preparatory training, or as one has put it, 'the ordinary requirements in this class of work can be easily learned as needed.' This is an utterly mistaken idea. We have to live these things every day

and hour of our lives, and unless we can get them right, everything else will be more or less distorted and wrong.

SOME PROBLEMS WHICH CONFRONT THE MODERN FARMER.

"Fifty years ago probably no one had ever heard of tuberculosis in cattle, but now it is one of the burning questions. Since the passage of the pure food law and the rigid government inspection of meats, the packers have been losing many thousands of dollars by the rejection of carcasses which are affected with tuberculosis. In addition to tuberculosis in beef, there is to be considered also the question of tuberculosis in milk, butter, and cheese, which makes it one of the far-reaching questions of the day.

"These are not only a few of the problems which confront the modern farmer and there are more to come. How is he going to meet and solve these problems? A reliable understanding of the conditions involved and a practical knowledge of how to overcome the difficulties encountered will alone avail. Nature's laws are irrevocable and are never set aside by any one. 'Know How' is the only password, and no one can enter without it.

PESSIMISM AND DISTRUST AMONG FARMERS.

"One of the most distressing signs of the times is the spirit of pessimism and distrust, too prevalent among farmers and laboring men. Some of them seem to think that everyone's hand is raised against them, and that all have conspired to beat them. This is a sure sign of a lack of education. Nothing can be done in this spirit, for one optimist will accomplish more than ten pessimists and will rule them every time. We should look at the dark side of the question for one purpose only, and that is to devise means to better it. It is necessary to look at it for this purpose, and this alone. When the great agricultural, manufacturing, and housekeeping masses get together in earnest, and with an intelligent purpose to improve their condition, they will receive the hearty co-operation and assistance of the learned professions, because what is good for one is good for all.

AGRICULTURAL COLLEGES A STATE AID.

"Agricultural colleges are a rather recent innovation. Fifty years ago the first one in this country was established at Lansing, Michigan, and one week ago its semi-centennial was celebrated in that city, and was considered an event worthy of the presence of President Roosevelt, who made an address which should be read and studied by all. A friend of mine recently said, 'Of all the money the State spends, there is none which begins to yield the returns of that spent for its agricultural college.'

"It is impossible to estimate the work that has been done by colleges—the light that has been shed by them on the important matters in charge. We only know that it has been great, but great as it has been it is but little more than a drop in the bucket to what is needed.

"I have also heard it said that agricultural colleges are too expensive in their operation to be of benefit to the ordinary farmer. If this is so, it is simply a matter of administration, which can easily be corrected in the proper way. It can not affect the principles at stake."

A very valuable book, "Some Interesting Facts on a Homely Subject," has been prepared by Mr. Loudon, which ought to be of interest to every farmer. Our readers can obtain a copy of this book by addressing Mr. Wm. Loudon, Fairfield, Iowa.

An Upper Berth.

A professor in the university of Berlin who came over here a year ago was much surprised the first time when he traveled in a sleeping car to be asked by the porter for his berth ticket. "My berth ticket?" he said; "I have my passport, I have my letter of credit, and I have even in my trunk

my certificate of vaccination; but why the railroad company should want my birth ticket I do not see." "But," said the porter, "I must know whether you have upper or lower berth." "Upper, of course," said the German. "Look at my passport; does it not say, 'well and highly born?'"

American Industries and Chinese Trade.

WU TING-FANG, MINISTER FROM CHINA, BEFORE THE NATIONAL ASSOCIATION OF AMERICAN MANUFACTURERS.

Agriculture is China's most important asset. Corn and millet are grown in the north of China, cotton in the Yang-tse valley, hemp and tea in the Fukien province, and tea in other parts of China. Rice is also grown in the southern provinces, and there are many other products which I need not detail. It is said of our farmer, "Give him a rock and he will turn it into a garden."

But there is one thing that our farmers and agriculturists have great difficulty to contend with. Their implements of agriculture are very primitive and though they are industrious in their farming, still only a few inches of soil on the surface have been fertilized. Now, with the beginning of intercourse and trade with foreign Nations we have learned to know that your implements of farming are superior to ours, and so we have begun to use them.

Thus, you see, trade will grow between China and this country in farm machinery and things of that sort. It is gratifying to say that only a week ago I engaged, on behalf of the Viceroy and Governor of Manchuria, two American professors of agriculture. Their contracts were entered into and in a short time they will proceed to China to help us establish an agricultural school, and to teach us your ways of farming.

CHINA IS BEING MODERNIZED.

Then you must remember that China is not what she was a few years ago. She is being modernized and reforming in every way. With regard to railways there are now, roughly speaking, four thousand miles of railway in operation and there are many more under construction. That is not a very great mileage of railways for a country like China, but of course there must be a beginning. You must remember that China, until twenty years ago, was opposed to railways. Now everybody, from high to low, in China is eager and anxious to have railways constructed and when we are constructing these railways we must come to you for engines, for machinery, and for other things. So there is another class of trade for you.

Then the natural resources of China are almost unlimited. Why, it is reputed that in one province in the central part of China there is enough coal for the consumption of the world for one thousand years. Thus when coal mining is fully developed, there will not be any famine in coal in the world. Then there are gold mines, silver mines, and other mines. All these things create a demand for your implements, machinery, and other things.

Then in the treaty ports of China we have silk mills, we have cotton spinning, and cotton weaving mills and so on, but these are very few, considering the large extent of China. We want more. In order to establish more cotton mills and other manufactories it is absolutely necessary for the Chinese merchants to order materials from abroad. And amongst the western nations I can not think of any nation better than America to come to for such articles.

But in order to develop trade with China it is necessary to remember two facts. One is that the Chinese must know the superiority of your articles. When they do know that, they will be sure to purchase them.

Therefore, in order to develop the trade it is my opinion that you should afford greater facilities for the merchants and traders of China to come to this country, to see and visit your

(Continued on page 705.)

Stock Interests

Best Way to Remove Tusks from Boar.

Please print in your next issue the proper way to remove the tusks from an old boar. A SUBSCRIBER.

Saline County.

The most convenient way that we have found to remove the tusks from a boar is to place a good, strong, inch rope in his mouth and by this means a couple of men can usually hold him in a corner of the pen, while the third with a pair of sharp pincers removes the tusks. R. J. KINZER.

Change in Regulations Regarding Canadian Sheep.

The Department of Agriculture has amended its regulations governing the inspection and quarantine of imported animals so as to require a quarantine of thirty days for sheep imported from Canada for breeding purposes. This action has been taken by amendment 3 to Bureau of Animal Industry Order 142.

The regulations as amended provide that all sheep imported into the United States from Canada for breeding, grazing, or feeding must be inspected at the port of entry by an inspector of the Bureau of Animal Industry, and also must have been inspected by a Canadian official veterinarian and be accompanied by a certificate signed by him, stating that he has inspected the sheep and has found them free from disease, and that no contagious disease affecting sheep has existed in the district in which the sheep have been kept for six months preceding the date of importation. The owner or importer shall present an affidavit that said certificate refers to the sheep in question. Sheep which upon inspection by an inspector of the Bureau of Animal Industry do not show signs of scabies or other disease may be imported from a district infected with scab if such sheep are accompanied by a certificate signed by a Canadian official veterinarian, stating that they have been twice carefully dipped under his personal supervision, or under the personal supervision of another Canadian official veterinarian, in one of the dips approved by the Secretary of Agriculture.

In addition to the lime-and-sulfur and tobacco-and-sulfur dips heretofore authorized, the amendment allows the use of approved coal-tar creosote, and cresol dips.

International Live Stock Exposition Dates Extended—November 28 to December 10, 1908.

The classification, with a few minor changes, will be the same as for the 1907 exposition.

Cattle.—Polled Durham cattle were given a junior and a senior classification.

Carload Classes.—Entries in these classes will close November 21, one week prior to the opening date of the show, and the animals must be in place not later than noon, Saturday, November 28. The animals exhibited will be judged on the following Tuesday and remain on exhibition until December 3, 1908.

Carcass Classes.—A separate classification was adopted for the live animals entered in the carcass classes, the latter to be judged on hoof as well as on the block.

Short-Fed Special Classes.—Additional special inducements will be offered to exhibitors in these classes.

Sheep.—The Hampshire-Down, Dorset, and Lincoln sheep were given increased appropriations.

Sales.—Hereafter all sales of purebred sheep will be conducted under the auspices of the different registry associations; consignments to be accepted only from "International" exhibitors.

Sheep Entries.—In the future, the number of entries will be limited to three head in any one of the ram, and to four in any one of the ewe classes; animals brought in excess of this

number will be placed in such pens as the superintendent of the sheep department may designate.

College Classes.—It was decided to have but one team from each agricultural college take part and go through the entire work of judging instead of two, one for horses and another for cattle, hogs, and sheep, as in the past.

Corn Judging.—The corn-judging contest was eliminated from this show.

Ponies.—Shetland ponies were given a special classification for the 1908 exposition.

Pork Per Bushel of Corn.

A Nebraska correspondent of the Breeder's Gazette reports some of his experience in making pork as follows:

Seeing reports of various feeding tests, regarding the amount of pork made from a bushel of corn, I submit some facts. In the test all weights were taken at the same time and under the same conditions as nearly as possible. Hogs were worth locally \$6 per cwt. at the taking of first weight. On January 29, thirty-nine head weighed 6,790 pounds; on February 10 three head, 510 pounds, were added, making 7,300 pounds of pork put on feed.

Meanwhile the market had so strengthened as to warrant \$6.50 locally and I decided to sell. February 19 forty-two weighed 9,450 pounds; they weighed in at 7,300 pounds, thus making 2,150 pounds of pork.

The cost of production was as follows: 169.65 pounds ear corn at 35 cents, \$59.48; 9 bushels oats at 30 cents, \$2.70; 200 pounds shorts at 90 cents, \$1.80; 200 pounds bran at 80 cents, \$1.60; 175 pounds tankage at \$2.25, \$3.95; total, \$69.53.

Two thousand one hundred and fifty pounds of pork at \$6.50 equals \$139.75. Most of the pork was made with an outlay of \$69.53. Add to this 50 cents advance on an original weight of 7,300 pounds and we have the net profit on this bunch of hogs increased to \$106.72; or 169 bushels and 65 pounds of ear corn fed to these hogs in thirty days (after deducting costs of all other feed stuffs) brought \$166.20. Figuring total value of feed consumed as corn these hogs made nearly 11 pounds of pork per bushel of corn.

In January, 1908, I conducted a similar test with the same sort of hogs and made 12 pounds of pork per bushel of corn, but with corn at 50 cents and up and hogs a scant \$4 the balance was on the wrong side of the sheet.

These hogs were all Poland-Chinas and were the culls that I considered unfit for breeders. While 11 and 12 pounds of pork may be better than an average, I am sure I could do better with my top pigs as the growthy best-responders are those cut back for the trade in breeding stock.

I aimed to feed only what corn hogs would clean up twice a day. Oats were fed as a change. Bran and shorts with tankage were fed in slops at noon. These hogs were fed a limited amount of choice alfalfa hay, the only thing not charged to them. This, however, is offset by a few fall pigs which insisted on feeding with them.

Tick Eradication Resumed.

The Bureau of Animal Industry of the United States Department of Agriculture is resuming active operations for the eradication of the cattle ticks which prevail in the southern part of the country and transmit the contagion of Texas fever of cattle. Its men are being sent into the field and preparations are being made to push the work of extermination vigorously during the warm weather, when the ticks are most active.

Since this work was begun, two years ago, an area of about 56,000 square miles, or almost the size of the State of Georgia, has been freed from the ticks. As a result the quarantine on Southern cattle has been either modified or entirely removed from this area. Last year work was done to a greater or less extent in the States of Virginia, North Carolina, South Carolina, Georgia, Alabama,

Tennessee, Kentucky, Missouri, Arkansas, Oklahoma, Louisiana, Texas, and California, and it is proposed this year to continue in the same States with the addition of a small portion of Mississippi. Most of the work has been and will continue to be done in sections contiguous to the quarantine line, the object being to push the line farther south from year to year; but encouragement is given to local work in any part of the quarantined district in the assurance that when any considerable area is rendered tick free it will be released from quarantine.

The work is being done by cooperation between the Federal Government and the State and local authorities. Congress has appropriated \$250,000 for the year beginning July 1, and it is expected that the States and counties where the work is carried on will duplicate this sum. The committee on appropriations of the House of Representatives expressed itself very strongly to the effect that the States should bear a reasonable share of the cost and that the Federal work should be mainly confined to States where cooperation is received.

Various methods for exterminating the ticks are used, including transferring the cattle from pasture to pasture at suitable intervals, and dipping, spraying, and hand dressing the cattle with oil and oil emulsion. In sections where there are large herds and large ranches dipping on a large scale is practised, either alone or in connection with pasture rotation, while in other sections where the cattle on some farms frequently consist only of a cow or an ox team, hand dressing with oil is found to be the only practicable method.

The damage caused by the ticks and the benefits to follow from their eradication are not generally appreciated. It is estimated that the Texas-fever tick is responsible for about \$40,000,000 of loss annually to the people of the infected country, and that it also lowers the assets of the South by an additional \$23,250,000, making the enormous aggregate of \$63,250,000. To wipe out this heavy loss is the object of the work now under way, and the results already accomplished leave no doubt that success is possible, though a number of years will be required for the completion of the undertaking. Much depends upon the cattle owners who can either hasten or retard progress according as they cooperate or refuse to assist in the work.

Literature giving full information as to the ticks, the disease which they transmit, and methods for their eradication has been issued by the Department of Agriculture and will be supplied free of charge on application to the Chief of the Bureau of Animal Industry, Washington, D. C.

Field Notes

LIVE STOCK REPRESENTATIVES.

L. K. Lewis.....Kansas and Oklahoma
A. L. Hutchings.....Kansas and Nebraska
Geo. E. Cole.....Missouri and Iowa

Hayes' Good Shorthorn Sale.

H. E. Hayes' sale of Shorthorn cattle at Olathe, Kans., Thursday, June 11, was one of the best of the year. Although the prices received could be considered good, in no case did animals sell above their value, and in a number of cases they sold considerably below. Mr. Hayes' offering was an excellent one, and was full of attractions, nearly one-half of his consignment was straight Scotch, and the remainder was Scotch-tops, with only a few outcrosses. The cattle were presented in the pink of condition and in quality, and breeding strongly sustained Mr. Hayes' reputation as a breeder.

After looking over the offering, and the cattle retained in the herd all agreed that Mr. Hayes had made about an even divide of the good ones, and this was appreciated by the buyers, of which there was a number present from several different States. A number of the good ones remained in Kansas. H. M. Hill, of LaFontaine, bid off the fine Victoria cow, lot 1 of the catalogue, for \$225. No. 4, the March Violet heifer, went to J. F. Stodder, of Burden, for \$105. The sale was topped in both the cow and bull divisions by Missouri men: E. L. Mear, of Lamar, Mo., paying \$365 for Norwood Jennie Lind, by Red Knight 187186. She sold

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with a big bull calf at foot by Lord Banff 2d.

The next highest price on females was paid by D. J. Griffin, of Belton, Mo., for the Hanna-bred cow, Ingle Queen, with a fine heifer calf at foot by Prince Royal. She was a bargain at \$310.

The bull sale was topped by C. E. Lankford, of Creighton, Mo., who secured the Orange Blossom, Cumberland's Last bull for \$200, which was much below his value. H. H. Grimes, of Belton, Mo., paid only \$140 for the big, fine Scotch bull, King Cowslip by Imp. Lord Cowslip. Colonels Bellows, Harriman, and James did the selling in their usual effective manner.

The totals, averages, and a complete list of the sales follow:

	Average.
9 bulls.....	\$920.00 \$102.22
29 females.....	4,365.00 159.83
38 head.....	5,555.00 146.16

BULLS.

Lot 29—Cumberland, 1 year, by Cumberland's Last, C. E. Lankford, Creighton, Mo., \$200.00

Lot 30—Commodore, 1 year, by Lord Banff 2d, John Hyde, Lenexa, Kans., 120.00

Lot 31—Spartan Champion, 1 year, by Prince Imperial 2d, A. L. Sims, Mt. Vernon, Mo., 75.00

Lot 32—King Cowslip, 3 years, by Lord Cowslip, H. T. Grimes, Belton Mo., 140.00

Lot 34—Scottish Beau, 1 year, by Lord Banff 2d, W. R. Brown, Olathe, Kans., 130.00

Lot 35—Collynie's Mariner, 1 year, Frank Kelley, Olathe, Kans., 65.00

Lot 36—Roan Lad, 1 year, by Lord Banff 2d, 75.00

FEMALES.

Lot 1—Victoria of Meadow Farm 4th, by Baron Goldust 3d, H. M. Hill, LaFontaine, Kans., \$225.00

Lot 2—Sinnissippi Lustre, by Lord Banff 2d, W. O. Rule, Ottawa, Kans., 170.00

Lot 3—Norwood Jenny Lind, by Red Knight, E. L. Mear, Lamar, Mo., 365.00

Lot 4—Choice Violet, by Choice Goods Jr., J. F. Stodder, Burden, Kans., 105.00

Lot 5—Ingle Queen, by Ingle-side, D. J. Griffin, Belton, Mo., 310.00

Lot 6—Lady Dorothy, by Lord Banff 2d, Dr. A. C. Berry, Unionville, Mo., 140.00

Lot 7—Red Lady 5th, by Prince of the Butterflies, E. L. Mear, 205.00

Lot 8—Lavender Secret, by Lavender Viscount 2d, W. A. Hasebrook, Bladen, Neb., 200.00

Lot 9—Jenny Lind A, by Lord Banff 2d, C. S. Nevius, Chiles, Kans., 160.00

Lot 10—Rose Victoria, by Lavender Champion, C. S. Nevius, 150.00

Lot 11—Golden Lady, by Imp. Mutineer, J. F. Stodder, 100.00

Lot 12—Miss Lancaster, by Imp. Mutineer, Dr. O. O. Wolf, Ottawa, Kans., 100.00

Lot 13—13th Elder Lawn Mary, by Gallant Knight, D. J. Griffin, 205.00

Lot 14—Glenwood Lenora 2d, by Gloster, C. S. Nevius, 250.00

Lot 15—Miss Josie B 3d, by Laird of Linwood, D. J. Griffin, 200.00

Lot 16—Louise, by Royal, D. J. Griffin, 300.00

Lot 17—Dorritt's Lavender, by Lavender Dorritt, D. J. Griffin, 140.00

Lot 18—Advance Fern Third, by Advance Guard, W. O. Rule & Son, Ottawa, Kans., 165.00

Lot 19—Scotch Beauty, by Imp. Achroie Style, D. J. Griffin, 180.00

Lot 20—Duchess Alice, by Alice's Prince, W. O. Rule, 115.00

Lot 21—British Beauty, by British Lion, W. O. Rule, 105.00

Lot 22—Wilhelmina, by Lord Banff 2d, E. L. Mear, 80.00

Lot 23—Adella, by Lord Banff 2d, D. J. Griffin, 80.00

Lot 24—Alice, by Admiral, Bert McMillen, Blanchard Iowa, 85.00

Lot 25—Banff's Lilly 2d, by Lord Banff 2d, E. L. Mear, 145.00

Lot 26—Agnes 14th, by Lord Banff 2d, Berkey Bros., Louis-berg, Kans., 105.00

Lot 27—Agnes 15th, by Lord Banff 2d, T. E. Kaufold, Blackwell, Okla., 80.00

Lot 28—Scotch Bloom, by Lord Banff 2d, Bert McMillen, Blanchard, Iowa, 75.00

Extra—Cow—E. L. Mear, 95.00

Mr. Ola Nordstrom, owner of the Spring Creek herd of Duroc-Jersey hogs, is one of the most popular young breeders of Durocs in Northern Kansas. The spring pigs and bred sows he is offering for sale elsewhere in this paper, are of the right sort. They are

typical Durocs, well grown in good breeding condition, not over fat, just the kind and in the best of condition to give satisfaction to those that buy them. The breeding sows in this herd are from the Top Notcher, Improver, Kant Be Beat, and Wonder families. Among the good ones are Ravens Pride 63145, sired by Red Raven dam Toust's Pride 120040 by Kant Be Beat, Lilly Belle 125118 sired by Parker Mc dam Miss Beo. 160557 by Kamhio Chief, and Rosa 5th 145874 sired by S. S. Wonder. One of the best fall show pigs we have seen this year was out of the last named sow, and sired by Ravens Pride 63145, one of Mr. Nordstrom's herd boars. This pig we have just heard has been sold at a long price to one of the best Duroc breeders in Kansas, which speaks well for the Spring Creek Durocs. The spring pigs and bred sows Mr. Nordstrom is offering for sale elsewhere in this paper are good ones. Write to him for prices.

The Linscott Jerseys.

R. J. Linscott has every reason to be proud of his Jersey herd which he has gathered together at Holton, Kans. One of the cows in this herd was bred by Mr. Linscott and made the champion milk record for 1906. In this record she gave 396 pounds in seven days, 1,491 pounds in 30 days, from which was made 91 pounds and 8 ounces of butter.

In the KANSAS FARMER issue of May 28 was an article stating the situation in this State in regard to the scarcity of specially bred milk cattle, and the fact that farther East pure-bred Jersey and other bull calves were sold for veal. Mr. Linscott has attempted to remedy this condition of affairs so far as one individual may go, and last week he returned from the East with fourteen more Jerseys to add to his herd. In this number were eleven animals imported from the Island of Jersey. It included the great bull Oakland Sultan 78528, by Sultan of Oakland, a famous prize winner on the Island of Jersey who recently sold for \$10,000. His dam was Nuriel 2d 6774, U. C. second over Jersey and winner of other prizes. Oakland Sultan carries the blood of most of the great prize winners on the Island, and if crossed with the Tormentor and St. Lambert's cows which now largely make up the Linscott herd, should produce Jerseys of the highest excellence.

Mr. Linscott also secured a granddaughter of the great Golden Lad and a daughter of Brookhill Fox, who sold at auction about two weeks ago for \$5,000. Another one is a granddaughter of the World's Fair champion prize winner, Loreta D., and of imported Flying Fox. These purchases make Mr. Linscott's herd very complete in representative blood lines that are very close up to the greatest Jerseys in the world. It is his aim to always have young registered bulls of high individual quality and breeding and to sell them at farmers' prices. When a farmer can buy a really good registered Jersey bull, whose pedigree is unquestioned, for \$50 there is no reason why he should continue to use scrubs.

Mr. Linscott has a bargain for some one. He bought two imported bulls for use in his herd but finds that he needs but one now. He offers the other for sale at \$100 and the buyer the choice of the two. This is less money than the animal could be imported for, and is a snap for some one. Read Mr. Linscott's changed announcement in his advertising card and write him your wants.

Morrison's Red Polls.

One of the first things that a stock man and breeder looks for in a pure-bred herd is the breed type and uniform conformation of its individuals. As like as two peas in the pod is what we want. "Why?" Because it tells us that the breeder of that herd has the type of breed in his mind and is breeding up to that type. Animals from such a herd will reproduce themselves in their offspring, which is the real value of any breeding animal.

Such a herd as this we found at Mr. Chas. Morrison & Sons, Phillipsburg, Kans., route 2, and they were Red Poll cattle. We have never seen a more uniform lot of cows and heifers in one man's herd of this breed. They are all Red Polls and all dual-purpose animals, what we want in the Red Poll breed. The matrons in this breed are large and long with great capacity, strong constitutions, and good udder development.

Mr. Morrison has at the head of this herd of grand cows the bull Actor 7781, which is a very large, fine bull—one of the very best of the breed to be found anywhere. In the herd also is Launfal, a good son of the most noted Red Poll bull in England in late years.

Mr. Morrison has for sale a few choice yearling bulls and heifers from this mating which ought to please any Red Poll breeder.

What we have said about the cattle in this herd we can also say of the Poland-Chinas owned by Mr. Morrison. They are the strong boned, large, useful kind—the ones that make money for the feeder.

Any one wishing Red Poll cattle or Poland-China hogs write Mr. Morrison for prices and mention THE KANSAS FARMER.

Pottawatomie Herd of Durocs.

It is a pleasure any time in visiting the hog breeders to find their pigs in dry, clean quarters with plenty of straw for bedding, especially so when the weather has been wet, as it has the past few weeks. The first few weeks of a pig's life is the most important for it is the time that decides his future usefulness. If neglected when young the only place for him is the pork barrel. Too much praise can not be said of the Pottawatomie herd of Durocs owned by J. C. Logan, Onaga, Kans. They were dry, clean, and well grown. Their coats shone like gold in the sun. The good condition of this herd is due to the care and attention of the herdsman, Mr. W. F. Randall, who is a thorough stock man and watches the young pigs from the day they are farrowed

FORTUNES IN FIG ORCHARDS

TEXAS FIGS ARE WORLD'S FAIR PRIZE WINNERS

10 Acres Magnolia Figs Worth 100 Acres Kansas Corn Land

Fig Preserves made at Aldine, near Houston, best known. Figs never fail to bear here. One acre set in Figs and one town lot at Aldine, both \$230. Payable \$10 down, \$10 a month, without interest, no payments when sick. Clear warranty deed in case of death. Single crop of figs more than pays cost of land and lot. Local cash market for fruit. There is nothing that offers a surer and steadier income to the investor under proper management than the cultivation of Magnolia figs. Five or ten acres set out in figs will pay all cost in four years, and yield an annual income thereafter of \$1,000 to \$3,000, quite enough to support an ordinary family. If you can't buy five, better buy less, and even one acre pays as well in proportion to the amount invested. If you want to enjoy life in South Texas under your own vine and fig tree or make a small, safe, profitable investment, better than bonds, savings banks or life insurance, write for particulars. AGENTS WANTED.

E. C. ROBERTSON,

Gen. Mgr., 501 Kiam Bldg.,

HOUSTON, TEXAS

until the day they are sold and go into other herds to be a credit to the breed as well as to the breeder.

At the head of this herd is the boar Worthy Wonder 66407, sired by Parker Mc 29283, out of Ruby Wonder 30044. Worthy Wonder, the dam, is Bright Lilly 2d 61430. This is a boar of great promise. He is large and smooth, showing lots of quality with the right conformation and Duroc type, combined with head, ear, legs, and feet, so much desired in a breeding boar.

Mr. Logan has another good boar in Pottawatomie Wonder 63545, sired by Nebraska Wonder 33927, he by Crimston Wonder 26355, the dam To To 3d 97498.

Mr. Logan has a choice bunch of bred sows from the Tip Top Notcher, Advance Wonder, Orion, and Perfection families. Among the lot are Lincoln Pride 174050, sired by Artherd 28069, he by Tip Top Notcher 20729, dam Village Pride 50492 by Improver 2d 13365. Another beauty is Parker Lilly 25120, sired by Parker Mc 29283 out of Ruby Wonder 30044, dam Bright Lilly 2d 61430.

Another is Logan's Special 164318, sired by Chief Orion 28817 by Orion 2d 28813, dam Red Rose 97768.

With such individual merit and breeding in the herd boars and brood sows as is in this herd, backed up with the judgment and care in handling and feeding by Mr. Randall, Mr. Logan is producing a high class of pigs that will speak for themselves in any company.

Watch the columns of this paper for sale advertisement later in the season.

J. J. Mason's Shorthorns.

J. J. Mason of Overbrook, Kans., breeds Shorthorns, and has one of the good herds in that part of the State. The field man of THE KANSAS FARMER recently inspected his herd and was impressed and pleased with the quality of the cattle that he saw.

Mr. Mason has been breeding Shorthorns for many years and is an excellent judge of good cattle, and while he does not keep a large number, an animal to secure a permanent place in his herd must measure up to his high standard.

The bull Regulus has headed the herd for a number of years, and judging from the quality of his get which we saw he must have been a good individual and a strong breeding animal.

Mr. Mason recently sold him and has purchased at a good price the beautiful Scotch bull Victoria Clipper, who has headed the herd of Everet Hays of Hlawatha, Kans.

Victoria Clipper is three years old, an outstanding individual, and a show bull, having been successfully shown at some of the leading shows in the different States last fall. In color he is a beautiful red, with nice head and horns; he is very symmetrical with lots of style and finish, and should make an ideal mating with the fine class of females Mr. Mason showed us. These are especially good and in every way the kind that pleases.

The matrons of the herd are nearly all red, and almost without exception, have plenty of substance and finish, some of which we will mention are: Jennie Lind by Godoy, a Harris bred bull, and out of Empress of Ravenwood, Wilhelmina, a beautiful Josephine, Lady Mary, Kensington, Maid, and others by such sires as the Lad For me Ferdinand, and Grassland.

Mr. Mason has show material and will fit a herd for the shows this fall that will be hard to defeat. He also has some fancy young stuff, both sexes, from 4 to 6 months old which will soon be ready to sell.

Watch for Mr. Mason's advertisement which will soon appear in THE KANSAS FARMER.

E. L. Linder's Tamworths.

A few years ago when the bacon hog was introduced into the hog centers of the corn belt a great hugh and cry went up from the lard hog breeders "why" because the bacon hog puts his feed into length and depth and not into thickness or lard. In spite of the opposition the bacon hog has steadily grown in favor and the demand is increasing rapidly. The reason for this demand is that bacon is the highest pork product on the market and the bacon hog or Tamworths will farrow larger litters than the lard hogs and raise them. The Tamworths are also known as great rustlers or grass hogs, and will feed up quickly for the market. A Tamworth at 6 months old will weigh 200 to 225 pounds, when it is the best weight for bacon.

Mr. E. L. Linder, Clay Center, Kans., has one of the best herds of Tamworth in the West. This herd is headed by the best Tamworth boar we have seen

in this country. He is very large and smooth, of the correct bacon type—such length, depth, and smoothness without coarseness is rarely found in any hog. Mr. Linder's brood sows are large and smooth, and typical Tamworths. When we saw this herd a short time ago there were a nice bunch of young pigs with these sows. Watch THE KANSAS FARMER for sale advertisements later in the season.

Jackson's Shorthorns and Durocs.

O. L. Jackson, of New Albany, Kans., who breeds Shorthorns and Durocs, and who is a regular advertiser in THE KANSAS FARMER, writes that he has had a good sale on bulls this spring, and has only two left. These two, he writes, are the best of the entire bunch, with quality and breeding to fit them to do service in good herds. They are of servicable age, one is a red and the other a beautiful roan. They are by good sires and out of heavy-milking dams, representing some of the best families of the breed. The prices on these fellows will be right, and if in need of a good young right and if in need of a good young bull write Mr. Jackson about these at once.

Mr. Jackson also writes that his Durocs have never done better and that he has a fine line of young stuff of the very best families of the breed coming on with which to supply his fall trade. He now has some choice males and gilts of servicable age for sale at right prices.

Watch for change of advertisement and a more extended mention of his Durocs, which will appear in THE KANSAS FARMER soon.

Special Bargains in Durocs.

O. L. Jackson, proprietor of the Alfalfa herd of Durocs, located at New Albany, Kans., is making a change in his advertisement in this issue of THE KANSAS FARMER, and we invite the particular attention of our readers who may be prospective buyers to the fine line of stuff that he is offering for sale.

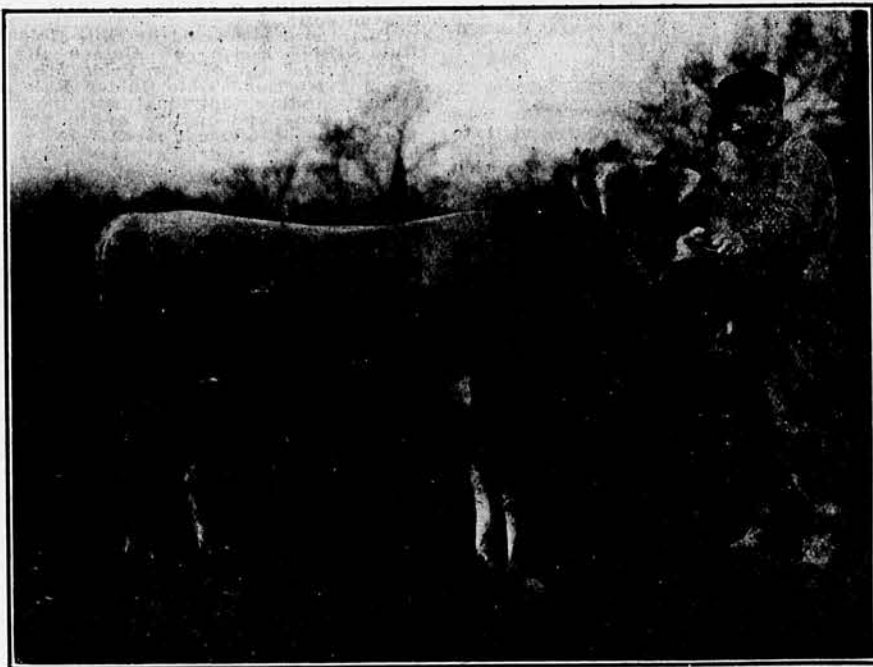
Mr. Jackson, who is a careful and discriminating breeder, writes that he has a fine bunch of spring pigs, the best that he has ever raised; a large part of these came early and are developing in fine shape. Some of these are now ready for shipment, and can be bought at right prices. The fall males that Mr. Jackson is offering, he says, are extra good ones from sires and dams of the richest breeding. Among these are two double cross Ohio Chief boars that are outstanding. In describing these Mr. Jackson says that they will weigh from 150 to 200 pounds, just in good, thrifty condition, are fine cherry color, with extra good head and ear, are well up on their toes, with eyes like a hawk. He is also offering for sale at a price that will move from him one of his herd boars that has done excellent service in the herd. This fellow is a son of Garret's Desoto 33575, he by Desoto 15155, dam, Miss Golden 139384, by Auction Boy 23471, out of Stockton Beauty 67462. He is being sold through no fault of his own, but because Mr. Jackson does not need him. Alfalfa herd of Durocs represents many of the standard families and noted sires of the breed, such as Missouri Wonder, Tip Top Notcher, Parker Mc, Dandy Orion by Orion, W. L. A.'s Choice Goods, Bells Chief 2d, by Bells Chief, Jumbo Jerry, Gold Chief, by Red Chief, and Royal 2d. Everything Mr. Jackson is offering for sale will be priced worth the money, and in ordering from him you will get a square deal. Look up his advertisement. Write or visit him and mention THE KANSAS FARMER.

A. K. Sell Claims September 30 for His Fall Sale.

A. K. Sell, of Fredonia, Kans., proprietor of Fairview herd of Poland-Chinas has claimed Wednesday, September 30, as the date of his fall sale.

Mr. Sell has one of the largest and best herds of Poland-Chinas that part of the State, numbering about 180 head, and representing some of the most popular and up-to-date blood lines. He has been especially fortunate in his spring farrow and has at the present time nearly 90 extra good pigs, the majority of which came early. We were also shown a fine bunch of fall and winter young stuff, which are thrifty, vigorous, and growing like weeds. It is from these, and the earliest of his spring stuff that the offering for his fall sale will largely be taken. There will also be some good mature stuff included.

The chief herd boars in service in Fairview herd are Correct Sunshine and Sells' Spell. Correct Sunshine is an outstanding individual, with excellent natural feeding and fleshing qualities, a boar of good bone and scale and one of the smoothest aged males that we have seen, and above all he is the kind that breeds on. A large part of



Oakland's Sultan 78528 A. J. C. C.

Now owned and for sale by R. J. Linscott, Holton, Kans. Dropped March 17, 1906. Bred by Wm. Ph. Jean, St. Lawrence, Isle of Jersey. Imported August 8, 1907, by G. G. Council, Vandallia, Ill. Solid color, black tongue and switch. A beautiful squirrel grey color, he is one of the best yearlings sold this year, and is backed up by a pedigree as substantial as any one could desire, being sired by Sultan of Oaklands, out of Nuriel 2d. An elegant head and horn, broad muzzle, excellent crest and neck, growing into his withers very smoothly, the withers are very thin, a well sprung heart girth, a strong rib, deep body, strong in loin, level in hip and setting of tail, thin in the flanks, a bull of wonderful finish and quality. Individually he will be one of the hardest to get around, and a glance at his pedigree will explain why. He has for his sire the great show and breeding bull, Sultan of Oaklands, one of the greatest show and breeding bulls of the Island, bought at a long price last year, and is now owned by Pennhurst Farm, Narberth, Pa. A glance at his pedigree will show within his veins flows the blood of the greatest bulls of the breed, out of the queens of the breed. Not a single animal in his ancestry, either sire or dam, but what traces to the most fashionable blood of the Jersey Isle, backed up with show yard prizes, with butter tests, with quality that makes him an individual that can win in any show ring in the two-year-old class. He was selected for the sole purpose of a show and breeding bull, and in this respect will please the man who is looking for such, and judging from his pedigree if like begets like, you may expect him to be one of the greatest bulls that ever crossed the Atlantic. You will like him when you see him. He is good enough to head any herd in the land.

the spring pigs are by him, and are strong in thrift, vigor and quality. Correct Sunshine is richly-bred. His sire is Luster Sunshine, by Ideal Sunshine. His dam, Hoosier Corrector, by the great Corrector and a half sister to Keep On 2d, champion boar at Chicago, 1902. Sells' Spell, who is not yet a year old, is a very fancy individual, and is richly bred. His sire is Spell-binder by Chief Perfection 2d, dam Imps Girl by Impudence. He was bred by Frank Fites, of Roann, Ind., was purchased by Lyd Mathis in dam, who sold him to Mr. Sell.

The matrons of the herd combine size, finish, and breeding qualities, and are by, or trace to, some of the great sires of the breed, such as the mighty Mischief Maker, Meddler's Medal by Meddler, Minstrel by Corrector 2d, Meddler Boy by Meddler, Perfect Challenger by Chief Perfection 2d, Sunshine Mischief by Luster Sunshine, Prince Perfection by Ware's Perfection, Band Master by Meddler, Harmonizer by Ideal Sunshine, Keep Corrector by Corrector 2d, and Correct Sunshine by Luster Sunshine. Nearly all of these sows are raising fine litters, numbering from 6 to 10 pigs.

Mr. Sell has some bargains in fall males and gilts from these matings. Write him about these, also watch for advertising which will appear in THE KANSAS FARMER July 9, and do not forget that Wednesday, September 30, is the date of Mr. Sell's fall sale which will be advertised in THE KANSAS FARMER.

A Great Herd of Polled Durhams.

Adjoining the town of Richland, 18 miles south of Topeka, on the Missouri Pacific, is the fine stock farm of D. C. VanNise, where can be found his great herd of Polled Durhams.

This farm comprises several hundred acres of the finest grazing land, and is well equipped with ample buildings of the most substantial kind and every convenience for caring for his fine herd.

Mr. VanNise is a modest and unassuming man and in a quiet way has been gathering the foundation material for what is now the greatest herd of Polled Durhams in the State, and perhaps in the West.

Mr. VanNise is a showman, and consequently a good feeder, and the fine lot of young stuff which we were shown, while on a recent visit to the farm, were thrifty, vigorous, well grown-out specimens of the breed. Among these are ten extra good young bulls ranging up to ten months old. These are very promising and among them are some show prospects fit for service in good herds.

These bulls are sired by Kansas Boy, Senator, and Belvedere. Kansas Boy has been the chief stock bull in service up to a few months ago; his work has been more than satisfactory, and a number of his get have been consistent winners at some of the leading shows and fairs during the past two seasons. Kansas Boy is by Young Emperor, and his dam is by Prince of Hedge Lawn.

Senator, who has been used some on the herd, is a son of Kansas Boy. The herd is now headed by Belvedere X2712, 195058, by Grand Victor, and out of Blossom, a Harris Victoria cow. Belvedere is an evenly balanced bull, of good bone and scale, evenly covered with thick, mellow flesh, showing great natural feeding qualities, and is of imposing appearance. He was purchased by Mr. VanNise at a long price of J. H. Miller of Peru, Ind., to head his herd, and the quality of his get, together with his outstanding individuality amply justifies the expenditure. His sire, Grand Victor in his 2-year-old form was exported to South America for the consideration of \$1,500. Among the matrons of the herd are Dorothy X by Commander X232, 8th Duchess of Linden X by Commander, Carmen X by Red Thistle Top X1258, 9th Duchess of Linden X by Duke of Rose Pomona 3d X1479, Rosa Belle 2d X by Prince Royal X3735, a number of fancy young females by Kansas Boy. The young bull out of Rosina X and sired by Kansas Boy is a show prospect, and will be fitted for the shows this fall.

Mr. VanNise is an experienced showman, and is fitting two herds, that judging from present prospects will be hard to compete against. The young bulls that Mr. VanNise is offering are the right kind, and any of our readers wanting good ones should investigate this at once. In writing please mention THE KANSAS FARMER.



Belvedere X2712, 195058, at the head of the fine herd of Polled Durhams, owned by D. C. VanNise, Richland, Kan.

October 28 S. A. Hands Will Sell Durocs.

S. A. Hands of Thayer, Kans., proprietor of the Walnut Lane herd of Durocs has claimed Wednesday, October 28, as the date of his fall sale. Mr. Hands is planning to have a choice offering of well grown, fall, winter, and early spring stuff, including a few good proven sows.

Mr. Hands is a careful and discriminating breeder and his constant aim is to improve his herd by adding to it the most popular and valuable blood lines that he can buy. His herd has been headed for some time by an outstanding breeding grandson of Ohio Chief, one of the greatest sires of the breed living or dead.

The chief herd boar now in service in this herd is Orion Chief 72187, a grandson of the great Orion. This fellow is an outstanding good breeding animal, and Mr. Hands will have some choice stuff from among his get to offer at this sale.

The matrons of Walnut Lane herd represent some of the standard families of the breed. Among them are three granddaughters of Mc's Pride with fine litters by Hanley Lad, a son of the great Hanley, and Store Chief, a grandson of Ohio Chief. There is also a very fancy granddaughter of Proud Advance and others of the best breeding.

Mr. Hands held a very successful sale last spring, but expects to surpass this in every way with his fall sale. R. B. Adams & Son of Thayer, Kans., will sell Durocs Tuesday, October 27, the day preceding Mr. Hands' sale. These dates are both claimed in THE KANSAS FARMER. Watch for display and descriptive advertising, preceding these sales.

Orchard Ridge Durocs.

J. J. Baker, of Elk City, Kans., is the owner of Orchard Ridge herd of Durocs, located on his fine farm one mile east of Thayer, Kans., where he is building up and maintaining a strong herd of the utility type, representing some of the best families of the breed. His herd is headed by Tip Topper, a good breeding son of the World's Fair champion Tip Top Notcher.

Tip Topper is a good individual of great bone and scale, with strong prepotent qualities; his work has been more than satisfactory, and he invariably sires large, even litters.

Some of the noted sires and families of the breed, such as Ohio Chief, Top Notcher, Ingomar, Longfellow, Jr., II Climax, Missouri Wonder, and Oom Paul II, are represented through the herd sows, which have been selected for constitution and strong breeding qualities, and are the kind that farrow and rear large, strong litters. Mr. Baker does not make a practice of breeding young and immature stuff, but believes that a sow should have sufficient size and age to farrow strong, vigorous pigs and raise them, consequently the dams of the nice lot of young stuff that we saw are nearly all strong, mature individuals, and are bringing along the good crop of spring pigs in fine shape.

Mr. Baker also has a nice bunch of fall and winter pigs from these matings with which to supply his fall trade, and for his fall sale.

Mr. Baker is a member of the Southeast Kansas sale circuit, and will hold his first public sale Friday, November 13. His offering will be a good one, and will consist of twenty good proven sows, twelve fancy well-grown fall yearlings, and a few springs of early farrow.


Mr. Baker is planning for this sale far enough ahead so that he will have ample time to put every animal in his offering in the best possible shape to do buyers good. Mr. Baker's date has been claimed in THE KANSAS FARMER. Watch for future advertising and plan to attend this sale.

The Star Breeding Farm.

The writer recently paid a visit to the Star Breeding Farm, six miles northeast of Elk City, Kans., of which Samuel Drybread is the proprietor.

Mr. Drybread is a well known breeder of Hereford cattle and Duroc-Jersey swine, and we found his herds doing nicely.

Mr. Drybread has been making some valuable improvements on his fine farm, among which is a 60-acre hog pasture fenced with the best woven wire and well set with the finest alsike and red clover. Mr. Drybread speaks very highly of the alsike for it makes splendid pasture for hogs and



ALFAALFA — \$3298.00

ONE SEASON'S EARNINGS

It will pay every Farmer who reads this "Ad" to write us especially if interested in Clover or Alfalfa growing. We can refer you to a man who made \$3298.00 in Alfalfa last year.

HE WILL TELL YOU HOW IT WAS DONE

We manufacture the machine shown in the cut, it threshes, separates, hulls, and cleans ALL the seed for market. No other machine will do it. You should write us and get our Alfaalfa Booklet FREE. It will give you valuable information. Mention this paper.

BIRDSALL MFG. CO., South Bend, Ind., U. S. A.

IT SETS ON THE GROUND

Indiana Pitless

The most perfect and economical Wagon and Stock Scale made. Write for Prices and Catalogue.

INDIANA PITLESS SCALE CO.

NEW CASTLE, IND. — KANSAS CITY, MO., Station A.

does exceptionally well on low or wet land. We found his fine herd of Durocs in a very thrifty condition, and he assured us that they were getting very little feed but from this pasture.

Mr. Drybread showed us the finest crop of spring pigs we think that he has ever raised; surely for quality, thrift, and vigor they are hard to beat. There are eighty of these and they are largely by Hanley Lad, a strong breeding son of the great Hanley, and chief herd boar at the Star breeding farm. He is assisted by Kant Be Beat Lad by Kant Be Beat, and Star Chief, a grandson of Ohio Chief. The sows represented in this farrow are the large, smooth, prolific kind representing such standard families of the breed as Ohio Chief, Proud Advance, Missouri Wonder, Nelson's Model, King Wonder V, and Oom Paul 2d. Among the spring pigs we saw some very fine young males large enough to ship. These were by Hanley Lad and out of the show sow Cinderella, and some out of Oom Paul 2d, dam by Crimson I Am.

Mr. Drybread has some fine fall males of quality and breeding for sale. Two of these are grandsons of Ohio Chief and Hanley. One is a grandson of Ohio Chief out of a Proud Advance dam, and there are three by Paul Wonder 2d, a son of 2d Climax.

Mr. Drybread is a member of the Southeast Kansas sale circuit and will hold his fall sale at his farm Wednesday, November 11, as per date claimed in THE KANSAS FARMER.

R. B. Adams & Son Sell Durocs October 27.

R. B. Adams, and Son, of Thayer, Kans., have claimed Tuesday, October 27, as the date of their fall sale.

They have one of the choice herds of Durocs in Southern Kansas, and their offering will be a good one consisting largely of well grown fall and winter stuff, including a number of their best proven sows.

Their herd is headed by Ohio Golden Rule 68845, a son of Golden Rule 14101-A and out of Our Pride 5th by I Am Perfection. Ohio Golden Rule is an outstanding individual with plenty of size, bone, and quality, and is proving a sire of unusual merit. He was bred by Watt and Faust of Zenia, Ohio. The young stuff that will go in the sale are largely by him, and they are showing up strong with fancy head and ears, plenty of bone and finish, and good feeding and fleshing qualities.

Among these is a September male by Ohio Golden Rule and out of Kansas Beauty by Royal 2d (Lant Brothers herd boar) that is a show prospect. This fellow will be one of the attractions of the sale and will probably appear at a number of the fairs this fall.

The sow herd is a good one, and a few of them that we will have space to mention are: Maud's Chin by Ohio Chief, with a show litter of eight pigs, by Hanley Lad, a son of the great Hanley, Kansas Beauty by Royal II, Princess Model by Dude Jr., Model Gem by Ladore, Lady Isabel by Dandy Boy, and Pansy Maid by Kansas Prince, he by Ohio King 12179. This sow is very large and fancy and will be one of the attractions of the sale. A number of these sows that we have mentioned will also be included.

Adams and Son have a fine crop of spring pigs from these matings that they are bringing along in good shape, a few of the earliest of these will be included in their fall sale which will be Tuesday, October 27, as per date claimed in THE KANSAS FARMER.

S. A. Hands, of Thayer, will sell Durocs Friday, October 28, the day following Adams' and Sons' sale.

Maple Grove Durocs.

Frank Drybread, of Elk City, Kans., is the proprietor and owner of the Maple Grove herd of Durocs that is fast coming into prominence as one of the good herds in that part of the State.

While Mr. Drybread is comparatively a new breeder, he is not new at the business, for he has handled hogs for a good many years, and surely knows the good ones when he sees them, and in the selection of his foundation stock he has achieved at one step what it has taken other new breeders years to reach.

Mr. Drybread has gone to the foun-

tain head, and from some of the best herds in the State has selected individuals of breeding and quality from which to build his herd. The chief herd boars in service are Crimson Prince 69527 and Chief Jr. 51985, both grandsons of Ohio Chief, one of the greatest sires of the breed living or dead. Crimson Prince is a show boar, and one of the smoothest individuals from this noted family that we have seen and combines strong breeding qualities with plenty of size, bone, and finish.

Chief Jr has great scale and heavy bone and could be made to weigh close to 1,000 pounds, he is also an excellent sire and has exerted a strong influence on the herd. He will be one of the attractions in Mr. Drybread's November sale.

In the selection of his brood sows Mr. Drybread has shown judgment and discrimination, both as to individuality and breeding. The good ones that we saw are many. Some of these are Raven's Best, by Red Raven, Lady Roosevelt by Hunt's Model, Sunlight by Young Orion; this sow has a show litter by Crimson Prince. Then there is Prairie Queen by Kansas Wonder, Miss Auction Boy by Auction Boy, Gould's Choice by Gould's Choice and a granddaughter of Kant Be Beat.

There is show material among these, and they will be fitted, together with Crimson Prince and some of his get, for the fairs this fall.

These sows have demonstrated their ability to farrow and raise good litters, and Mr. Drybread has over 100 pigs that are among the very best that we have seen this year. Fifty of these are of early farrow, and remarkably well grown; from these Mr. Drybread expects to select a large part of the offering for his fall sale. He is a member of the Southeast Kansas sale circuit and the date of his sale is Thursday, November 12, as per date claimed in THE KANSAS FARMER.

Tenneholm Shorthorns.

Adjoining the city of Chanute, Kans., on the west is the fine stock farm of E. S. Myers, proprietor of Tenneholm herd of Shorthorns.

Mr. Myers is an experienced breeder having handled this, his favorite kind of cattle for forty years, and has bred them for thirty.

His farm is equipped with comfortable buildings, large pastures, and every convenience necessary for the comfort and welfare of the good herd of Shorthorns we found there.

The chief stock bull in service is Gladiator 261035, a Duchess of Gloster by Imp. Daydreams Pride, dam Lady Gloster 2d by Lochinvar. He is assisted by Barney 275673, a Cruickshank, by Violet Prince, who heads H. W. McAfee's well known herd; his dam is Butterfly 12, by Vanquish 121425, 2d dam 5th Butterfly of Valley Grove by Thistle Top 33876. Gladiator is a smooth, evenly balanced bull, and although not in strong flesh shows lots of quality. We saw some extra good calves by him which demonstrates his ability as a sire. Barney is a typical Cruickshank, and is doing good service in the herd. A number of standard families are represented by the females, such as Cruickshank, Bates Wild Eyes, Kirklingston, Rose of Sharon, and Young Mary. These are all good milking families, enabling Mr. Myers to cater to the strong and growing demand for young things from heavy milking dams.

Mr. Myers has had a good trade on males this spring, and only has one on hand at the present time of serviceable age. But this is an extra good one, a thick-fleshed, mellow fellow with plenty of scale, bone, and finish and fit to head a good herd. He is a Cruickshank Barmpton bull, his dam, Barmpton Hope, is a half sister to the great breeding bull Barmpton Knight, who now heads T. K. Tomson & Sons' herd. Barmpton Knight was bred by Mr. Myers. This young fellow's sire is Godoy Butterfly by Godoy. Prospective buyers desiring a first class prospect should write Mr. Myers about this bull or go and see him. Mr. Myers is pricing him reasonable.

Please mention THE KANSAS FARMER when writing.

Additional Field Notes on page 711.

Agriculture

A System of Soil Culture.

PROF. A. M. TENEYOK IN THE INDUSTRIALIST.

So far as cultivation is concerned there are three principal steps in the conservation of soil moisture:

1. The soil must be loosened to a considerable depth in order to prepare a reservoir to receive the rain and to carry the water downward into the soil. This is accomplished by deep plowing or disking unplowed lands.

2. The water which is carried downward into the subsoil must be brought back again into the surface soil where the seed is germinating and the roots are growing, and to accomplish this, a good connection must be made between the furrow-slice and the subsoil, and this is the purpose in the use of the surface packer.

3. Finally, in order that the water which is drawn up toward the surface by capillary action may not reach the air and be wasted by evaporation, the upper two to four inches of soil must be kept mellow, in the form of a soil mulch, which is accomplished by frequent cultivation, and this is applicable not only to corn and other intertilled crops, but also to wheat and other small-grain crops.

SYSTEMATIC TILLAGE.

Disking the land before plowing puts the soil of the furrow-slice into better condition to reunite with the subsoil when the furrow is turned over. The smooth, hard furrow bottom, as left by the ordinary plow, is unfavorable to the proper union of the furrow-slice with the subsoil. In order to cause a more complete union of the furrow-slice with subsoil, the bottom of the furrow may be loosened by means of a shallow subsoiling attachment to the plow.

Such a system of culture is intended to favor the conservation of soil moisture, and is thus especially adapted to regions where a limited or irregular rainfall makes the most careful methods of soil culture necessary in order to store and conserve the water in the soil and get the most use from it in the production of crops.

TILLAGE AND FERTILITY.

The principles stated above have been known and practised more or less for a long time and are mostly included in what is known as the "Campbell system of culture." Mr. H. W. Campbell was among the early apostles of "dry-land farming" in the West and perhaps done more to call the attention of western farmers to the necessity and advantage of thorough cultivation of the soil than any other investigator.

The method of culture advocated by Mr. Campbell is in fact simply good tillage and thorough cultivation of the soil at the right time, in the right way, and in a systematic manner.

Good farming pays, everywhere. The writer believes in the practicability of thorough tillage and good cultivation on every farm, and the increase in crops by such farming will more than pay for the extra labor, and in a series of years should leave our farms in a better state of fertility and more capable of producing crops than may result from the careless and shiftless methods of farming which are yet too commonly practised by many farmers throughout the West.

Simple tillage, however, will not maintain the fertility of the soil. In fact, continuous cultivation, as proposed by Mr. Campbell, ought to exhaust the native fertility of soil more rapidly than may result from less intensive culture.

It is the judgment of the writer, after visiting the Pomeroy model farm at Hill City, Kans., upon which an intensive system of soil culture has been carried out for the last six years, under the direct supervision of Mr. Campbell himself, that the soil of this farm is already greatly exhausted in

fertility and will soon become less productive than neighboring land which has been less intensively farmed, unless crop rotation and manuring to maintain soil fertility are practised along thorough culture.

The greatest problem in western agriculture to-day is not how to get larger crops out of the soil for a few years, but rather how to produce paying crops every year and at the same time maintain the fertility and productivity of the land.*

IMPLEMENTS AND METHODS.

It is not necessary to have extra machinery in order to successfully practise the system of culture outlined above. The only implement required or recommended which is not in general use on every well-equipped farm, is the subsurface packer.

The use of the packer is most essential on late spring plowing when the purpose is to plant at once after plowing. It is not so necessary to use the subsurface packer on fall plowing which is not intended to be planted until the following spring, but for sowing fall wheat, if the plowing precedes the sowing by a very short interval, the subsurface packer may be used very advantageously.

When the land is allowed to lie for a considerable period after plowing before the crop is planted, the settling of the soil, together with the cementing due to rain, usually causes the soil to repack and firm-up to a sufficient extent to make a good seed-bed.

The subsurface packer is a hard-running machine and it costs much more to use it than it does to use the common harrow or even the disk-harrow. Thus at the Kansas Experiment Station we have adopted the practise of early plowing whenever it can be done, in preference to subsurface packing, using the harrow immediately after plowing.

However, the principle involved in the use of the subsurface packer is correct, and the lighter the soil and the greater its tendency to remain loose and mellow the more necessary becomes the use of the subsurface packer or similar implement, in order to prepare a proper seed-bed.

Also, in plowing under trash or manure, subsurface packing, by pulverizing the bottom of the furrow-slice, sifts the soil through the coarse trash and causes a better union with the subsoil below, so that the capillary water may be drawn up into the surface soil, whereas, if a heavy coat of stubble or manure plowed under in this way is left without packing or pulverizing, the furrow-slice is apt to dry out and the crop that is growing on the land may be injured by a short interval of dry weather.

By setting the disks rather straight and weighting the harrow, a disk harrow may be used as a substitute for the subsurface packer, resulting in a pulverizing and firming effect at the bottom of the furrow-slice.

Very often, however, good plowing, with the proper use of the common harrow, may largely accomplish the results required in preparing a proper seed-bed.

It is usually advisable to weight or ride the common straight-tooth harrow in order to cause it to stir and pulverize the soil deeper and prevent the "slicing" effect which is apt to result from light harrowing.

DEEP PLOWING.

Some types of soil can be plowed deeper than others, and the writer believes in deep plowing, at least every few years. The deeper loosening of the soil not only takes a larger reservoir to catch the rain, but it gives more room in which the soil bacteria may develop and prepare the plant-food.

It is known that certain bacteria in the soil have much to do with the preparation of the food for plants, and experiments have shown that these bacteria are found largely in the surface

six to nine inches of the soil, or in that part of the soil which is turned with the plow and stirred with the cultivator; thus deep plowing favors the development of the bacteria and the preparation of more available plant-food than is the result from shallow plowing.

It may not be best to plow deep every year; sometimes shallow plowing will give better results, and occasionally it is best not to plow at all. The depth and frequency of plowing will vary according to the nature of the soil, a light or sandy soil requiring less depth of plowing and less frequent plowing than a heavy, compact, clayey or "gumbo" soil.

This fact should be borne in mind, that when the land is plowed deep, it is necessary to reestablish the capillary connection of the soil with the subsoil and prepare a good seed-bed by the methods described above, in order that unfavorable results may not occur from the deeper plowing.

Also, it is not advisable to plow deeper than is usual practise, just previous to planting. Rather, deep plowing should be allowed to lie and weather some time after plowing, before planting.

THE SOIL MULCH.

In the ideal system of culture the purpose is to keep a mellow soil mulch on the surface of the land all of the time, not only during the growth of the crop but also in the interval between harvest and seeding time.

Thus after the crop is planted, the land is kept cultivated with the weeder or harrow in order to break the surface crust and conserve the soil moisture, and following out the same principle, the harrowing or work with the weeder is continued after the grain or corn is up, and during the growing period frequent cultivation is required for intertilled crops.

The principle of loosening the surface soil and keeping a mulch of mellow soil in order to break the capillary movement of the water and prevent its evaporation is well recognized by farmers generally, and is practised to a greater or less extent in the cultivation of all kinds of crops.

DISKING AFTER HARVEST.

After the crop is harvested the cultivation is not discontinued, but the surface of the soil is loosened as soon as possible after the crop is removed, by the use of the disk-harrow, and thus the soil is kept continually in a condition to not only prevent the loss of water already stored in the soil, but also this same condition and mellow surface favors the absorption of rain and largely prevents the loss of water by surface drainage.

The smooth, finely pulverized surface left by continuous light harrowing really defeats the purpose of the cultivation, since soil in such condition will shed heavy rains, causing a waste of water which should have been stored in the soil, and the surface often becomes too fine and compact, preventing the proper aeration of the soil and producing an unfavorable seed-bed condition.

Thus during the interval between crops it is sometimes advisable to use the Acme or the disk-harrow, in order to keep the surface of the soil open and mellow.

HARROWING WHEAT.

The weed-harrow or weeder is probably better adapted for harrowing wheat or other small grain than the common straight-tooth or slanting-tooth harrow. The weeder is somewhat objectionable on account of the wheels.

When the ground is reasonably firm, the common harrow may be used without injury to the wheat.

The writer questions whether it is necessary to continue the harrowing after the wheat covers the ground well, unless heavy rains firm and puddle the soil, destroying the mulch of mellow earth. Usually this will not occur.

In a single trial, wheat was harrowed when it stood five or six inches high and had stood so as to nearly cover the ground, and the mulch thus

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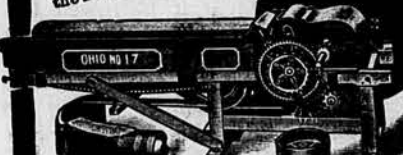
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*Circular Nos. 2, 3, and 5, published by the Agronomy Department of this College and Experiment Station, treat on manuring, fertilizing, and rotation of crops as related to the improvement and maintaining of soil fertility.

produced was still in evidence at harvest time. In this experiment the ground was harrowed twice on the same day. The yield of wheat on the harrowed plot was on the average three bushels per acre above that from the field adjacent, not harrowed.

This experiment, with others, was carried at the North Dakota Experiment Station with spring wheat, and it was observed that wheat harrowed before it had stood much was injured in stand and gave a lower yield of grain than wheat not harrowed.

Wheat or other small grain may usually be harrowed without injury before it comes up, but after the grain is up it should not be harrowed until it has established a good root growth and made considerable top growth.

It appears that even with winter wheat there may be some danger of

large stacks with comparatively little loss. However, haying time is a hard-working, busy time with the farmer, and he may be careless and neglect to stack the hay well or to cover the stacks properly. Rains will come sometimes when they are not wanted and least expected, and some stacks will blow over or wet in, so that the average stacking out of doors is expensive and wasteful.

When alfalfa is put up in a large way with sweep-rakes and stackers, stacking in the field seems to be about the only practical method, but on the average farm where the hay is largely fed to live stock the hay-shed becomes a hay saver, a labor saver, and a profitable investment. Some farmers who have built sheds estimate that the saving of hay and labor will pay for the shed in two

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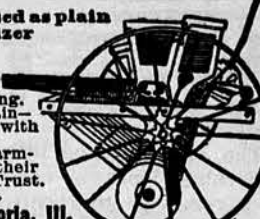
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or thirty-five dollars. Again, many leaves are shattered by the extra handling, which may easily reduce the feeding value of the hay fifty cents per ton, which makes another loss of

by twenty-four by sixteen should hold about sixty tons of well-settled hay, or the annual crop from twelve or fifteen acres of good alfalfa land. A pair of such sheds may be built end

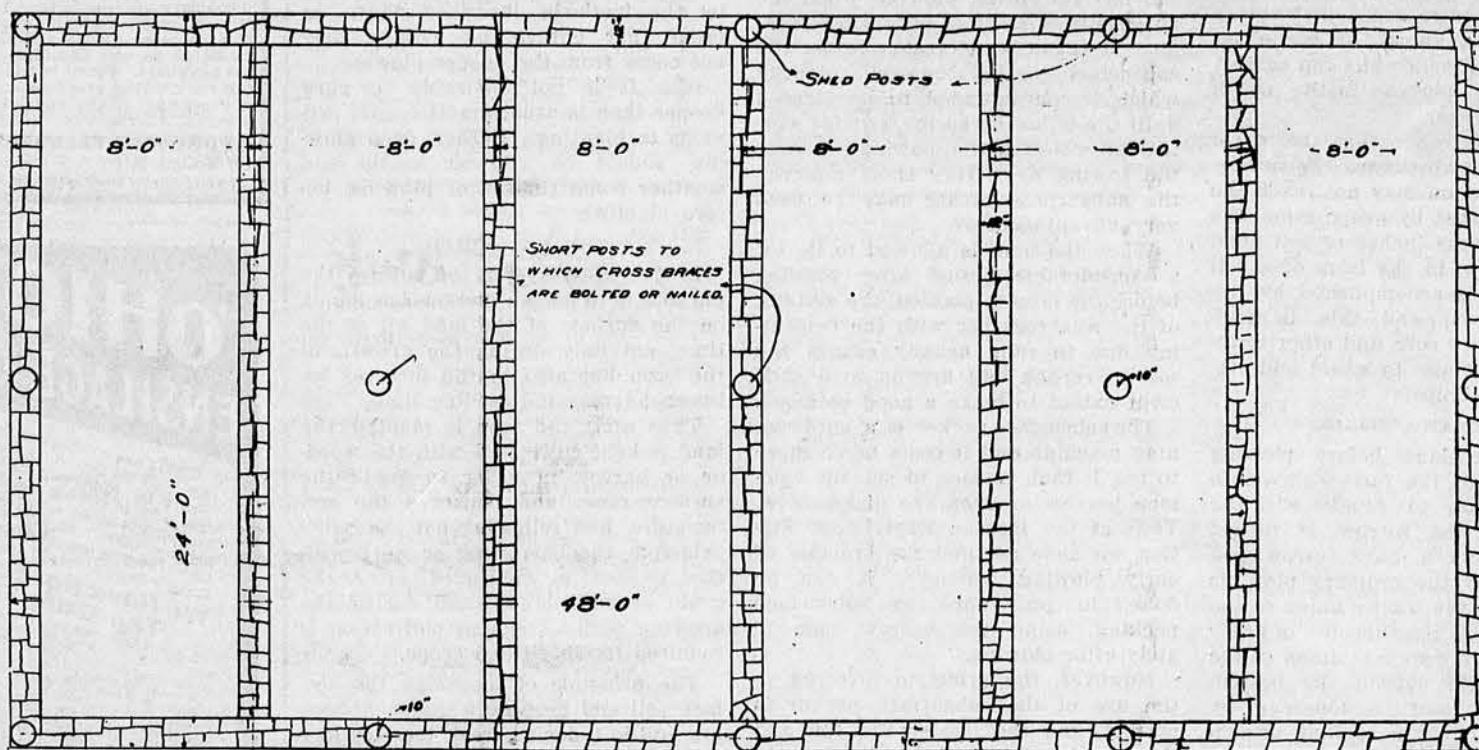


Fig. 1.—Ground plan. (Walls do not extend lengthwise of shed, as shown in plan, but the spaces between cross-walls are left open for ventilation.)

injury to the wheat if harrowed too early in the spring, and the writer would not, as a rule, advise to harrow wheat in the fall.

Experiments in the harrowing of wheat and in the practice of various methods of culture for several crops are being undertaken at the Fort Hays Branch Experiment Station and also at the State Experiment Station at Manhattan.

Making Hay.

A. M. TENEYOK, PROFESSOR OF AGRONOMY.
(Continued from last week.)

HAY-SHEDS.

Attention has been called to the importance of shedding hay, especially alfalfa and clover. By carefully stacking hay and covering the stacks well it is possible to preserve the hay in

years. This may be figuring the value of shedding a little too high.

From Experiment Station reports and from the experience of farmers, the writer concludes that the ordinary loss of hay stored in a shed will be, on the average, 10 per cent less than that of hay stacked out of doors. A shed large enough to store seventy tons of alfalfa will cost about \$420. Ten per cent of seventy tons of alfalfa hay, at ten dollars* per ton, is seventy dollars. If the hay is stacked it must, as a rule, be handled twice in feeding it, while if stored in the shed or barn, one handling may get it to the live stock. The extra handling of the hay will cost at least fifty cents per ton,

*The price of No. 1 alfalfa hay (baled) on the Kansas City market has averaged \$12.50 per ton for the last three years.

thirty-five dollars; or the shed would save \$140 a year. At this rate the original cost of the shed will have been paid for in three years, and a good shed ought to last fifteen or twenty years.

PLAN OF CONSTRUCTION.

On a stock farm it will usually be advisable to build a combination hay-and-feeding-shed. This may consist simply of a main shed for hay with lean-tos for the stock; feeding-mangers should be built on one or more sides of the hay-shed, into which the hay may be thrown. The lean-tos may be closed or open at the sides and ends, as desired.

Forty-eight feet to sixty feet long, twenty-four feet wide, and sixteen feet to the eaves are good dimensions for a single shed, and a shed forty-eight

to end with a driveway between them, the roof being continuous. The hay should be taken in at the end of each shed by a hay fork and carrier.

A hay shed should be well braced and strongly constructed. The system of long bracing, such as is shown in the accompanying figures, gives great rigidity and strength, and is preferable to the method of short bracing commonly practised. The short braces easily work loose and the shed soon becomes "rickety" and unsafe and is apt to blow over in a strong wind.

The roof should be strongly constructed and securely fastened to the posts. Galvanized iron or steel roofing makes a durable roof covering, and the same material may be used for siding. It is advisable to side

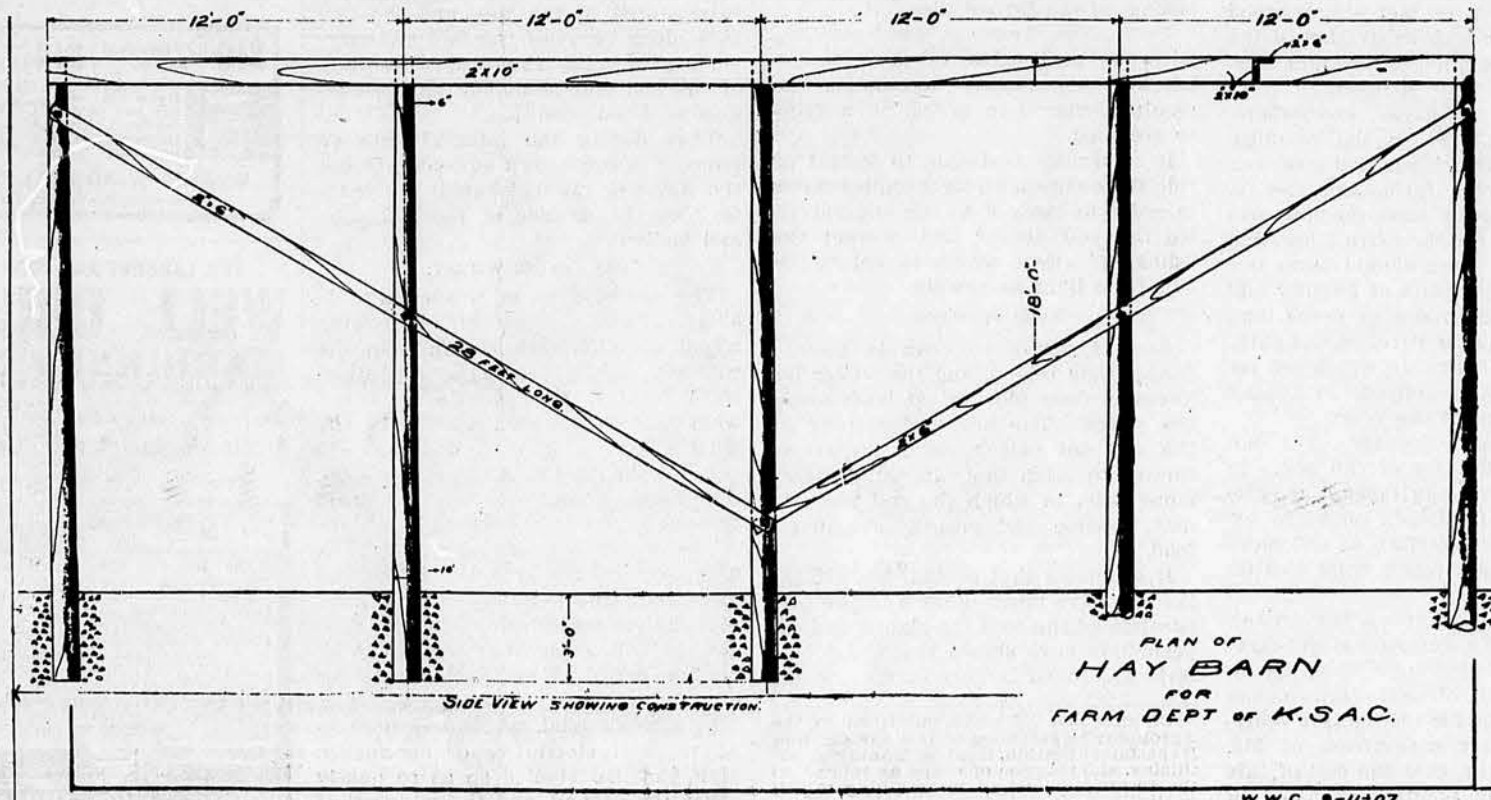


Fig. 3.—Side view, showing method of bracing.

W.W.C. 8-11-07.

hay-sheds, at least part of the way down, otherwise there may be considerable damage from drifting rain and snow. If the hay is stored a bent at a time, the side protection is not so necessary, but if the plan is practised of spreading the hay from a single cutting over the whole area of the shed, some side protection from driving rains during the summer should be given.

A GOOD SHED.

Figures 1, 2, 3, and 4 illustrate the plan of construction of an alfalfa shed which the writer recently built at his

is lowered to the load. The ends of the rafters are flush with the top edge of the ridge timber and are secured nailed.

When built, this shed was left open, but it will be sided this season with boards to within four feet of the floor, at an estimated cost of about eighty-six dollars.

A fairly accurate account was kept of the material and labor required to build this shed. Most of the labor was done by unskilled workmen, an expert carpenter being hired only seven days while framing the shed. The

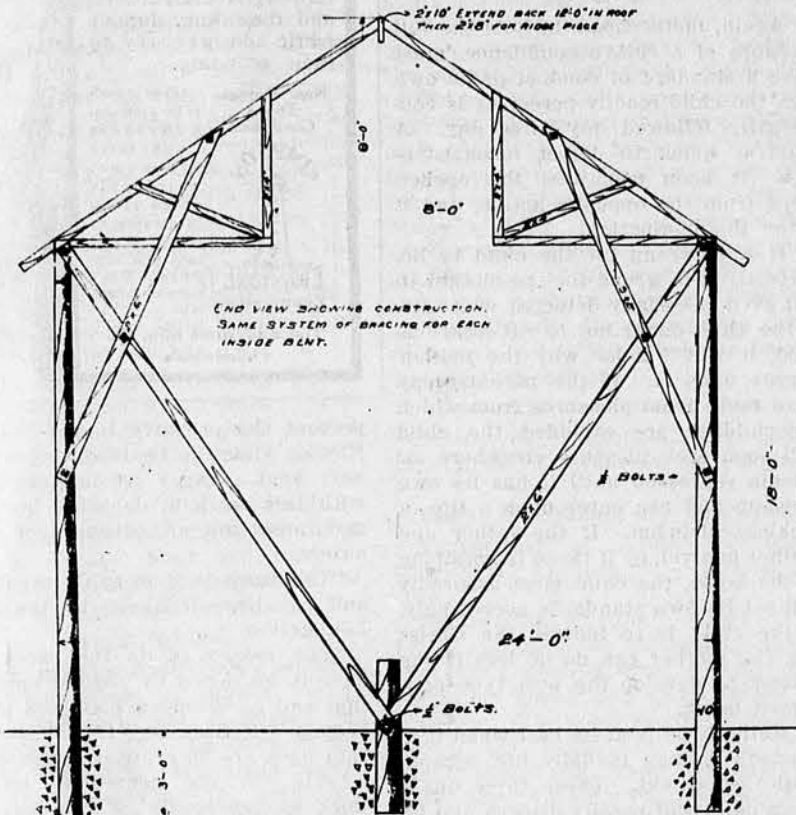


Fig. 2.—Showing plan of construction of end section, general plan of bracing for middle sections.

home farm on College Hill, near the Agricultural College. The shed is 48 by 24 by 18½ feet, or about seventeen feet high in the clear from the floor or ground walls to the eaves. The plan of construction of this shed may be readily understood from the illustrations. The floor walls average about eighteen inches in height and are made of loosely laid rock which were near at hand. The posts were set in cement, which was rounded at the surface about the posts in order to shed water. The floor of the shed consists of loosely laid poles—young trees that were being drubbed in clearing a neighboring piece of land.

The posts are white oak trees, averaging about seven inches in diameter at the top and ten to twelve inches

cost of this shed may be stated as follows:

10 long posts and 4 short posts, including labor of cutting and hauling.....	\$19.05
Lumber for frame and roof.....	65.73
1,850 sq. ft. galvanized steel roofing, at \$4.15, including ridge roll.....	\$9.50
Bolts and nails.....	6.00
Lime, cement, sand, etc.....	9.80
Poles for bottom.....	6.00
Construction labor, including carpenter work, setting of posts in cement, laying walls, etc.....	91.75
Painting roof.....	12.00
Hay-fork, pulleys, track, carrier, complete.....	31.26
Siding, estimated cost of labor and lumber.....	86.60
Total.....	\$417.69

This is a strong and durable shed, and was built at a relatively low cost, yet on the average farm it might be built at an even less cost than given above. Considering the saving in hay and labor which may result from shedding alfalfa, compared with the actual cost of building, every farmer who has ten acres or more of alfalfa should build a hay-shed.

A Good Hired Man.

Is he prompt in getting up early in the morning? Does he attend strictly to business? Does he take an active interest in his work? Is he a good caretaker of stock? Does he get out at night to look after stock when necessary? Has he any bad habits? If so, what? Does he take good care of farm machinery? Does he show a disposition to perform little acts of courtesy about the house or barn which are not required but which indicate a thoughtful and helpful spirit? Is he worth more than the ordinary man? If so, how much more? Is he agreeable to get along with? Has he shown executive ability? Can you recommend him as a proper person to manage or superintend a farm? If he is not yet qualified as a manager or superintendent, will he develop into one? Such a list of questions sent to the farmer will also give him some idea of his duty towards the young man in supplying him with books and papers that will add to his stock of knowledge as well as that interest and sympathy in his future which all good farmers will naturally feel.

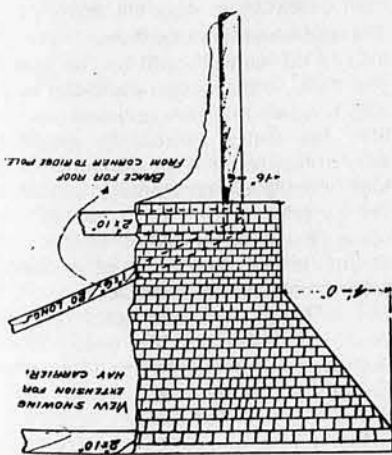


Fig. 4.—Section of roof, showing extension for hay-carrier track and plan for bracing roof.

at the base. The frame timbers and braces were fastened to the posts with lag-screws and were usually bolted together rather than nailed—some nails were used along with the bolts.

The roof is braced as shown in figure 4, and securely tied to the frame by braces at each post, as shown in the plans, and each rafter was securely nailed to the plate.

The hay-carrier track is attached to a two-by-ten ridge timber for the first sixteen feet and to a two-by-eight for the remaining thirty-six feet, the two-by-ten extending four feet over the end of the shed, from which the fork

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Home Departments

CONDUCTED BY RUTH COWGILL.

LINES TO MY GROWING SON.

Stop pulling father's papers round,
Don't pick holes with his pens,
And please remember not to drink
Your versifying daddy's ink;
It costs him many yens.
Now, come give dad that book you
found

Before you have it all unbound.

Stop playing with that match, my dear.
(Yes, I've no doubt it burns);
Now, why should daddy buy you meat
If you forever try to eat
The small change that he earns?
You needn't cry and think it queer
When that shoe-button hurts your ear.

'Cause you can't eat the gravel walk,
Don't bite your nurse's arm.
She'd let you eat it, but she feels
That it might spoil your other meals
And do your tummy harm.
And really, son, papa must balk:
You've marked the whole house up
with chalk.

You will lift pussy by the foot;
No wonder you got scratched.
Don't fall down-stairs; you'll break
your legs.
And don't play ball with fresh-laid
eggs.
Or how can they get hatched?
If in the grate your head you put,
Of course your hair gets full of soot.

ENVOY.

Wherever you're going,
Come right back now!
Whatever you're blowing,
Do stop that row!
Whatever you're drinking,
Will make you sick!
Whatever you're thinking,
Forget it, quick!
Whatever you've found to play with,
Drop it!
In short, whatever you're doing,
STOP IT!
—Julian Street, in The Century.

Vacations.

Mothers and homekeepers do not need to be reminded that it is time to think about a vacation; a change, a rest from the customary duties of every day, for tired nerves and weary mind have already suggested it. But so many shut the ears to the cry of these monitors of nature and conclude that there is no use to think of it. They are so used to plodding along every day, seven days in a week, for fifty-two weeks that the thought of a vacation is only a dream. The whole nature becomes keyed to work and, as if by machinery each day the body rises and goes at its tasks in the same mechanical way, without spirit or joy. The work becomes a grind, drudgery, and everything is made to bend to the one end in view, the daily routine of work.

Vacations have become to be considered necessary to clerks and similar employees and are granted two weeks or more of the fifty-two. But if there is any class of people who need a vacation more than the home-keeper I do not know who it can be. She must get away from the home in order to really get the needed rest for it is the mind more than the body that is in need of rest, and it can be obtained only by getting out of sight of the things that have produced the weariness. Two weeks out of the fifty-two—why that still leaves fifty for work, but in the end it will be found that it has really added more than it has taken away, not in time measured by hours and days, but in work accomplished, and if measured by the amount of real living, getting out of the time allotted to us here the best things for ourselves and others, it will be more than satisfactory. There are a few women who pride themselves upon their devotion to their homes and children as an excuse for their self-imprisonment, and boast of how long they have staid at their post. This is a mistaken notion for what they gain by a vacation in every way, will bring more to their home than could be lost, and a vacation broadens one and makes one more capable of giving pleasure. What ever makes the home-keeper better and wiser makes the home and its inmates better and wiser.

No woman need feel that she is selfish to claim for herself a short vaca-

tion somewhere during the year, unless, perhaps, by so doing she would neglect the sick or some one dependent upon her for care and comfort, then, of course, she will patiently and cheerfully wait till a "convenient" time. Seek an opportunity for a rest and do not wait until it becomes compulsory. It is so much more enjoyable, and the length of time given to it more in your own control, if you take it before a breakdown or illness of some sort compels it. The author of the Physic World says, upon this subject:

"Whatever man does or wherever he goes he can not depart from his dual nature. Without occasional rest his whole being is keyed to work. All of his faculties are preempted by it. All of his physical forces behind it. After a long term of years of such application, if circumstances bring about a withdrawal from it for a time of his final retirement, he experiences not rest, but unrest. He has earned recreation and enjoyment, which apparently are all around him as he gets farther and farther away from the business grind, but in some way inexplicable to himself he is entirely unprepared for the change. He droops under it, and if he is old he seldom recuperates.

"The fact is that rest, like labor, requires preparation. It has its technique that every toiler in the land may consider with profit. Whether we are producing anything or not, we are all laborers. Movement, waste, and repair of the forces of life are constantly going on. There are times when the soul asserts itself and asks of the body whither and wherefore."

Motherhood in Its Highest Sense.

There would be more good people in the world, less need for homes of refuge, reform schools, etc., if the view of motherhood taken by Gen. Wm. Booth were accepted by every one. He speaks feelingly upon the sacredness of motherhood in the Mother's Magazine, of which here is a part:

"When motherhood is not regarded as sacred, it ceases to be motherhood in the highest sense. It then becomes mere animal living.

"Motherhood has a divine origin. Its purpose is not merely the propagation of the human race, but the education of childhood into a full knowledge of God and the highest type of citizenship.

"I have always held this to be true—that Christian living and the best citizenship go hand in hand. I do not believe it possible to be a thoroughly good citizen without being an equally good Christian.

"How important, then, the functions of the mother! The least of her burdens is truly in the bearing of the child. If she be in normal good health, childbirth to her is not a burden. It should naturally transform her system into a higher physical growth, and develop a new mentality in her, stronger than she ever possessed before marriage. In true motherhood mental and physical growth does not cease after the child is born, any more than the rose after blossoming, if properly cared for, fails of its beauty until natural death comes.

"While the conduct of the mother before the birth of the child must have considerable influence upon its future, it is her relation with the child after birth that really determines its character. I think it wise that young girls should be brought up with the knowledge that they are to become mothers. I think after they pass a certain age it is the height of wisdom to teach them what motherhood means. I do not believe that they should be permitted to undertake a mother's duties in ignorance. Pure thoughts, pure reading, a firm faith in

God, and pure actions, will do much to fit a young girl for her sacred calling.

"But, after all this is said, a woman does not come into the full realization of motherhood until she folds her first child to her breast and sees in its shining eyes the implicit trust and confidence it places in her. Then she knows that a human body and a soul of divine origin has been given into her keeping. Then she knows that she is to guide the tiny feet away from pitfalls, and keep the tender heart beating in unison with that of the God who gave it to her.

"Again, motherhood, to hold the full measure of a child's confidence, must have a standard of conduct of its own that the child readily perceives is consistently followed day after day. A child is quick to detect inconsistencies. It soon separates the spoken word from the opposite action, and it notes the distinction.

"If it is wrong for the child to lie, certainly it is wrong for the mother to tell even the easily detected white lie. If the child ought not to eat injurious food, it will wonder why the mother gorges upon it. If the parents may have their home pleasures from which the children are excluded, the child will soon seek pleasure elsewhere, or remain repressed until it has its own freedom and can enter upon a life of reckless abandon. If the father and mother quarrel, or if there is gossiping in the home, the child most assuredly will set its own standards accordingly. If the child is to imitate the Christ life, the mother can do no less if she desires to develop the best type of a human being.

"Motherhood is at its best when it is intensely human in daily life, sympathetic, consistent. These three qualities a child will readily discern and be governed accordingly.

"I could say much more on this subject, but my time is limited. But next to the power of our Lord Jesus Christ, I look upon motherhood as the most powerful lever to be had for the regeneration of this world—for the building of human lives fit to enter upon the things yet unseen.

"Far be it from any woman to shirk this God-given responsibility. Through all the ages that which has held womanhood up, that which has placed the white robe and the crown upon its head, has been the immortal principle of maternity."

The Preservation of Pawnee Rock.

The women of the Kansas Day Club have undertaken the preservation of Pawnee Rock as a mark of early Kansas history and its president, Mrs. S. J. Simmons, is sending out circulars over the State which says:

"The Woman's Kansas Day Club is a woman's patriotic organization which meets at the State capitol once a year, January 29. It is interested in collecting and preserving early Kansas history. This year it is working on Pawnee Rock. This property is owned by Benjamin P. Unruh, who values it at \$3,200. He will deed four acres surrounding and including the rock to the State of Kansas as a gift, if the women of Kansas will place thereon improvements to the value of \$3,000. These improvements will include a monument to cost not less than \$1,500; an avenue 100 feet wide leading from the town of Pawnee Rock to the rock; a woven wire fence 50 inches high surrounding the entire property; a well and windmill. The avenue on either side, and the park of four acres are to be set with shade trees and otherwise beautified; a four-foot cement walk is to be laid leading from the town up to the rock. The face of the rock, which has been mutilated to some extent, is to be restored in mason work as nearly as possible.

"The citizens of Pawnee Rock will add an extra \$1,000 improvement and have the money deposited in the bank at the present time. This will make the property, when completed, worth \$7,200. The Women's Kansas Day Club want to complete the work and

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The Eddystone Mfg. Co.
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present the property to the State of Kansas when the Legislature convenes next year. Every woman connected with this work is donating her time and labor and all expenses of every nature.

"The work is thoroughly organized, and has been legalized by the State Legislature.

"The money to do this work will have to be raised by popular subscription and by securing members to the Woman's Kansas Day Club. Membership dues are 25 cents per year.

"Will you not contribute to this work as generously as you may feel able to do?"

Hygienic Cookery.

MRS. HENRIETTA W. CALVIN, PROFESSOR OF DOMESTIC SCIENCE, KANSAS AGRICULTURAL COLLEGE.

BREAD.

Bread in some form is the principal article of diet for most of mankind. The products of corn, oats, rye, millet, wheat, chestnuts, bananas, rice, beans, and many other articles have, by different Nations, been used as bread. To the English-speaking races bread means the food made from wheat flour, leavened, made porous by the action of yeast, and baked.

The opinions concerning the desirable qualities of bread vary with the consumer, but in general the following qualities have been agreed upon.

QUALITIES OF GOOD BREAD.

Bread should be in flavor sweet and nutty; the odor should be the same as the flavor; the texture should be soft and tender, but not inclined to crumble; the holes should be small and very numerous; the interior of the loaf should be thoroughly baked and the exterior should be a golden-brown upon all sides; the color of the crumb of the bread should be of a delicate, creamy white. To attain these qualities in bread it is necessary that good yeast and good flour be used, that the materials be properly handled and the product correctly baked.

YEAST.

Yeast is a one-celled plant, so small that it can only be seen by the use of the microscope. When placed under favorable conditions—given warmth, moisture, air, and food—it grows and multiplies rapidly. During growth a bud or small enlargement starts on one side of the cell; this grows until almost as large as the original yeast plant, when it separates from the other and becomes independent. Dry yeast, as purchased, consists of dormant yeast plants together with other micro-organisms, many of these latter being injurious to the quality of the bread. The lactic acid bacteria, which were mentioned when studying milk, often occur so numerous in bread as to cause a sour flavor. Whenever the yeast plants are weakened, either from long keeping or bad

conditions, the acid-forming bacteria multiply and injure the bread.

Compressed yeast consists of living, active yeast-cells, together with sufficient starch to hold it in shape. When it can be obtained fresh it makes bread of the finest quality, but because of the cells are alive and growing they will quickly die if not planted in a suitable medium.

The first requisite of yeast is food, which must consist of proteid, mineral matter and sugar; the second requisite is water; the third is warmth, a temperature of 72 to 90 degrees F. being most advantageous; and the fourth is air. Flour and potatoes each contain the proper yeast foods. Yeast has the power to alter the starch of potato and flour to sugar before making use of it. As yeast grows in bread it discharges into the bread alcohol and carbon dioxide (the same gas that a human being discharges from the lungs). This carbon dioxide is the material that forms the bubbles in the dough which afterwards leave the holes in the bread. The carbon dioxide and alcohol are both driven off by the heat during baking.

In the following yeast recipe potato and potato water, together with a small amount of sugar, furnish the feed for the yeast plants upon which to grow and in which to multiply. The salt tends to reduce the growth of the acid-forming bacteria. When hops are used in yeast the tannin in the hops kills the bacteria and prevents sourness.

YEAST RECIPE.

Four medium-sized raw potatoes, pared; one quart of rapidly boiling water; one-fourth cup of sugar; one tablespoon of salt; one cake of dry yeast. While the water boils rapidly grate the potatoes into the water, boil until clear like laundry starch. Stir sugar and salt in while it is hot, cool down to lukewarm, then add the yeast-cake, which has been soaked in a little warm water. Allow to ferment in a stone crock twenty-four hours, place in a two-quart Mason jar and set in a cool, dark place. This will keep about two weeks, and the last cup of this may be used in place of a dry yeast-cake in making a new supply.

FLOUR.

Flour, which is the chief product in the grinding of wheat, is composed of carbohydrate, proteid, and mineral matter, with a small percentage of water. The proteid of wheat is known as gluten, and is the constituent of flour which renders tenacious the dough made from it. The greater the percentage of proteid, the greater this tenacity and the consequent resistance to the pressure of the gas formed by the yeast. Flour made from hard wheat (wheat which has a high percentage of gluten is called "hard") makes excellent bread, and the loaf from a given weight of flour is larger than from the same weight of flour from soft wheat (wheat low in gluten content). Good bread may be made from either soft or hard wheat flour, but the methods required will be slightly different. The most of Kansas flour are from hard wheat or a blend of hard and soft wheat. The bread-making qualities of flour are injured if the wheat undergoes damage in the sack or the flour is stored in a moldy or damp place before it is used.

BREAD-MAKING.

The liquid used in bread may be milk or water, but in either case it should be heated and cooled to kill any micro-organisms. All utensils used should be perfectly clean. The kneading should be with a light, swift movement, and be continued until the dough feels smooth and velvety. No flour should be added at the time the loaves are shaped. Each loaf should be baked in a separate pan, with the loaves far enough apart in the oven that each may receive an equal amount of heat upon all portions of its exterior.

FAULTS IN BREAD.

The common faults of bread are: sourness; due to poor yeast, too high

a temperature, or too long fermentation; moldiness, due to unclean utensils, moldy wheat, flour stored in a moldy place, or bread placed in a box or cloth that was moldy; uneven texture, due to poor kneading; coarse holes, due to poor kneading, too long fermentation, too cool an oven while baking, or dough not stiff enough when made; burned or underbrowned crust or misshapen loaves, due to faulty heating of the oven.

BREAD RECIPE.

One cup of yeast; one-fourth cup of sugar; one tablespoon of salt; one quart scalded and cooled sweet milk; one-fourth cup of shortening. Make into a sponge and allow to become thoroughly light, stir in the remainder of flour and work until perfectly smooth. The amount of flour will vary somewhat with the kind used. Allow to rise until more than twice the original bulk. Shape into loaves with as little working as will permit of smoothness. Allow to rise again, and bake in oven at 400 degrees F. Cool right side up on wire rack. Keep in tin bread-boxes. Do not wrap in cloth or paper. All bread should be baked in individual-loaf pans.

SCORE-CARD FOR JUDGING BREAD.

Baking.—Thoroughness, 20; color, 12; (shade, 6, evenness, 6); shape, 8.

Taste.—Sweetness, 25; flavor, 15.

Appearance of Crumb.—Texture: Quality, 8; fineness, 4; evenness, 3; color, 5.

Explanation of the Above: The bread should be so completely baked that when pressed upon it would immediately spring out upon release of pressure. The color should be golden-brown, top, sides, and bottom. The bread should be baked in individual pans, size 9 x 4 1/2 x 2 3/4 inches. The last measure is the depth. The loaf should be evenly raised in the pan, with no cracked, protruding or uneven crusts. There should be no trace of acidity in the taste, and the flavor should be rich and nutty. The bread when cut should have a soft, velvety texture, all harshness absent. It should slice smoothly, without crumbling. The holes should be numerous and small and of uniform size. Occasional large holes are a serious fault. The color should be of a slightly creamy white.

The Young Folks

WHERE IS LAUGHTERLAND?

All aboard for Laughterland—
'Tis a pleasant place,
Where the sun of happiness
Shines in every face;
Where the cares of this old world,
Quickly, are forgot,
And there's never any cloud,
Any pain or blot!

All aboard for Laughterland,
Region of delight!
Can be reached by any who
Set about it right.
First you shake your troubles off,
Then begin to smile,
And you'll go to Laughterland
In a little while.

Children dwell in Laughterland,
'Cause they do not know
What makes grown-up people bear
Burdens as they go.
Light hearts seek for Laughterland,
Optimists go there—
Oh, it is the gladdest place
Known of anywhere!

—Answers.

A Pioneer Burglar.

MRS. CARRIE SMITH, WHO WON FIRST PRIZE OFFERED BY THE STERLING BULLETIN FOR THE BEST STORY OF KANSAS LIFE.

There was a harvest home picnic in a Central Kansas village a few years ago, and a large crowd was in attendance. The wind was blowing a perfect gale and only those near the speaker's stand could hear any part of the exercises, so those on the outer edge gathered in groups and engaged in conversation.

One of these groups consisted principally of old settlers, and stories of the hardships of the early days, of the drouth, of grasshoppers, of prairie fires, and adventures with the Indians were given.



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O. H. LONGWELL, President

HIGHLAND PARK COLLEGE,

DES MOINES, IOWA

One woman told how homesick she was to see some trees, and how one day she and her husband rode for miles to find some. They thought they saw a grove in the distance, but on getting closer were disappointed to find instead of trees only a patch of Kafir-corn.

This started some one else to telling of the wonderful mirages once seen in Kansas, and these were described as such beautiful, interesting things that some of the younger members of the group wished they too could have been Kansas pioneers, and have seen these visions.

"Now, Mrs. Clarkson," said one of the story tellers, "we want to hear from you next. You have been here a great many years, and we want to listen to your most thrilling experience." "Well," said Mrs. Clarkson, "I will tell of the most exciting thing that happened to me in the early days, of one night of terror that I passed through while we were living on our claim over on Cow Creek.

"We came to this country in the early seventies. It was a desolate looking place then, and for the first two or three years I was quite homesick, and thought almost any other place in the United States was preferable to a Kansas farm, but I have changed my mind considerably in the last thirty years, and now there is no other place that suits me as well.

"Our nearest home was Raymond, fourteen miles distant. Our nearest neighbor was over two miles away.

"I was afraid the first two or three years to even stay alone in the house while my husband was at work in the field, but gradually became accustomed to our monotonous, uneventful life, and when John came in one day and told me he must go to Raymond for repairs for some of the machinery, but would go first to one of the neighbors for company for me, I very bravely told him to go on to town, and as soon as I had finished my work I would go for company.

"He objected to this arrangement at first, but as it was getting late, and it was out of his way to go past Gibbons' (our nearest neighbor), he finally consented to start for Raymond and leave me entirely alone. I hurried through my work and started for Gibbons', intending to spend the rest of the day there, then take two of the children home with me to stay all night. But when I reached their house I found them all gone. There was no other place where I could get anyone to stay with me, and it would be a long walk for me to go back home and do the chores, then go three miles to the next

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The Club Member

A monthly magazine published for women by women. It contains these departments: Editorial, Schools and Colleges; The Club Woman; The W. K. D. C.; The D. A. R.; The W. R. C.; The Woman Who Votes; Notes on Bible Study; Children's Hour; Us Men; Among the Books. Subscription price, 50 cents per year. Send for sample copy to Club Member Publishing Co., Topeka, Kans.

Res. Tel. 775. Office Tel. 192.

L. M. PENWELL, Funeral Director and Licensed Embalmer. 511 Kansas St. Topeka, Kansas

neighbor's. So I decided there was only one thing I could do, that was to stay alone all night or perhaps only part of it, for John said he could get his repairs done in time he would come home in the night, as he was anxious to be at work early the next day.

"I had the chores all done before sun-down and was in the house with the doors locked and windows barred when I heard a wagon coming. I peeped through the curtains and saw an old tin peddler from Ellsworth, who had been through the country before, and had stopped over night with us. I knew he was intending to stay again and would be quite disappointed to find no one at home. After calling and pounding around for awhile he finally drove off and I felt quite relieved to see him go.

"We had a sod house consisting of two rooms. I made everything as secure as possible, then took John's shot gun with me into the bed room and propped it up on chairs in front of the window, which I was obliged to leave a little open as it was a very warm night.

"I had no intention of shooting the gun, even should occasion arise, but I thought I would feel safer to have a gun which I knew was loaded, between me and the window.

"I thought I would not lie down, but as I was very tired did so, and in spite of my precautions to keep awake I was soon fast asleep.

"After awhile I was awakened with some sort of a noise. I sat up and looked toward the window; the stars were giving a faint light and I could make out a dark form and knew someone was trying to break in.

"Scared? I think I was! For a few moments I was so weak from fright I could not do anything. Then the thought occurred to me that if I would call out and make him think John was there, he might be scared away.

"So in a quaking voice I called: 'John, John, get up and see who is at the window.'

"Still the noise continued. Then I happened to think about the old peddler being a little deaf, and I felt sure it was he trying to enter.

"I concluded it was necessary for me to make a louder noise in order to frighten him away. So I got up and moved the gun so it would shoot past him out into the darkness, then I pulled the trigger and the old gun roared out its deadly sound, and I tumbled over on the floor.

"I lay still listening intently. He's gone, I thought, but I wonder if he will return.

"Presently I got up and walked to the window. I looked out and to my great surprise and horror I saw a form stretched out lifeless on the ground.

"I screamed and fainted. When I recovered consciousness I heard John calling to me to open the door.

"I managed to creep to the door and open it, and tell John the awful news. He tried to make light of it, told me I had been having bad dreams, and even though he could smell the powder smoke, he could not believe I had shot anyone. He thought I had imagined some one was at the window.

"Go and look for yourself," I finally said to him, and he went out doors and around the house carrying the lantern with him.

"I heard him give a surprised exclamation, then he began laughing heartily. 'Come here, Mary,' he said, 'I want you to view the corpse.' And before I could answer or ask an explanation, he came in and almost carried me around the house, and there close by the bed room window, stretched out at full length, lay our finest calf.

"When I had done the chores the evening before I could not find it to feed it, and it was hunting around for someone to give it its supper.

"How thankful I was that it was only a calf and not a human being I had shot, and how John did love to tease me about my burglar after I had gotten over my nervousness and fright."

Some one then announced, "The ex-governor of Kansas will be the next

speaker;" and the story-telling crowd dispersed to hunt for vacant seats near the front.

The Little Ones

THE PRE-SCRIPTION.

It was a very dreadful time
When my mama lay ill,
The nurse went tiptoe through the
halls,
The house was sad and still.
The doctor with his medicines
Came every single day;
He would not let me see mama
To kiss her pain away!

But every time he looked so grave—
For dear mama was worse;
I knew they could not make her well,
That doctor and that nurse.

I sat before the chamber door
And cried and cried and cried—
I knew that I could cure mama
If I could be inside.

But once I had a splendid thought;
Behind the doctor's back,
To write my own pre-scrip-tion out,
And tuck it through the crack!

I made upon a paper sheet
Round kisses in a shower,
And wrote—"A kiss for my mama,
Please take one every hour."

And from that very time, of course,
My dear mama grew well,
The doctor thinks it was his pills,
And I shall never tell!

—Abbie Farwell Brown.

Betty's Playtime.

"Oh, pshaw!" said Betty, when mama called her from play, "somebody's always a-wantin' me to do something!" She ran into the house with a frown on her face.

"Betty," said mama, "if you can't obey cheerfully—"

"Well, I always have to be doin' somethin'," burst out Betty. "I never can play!"

"You may play this whole day long," said mama, quietly.

"And not do anythin' else?" asked Betty.

"Not do another thing," said mama.

"Oh, goody!" cried Betty, and she ran and got her doll things and began making a dress for Cora May, her new dolly.

Grandma came into the room while she was sewing.

"Betty," she said, "will you run upstairs and get granny her spectacles?"

"Yes, ma'am," cried Betty, jumping up in a hurry, for she dearly loved to do things for grandma.

"No, Betty," said mama; "you keep on with your doll things. I'll get grandma's glasses myself."

Betty returned to her sewing, but somehow it wasn't so interesting as it had been. She threw it down the minute little Benjamin waked from his nap and ran to take him.

"Nursing is too much like work," said mama, taking the baby out of her arms; "you must not do anything to-day."

Betty's cheeks turned rosy. She thought of the times she had grumbled when mama had asked her to hold baby. Now she would have given anything just to hold him a minute.

Mary Sue, Betty's best friend, came by to get her to go on an errand with her.

"I am sorry, but you can't go," said mama. "Running errands is not play, you know."

Jack came running in with a button to be sewed on. Betty put on her little thimble and began sewing it on. But mama came in before she had finished.

"Why, the idea of your sewing,

child!" she said, taking the needle and thread out of her hand. "Run along to your play."

When father came home to dinner, Betty started, as usual to open the front door for him. But mama called her back.

"You forget, Betty," she said in her pleasant way, "that you are not to do anything for anybody to-day."

"Then I guess I'd better not ask her to drop my letter in the mail box," said Cousin Kate; "it might interfere with her play."

"I'm tired of playin'!" cried Betty. She ran out to the kitchen. Callie, the cook, would let her help her, she knew. But for a wonder, not even black Callie would let her do anything.

"It's agwine ter a fun'ral," she said, "an' I's in a mighty hurry to git off, but, law, honey! I wouldn't hab you 'rupted in your play fer nuthin'!"

Poor Betty! She thought the day would never come to an end.

"O mama!" she cried, as she kissed her at bedtime, "do wake me up early in the morning. I want to get a good start. Helpin' is so much better than playin' all the time."—Mary Callum Wiley, in Pearls.

Do you ask what the birds say?
The sparrow, the dove,
The linnet and thrush say,
"I love and I love!"

In winter they're silent; the wind is so strong;
What it says I don't know, but it sings a loud song.

But green leaves, and blossoms, and sunny warm weather
And singing and loving, all come back together.

But the lark is so brimful of gladness and love,
The green fields below him, the blue sky above,
That he sings and he sings, and forever sings he!

"I love my love, and my love loves me."
—Samuel Coleridge.

Farmers' Fairs in 1908.

The list of county fairs to be held in Kansas in 1908 is announced by Secretary F. D. Coburn as follows:
Allen County Agricultural Society—Frank E. Smith, secretary, Iola; August 25-28.

Barton County Fair Association—W. P. Feder, secretary, Great Bend; September 8-11.

Brown County, The Hiawatha Fair Association—George M. Davis, secretary, Hiawatha.

Butler County Fair Association—A. Shelden, secretary, El Dorado; August 25-28.

Butler County, Douglas Agricultural Society—C. R. Alger, secretary, Douglas; September 17-19.

Clay County Fair Association—Walter Puckey, secretary, Clay Center; September 1-4.

Clay County, Wakefield Agricultural Society—Eugene Elkins, secretary, Wakefield; first week in October.

Cloud County Fair Association—W. S. James, secretary, Concordia; September 15-18.

Coffey County Agricultural Fair Association—Charles N. Converse, secretary, Burlington; September 7-11.

Cowley County Agricultural and Live Stock Association—Frank W. Sidle, secretary, Winfield; September 1-5.

Cowley County—Eastern Cowley County Fair Association—W. A. Bowden, secretary, Burden; September 16-18.

Dickinson County Fair Association—H. C. Wann, secretary, Abilene; September 22-25.

Elk County Agricultural Fair Association—H. B. Terry, secretary, Grenola; September 23-25.

Finney County Agricultural Society—A. H. Warner, secretary, Garden City.

Franklin County Agricultural Society—E. M. Shelden, secretary, Ottawa; September 1-4.

Greenwood County Fair Association—C. H. Weiser, secretary, Eureka; August 18-22.

Harper County, Anthony Fair Association—L. G. Jennings, secretary; Anthony; August 4-7.

Harvey County Agricultural Society—L. G. Harlan, secretary, Newton; September 29, October 2.

Jefferson County Fair Association—Ralph Snyder, secretary, Oskaloosa.

Leavenworth County Fair Association—Stance Meyers, secretary, Leavenworth; September 15-19.

Linn County Fair Association—O. E.

DOCTORS MISTAKES

Are said often to be buried six feet under ground. But many times women call on their family physicians, suffering, as they imagine, one from dyspepsia, another from heart disease, another from liver or kidney disease, another from nervous prostration, another with pain here and there, and in this way they present alike to themselves and their easy-going or over-busy doctor, separate diseases, for which he, assuming them to be such, prescribes his pills and potions. In reality, they are all only symptoms caused by some uterine disease. The physician, ignorant of the cause of suffering, keeps up his treatment until large bills are made. The suffering patient gets no better, in reason of the wrong treatment, but probably worse. A proper medicine like Dr. Pierce's Favorite Prescription, directed to the cause would have entirely removed the disease, thereby dispelling all those distressing symptoms, and instituting comfort instead of prolonged misery. It has been well said, that "a disease known is half cured."

Dr. Pierce's Favorite Prescription is a scientific medicine, carefully devised by an experienced and skillful physician, and adapted to woman's delicate system. It is made of native American medicinal roots and is perfectly harmless in its effects in any condition of the female system.

As a powerful invigorating tonic "Favorite Prescription" imparts strength to the whole system and to the organs distinctly feminine in particular. For over-worked, "worn-out," run-down, debilitated teachers, milliners, dressmakers, seamstresses, "shop-girls," house-keepers, nursing mothers, and feeble women generally, Dr. Pierce's Favorite Prescription is the greatest earthly boon, being unequalled as an appetizing cordial and restorative tonic.

As a soothing and strengthening nerve "Favorite Prescription" is unequalled and is invaluable in allaying and subduing nervous excitability, irritability, nervous exhaustion, nervous prostration, neuralgia, hysteria, spasms, St. Vitus's dance, and other distressing, nervous symptoms commonly attendant upon functional and organic disease of the uterus. It induces refreshing sleep and relieves mental anxiety and despondency.

Dr. Pierce's Pleasant Pellets invigorate the stomach, liver and bowels. One to three a dose. Easy to take as candy.

Haley, secretary, Mound City; first week in September.

Marshall County Fair Association—W. H. Smith, secretary, Marysville.

McPherson County Agricultural Fair Association—D. H. Grant, secretary, McPherson; September 22-25.

Miami County Agricultural and Mechanical Fair Association—George R. Reynolds, secretary, Paola; September 29, October 2.

Mitchell County Agricultural Association—Ira N. Tice, secretary, Beloit; September 16-19.

Montgomery County, Coffeyville Fair and Park Association—A. B. Holloway, secretary, Coffeyville; August 11-14.

Nemaha County Fair Association—Joshua Mitchell, secretary, Seneca; August 26-28.

Neosho County, Chanute Fair and Improvement Association—A. E. Timpane, secretary, Chanute; August 18-21.

Ness County Agricultural Association—Thomas Rineley, secretary; Ness City, October 7-9.

Ness County, Utica Agricultural and Fair Association—R. C. Webster, Jr., secretary, Utica, October 7-9.

Norton County Agricultural Association—M. F. Garrity, secretary, Norton; August 25-29.

Osage County Fair Association—F. E. Burke, secretary, Burlingame; September 1-4.

Reno County, Central Kansas Fair Association—A. L. Sponsler, secretary, Hutchinson; September 14-19.

Republic County Agricultural Association—F. N. Woodward, secretary, Belleville; September 8-11.

Rice County Agricultural and Live Stock Association—C. Hawkins, secretary, Sterling; September 1-4.

Riley County Agricultural Association—W. B. Craig, secretary, Riley.

Rooks County Fair Association—H. A. Butler, secretary, Stockton; September 8-11.

Shawnee County Kansas State Exposition Company—R. T. Kreipe, secretary, Topeka; September 7-12.

Sheridan County Agricultural Association—Frank A. McIvor, secretary, Hoxie.

Sheridan County, Selden District Fair Association—George W. Sloan, secretary, Selden; September 1-4.

Stafford County Fair Association—D. S. Mull, secretary, St. John; August 26-28.

Wilson County, Fredonia Agricultural Association—W. H. Edmundson, secretary, Fredonia; August 4-7.

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L. J. Sturges TOPEKA, KANS.

Horticulture

Mildew on Roses.

Enclosed find a sample of a diseased rose bush. The disease is killing all of the leaves on the climbing rose bushes. Will you give a remedy? Butler County. E. C. MORGAN.

The trouble with your roses is a fungus disease commonly known as mildew. The treatment recommended is spraying with one of the copper compounds—(1 pound copper sulfate to 25 gallons water; or 5 ounces copper carbonate dissolved in 3 pints ammonia and added to 45 gallons water)—or sprinkling the plant with sulfur while the dew is on the plant.

ALBERT DICKENS.

Tree Questions.

You will find enclosed, in a box, a few small leaves taken from my blackberry bushes. The blackberries are on a high piece of ground. Will you please tell me what is the trouble and a remedy?

My gooseberries seem to have something on a part of them. The disease doesn't seem to trouble any until the berries are formed.

My plum trees have bugs on them, something that has never bothered me before. My plums always fall off the tree badly. I have not sprayed the trees any this spring. F. Cheney, Kans.

The trouble with your blackberries is what is known as the orange-rust, a fungus disease which attacks both blackberries and raspberries. So far as is yet known, the only practical remedy is to dig out and destroy the affected plants as soon as the disease makes its appearance. It might be well to spray with a fungicide to prevent the entrance of the fungus into the foliage of the remaining plants.

Your gooseberries are affected by mildew, which is also a fungus disease. This may be destroyed by the application of a fungicide, preferably one of the copper compounds or sulfide of potassium. Weekly applications of the latter have been found very effective, although the first application should have been made before the buds opened in the spring. If the work is started thus early in the season, Bordeaux mixture may be used for the first two sprayings.

We can not tell what insect may be at work on your other plants without a specimen of the same.

ALBERT DICKENS.

Are Orchards Propagated by a Method Called Whole-Root Grafts?

EDITOR KANSAS FARMER:—A correspondent mentions that certain agents are selling orchards in his neighborhood, inducing the farmers to pay \$130 per acre for two hundred and forty trees to be planted on each acre. The agents claim that the trees they offer are budded on Siberian crab roots, are propagated by a method called whole root grafts, and that trees grafted on Siberian stocks bloom later than trees grafted in the ordinary way, that they raise more and better fruit per acre and come into bearing within three years after planting.

The correspondent queries whether these claims are credible and whether this method indicates a decided advance over ordinary methods in establishing commercial orchards.

EVERY TREE HAS ITS OWN WAY OF MAKING ROOT GROWTH.

In reply we have suggested that the late Prof. T. T. Lyon, of the United States Pomological Division, who has devoted a long life to horticulture, not only in scientific aspects, but also as a propagator, states, "My observation would be that every tree has its own peculiar way of making root growth, and that it would not change it in the least, whether it was grafted on a whole or a piece root." Professor Lyon stated that he was in favor of

that system which the soonest gets the tree upon its own roots. Briefly that means to use a long scion and a short piece root, which tends to induce the emission of rootlets from the scion. The tree then has a root system of the same hardihood as the variety from which the scion was taken.

METHODS OF PROPAGATING TREES.

The late Professor Budd, professor of horticulture at Ames, Iowa, gave many years of study to the question of methods of propagating trees that should be hardy enough for Minnesota, the Dakotas, and Northern Iowa. Professor Budd favors the use of the long scion and what is termed the piece root graft, because of the increased probability of getting the scion to emit roots and thus develop a root system as hardy as the variety from which the scion was cut. This testimony coincides with our thirty-six years' experience here in Crete, Neb., as we have found that the most reliable trees were rooted from the scions. We may also remark that quite a proportion of the whole root grafts, so called, sold in the trade, are made from seedlings which are not large enough or strong enough to make more than one graft, instead of from strictly first-class apple seedlings which are usually large and strong enough to make two or three grafts.

Regarding the influence of the scion on the root system, it is noticeable that the Whitney No. 20 develops a different root system from that formed by the Winesap. The Ben Davis develops a different root system from that grown under the Genet tree, indicating that the scion has a marked influence over the root and usually develops a root system partaking in some degree of the characteristics of its own variety.

DOUBLE WORKING.

Some twenty years ago, our horticultural writers gave a great deal of attention to the discussion of double working. In accord with that suggestion, the writer about eighteen years ago, propagated a good many nursery trees by double working on Whitney No. 20, Siberian. The result, the ordinary commercial varieties of apple, suited to this locality, were found to be dwarfed somewhat by working them on Whitney No. 20, Siberian. They did not make as large trees when grown in commercial orchards, as other trees propagated in the ordinary way, that is by piece root grafting. The trees did not come into bearing any earlier than the others and not having attained nearly as large size, have not yielded as many bushels per tree. The result therefore, would seem to indicate that for us in Nebraska, there was nothing gained, but rather loss, by propagating commercial varieties of apple on Whitney No. 20, Siberian.

Regarding the question of trees propagated on Siberian stocks, blooming later, our observation has indicated that this claim is incorrect. Siberians bloom earlier than ordinary commercial varieties of apples. Transcendent crab blooms earlier than any variety of apple.

PLANTING OF APPLE ORCHARD.

Regarding the planting of two hundred and forty apple trees per acre, we find in our commercial orchard work, that when we plant 14 by 28, or one hundred and ten trees per acre, we do this with the expectation that we must at a later period, remove every other tree. Those trees which are to be removed later, are ultimately trimmed fan shaped so that the permanent trees may have more than their average proportion of air and room, the alternate trees being ultimately cut out. We would regard two hundred and forty apple trees per acre as an excessive number and a detriment to the planter, rather than an advantage.

The price of \$130 per acre for a commercial orchard, we would regard as four times more than the planter needs to pay.

Regarding such trees coming into

How Harsh Physic Wrecks the Bowels

Irritate the skin in any spot frequently and that spot will grow calloused.

That is Nature's means of protection. So with the bowels. When you irritate the lining with salts or "pills," the lining grows hard.

That so retards the natural bowel action that you come to need physic constantly.

And you need a constantly larger dose because of the calloused bowels.

You have the "physic habit."

Cascarets bring the same results gently and naturally—without irritation.

They restore the natural bowel functions, so you don't need them long. And the dose never needs increasing.

Their effect is the same as the effect of laxative foods—or of exercise.

They act exactly the same as right living would do.

If the bowels are already calloused, you may need two tablets a day for a time.

But, after that, take one at a time—when you need it.

Cascarets are candy tablets. They are sold by all druggists, but never in bulk. Be sure to get the genuine, with CCC on every tablet. The box is marked like this:

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bearing in three years from planting, under ordinary methods of propagation, it occasionally happens that the apple tree will bear in the nursery row. Nearly every season we notice 2- and 3-year-old apple trees showing some bloom, but this does not mean that the trees will come into bearing at that age. Under ordinary conditions in Nebraska, the planter should expect to cultivate his apple orchard for from seven to nine years before the orchard can be regarded as bearing. Usually when the apple tree sets a crop of fruit earlier than the seventh or eighth year after planting, it is due to a period of drouth that checks the growth of the tree at mid-summer and forces the tree to develop fruit buds, or the tree has sustained some mechanical injury which usually forces the premature development of fruit buds. It has been the experience and observation of the writer that agents who claim unusual and extraordinary qualities for the trees and plants they sell are not very scrupulous in regard to what they supply. The old Latin proverb, "False in one thing, false in all," is oftentimes found to apply. E. F. STEPHENS. Crete, Neb.

Rose Slugs.

A few years ago when the rose bushes in many yards in Topeka began to look as if fire had been through them, A. T. Daniels appealed to the editor of THE KANSAS FARMER to know what was the matter and what the remedy. He was informed that the damage was the work of the rose slug, a little green worm which eats out the soft parts of rose leaves. This worm is one of the stages of development of a black fly about as large as a house fly. Each spring this fly deposits eggs on or rather within the tissue of the leaves. These eggs hatch into worms or slugs which eat away the soft portions of the leaves. When it has eaten enough the slug goes to the ground, spins a silken cocoon about itself, and in about two weeks

transforms into a fly. Another crop of eggs, another brood of slugs and another lot of flies may of course be expected.

But what the Topeka man most wanted was a remedy. He was told to buy fifteen cents worth of powdered hebeore, mix a dessert spoonful of it in a quart of water and apply it to his rose leaves once in two or three days for a week. The application is best made with a small hand sprayer, but if this be not at hand a whisk broom may be used. The advantages of the sprayer are greater speed and less waste of materials.

These directions got into the Topeka daily papers and have been followed by hundreds of lovers of the rose. Hebeore is a vegetable poison, not a dangerous poison for humans, but exceedingly detrimental to the longevity of rose slugs.

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Get a Little Buffalo Calf from your dealer free and try to tear it with your fingers. If you succeed we will give you absolutely without charge a pair of Bentley & Olmsted Co. Buffalo Calf Shoes. Note the strength and pliability of the leather of the Little Buffalo Calf is made of. That's the stuff that goes into the vamps and uppers of our Buffalo Calf Shoes. That's why they are the best wearing—most comfortable—and most slightly work shoes ever made.

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Dairy Interests

Farm Butter-Making.

MRS. ESTHER WOOLMAN, BEFORE THE EASTERN AUXILIARY OF INDIANA STATE DAIRY ASSOCIATION.

There are several essentials to the making of good butter; first, the quality of cows, second, the kind of feed and water given them; third, cleanliness and care; and fourth, the interest taken, and not being afraid of work.

Cows in poor condition, or diseased in any way, produce milk that in turn produces bad-keeping and bad-tasting butter. The very best of cows are none too good.

Quite often the butter-maker complies with every condition necessary for the making of good butter, and fails because of some detrimental quality in the milk.

Cows fed on an extra quantity of properly selected food will produce more and better milk than will a third more cows fed on anything that comes handiest to feed—the bulk of it dry and poor in quality. Cows that drink from stagnant pools, or that eat weeds, moldy hay, or musty corn fodder, or anything in the way of hay or grain that is damaged, or anything ill-smelling or highly flavored, will give milk from which good marketable butter can not be made.

CLEANLINESS.

Cleanliness does not mean to use care with the milk only after it has reached the milk room. On the contrary, it means that care is necessary from the time you come into possession of your cows until you market your butter and get your money.

The greatest care and attention should be paid to the cow. The pastures and fields should be well cared for. The stables should be well kept and be whitewashed frequently, and plenty of air-slaked lime should be used as a purifier.

Use nothing but the best of tin buckets to milk in. When the tin is worn off, discard the bucket for milking purposes. Incidentally, I will say, never use your milk-buckets for anything else than to milk in.

Everything coming in contact with the milk, cream, or butter must be kept in a cleanly condition. Care must be taken of all your milking utensils. Use plenty of warm water and sal soda, and then use hot water, sunshine, and pure air to purify them.

Always stable your cows, both summer and winter, at milking time. Use a stool brush and cloth before beginning to milk. Strain the milk as soon as it is drawn, and then separate, or "set" in milk pans submerged in cold water.

CARE OF THE CREAM.

As soon as possible after milking, if the hand separator is used, place the cream in a cool place, where the temperature is about 55 degrees. After the cream is thoroughly cooled to that temperature, it can be emptied in with the cream from previous milkings. Every time a new skimming goes into the cream jar, it should all be thoroughly stirred into the cream below, and then the sides of the jar about the cream should be wiped clean of adhering cream, as this, if left, always ripens too soon and mottles the butter.

I am a friend of the cream separator. With it you get more and better cream than by the old plan of skimming, and, as a rule, better butter is made from the separated cream.

To make good butter, one must not go guessing at the temperature of the room in which the cream is kept. For ascertaining whether the cream is at the proper ripening or churning temperature, a good dairy thermometer is a necessity.

RIPENING THE CREAM.

When you have the amount of cream you want to churn, the ripening or

souring comes next. This is accomplished by bringing the temperature of the cream up to 70 degrees. Keep the cream in the cream jar while ripening, and place the jar in a warm room with the thermometer hanging close by.

Cream will take on flavor from its surroundings, and as most of us are compelled to keep it in the kitchen while ripening, great care must be used, as the cooking odors penetrate very readily.

After the cream is ripened, which will take about twelve hours after it is brought up to 70 degrees, cool it down to 62 degrees by placing in a cool room, and then hold it at this temperature for from three to four hours before churning.

It is very essential in cream ripening to stir the cream frequently to insure uniform ripening. When cream remains undisturbed for some time, the fat rises in the same way that it does on milk, and the result is an uneven ripening, which leads to a poor bodied cream. Instead of being smooth and glossy, it will appear coarse and curdy when poured from a dipper.

As a rule, quick ripening gives better results than slow. For instance, when we attempt to ripen cream at a low temperature, more or less bitter flavor is always the result; if at too high a temperature, the butter will have too much of an acid flavor. If the cream is kept too long after it is ripe enough to churn, the butter will have an old flavor.

PREPARING FOR CHURNING.

Before putting the cream into the churn, the churn should be scalded thoroughly with hot water and then rinsed well with pure, cold water. This will freshen the churn and will fill the pores of the wood with water so that the cream and butter will not stick.

Let me say right here that we think that the churn has a great deal to do with the appearance of the butter. We use an ordinary barrel churn because it churns easily and quickly, and there is no dasher or paddles inside to beat and break the grain and make the butter look like lard with butter-coloring in it.

All cream should be thoroughly strained into the churn. This removes the possibility of white specks in the butter, which usually consist of curd or dried particles of cream.

Butter should be churned until the granules are about the size of wheat. When larger than this, it is more difficult to remove the buttermilk and distribute the salt.

WASHING AND SALTING THE BUTTER.

As soon as the butter granules are the proper size, draw off the buttermilk and put in as much water (the same temperature as the buttermilk or a degree or two warmer) as you have buttermilk. Turn three or four times and draw off. Have a bucket of clear water, of the same temperature as before, and pour on the butter until the water runs off clear.

It is needless to say that nothing but the best grade of salt should be used in salting butter. I would prefer the flake salt, as it dissolves more readily and is not so liable to make mottles. Salt adds flavor to the butter, and materially increases its keeping quality.

Butter-makers differ as to the amount of salt which should be used in butter. Very high salting, however, has a tendency to detract from the fine, delicate aroma of butter, while at the same time it tends to cover up slight defects in flavor. As a rule, butter-makers will find it to their advantage to salt rather high.

Salt very readily absorbs odors and must therefore be kept in a clean, dry place where the air is pure. It should be of the same temperature as the butter when used.

WORKING, PACKING, AND MARKETING.

The chief object in working butter is to evenly incorporate the salt. Our method is as follows: After the wash water is drained off, carefully distribute the salt over the butter, and then

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Ask any successful and experienced dairyman whether this is correct. Inquire what separator the successful dairyman has—you won't find a mail order machine.

Ask the dairy colleges or agricultural departments of the various states—they don't use mail order house separators.

Prof. C. E. Lee, of the Illinois Agricultural Department, says: "I desire to warn you farmers against buying hand separators from the mail order houses. You will regret it. The machines do not give results—they do not last—they fall all to pieces."

Take a look among your neighbors. Who has most trouble? Who has most repairs? Who has changed separators? What kind goes out when changes are made? Generally a Mail Order House separator is at the bottom of the difficulty, isn't it?

Good experience is worth something, but the Mail Order House separator experience is very dear at any price.

Do you want to buy a separator or experience? Those who buy Tubulars get separators and satisfaction. They who buy Mail Order House machines get experience, and when they want separators have to part with more money—even though the change and extra cost are profitable.

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The satisfactory separator is the one that will get all the cream most easily and quickly. The one that is most easily cleaned, and that without repair bills will last a lifetime. That's true economy. It's found in the National Separator. You don't have to take our say-so for it—any one of over 40,000 leading farmers and dairymen using the National today, will gladly tell you so. Why is the National the best? Simply because we have made it our one object for years to build a machine so close-skimming—so easy running—so durable—that no one could find fault with it—we have done so.

The National Cream Separator

stands for every point of perfection put into the simplest form. We use only the finest grade materials. It is carefully put together to stand the wear and tear for years without repairs. Every separator is then carefully tested before leaving our factory. That's why we can safely assure you that the National will soon repay the difference in price between it and a cheaply constructed machine in the saving of cream, time, labor, annoyance and repair bills. Doesn't that kind of an argument count for something with you? Isn't it worth money to you? Well, then, let us tell you more about the National. Send us your name and address—a postal card will do. Ask for our Free Separator Book No. Y2. It describes and illustrates every part of the National. It explains why the National has only two parts to be cleaned—why it is simply play for the children to run a National—and many other points of great interest. We will also give you our Free Trial Proposition. Address today our nearest office.

National Dairy Machine Co.

Chicago, Ill., and Goshen, Ind.

Get Our Free Trial Proposition!

Better Cream = and more of it

It isn't the fault of your cows if you don't get lots of butter from the churning. The fault lies in your way of skimming milk. You must skim so that the large butter-fat globules are not broken up, then you'll have a better grade of cream—more butter if churned—a better test and a higher price if sold. The

Peerless Cream Separator

is the only machine with a combination hollow and disc bowl—that means doubled capacity—and the hollow bowl doesn't break up the large fat globules. If you have but four cows it will pay you to operate a separator and you can't afford to put your hard earned money into a separator of any kind until you have at least read our new free book telling all about the Peerless way of getting more profits from your dairy. Drop us a postal today while you're thinking about it.

Waterloo Cream Separator Co., Dept. C, Waterloo, Ia.



work in churn just enough to get the salt in the butter. Then cover up, and let it stand for twenty minutes or a half hour, to allow the salt to dissolve, and then remove to butter-worker and finish.

In working enough to get the salt evenly distributed, the rule to follow is to work the butter just enough to prevent the appearance of mottles. Just how much working this requires every butter-maker must determine for himself, for the reason that there are a number of conditions that influence the length of time that butter needs to be worked.

After working, then mold. We use the one-pound brick molds. Wrap each cake separately in parchment paper, and the butter is ready for market. Place the butter in a large jar which is used for that purpose and no other, and cover properly. Then put the jar in the milk trough and it will keep nicely until market day.

Always send your butter away in a nice clean basket, with nice snow-white towels, and you can not but feel good, and realize that you have done something to be proud of.

For 16 Years the Best STILL BETTER 1908



The market to-day is flooded with separators of every style and description, and all make big claims.

U.S. CREAM SEPARATOR

But the World's Record for clean skimming in 50 consecutive tests is held by only one Separator, and that one is the reliable U.S. Cream Separator.

Send to-day for Catalogue No. 81 18 distributing warehouses in U. S. and Canada.

494 V.T. FARM MACHINE CO. BELLFLOW FALLS, VT.

Keep Pure-Bred Cows.

Does it pay to breed registered Jerseys? If you like good stock, I say yes; for then you will take a pride and interest in them which will naturally cause you to take better care of them. You will want to see them fat, clean, and in good stables whenever it is stormy. It makes a little more work to keep a herd in during rainy days or nights. You will have to provide a little straw for the gutter so that the tails will not get wet and dirty and be switched into the milker's face, which generally causes a little quick temper with words from most milkers not pleasant to hear.

This is a reminder for those who let their cows stand out in these rains during nights that is so general over the entire country.

WEIGH THE MILK.

If you weigh your milk you will find your cow giving short weight when she stays out over night, and your profits are therefore smaller. The monthly cream check arrives; you look at it. "Well, I ought to have more from those cows than that. That creamery man, I am sure, is not giving me what is right, so I am going to try some other creamery." Try it a while, and it is no good. It is true some creamery men are not honest, but get next to yourself; get a tester; put a spring balance scale in your barn. Keep tab on your creamery man; if you find him all right, go to work and keep tab on your cows and I will venture to say the majority of the so-called dairymen will merely find out that they are only milking cows and selling what they do not use at home. Such cows probably bring a revenue of about \$30 per year each, which barely pays for their keep. I once visited a cow-keeper who had eighteen head of grade Durham cows, and I asked him what his returns were per cow per year. He said: "Well, I get \$20 for butter-fat per cow per year and there is a big calf I am feeding skim-milk; he will bring me \$12. So I have \$32 ahead and the cow left."

I asked him if he did not think a herd should not do better.

He said: "Well, I read about cows doing better, but I don't believe it."

I told him that at that time I had a herd of common cows and a few grade Jerseys that made me \$70 per year for butter-fat and from 5,000 to 7,000 pounds of skim-milk per cow to feed heifer calves and hogs, and the heifers at 2 years old I have since sold for \$50 and \$60 per head and are no doubt giving their owners good returns.

SOME GOOD MILK COWS.

Three and a half years ago I purchased two registered Jersey cows of the Ladd estate at a good price. One of the cows I lost soon after; the other I still have, but have none of her heifers in milk for the reason others wanted them. The cow is a persistent milker and a money-maker. Two years ago this month (May) I purchased several head of choice heifers of Mark Hulburt and D. H. Looney. A part of the herd has been giving milk two years, some one a half, and some about eight months. The result is I have a nice herd to look at, a nice check each month to put on deposit, and a herd that is clipping me out \$100 per cow per year for butter-fat, a nice lot of skim-milk and a choice bunch of calves each year that commands a good price.

A REGISTERED HERD PAYS.

I have concluded that a good registered herd on the average is worth above common stock: \$30 for butter-fat; a calf, 1 year old, \$50; the cow left, from \$100 to \$200; with the common cow at \$40, and her calf not worth raising except you should by chance to get a heifer calf that develops into a good milker, and then you must have a good registered sire.

Some contend that the registered stock business will soon be overdone. Not so with a good butter breed, for the more good cows there are the more are wanted and the increase in butter production is not keeping pace with the demand.

It takes the pure-bred animal to produce a better animal.

If you are good and kind to your stock, get some pure-breds; if not, do not keep any stock around you for stock are not profitable when abused.—W. O. Morrow in Pacific Homestead, Salem, Oregon.

The Hand Separator.

The New York Produce Review and American Creamery presents the following summary of Swedish conclusions on the use of hand separators:

The question whether it is desirable to change to the hand separator system in Gotland, Sweden, has been discussed and the answer has been given by Nils Broander that it is impossible to give an answer that will fit all localities and that the truth is that in some districts the whole milk creameries are the best and in others the hand separators. The deciding factor is the milk quantity that can be secured within a certain distance. If sufficient milk is secured so as to make the working expenses reasonable the whole milk system will hold its own. But in many places this is not possible and there it is better to have a central churning station and skimming stations, provided the roads are such that the cream may be hauled daily to the churning stations. By this system it is possible to make as good butter. But even this system requires a certain amount of milk daily at the skimming stations to make it pay, and if this is not at hand, then the hand separator system must be adopted. As regards the quality of butter, it may be good by all three systems, but the greatest difficulties will be found in the real gathered cream creameries and the least in the whole milk creameries.

American Industries and Chinese Trade.

(Continued from page 693.)

manufacturing establishments. The greater facilities you afford to the Chinese merchants, traders, and travelers to come here and visit your manufacturing, the better for you and the better for us.

THE NATIONAL ASSOCIATION OF MANUFACTURERS.

There is another thing to consider. You can not expect every purchaser of your goods to come to America to see your factories. That would be impossible. But for a great organization like the National Association of Manufacturers to establish a sort of museum or emporium in a great port of China, like Shanghai, to exhibit your goods, should be feasible.

You will understand that your people in China are at some disadvantage. The people of other nationalities have a better way of dealing with the Chinese. They have many agents in almost every important port in China for the sale of their goods. In regard to Americans, it is true there are a few American firms, but what are they in comparison to the number that ought to be there? This great Nation ought to have more houses in China and if you can not afford to establish branches surely you should put your heads together and consider the scheme of sending some one to be your agent and establish a sort of emporium for the sale of your goods.

With China reforming in every direction and with the people waiting to do business in all sorts of trade, it is time for you to push forward your trade with China if you do not want to be left behind.

WHAT WILL BE THE RESULT OF TRADE BETWEEN CHINA AND AMERICA.

Now what will be the result of this great development which I see before me, of trade between China and this country? It is a well known fact that the Chinese merchants and traders are honest people, well known for their integrity. Their word is their bond. I am sure you manufacturers will be very glad to deal with them. On the other hand, as I have said, we have already learned to buy some of your best goods, and in the course of time

we will learn to buy more. In my opinion an increase in the commercial relations between your country and China would tend to smooth any friction which may now and then inevitably happen and in the end will serve to cement the friendly relations not only of the merchants of the two countries, but of the officials as well. I believe a commercial alliance is a very good thing. By this I do not mean an alliance in black and white. The commercial interests of the two countries being identical and not conflicting would themselves form a solid basis for peace. I am speaking generally and not with reference to any country when I say a written alliance for offensive or defensive purposes is very good so far as it goes, but if the interests of the merchants of one allied nation should be handicapped by the merchants of the other allied nation, I fear that written alliances will not last very long. China, so far as I know, like your country, has not made any entangling alliances. China and America have no conflicting interests. The commercial relations between the two are bound to grow in importance. And in this growth you can play an important part. In that way you have the power to bring about this unwritten alliance, based on identity of commercial interests, and principles of peace and good will. And, as I am sure, you manufacturers of this great association are all lovers of peace, you will do your part, as I will in my humble way do my own part, to effect this consummation of a most desirable end.

The Care and Protection of Machinery.

H. M. RAINER, COLORADO AGRICULTURAL COLLEGE.

One of the first essentials to the handling of machinery is to thoroughly understand all parts and to be able to adjust them for best working conditions. By running a certain implement with one or more of its parts out of adjustment, there is danger of damaging other parts by throwing unequal strains on them, besides ruining the part which is not adjusted. In a grain binder, for example, one side of one of the elevator canvases may be tighter than the other, or the elevator frame may not be square, the result is that the canvas can not run straight, and

one end of the canvas slat gets ahead of the other, thus perhaps causing it to be torn off. This will not only seriously damage the canvas but cause other parts to be broken. At one time the writer was sent as an expert to adjust a new mower for a farmer. Upon carefully looking over the machine, it was found that the clips which hold the sickle in place on the cutter bar, had been hammered down so there was no play and a team could not pull it. As soon as these were raised enough to give a very little play, the machine was ready for work.

The draft of an implement is affected very much by its condition. A dull plow share requires about one-fourth more energy to pull it than one which is in good condition. Poorly adjusted implements sometimes pull twice as hard as they should, and in so doing not only wear out the horses, but at the same time do poor work at a loss of time, with damaging results to the machine.

PROPERLY OIL THE WORKING PARTS.

Another very important point in caring for farm machinery is to properly oil all working parts. It has been wisely said by O'Brien that "oil is the cheapest machinery we have." The farmer must not only know how and where to oil every moving part of his machine, but he must oil them. The fact that some parts need a great deal more oil than others must not be overlooked. Some parts that are handy will receive more oil than is necessary, while other parts which are not so handy are neglected almost altogether.

The oil holes found in various parts of machines should be protected from dirt as far as possible. Oil mixed with dirt in connection with wearing part on machinery will soon cut out the bearings and perhaps ruin them.

Sometimes oil holes will become clogged with dirt, and while they may appear to be open, still do not convey the oil to the wearing parts; this will often result in serious damage. In other cases, certain machines have been condemned by operators simply because one or two oiling places had been entirely overlooked. In one case an expert was sent eight miles to fix up a condemned grain binder, and found that the knottor would not tie because of a lack of oil. In this case,



EVERYBODY BUYING DE LAVAL CREAM SEPARATORS

That's very nearly the case this year—from Maine to California and Canada to Florida. The New Improved 1908 DE LAVAL machines are simply "Sweeping the Field."

If you have seen and tried a new 1908 DE LAVAL separator you know WHY. If not you have but to see and try one to know WHY.

A new 1908 Catalogue—as interesting and superior as the machines themselves—is to be had for the asking.

THE DE LAVAL SEPARATOR CO.

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107 FIRST STREET
PORTLAND, OREG.

for want of two drops of oil, the entire machine was brought to a standstill.

Iron wearing on iron must be covered with a film of oil to prevent cutting. The oil, then, prolongs the life of the machine besides making it of lighter draft.

On account of paint in the bearings of new machinery, the moving parts often run hard for the first few days. This paint can be easily removed by the application, as the machine is being started, of kerosene and one-half machine oil.

WATCH NEW MACHINERY.

New machinery should be watched constantly to prevent the loss of bolts and small parts, as such parts will work loose during the first season's use. Certain boxes or bearings may fit too tightly, thus causing them to heat, while others may need tightening. There is nothing that will shorten the life of farm machinery more than the carelessness of not keeping all nuts, screws, and lugs tight.

A wrench should always be found in connection with machines which are in operation, and they should be used when necessary. Some few people get in the habit of using a wrench entirely too much and often get the various parts out of adjustment when they do not necessarily need attention. A large number, however, will allow parts of the machine to lose before they will think about a wrench.

As long as everything is all right, let the machine alone.

STUDY THE CONSTRUCTION OF FARM ENGINES.

In running farm engines, especially the gasoline engine, trouble often arises. The operator may or may not know the cause of it. At first thought, there is perhaps not over one-half of the operators who can exactly locate the trouble. Careful study will help to find the difficulty and after locating it usually very little adjustment will put the engine in working condition. The man who does not exactly know the trouble and does not take time to study it out, but rather seizes a wrench and begins tinkering somewhere will perhaps make several changes before he finally gets the engine started. Then, to his disappointment, the engine does not run exactly right. He tinkers some more and makes it no better. Finally he must call in an "expert" to readjust all working parts and make the engine run right once more.

Good reasoning tells us that there are but two times during the year that farm machinery needs any special care. First, when it is in use. Second, when it is not in use.

PROVIDE SHELTER FOR FARM MACHINERY.

One season without shelter will damage farm machinery more than the year caused by its use during the season. The action of the weather which will cause a rusting of the iron and steel as well as the rotting of the wood parts, will seriously interfere with the working of the machine when it is again put to use. By this exposure, certain parts are very much weakened and the machine becomes of shorter life.

When the season's work with a certain machine has been finished, it should be thoroughly cleaned and all parts that are liable to rust should be carefully wiped with oiled waste or an oiled rag. It is a good idea to coat these parts with either tallow or a good grade of axle grease. Cultivator shovels should be removed, and, after being greased, placed in a sack and hung in the implement shed or storehouse. Time spent in caring for plow shares, mold boards, cultivator shovels, etc., in storing them, will be well paid for the following season.

CARE SHOULD BE TAKEN WHEN PUT AWAY.

After carefully putting away the greased parts, the implement should be stored in a shed of some kind, rather than be left in the open. It is poor policy to leave the implements in one corner of a field or under a tree where

the chickens may roost on them. With this kind of shelter and perhaps not any better care otherwise, they will not last over four years. With good care and housing they would easily last for eight years. It is safe to say that they will last at least twice as long in the one case as in the other. Would it pay a farmer to house his machinery?

With good care and housing, an ordinary grain binder on the average 160-acre farm will last from ten to fourteen years. In comparison to this, a binder doing no more work, without extra care or housing will last but from five to seven years. Records show that many farmers have kept their tools in constant use by good care and housing for more than twice the average life of the machine.

We will assume that a farmer starts in with \$1,000 invested in new farm machinery and that if sheltered and well cared for it will last ten years and if not sheltered only five years. If the implements stand out in the weather, it will cost another \$1,000 to replace them at the end of five years. The compound interest on this at 5 per cent amount to \$276.28 or the total amount of money paid out for machinery with its interest amounts to \$1,276.28.

A TOOL SHED.

At odd times, a farmer may build a tool shed large enough to house this machinery for \$200. The compound interest on this amount for ten years at 5 per cent equals \$125.60 or the shed may be considered to have cost \$325.60 at the end of ten years. After paying for the shed, it leaves the owner at the end of ten years, a balance of \$950.68 in favor of housing his machinery and with little repairs, the shed is good for ten years more.

A shed 22x50 feet with 10-foot posts is large enough to hold the implements on the average 160-acre farm, including one farm wagon and a manure spreader. The doors are 9x9 with one foot between each. Two of these doors should roll on the inside of the plate and the other three on the outside, thus making it possible to open any door of the shed without interfering with any other door. With a roof of $\frac{1}{4}$ pitch this shed requires 14-foot rafters, these should be 2x6's; 2x6 ties are securely spiked on the base of every second pair of rafters to hold the shed from spreading. The shed is best framed for drop siding. A floor may be placed on the ties on which very many small implements or parts of implements may be stored. In case of flooring it, the ties should not be over two feet apart instead of four. The bill of lumber for this shed should not cost over \$200; this, however, would not include cost of labor for construction.

USE PAINT OCCASIONALLY.

The farmer who takes proper care of his implements not only houses them and keeps them in good adjustment, but he paints them occasionally. Paint closes all cracks and keeps out the moisture. It not only preserves the wood, but the iron parts are benefited as well. It also gives the tools a much better appearance.

Before applying new paint, remove all old paint that is likely to scale off and see that all parts are thoroughly clean and dry.

A good grade of carriage paint will give best satisfaction on farm implements. Two gallons of this paint need not cost over \$4 and will cover all implements needing paint on the average 160-acre farm each season. The paint may be applied during slack times of the year at very little cost for labor.

The Shawnee Alfalfa Club.

Unusual interest attaches to the next regular monthly meeting of the Shawnee Alfalfa Club which will be held at the Commercial Club Rooms, 625 Kansas Avenue, on Saturday, June 27.

The presence of Prof. A. M. Ten-Eyck will of itself be sufficient to attract an unusual number of members and visitors, while a discussion of ways and means for the proper han-

dling of a crop under present conditions will be of great importance.

In addition, the matter of making an exhibit at the National Corn and Cereal Show, which will be held at Omaha next December, will be up for discussion.

Samples of alfalfa, particularly those showing unusual or abnormal growth, will be brought to the meeting by the members.

The membership is growing daily and the interest never lags. These meetings are free to all and everybody is invited.

They Want a Coburn in North Carolina, and They Want a Real Agricultural College.

The Progressive Farmer, of North Carolina, has the following in its issue of June 11:

Two splendid opportunities for helping forward North Carolina agriculture are now before our people.

In the first place, a new State commissioner of agriculture is now to be chosen, and to this position should be called the very strongest man the State affords. "There are greater opportunities to-day in the office of commissioner of agriculture than in the office of governor itself," a thoughtful farmer declared to us the other day; and he is right. We need a man of force, ability, energy, enterprise, progressiveness; a man whose whole heart is in the work of uplifting agriculture and agricultural conditions, and no man can be true to his State and vote for any candidate for this position solely because of personal, sectional, or factional considerations. F. D. Coburn, of the Kansas Department of Agriculture, by his aggressiveness, energy, enterprise, and whole-souled devotion to his great task, has been worth millions of dollars to the farmers of that State, and we should choose a man for commissioner here who will set himself to be the Coburn of North Carolina.

In saying this we are advocating the claims of no one candidate, and with no one candidate in mind; but we are urging upon our people the dignity and importance of the office. Our farmers are going wild—some of them—about the candidates for Governor, while this vastly more important position (to them) is not getting its share of attention. The thing to do is for every farmer to decide who will make the strongest and most efficient commissioner, and then impress that candidate's claim upon his delegates to the State convention. And when the Republican primaries are held, we hope our Republican readers will also see to it that the dignity and importance of the office has the same full recognition in their party also.

A second and no less notable opportunity for helping forward North Carolina agriculture is afforded by the election of a new president of the Agricultural and Mechanical College at Raleigh.

These State "Colleges of Agriculture and Mechanic Arts," as the name indicates, were established primarily to foster agricultural education; secondarily, industrial education, and with the third distinct idea that they would be fundamentally different in spirit and purpose from the regular literary institutions of the country.

Yet in too many cases they have become primarily literary colleges, secondarily, mechanical, and with just enough agricultural training to get the heavy appropriations for this purpose from State and National Governments. This condition of affairs has gone on in many States until the farmers have risen in their might and demanded and secured the establishment of separate agricultural colleges in which the mechanical and classical branches can not fatten at the expense of the agricultural.

Our North Carolina Agricultural and Mechanical College, along with others, has suffered in this respect. For a long time—until three years ago, in fact—there was no agricultural building, and even then this was built, not at the expense of the general public

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as all other buildings have been, but out of a special tax levied on the farmers themselves.

Another serious drawback has been that the boards have also seemed unable to realize the folly of the flat salary scheme. Because there are thousands of men trained (turned out for two or three generations past) in literary institutions, now seeking professorship in literary branches, against only hundreds of scientifically trained men (graduating only in recent years fitted to teach in the agricultural division of a college, it is a fact that it is absolutely impossible to get and keep strong, aggressive, capable men in agricultural work at the same salaries paid professors in the ordinary branches of college work.

This is a fact which must be faced, if the college is to get and keep strong men who will build up its agricultural side. There should also be recognition of the fact that there is greater need of constructive activity here; there is building to be done, while the other departments of the college are already well developed. Hence the need of stronger men.

The Agricultural and Mechanical College, if it has a place at all—and we insist that it has a place whose possibilities not one man in a thousand has yet realized—has a place as a promoter of industrial education, not of mere, ordinary classical education; and it has a place to fill as a promoter of agricultural educational primarily, not of agricultural education lastly, and "for revenue only." If it is not going to fulfil this mission, it has no earthly excuse for existence apart from our State University.

The institution needs a president who has a vision of the possibilities of the institution, a man whose heart and soul is in the work of industrial education, and who will put his life blood into the construction of a great and genuine "agricultural and mechanical" institution that will be a credit to North Carolina and the Southern States. We have no candidate for the place at this time; we doubt whether any one should have a candidate on such short notice. But we do plead for the election of a man who will give his life and time and mind and heart and soul to the mighty and inspiring task of rebuilding North Carolina by turning out from our Agricultural and Mechanical College two thousand thoroughly trained and splendidly equipped young men every year to develop our agricultural and mechanical industries. There is no finer opportunity for service, for State-building, to be thought of.

And we would especially urge every farmer in North Carolina who takes an interest in his State and his calling to write one or all of the board of trustees, and urge this policy upon them:

"If you can't say anything more, at least write this: 'For Heaven's sake, give us a president who will set himself to make not a literary institution,

Weather Bulletin

Following is the weekly weather bulletin of the Kansas Weather Service for the week ending June 16, 1907, prepared by T. B. Jennings, Station Director.

DATA FOR THE WEEK.

	Temperature.			Precipitation.	
	Maximum.	Minimum.	Mean.	Departure from normal.	Total.
WESTERN DIVISION.					
Ashland.	85	58	72	5.14	75
Bird City.	85	58	72	1.18	24
Blakeman.	85	58	72	1.64	29
Cimarron.	86	51	68	3.89	57
Colby.	83	52	67	0.99	57
Coolidge.	83	50	67	0.82	57
Dodge City.	86	54	68	2.20	67
Dresden.	88	49	68	1.32	60
Farnsworth.	88	50	70	3.09	60
Garden City.	88	49	67	1.49	60
Gove.	89	50	68	1.91	60
Jetmore.	87	52	68	1.70	60
Lakin.	80	48	70	2.92	85
Liberal.	87	52	70	2.55	60
Lucerne.	86	50	70	1.95	44
Norton.	89	46	70	2.15	77
Scott.	86	50	68	2.05	60
Wakeeney.	88	43	69	0.95	60
Wallace.	88	43	69	2.01	57
Division.	88	43	69	2.01	57

MIDDLE DIVISION.					
Chapman.	81	57	70	4.52	76
Coldwater.	83	57	70	3.02	67
Concordia.	82	58	68	2.86	70
Cunningham.	89	58	70	2.64	60
Ellinwood.	85	57	70	2.71	54
Ellsworth.	83	52	67	6.08	60
Harrison.	81	54	68	2.47	36
Hays.	82	51	68	2.67	62
Hutchinson.	83	53	70	4.21	70
Jewell.	85	54	70	2.88	64
Kingman.	86	60	72	3.31	82
Larned.	83	55	68	4.56	60
Lebanon.	84	56	70	2.30	62
Macksville.	83	53	70	3.20	29
McPherson.	85	58	71	3.22	60
Marion.	82	60	72	3.69	66
Minneapolis.	81	58	68	6.81	60
Phillipsburg.	88	53	68	2.46	60
Plainville.	81	59	70	5.95	60
Pratt.	91	59	77	2.71	60
Republic.	82	50	70	2.62	60
Rome.	80	60	70	3.84	50
Wichita.	80	60	70	1.99	59
Division.	91	59	70	3.35	59

EASTERN DIVISION.					
Atchison.	82	54	68	4.16	46
Cottonwood Falls.	83	56	70	5.31	39
Emporia.	81	50	68	2.83	43
Eska Ridge.	82	57	69	2.99	50
Fall River.	85	59	72	1.34	34
Fort Scott.	87	57	71	2.47	50
Fredonia.	84	60	72	2.21	50
Garnett.	82	56	70	2.21	50
Independence.	81	61	74	4.37	36
Iola.	84	59	71	2.17	46
Kansas City.	80	57	69	4.49	58
Lebo.	80	58	68	2.20	43
Manhattan.	87	58	70	5.60	60
Olathe.	81	54	68	3.34	60
Osage City.	87	52	70	3.52	79
Paola.	83	52	68	2.42	53
Pleasanton.	82	57	70	2.32	42
Sedan.	85	62	72	4.70	42
Topeka.	81	57	68	3.90	44
Valley Falls.	81	56	65	5.69	33
Yates Center.	87	58	72	1.40	45
Division.	91	50	70	2.97	53
State.	93	43	70	2.97	53

DATA FOR STATE BY WEEKS.

April 13.	89	19	55	0.91	54
April 20.	92	30	60	0.79	53
April 27.	92	37	65	0.46	60
May 4.	78	15	49	0.08	62
May 11.	88	29	52	1.32	67
May 18.	95	37	67	1.12	67
May 25.	102	33	68	1.74	64
May 31.	97	40	69	1.33	69
June 7.	100	41	71	2.83	49
June 13.	93	43	70	2.97	53

GENERAL SUMMARY.

The week was unusually cool, the temperature averaging three degrees below normal in the central counties and four degrees below in the western and eastern counties, and was much cooler at the close than at the beginning. The amount of bright sunshine was much less than usual, tho the number of clear and partly cloudy days was nearly normal.

The rainfall for the week was above normal in all parts of the State, and occurred mostly during the last two days. It was much above normal in the southern counties and decidedly excessive in the central and northeastern counties, causing floods in the Kaw and Neosho Rivers and their tributaries. Some hail occurred, but little damage was done except in Hamilton and Scott Counties.

EASTERN DIVISION.

Anderson.—The week began and ended with copious showers and there was but one clear day. The maximum temperature was below 80° on the 9th, 10th, and 13th, and the average weekly temperature was considerably below normal.

Atchison.—Rains fell on every day but the 11th, those on the last two days amounting to 3.24 inches. The 8th and 11th were clear days, but the sunshine for the week was very deficient, as was also the mean temperature.

Bourbon.—Unusually cloudy and damp weather prevailed. The fore part was seasonably warm, but there was some cool weather the latter part.

Chase.—The weather was unfavorable on account of the excessive rainfall and cloudiness. Wednesday, the 10th, was clear and rainless, but the other days were partly cloudy to cloudy, and heavy rains

on the last two days amounted to nearly four inches. Temperatures were somewhat low.

Chautauque.—Rains fell on every day but Sunday, the 7th, making a weekly total of 4.70 inches and the ground is very wet. No clear days occurred and the want of sunshine is badly felt. Temperatures were seasonable, the highest, 85°, occurring on the 9th, and the lowest, 62°, on the 13th.

Coffey.—Cold, wet, and cloudy weather prevailed and sunshine is much needed. On no day did the temperature exceed 80° and no day was more than half clear.

Greenwood.—The week began and ended with rainy, wet weather, and the amount of sunshine was unusually small. Maximum temperatures ranged low in the eighties and minimum temperatures in the sixties.

Jefferson.—There was some sunshine and but little rain up to the 12th, but on that and the following day nearly five inches of rain fell, which was much in excess of what was needed. Warm, dry weather would be of much benefit.

Johnson.—Cool, cloudy weather obtained and the week ended with two heavy rains.

Linn.—The week began clear and warm, but the latter part was cloudier and much cooler, the temperature falling to reach 80° after Monday, the 8th. The rainfall was excessive.

Lyons.—Rains were frequent and heavy thruout the week and the weather was generally cool and gloomy. The Neosho River was within four inches of the high water mark of 1903.

Miami.—Plenty of sunshine was received and temperatures were seasonable.

Montgomery.—Rain fell on four days of the week, the total being 4.37 inches. The maximum temperature was 91° on the 9th, the highest for this year.

The flood of the Verdigris reached its crest on the 8th, being 37 feet above low water mark.

Osage.—The week began with warm and showery weather and ended with 3.27 inches of rain on the 12th and 13th, which was much in excess of what was needed.

Riley.—The week was very wet and cloudy, with

and the ground is too wet for cultivation. The highest temperature occurred at Jewell on the 8th and the lowest at that place was 54° on the 11th.

Kingman.—At Kingman the usual amount of sunshine was received, but rain fell on every day except the 8th, making a weekly amount of 3.31 inches. At Norwich there was but one clear day. Hail fell at Kingman on the night of the 12th-13th.

McPherson.—The rainfall, 3.22 inches, was excessive, but there were only two clear days, the balance being entirely cloudy. Two weeks of dry, sunny weather are needed.

Marion.—Light rains fell the first five days and heavy rains the last two. Temperatures were very uniform, the maximum temperatures ranging in the eighties and the minimum temperatures in the sixties.

Ottawa.—The week began and ended with unusually heavy rains, but four of the days were clear.

Pawnee.—Heavy rains occurred on the 7th and showers fell on each of the other days, with the exception of the 8th.

Phillips.—This has been a cloudy week, with plenty of rain which usually occurred during the nights. The sunshine and temperatures were deficient.

Pratt.—Rains were frequent and heavy, and the ground is now thoroughly soaked. A maximum temperature of 91° occurred on the 7th.

Renov.—Cool, rainy days characterized the week, the heaviest rain, 2.23 inches, occurring on the 13th. The 8th, 10th, and 12th were clear.

Republic.—The weather was cloudy and rainy, the weekly total being 2.62 inches. Warm, dry weather is much needed.

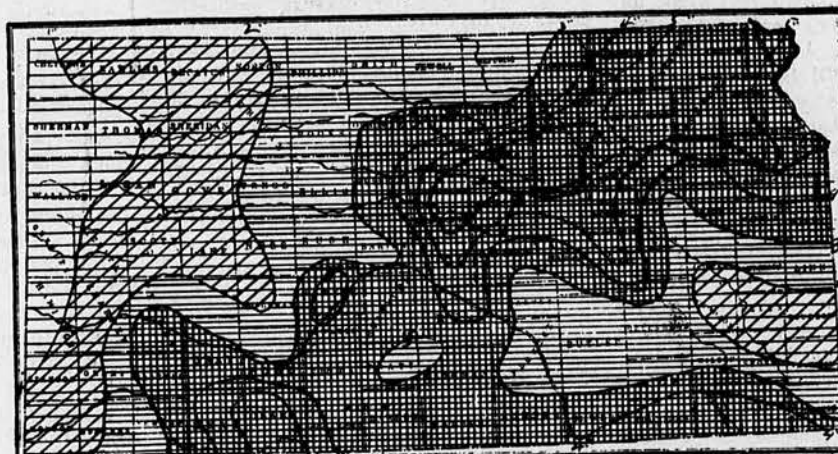
Rooks.—The week was unusually wet, 5.96 inches of rain having fallen.

Sedgewick.—The wet weather has continued thruout the week, with less than the usual amount of sunshine and temperatures somewhat below the normal.

Smith.—Rains fell on every day but the 8th, but there was plenty of sunshine and the temperatures were seasonable.

Stafford.—Rains on six days amounted to 3.20

RAINFALL FOR WEEK ENDING JUNE 13, 1908.



SCALE IN INCHES. Less than .50. .50 to 1. 1 to 2. 2 to 3. Over 3. T, trace.

some hard wind. The rainfall amounted to 5.60 inches. The highest temperature was 87° on the 7th and the lowest 58° on the 8th, 9th, and 11th.

Shawnee.—During the fore part of the week there was some sunshine and temperatures were about seasonable, but cooler and cloudy weather prevailed the latter part, with excessively heavy rains on the nights of the 12th and 13th, which amounted to 3.73 inches. The latter rain was attended by a gale reaching 46 miles an hour between 2 a. m. and 3 a. m. on the 13th. The Kaw overflowed its banks twice during the week, reaching a stage of 28.0 feet on the morning of the 9th, and during the second rise it reached a crest of 24.8 feet.

Wabaunsee.—A violent thunderstorm occurred on the 12th and 13th, accompanied by heavy rains. The week was unseasonably cool and cloudy.

Wilson.—Partly cloudy to cloudy weather prevailed, with frequent and copious rains. There was a dense fog on the 11th and hail fell on the morning of the 12th. The ground is very wet.

Woodson.—Temperatures were about seasonable and very uniform. Two clear days occurred, but the rainfall was in excess of the present needs.

Wyandotte.—The week was cool, cloudy, and stormy, with a gale of 50 miles an hour from the southeast on the morning of the 12th and thunderstorms on the 8th, 12th, and 13th, the latter being quite severe. Excessive precipitation occurred on the 12th and 13th.

MIDDLE DIVISION.

Barton.—Showers and thunderstorms occurred on every day, the total rainfall being 2.71 inches. One day was clear, five partly cloudy and one cloudy.

Cloud.—The temperature was uniformly below normal thruout and the sunshine was deficient. Rain on the 7th, 9th, 12th, and 13th amounted to 2.86 inches.

Comanche.—Maximum temperatures ranged in the eighties and minimum temperatures in the fifties. Two days were clear and the rest partly cloudy. Rains on the 7th, 9th, 10th, and 11th amounted to 3.02 inches.

Dickinson.—The first and last days of the week were marked by heavy rains, but almost the average amount of sunshine was received, the temperatures were deficient.

Ellis.—Several of the days were clear and warm, but the nights were cooler and rainy, with thunderstorms and high winds. The ground has been thoroughly soaked.

Ellsworth.—The week opened with an unusually heavy rain of 3.10 inches on the 7th and this was followed by other heavy rains on the 8th, 10th, 12th, and 13th, the weekly total being 6.08 inches.

Jewell.—Heavy rains were general the fore part

inches. Temperature extremes were 83° and 53°. Summer.—Rain fell on the 7th, 8th, 11th, 12th, and 13th, aggregating 3.84 inches. Cool and cloudy weather prevailed.

WESTERN DIVISION.

Clark.—Rainfall was frequent and heavy, but five of the days were clear and temperatures were seasonable.

Decatur.—Very favorable weather prevailed. Light to moderate rains occurred on every day, and the total amount, 1.70 inches, was ample for all needs. Violent local storms occurred on the 11th and light hail on the 8th.

Cheyenne.—Much benefit was derived from rains on the 9th, 10th, 11th, and 12th, which amounted to 1.18 inches.

Finney.—Heavy rains the last five days have effectually broken the drouth. Temperatures were moderate.

Ford.—Frequent thundershowers, with unseasonably cool weather and a slight deficiency of sunshine, characterized the week.

Gove.—Splendid rains, amounting to 1.49 inches, fell during the week.

Gray.—Rains were frequent, the total precipitation being 3.39 inches. Hail fell on the 9th and 10th.

Hamilton.—Light showers, amounting to 0.62 of an inch, and partly cloudy weather characterized the week. Hail fell on the evening of the 11th.

Hodgeman.—The week opened with a heavy rain on the 7th and this was followed by light showers during the last five days. Southeasterly winds prevailed and there was considerable cloudiness.

Kearny.—Welcome rains fell on the 8th, 9th, 10th, and 12th, aggregating 1.70 inches. Temperatures were somewhat below the seasonal average.

Lane.—With good showers on each of the last four days and normal temperatures, this has been the most favorable week of the season.

Norton.—The weather was very favorable, owing to the abundance of rainfall.

Rawlins.—The week was cloudy, but generally favorable, with some rain every day of the week, making a total of 1.64 inches.

Scott.—The week was wet and cloudy, with heavy local hail storms.

Seward.—The drouth was ended by rains which fell the last five days and amounted to 2.92 inches.

Sheridan.—Beneficial rains fell this week.

Thomas.—Showers fell on the 7th, 8th, 9th, and 12th, amounting to 0.99 of an inch.

Trego.—Rains fell the last five days and amounted to 2.05 inches.

Wallace.—Rainfall was frequent, but comparatively light, and several high winds occurred.

but a great and genuine Agricultural and Mechanical College.

"We are going to get the right man for the place if it takes us a year to find him," one of the trustees is reported as saying, and he has the right idea. We do not know who the man is, but he can be found, and the board of trustees can do the State of North Carolina a lasting service by setting themselves unselfishly to the task.

Free Government Farms.

The United States Reclamation Service announces as follows:

In northern Wyoming, 75 miles east of the Yellowstone National Park, 300 farms varying in size from 40 to 160

acres have just been thrown open to entry and settlement under the Reclamation act. This tract of about 15,000 acres constitutes what is known as the first unit of the Shoshone irrigation project.

The farms are obtainable under the homestead law, subject to the charges of actual cost of supplying water to the land. This charge has been fixed at \$45 per acre, payable in not less than five nor more than ten annual instalments. In addition to this the settler is required to pay an annual fee for maintenance and operation of \$1 per acre. The first instalment of \$5.50 per acre is due and payable at the time application is made for water right for any farm unit. The second

instalment will be due on or before December 1, 1909, thus giving early settlers an opportunity of securing two crops before the second payment becomes due.

The elevation is about 4,400 feet above sea level, and the temperature seldom goes above 95 degrees in summer or below zero during the winter months. The valley is sheltered by mountain ranges on every side, and no blizzards, cyclones, or other severe storms ever occur there.

The crops that can be grown on the Shoshone project are those common to the temperate zone. Alfalfa, wheat, oats, barley, timothy, potatoes, sugar beets, and all other crops produced in the States of the Mississippi Valley of

the same latitude are grown here. Wheat of excellent quality averages 40 bushels to the acre, oats average 55 to 60 bushels, and potatoes yield 250 to 300 bushels per acre. Sugar beets contain a large percentage of saccharine matter and a beet sugar factory is projected for this project as soon as the acreage settled is large enough to warrant it. At present the beets are shipped to the factory at Billings, Mont. Hardy varieties of apples, pears, plums, cherries, and small fruits may be successfully grown. Large numbers of cattle and sheep graze on the lands surrounding the project, and there will always be a home market for hay.

Transportation facilities are furnished by a branch of the Chicago, Burl-

ington & Quincy Railroad, which passes through the entire length of the project, and a line under construction giving a north and south trunk line from Denver, Colorado, to the Pacific coast via Billings and Great Falls, Montana.

Four flourishing towns, viz.: Cody, Garland, Powell, and Ralston, are located on this project, containing schools, churches, banks, newspapers, manufacturing establishments, hotels, stores, etc., and offering fine opportunities for professional and business men and laborers.

The surrounding mountains are covered with spruce and fir and supply the farmers with timber and the stockmen with summer range. Large coal mines operated in the vicinity supply cheap fuel for domestic and manufacturing purposes. Well water of good quality is found at depths varying from 30 to 50 feet.

Every settler will need some capital. The amount, of course, will vary with the man, but \$1,000 or its equivalent, is desirable. He will need a house to live in, well, fences, barn, provisions for his family and feed for his working animals sufficient to last one year, as well as machinery, tools, etc. Arrangements have been perfected whereby settlers will be given opportunity by the Reclamation Service to work out their water right payments in excavating canals, extending the present system to cover additional lands.

Further information may be obtained by addressing the Statistician, United States Reclamation Service, Washington, D. C.

Grasses and Mixtures Adapted to Various Purposes.

Prof. W. H. Olin, a Kansas man of great energy and efficiency who was allowed to escape from this State to become professor of agronomy at the Colorado Agricultural College, has prepared the following list of grasses and mixtures adapted to almost every purpose in either Colorado or Kansas:

BINDING GRASSES FOR RESERVOIRS, SANDY SOILS, AND WASHING SOILS.

1. Carpet grass (*Paspalum compressum*). It does not seed in Colorado.
2. Beach grass (*ammophila arenaria*).
3. Canada blue-grass (*Poa compressa*).
4. Velvet grass (*Holcus lanatus*).

GRASSES FOR WET LANDS.

1. Red-top (*Agrostis alba*).
2. Rhode Island bent grass (*Agrostis Canina*).
3. Alsike.
4. Large water grass (*Paspalum dilatatum*).
5. Brome grass (*Bromus inermis*).
6. Blue Joint (*Galamagrostis canadensis*).
7. Meadow fescue.

GRASSES FOR NON-IRRIGATED LANDS.

1. Bromus inermis.
2. Western wheat grass (*Agropyron occidentale*).
3. Western rye grass (*Agropyron tenerrum*).
4. Meadow fescue.

GRASSES FOR ALKALINE LANDS.

1. Giant rye grass (*Elymus condensatus*).
2. Salt grass (*Distichlis maritima*).
3. Australian salt bush (*Attriplex sammibaccata*). Though not a grass, this is a perennial forage which has been known to grow on strongly alkaline soils and with less than six inches of rainfall.

MEADOW GRASSES FOR HORSES.

1. Timothy (*Phleum pratense*).
2. Meadow fescue.
3. Western wheat grass.
4. Grama grasses.
5. Grain hay (for annual grasses).
6. Grass mixtures.

MEADOWS FOR CATTLE AND SHEEP.

1. Alfalfa (*Medicago sativa*).
2. Red clover (*Trifolium repens*).
3. Alsike (*Trifolium repens*).
4. Millets (animal grasses).
5. Field peas.
6. Grass mixtures.
7. Native meadow grasses.

PASTURES FOR HORSES.

1. Timothy.
2. Mixture No. 1—(a) Alfalfa, 20 per cent; (b) brome grass, 20 per cent; (c) meadow fescue, 50 per cent; (d) Italian rye grass, 10 per cent.
3. Mixture No. 2—(a) Timothy, 30 per cent; (b) brome grass; (c) meadow fescue, 20 per cent; (d) alfalfa, 20 per cent.
4. Mixture No. 3

- (a) Timothy, 25 per cent; (b) red top, 10 per cent; (c) Alsike, 10 per cent; (d) meadow fescue, 15 per cent; (e) Western wheat grass, 15 per cent; (f) brome grass, 30 per cent.
5. Mixture No. 4—(a) Timothy, 40 per cent; (b) alfalfa, 20 per cent; (c) meadow fescue, 40 per cent.
6. Mixture No. 5—(a) Brome grass, 20 per cent; (b) meadow fescue, 40 per cent; (c) Western wheat grass (Colorado blue stem), 40 per cent.
7. Mixture No. 6 (native grasses)—(a) Western wheat grass, 40 per cent; (b) Western rye grass, 20 per cent; (c) grama grass, 40 per cent.
8. Mixture No. 7—(a) Timothy, 20 per cent; (b) meadow fescue, 0 per cent; (c) perennial rye grass, 40 per cent.

GRASS MIXTURES FOR PASTURE FOR CATTLE.

- Mixture No. 1—(a) Brome grass, 50 per cent; (b) Western wheat grass, 50 per cent.
- Mixture No. 2—(a) Alfalfa, 20 per cent; (b) Italian rye grass, 40 per cent; (c) meadow fescue, 40 per cent.
- Mixture No. 3—(a) Alsike, 30 per cent; (b) Western wheat grass, 40 per cent; (c) Western rye grass, 30 per cent.
- Mixture No. 4—(a) Brome grass, 50 per cent; (b) perennial rye grass, 40 per cent; (c) alfalfa, 10 per cent.
- Mixture No. 5—(a) Meadow fescue, 50 per cent; (b) red clover, 20 per cent; (c) timothy, 30 per cent.

SPECIAL PASTURE GRASSES.

1. Brome grass.
2. Meadow fescue.
3. Western wheat grass.
4. Grama grasses. (a) Blue and black grama. (b) Side oat grama.
5. Native range grasses.
6. Italian rye grass.
7. Western rye grass.

PASTURE FOR SHEEP.

1. Sheep's fescue.
2. Meadow fescue.
3. Brome grass.
4. Native range grasses.
5. Grass mixtures for cattle.

PASTURE FOR HOGS.

Alfalfa is the best that can be obtained.

Field peas, vetches, and rape furnish rich and nutritious green feed for hogs when temporary pastures are needed for quick maturing. Rape can often be pastured six to ten weeks from seeding. By sowing at different periods in different paddocks, a rape pasture can be provided for the entire season.

Domestic Water Supply.

PRESS BULLETIN NO. 153, OKLAHOMA AGRICULTURAL EXPERIMENT STATION.

Undoubtedly there are as many if not more of the germ diseases that may be transmitted by means of water than any other means; and some of the diseases are so uniformly transmitted by the water supply that they are known as water borne diseases. Typhoid fever is such a disease, as well as some of the other forms of intestinal troubles. If disease may be carried by water it is of the greatest importance that every precaution should be taken to insure a pure water supply.

A hasty examination of a water is of very little benefit and may often be entirely misleading. A water may be clear, free from any sediment or odor, and may taste good, and still be dan-

gerous for drinking purposes. Too much emphasis can not be given to the fact that water may look good and taste good and still be a source of very great danger. A chemical analysis, supplemented when necessary by a bacteriological examination, is necessary to determine the quality of a given sample of water for domestic purposes. One examination is not always sufficient to determine the fitness of the water, as contamination is more likely to take place at one time of the year than another. The amount of rainfall will influence very considerably the bacterial content of water from shallow wells or poorly constructed cisterns. During the heavy spring rains the number of bacteria reaches an enormous figure and decreases again as the dry season progresses. All of the bacteria that are found in water are not dangerous, but if drainage and other conditions allow contamination from outside sources there is always an opportunity for the introduction of disease-producing germs.


The domestic water supply of the country and small towns comes almost entirely from wells and cisterns, while in many of the larger cities the water is pumped from a stream or reservoir and usually subjected to some purifying process before being used for drinking purposes. Wells and cisterns furnish by far the larger water supply for the people of Oklahoma. It frequently happens that a choice may be had between a well and a cistern as a source of water supply; while in many localities the cistern is a necessity on account of the poor quality or scarcity of the ground water in that particular locality. We do not intend to discuss the merits of the cistern as compared to the well as a source of water supply for the home but will say that either may be made a safe source of drinking water when properly located and well constructed.

If a cistern is constructed, it should be water tight so as to prevent contamination from ground water during the wet season, as well as to prevent leakage of water that runs into it from the roof and if a well is to be dug or drilled it should be located upon higher ground than the house, barn, and outbuildings, and some distance from the latter. The principal troubles that may be traced to an impure or contaminated water supply are as a rule intestinal troubles, the most dangerous being typhoid fever. The most common as well as the most dangerous contamination of drinking water comes from the privy vault. Every precaution should be taken in locating the well to place it so as to prevent as nearly as may be any possibility of contamination. The germs of typhoid fever will remain alive for some time in water and may be distributed to a considerable distance. It is well

known that the urine and faeces from a typhoid patient is dangerous on account of the presence of large numbers of the typhoid germ. In many cases of this disease the infected material from the sick person is not disinfected in any way, or only partially so, and is thrown into the vault or cesspool to be a source of danger in the future. Typhoid fever is not a contagious disease but is strictly an infectious disease and its spread in a family or a community is due, as a general rule, to the use of an infected water supply.

It is easy for a well to become contaminated if it is located near a privy vault as the ground water which feeds the well may have come in contact with the seepage from the vaults, cesspools, etc., or it may be contaminated by surface water carried down by seepage. A review of the results obtained by a bacteriological examination of a large number of samples of water shows how unsafe the water may become at certain seasons. In many cases an examination of the premises has shown the reason for this, as the wells are frequently located within a few feet of an outbuilding, frequently on lower ground than either these buildings or the barn, and are supplied with a poor covering which frequently allows contamination by direct surface flow of water during heavy rains.

The necessary thing to do to secure a good and safe water for domestic use is to locate the well so as to prevent contamination or to construct the cistern so as to prevent contamination from either the ground water or from the surface. There is usually very little trouble from typhoid fever or intestinal diseases during the winter months, and for that reason we pay little attention to the quality of the water until we are forcibly reminded by sickness that something is wrong. Wells and cisterns should be kept clean; they should always have close fitting covers that will prevent the entrance of insects or the working of rats around the top. In most cases a filter should be supplied where water is run into them from the roofs and finally, the roofs should be kept clean and the gutters free from the droppings of birds, bird nests, etc. A filter should not be constructed in the cistern but should be outside where it can be cleaned and refilled as occasion demands. Where it is possible the cistern should be filled with the cold rains of winter and spring and then shut off from the warm rains of summer. If a water supply is suspected of being contaminated, boiling for five minutes will destroy all of the disease germs that are usually present. This is not a very difficult thing to do with the small amount of water consumed for drinking purposes. Wells and cis-



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terns should be put into good condition at this season of the year. Have them well cleaned, securely walled at the top and well covered, and keep them in good condition. Much of the sickness of the summer months may be prevented by doing the needed work at this time instead of putting it off until a case of fever leads you to suspect that the water is not as good and pure as it might be.

An Hour on the Farm.

EDITOR KANSAS FARMER:—One of the finest things at the Grout Farmer Boys' Encampment near Winchester, Ill., was an address by Mr. W. S. Cora, a very successful farmer of Greene County. The following are several of his ideas:

It is the clear, precise appreciation of the value of an hour which distinguishes between many a man of business and some of us farmers. The manufacturer must have his product ready and shipped at a certain hour or somebody loses his job. A ten-minutes' interview with the publisher or manufacturer during business hours is the granting of a distinct favor on his part.

FARMERS CARELESS OF TIME.

But we farmers have little or no regard for the time of a neighbor farmer or our own time. Our errands are not so much business calls as friendly visits. We are not held to any accountability of time. Our trips to town are usually of the same happy, careless, leisurely character.

CAREFUL PLAN COMES FIRST.

Limited by seasons, pinioned by conditions of weather, we are, nevertheless, still heedless of the stray hours. To properly marshal the straggling hours on a farm and make them productive, requires more ability than is possessed by the average captain of industry.

It is quite useless to hope to execute brilliantly without planning carefully. It is equally useless to plan ever so carefully unless we are resourceful in providing against the disarrangement of our plans.

THE NOTE-BOOK METHOD.

When you have an idea write it down where you can refer to it. I once took a day's ride over a large ranch with one of its owners. Repeatedly the well-worn little vest-pocket book came out, and memoranda of a missing staple, a needed repair on a windmill, or a steer that required attention, were jotted down to be cared for at the proper time.

If we can't plant corn, we can take the cultivator shovels to be sharpened, if this has not already been done. A little card in the offices of business men reads, "Do It Now." That card ought to be pasted in every boy's hat. Then the shovels would have been sharpened and greased months earlier, and you could take that day to go fishing, if you wanted to.

CLASSIFIED TASK LIST.

The most hopeful hour-saver is a list of "Must Do" and "Ought to Be Done." It seems a waste of valuable time to take a bright, clear hour, one that invites to productive results, for repairing or cleaning up. Take from your general "trouble list" all those items which can be attended to "while it rains." You can mend a harness when you couldn't go out to repair a gate. But after dinner the rain has stopped; then repair the gate.

It is immensely helpful, where several men are employed, to jot down the name of the man to do the work. In a crew of men there is always one or two who can do certain work better than any one else. Try and direct your force to the best advantage.

FORETHOUGHT SAVES MANY HOURS.

It is oftentimes flippantly said, "It is no trouble for me to think of something to do." No, and it's no trouble for me to think of something to eat, but a little method and forethought may save a bad case of indigestion. The point is to use all the time to best advantage. A well arranged plan, covering as many contingencies as possible, is valuable for one man, and where the time of a number of men is concerned, it is invaluable.

These ready reference lists will in-

stantly direct your energies along the line of greatest profit instead of along the line of least resistance. They become a vest-pocket index for the wisest expenditure of your time and the saving of innumerable hours.

MAKE A MAP OF THE FARM.

Every convenience is a time saver. One little convenience that every farmer, no matter how small, deserves, and one that can be made by any of you boys, is that of a map of the farm. You can put in the fields and the lots, marking the area of each. Number these fields, or label them the "old south pasture," the "spring forty," etc., as you prefer, but the numbering plan seems preferable. Go over the fields with your father, or some one who has known the farm for years, and locate the tiling, and if possible, record the size of the tile, with their outlets. Locate the buildings on the farm and put down their dimensions. If necessary, number them. It is more brief to say "No. 5," than "the old shed on the forty south of the creek." Indicate the woods pasture, the orchard, the garden. Summarize the whole drawing and put down how many acres of permanent pasture; how much land in lots.

The tendency of all this is to an analysis of your plant—the study of what you have to do with, and what you are doing with what you have.

GOOD SUGGESTIONS FOR THE SCHOOLS.

An occasional exercise in farm platting in our country schools might profitably be introduced. One can not contemplate such a map without being impressed with the value of a year, the value of a season, the value of an hour. Field No. 1 is in corn. In the ordinary expectation of life at any age, how many more crops of corn, with the proper rotation, may I expect to see on that field? The last time it produced only 50 bushels per acre. How many chances have I to make it turn off 75 or 100 bushels? In a ball game we have nine innings in which to win out, and it is all over in a pleasant afternoon. When we have had nine corn crop innings at field No. 1 most of us will be fathers and some grandfathers.

THE MAN BEHIND THE CULTIVATOR.

The 8-foot bidder should supplant the 5-foot; the gang plow, the walking plow. Valuable hours should be saved by the use of the largest practicable machinery—less man-power, more horse-power, less expense.

It is the man behind the cultivator that counts. He counts on the crop, and if he counts among the men who work with him, there are hours and days made for the farm. But, more valuable than time saved, is the cultivation of a spirit of good will and the helpfulness among the men; this is nowhere more valuable than on the farm.

Surely, a farm is also known by the kind of men it keeps. It needs young men like you, men of ability, men of ambition. Hundreds of farms are waiting for your enthusiasm, your energy, your endeavor. Opportunities were never more inviting or alluring. You will have a chance to place your value upon an hour.

Springfield, Ill. ARTHUR J. BILL.

A Car Shortage Decision.

For the last six months complaints of car shortages have been scarcely ever heard. The time may be near at hand, however, when a knowledge of one's rights in the matter of obtaining cars will again be of paramount importance. We therefore give in full the report of a case recently decided:

In an opinion by Interstate Commerce Commissioner Clements, the Commission has dismissed Case No. 1193, S. MacMurray, doing business under the name of Wood River Grain Co. vs. Union Pacific R. R. The syllabus is as follows:

Reparation on account of alleged unjust discrimination of defendant in not furnishing complainant with his proper share of cars for shipment of grain at Wood River, Neb., in November and December, 1906, while during that time complainant's competitors at that station were favored with



Blacklegoids

Simplest, Safest, Surest Vaccination
for the prevention of

BLACKLEG IN CATTLE

NO DOSE TO MEASURE. NO LIQUID TO SPILL. NO STRING TO ROT.

Just a little pill to be placed under the skin of the animal by a single thrust of the instrument. You cannot afford to let your cattle die of blackleg when a few dollars spent on Blacklegoids will save them. Write for circular.

PARKE, DAVIS & COMPANY

HOME OFFICES AND LABORATORIES, DETROIT, MICH.

NOTICE.—For a limited time we will give to any stockman an injector free with his first purchase of 100 vaccinations.



grain cars, denied, as the testimony discloses that the time mentioned was during the car shortage season, and that the business of complainant and his competitors suffered in common during that time, and no undue discrimination in furnishing cars by defendant was satisfactorily shown.

The report of the Commission follows:

Complainant buys and sells grain at Wood River, Neb., a local station on the Union Pacific Railroad. In addition to complainant, the Omaha Elevator Co., the T. B. Hord Grain Co. and the Conrad Grain & Elevator Co. are there engaged in the same business. The complaint is that during November and December, 1906, defendant unduly discriminated against him and in favor of other dealers in the furnishing of cars for shipments of grain. Reparation on account of the alleged unjust discrimination is asked in the sum of \$2,000.

Complainant owns two warehouses, with a total capacity of about 12,000 bushels, located from 80 to 200 feet from the tracks of the railway. He has no elevator, but by means of scoop shovels loads therefor and the ability to handle the business when the cars were supplied.

From a statement taken from the records of the defendant, furnished at the request of the examiner, it appears that during the year 1906, prior to the period covered by the complaint, there were shipped cars of grain by the four grain companies at Wood River as follows:

Conrad Grain & Elevator Co.	150
T. B. Hord Grain Co.	102
Omaha Elevator Co.	58
MacMurray (Complainant).	17

This shows that complainant during the year 1906 shipped out about 5 per cent of the grain. Complainant insists that he could have greatly increased his business if he had been supplied with cars as needed.

While it is no doubt true that under the circumstances of general insufficiency of transportation facilities prevailing during the period covered by this complaint, complainant could have greatly increased his business, if supplied with cars as needed, it is not apparent that he could have done so had his competitors also been supplied with all cars needed by them. They all, in common with shippers throughout the country, suffered in the same way from the effects upon business of the so-called car shortage. Demands were being made by

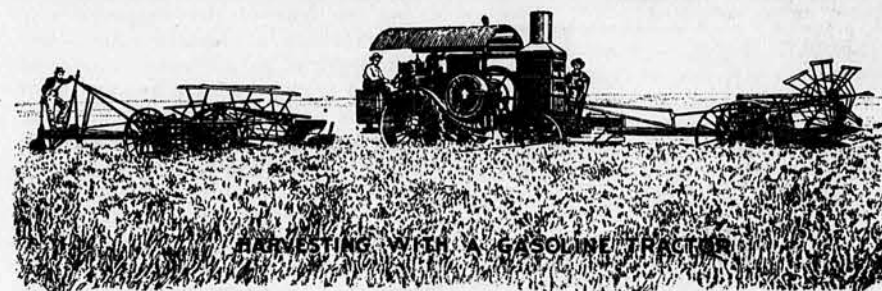
the competitors of complainants at Wood River upon the defendant for more cars during the same period, and vigorous protests were made by them on account of the failure of the defendant to furnish a sufficient number of cars. The business of complainant and of his competitors suffered in common. No undue discrimination in the matter complained of has been satisfactorily shown.

The complaint will be dismissed.

The little girl was fond of pleasant days and at the close of a heavy rain-storm petitioned in her prayer for fine weather; when, the next morning the sun shone bright and clear, she became jubilant and told her prayer to her grandmother, who said: "Well, dear, why can't you pray to-night that it may be warmer to-morrow so grandma's rheumatism will be better?" "All right, I will," was the quick response; and that night, as she knelt, she made this request in her prayers: "Oh, God, please make it hot for grandma."

"The man who tries to conduct his business without advertising is like the fellow who throws his sweetheart a kiss in the dark. He knows what he is doing, but no one else does."—William J. Bryan.

Since the United States reclamation service began operations in opening public lands under the Carey Act, about ten million acres of rich irrigable lands have been segregated and will be irrigated by many big reservoirs, canals, etc., being put in by the Government. Uncle Sam is spending fifty million dollars now to bring under water in the next three years about four million acres of land. Under the present reclamation laws a farmer who takes up land in one of these irrigated districts must reside on it six months after he makes a filing, and as squatters who take this land for speculation file on the land just as soon as it is open regardless of when water is delivered, much of this rich land is passing into the hands of land grafters. The reclamation laws as they now stand work against the real farmer who wishes the land for farming, and gets into the speculators' clutches. Wm. R. Draper, of Kansas City, Mo., is organizing farmers into societies everywhere through the Middle West to present a big petition to Congress next session to change these laws. Mr. Draper wants to change the laws so as to make residence on the land unnecessary until six months after water is delivered. This clause already applies in the Carey Act but not in the Homestead or desert land law. Mr. Draper began this campaign several months ago and has fifty thousand farmers now who have signed the petitions. He asks every farmer who reads this and who wishes at some future time, if not now, to get a Government farm, to write him at Kansas City signifying his intention of helping with this big fight. No money or financial aid is wanted, just moral help.



This seems to be the day of gasoline power. Such engines are coming into use for all sorts of farm purposes. At first only small stationary gasoline engines were utilized; then large ones of a portable form and now the gasoline traction is rapidly coming to the front. At first the gasoline traction was used only for thrashing purposes, but they were soon built strong enough to be used for plowing and other heavy farm work. We have already seen illustrations in your columns of several gasoline tractions at work plowing, disk and seeding and road grading. We learn that many enterprising owners of such engines have also used them for listing their corn, using 3 or 4 two-row lists behind the engine and doing the work quicker, better and cheaper than it can be done with horses. The above illustration shows an engine at work harvesting wheat near Washburn, Texas. Two 12-foot header binders were used, harvesting from 60 to 70 acres per day. There is no danger from fire with such an engine, and it operates with perfect coolness in the hottest weather under conditions which are the hardest on horses. Such an engine does not get sore shoulders and when the day's work is done there are not a dozen or fifteen horses to be unhitched and cared for. There will be many of these engines at work in the harvest fields of Texas and Kansas this summer. These engines are built by the Hart-Parr Co., Charles City, Iowa.

The Poultry Yard

CONDUCTED BY THOMAS OWEN.

THE NEW "SPORTS" BREED.

Joseph Christopher Jabez Bilk
Kept a dairy farm for butter and milk,
Fresh cream and hams,
Eggs, fruit, and jams
Which he thought would pay better than
rails or trams.
And he tolled away,
By night and by day,
With never an hour for rest or play.
Yet, I very much grieve to have to relate,
The profits could never be said to be great.

Then Jabez thought of a better plan
Of becoming a noted and wealthy man,
He sold his kine,
And slaughtered his swine,
Abandoning all but the poultry line.
And taking heed
Of the public need
For a new and original useful breed,
Forthwith resolved to devote his mind
To inventing a strain of a novel kind.

As a good foundation for future stock,
He purchased a curious cross-bred cock
From a neighbor's pen
Of fowls; and then
He mated him up with a Faverolles hen.
Result was a score
Of chickens which bore
No resemblance to anything heard of before.
And such being the case, 'twas easy to guess,
Each chicken resembled its fellow still less.

Another year, and a second hatch,
And out came a still more remarkable batch.
Though one could say
That this time, they
Resembled a certain type, in a way,
And therefore if I
Endeavor to try

To describe just one of the motley fry,
The reader must understand that this cock
Was reckoned by Jabez the flower of the flock.

Although possessing the beak of a snipe
In head he resembled the Hamburg type.
His comb like the rose
Of a garden hose,
Had a pike upon which you could hang your
clothes.
Ear-lobes like lead,
Set high in the head,
And a hackle striped with green and red,
While sickles the color of old port wine
Surmounted a tail which was simply divine.

His breast of a beautiful sunset hue
Was spangled profusely with azure blue.
His eye was keen,
Of a color between
A brown and a gorgonzola green.
He sported a ruff
Of a snuffy buff.
His thighs and cushion were smothered in
fluff,
While in strict accordance with Mendel's
laws,
He'd a dominant voice and recessive claws.

Winter came with its fogs and snow,
And Jabez prepared for the Palace Show,
Since profit and fame
Were his little game.
As well to get the new breed a good name,
So reviewing his stock,
He selected a cock
(The one I described as the flower of the
flock),
With a pullet in color and form to agree,
And entered them both in the A. O. V.

Now the Palace Show is, as every one knows,
The place where the poultry "quality" goes,
And there they stay
Most part of the day.
About conference rings,
And lacing of wings,
The marking of eggs and similar things.
In fact, if you really would be "in the know,"
It's essential to visit the Palace Show.

Around those variety pens could be seen
The creme de la creme of fanciers keen.
There were Edward B.
And Doctor C.
With Viscount D, and L. C. V.
While George A. P.
And F. J. B.
Discussed the points with G. T. D.
And judging stick and fountain pen
Were soon at work on that cock and hen.

Poultry editors flocked from the Fleet,
Strand, and Essex and Arundel Street.
Scientists, too,
Came from the Zoo,
To see for themselves if it really was true
That birds had been bred
Of whom it was said
That the cockerels crowed ere their combs
were red.
While the pullets were known on occasion to
lay
As many as five or six ova per day!

And Jabez stifled his laugh with a cough,
As he smiled the smile which never comes off.
For most of the crowd
Were decidedly loud
In praise of a breed so uniquely endowed.
And utility men
Again and again,
Returned to have just one more look at the
hen.

Still, one or two wisecracks made the assertion
That color so perfect must end in reversion.
Then letters flowed in from every clime,
While clerks and typewriters worked overtime.
Each morning mail
Brought a perfect hail
Of cheques and orders, to send without fail
A sitting or two,
Or even a few

Of day-old chicks, for they little knew
That to meet a demand so enormously great
Their eggs were being purchased at "so much
a crate!"

And from day to day, like a ball of snow
The banking account continued to grow.
And all went well
As a marriage bell,
Till the buyers found out they were in for
a "sell."

Then some of them went
On mischief intent
To visit the farm, but their time was mis-
spent,
For a neatly-typed notice affixed to the gates
Informed them that Jabez had gone to the
"States!"

—By the Lady Dorking, in Poultry, London.

Poultry Notes.

As soon as the growing chicks are
far enough advanced, carefully cull

out all off-colored, crooked backs,
crooked toes and those which show a
clearly defined disqualification, in fact
all that are inferior. These can be
disposed of for table or market pur-
poses and their places allowed to those
of greater value.

Whitewash the inside of the poultry
house and clean it out quite often.
Open the doors and windows at night.
It will be well to examine the legs of
every fowl and chick on the place, and
if they are getting rough, wash thor-
oughly with soap and water. After
drying, anoint with a mixture made as
follows: 3 ounces sweet oil, 1 ounce
sulfur, 10 drops carbolic acid. Wait
a week and anoint again.

Most of the hens are now through
laying and if not wanted for next
year's breeders, should be disposed of
to the butcher. Very good prices are
now paid for fowls and it will be very
unprofitable to keep them through the
summer, expecting a higher price for
them in the fall. For though a higher
price be realized it will not pay for
the feed given to them through the
summer, especially at the high price
that feed is now selling for. So we
would advise you to market every mar-
ketable fowl.

The critical time in the raising of
young chicks is now at hand. Lice
and hot weather combine to get away
with them. Many people are quite en-
thusiastic with the occupation of pou-
ltry raising during the pleasant spring-
time, but as the mercury in the ther-
mometer goes up their enthusiasm
goes down. It is the hot weather that
extra care and attention becomes ne-
cessary in the poultry yard. A little
of the efforts expended in the spring,
if put forth now, would save many a

	Eggs per hen.	Value per hen.
12. Langshans.	210.6	138.5
6. Cuckoo Leghorns.	190.1	153.0
6. Buff Leghorns.	196.0	158.3
48. White Leghorns.	201.2	144.8
6. Buff Orpingtons.	182.6	151.0
12. Brown Leghorns.	191.8	128.5
51. Silver Wyandottes.	179.6	127.1
6. White Wyandottes.	169.1	120.1
72. Black Orpingtons.	187.7	115.7
6. Rhode Island Reds.	166.6	123.0
6. Buff Wyandottes.	165.5	118.8
6. Minorcas.	170.8	123.6

chick that otherwise will succumb to
disease and death.

Neglect of the chickens, especially
if they are confined to yards, is al-
ways liable to be followed by disease.
The accumulation of filth in the pou-
ltry houses, the failure to supply with
regularity suitable food and pure
water and material without which the
fowls can not properly prepare their
food for digestion, and damp walls and
floors, all this will in time undermine
the health of the fowls and end in
serious trouble. The chickens will
stand a great deal of abuse, but there
is a limit beyond which they can not
maintain their health and survive.
But chickens are not naturally subject
to disease to the extent that is sup-
posed. Many people who would other-
wise keep a flock of hens hesitate to
do so for fear of the supposed con-
stant presence of disease which they
think requires an immense amount of
time and trouble to keep at bay. Half
an hour a day will suffice for cleaning
the poultry house and giving all the
needed attention to a flock of twenty
or thirty hens. The person who indus-
triously devotes this much time to the
purpose every day need not worry
about disease. The chances are fifty
to one that his premises will never be
invaded by any of the contagious dis-
eases which are widely supposed to be
the main drawback to successful pou-
ltry culture. If you are careful to keep
your chickens clean and dry there is
very little chance for disease to get
a foothold.

Topeka is to have a real old-fash-
ioned State fair this year and great
preparations are now being made to
make a great success of it. The pou-
ltry department will have its proper
share of attention. Good premiums

will be offered and a competent ex-
pert selected to do the judging. If the
poultrymen will but do their duty a
great display of poultry can be gath-
ered together, which will give a great
impetus to the industry in this State.
The date of the fair will be September
7 to 12.

Egg-Laying Contests, Hawkesbury Col- lege, Australia.

At the Hawkesbury Agricultural Col-
lege March 30, 1908, there was con-
cluded the first two-years' egg-laying
competition ever held in the world.
The sixth annual competition also
came to a close. Both were organized
by "The Daily Telegraph," and were
conducted under the personal super-
vision of Mr. D. S. Thompson, Govern-
ment Poultry Expert. The executive
management was in the hands of a
committee consisting of Messrs. W. S.
Campbell, director of agriculture; H.
W. Potts, principal of the Hawkesbury
Agricultural College; D. S. Thompson;
A. A. Dunncliff, jr. ("The Daily Tele-
graph"), and S. Ellis, J. Stewart, J.
Hadlington, A. E. Henry and E. Wal-
dron, competitors' representatives. Li-
beral cash prizes were offered, total-
ing 120 pounds, including 50 pounds
donated by "The Daily Telegraph."

The wisdom of the committee's ac-
tion last year in deciding to extend the
duration of all future competitions to
two years has been abundantly justi-
fied by results, and the records
now available will furnish the
poultry world with the first reliable
data of the laying of second-year hens,
and as such they will doubtless be wel-
comed by Europe and America, as well
as Australia. The following com-
pares the average number and value
of eggs laid per hen by the different
breeds during the first and second
year respectively:

Eggs per hen.		Value per hen.	
First yr.	Second yr.	First yr.	Second yr.
210.6	138.5	19s 1d	14s 1d
190.1	153.0	16s 10½d	14s 7½d
196.0	158.3	16s 10d	14s 5½d
201.2	144.8	17s 5½d	13s 6d
182.6	151.0	16s 3d	14s 6d
191.8	128.5	16s 1½d	12s 9½d
179.6	127.1	15s 10d	13s 0½d
169.1	120.1	15s 9d	12s 2d
187.7	115.7	16s 9d	12s 2d
166.6	123.0	14s 2d	12s 3d
165.5	118.8	14s 4d	11s 10d
170.8	123.6	13s 8d	11s 10½d

The Fertility of Eggs.

Officials of the Department of Ag-
riculture have been collecting data re-
garding the factors which affect the
fertility of eggs, the question having
been carefully studied at a number
of experiment stations in the United
States and elsewhere.

Too warm quarters for laying stocks
and overfeeding are commonly be-
lieved to exercise an unfavorable in-
fluence on egg fertility as well as
does a cold season. The way eggs
are handled or stored is also believed
to affect the proportion which will
hatch, as will also the conditions un-
der which incubation occurs.

The vigor and character of the par-
ent stock and the length of time the
male bird has been with the flock are
also important questions with respect
to egg fertility. At the outset it
should be pointed out that fertility
and "hatchability" are not necessarily
identical.

An egg may be fertile and still the
germ does not have sufficient vitality
to produce a healthy chick under the
ordinary conditions of incubation. In
a series of incubator experiments at
the Rhode Island Station, of 8,677
eggs tested, 83 per cent were found
to be fertile, while only 46 per cent
of the fertile eggs, or 38.6 per cent of
the total number of eggs, hatched un-
der the conditions of the tests.

The various observations made,
while not entirely conclusive, indicate
that, in order to secure fertile eggs,
which will hatch, the laying stock
must not be kept in very warm quar-
ters or overfed; the males must be
kept with the hens continuously and
that only eggs should be used which
are produced after the male has been
with the hens several days.

Only the fowls from very vigorous
parent stock and those known to

PLYMOUTH ROCKS.

BARRED ROCKS—Young stock from Smith's lay-
ing Rocks after Oct. 1. Chas. E. Smith, Mayetta, Ka.

DUFF'S BARRED ROCKS—Choice standard
stock by standard mating. We breed them now
exclusively, and have the very best. Eggs and
stock in season. Write your wants. A. H. Duff,
Larned, Kans.

ONE DOLLAR

buys 15 eggs from Smith's laying strain of Banded
Rocks the balance of the season. Eggs shipped as
they come; choice. Choice breeders. Prices right.
CHAS. E. SMITH, Route 2, Mayetta, Kans.

White Plymouth Rocks EXCLUSIVELY.

For 16 years I have bred W. P. Rocks ex-
clusively, and have them as good as can be
found anywhere. I sell eggs from first-class,
high-scoring stock at live and let-live prices.
\$2 per 15, \$5 per 45, and I pay the expressage
to any express office in the United States.

Thomas Owen, Sta. B, Topeka, Kans.

BRAHMAN.

Light Brahma Chickens

Choice pure-bred cockerels for sale.

Write or call on

Chas. Foster & Son, Eldorado, Ks. Route 4

WYANDOTTES.

BROWN'S WHITE WYANDOTTES—Ahead of
everything; stock for sale; eggs in season. I have
the English Fox Terrier dogs. Write me for prices
and particulars. J. H. Brown, Boyero, Colo.

WHITE WYANDOTTE EGGS for hatching \$1
per 15 or \$5 per 100. Mrs. E. F. Ney, Bonner
Springs, Kans.

LEGHORNS.

S. C. BROWN LEGHORN EGGS from our stand-
ard bred flock, sterling quality, rest of season \$1 per
30, \$1.50 per 50 or \$3 per 100. Our motto: Fine birds,
moderate prices. L. H. Hastings, Quincy, Kans.

S. C. B. LEGHORN EGGS—30 for \$1, 100 for \$3.
Mrs. P. E. Town, Route 3, Haven, Kans.

STANDARD-BRED S. C. Buff Leghorns founded
by flock of prize-winners of Chicago and St. Louis
World's Fairs, and have taken 1st wherever shown.
Stock for sale; eggs in season from pens scoring 90 to
95. No. 1 pen, \$2.50 for 15; No. 2, \$1.50 for 15. S.
Perkins, 801 E. First St., Newton, Kans.

Rose Comb Brown Leghorns Exclusively
Farm raised. Eggs per sitting of 15, \$1; per 50,
\$2; per 100, \$3.50. F. H. Mahon, R. R. 3, Clyde,
Cloud Co., Kans.

BUFF ORPINGTONS.

BUFF ORPINGTONS—This year's breeders now
for sale cheap. Hens that were \$3 to \$10, now \$1 to
\$3. Cocks that were \$5 to \$15, now \$3 to \$6. Catalogs
free. W. H. Maxwell, 1990 Mo Vicer, Topeka, Kans.

CHOICE Buff Orpington and B. P. Rock cocker-
els. Collie pups and bred bitches. Send for circu-
lar. W. B. Williams, Stella, Neb.

BLACK SPANISH.

BLACK SPANISH EXCLUSIVELY—For 12
years winners of all firsts at Kansas and Nebraska
State shows, 1908. Eggs balance of season, \$1 per 15,
\$5 per 100. H. W. Chestnut, Centralia, Kans.

RHODE ISLAND REDS.

R. C. Rhode Island Reds

Eggs, \$1.00 for 15,
\$5.00 for 100.

Mrs. Wm. Roderick, R. 1, Topeka, Kans.

SCOTCH COLLIES.

SCOTCH COLLIES—Pups from trained parents,
\$5 each. Will Kilgough, Ottawa, Kans.

SCOTCH COLLIES—Pups and young dogs from
the best blood in Scotland and America now for sale.
All of my brood bitches and stud dogs are registered.
Well trained and natural workers. Emporia; Ken-
nels, Emporia, Kans. W. H. Richards.

SCOTCH COLLIES of the
best breeding, have the intelligence of a
human. For particulars address:
DEER LAKE PARK, SEVERY, KAN.

Scotch Collies.

Fifty-seven Collie puppies just old enough to ship.
Place your orders early, so you can get one of the
choice ones.
Walnut Grove Farm, Emporia, Kans.

Incubators and Brooders

If you want a good incubator in a hurry
write to the undersigned. He keeps the Old
Trusty Incubator (hot water) and the Com-
pound (hot air), two of the best incubators
made. Also the Zero brooder, no better
made. It pays to buy a good brooder. No
use hatching chicks without a good brooder
to raise them. The Zero will raise every
chick you put in it.

THOMAS OWEN, Sta. B, Topeka, Kans.

The Blossom House

Kansas City, Mo.

Opposite Union Depot. Everything
first-class. Cafe in connection. Cars
for the Stock Yards, the up-town busi-
ness and residence parts of the city
and for Kansas City, Kansas, pass the
door. Solid comfort at moderate prices.
A trial will please you.

produce a high percentage of fertile eggs (hens vary widely in this respect) should be used; the hens should be allowed a rest after each laying period, while the eggs should be handled carefully, not subjected to extremes of temperature in storage and used only when comparatively fresh.

The Southeast Kansas Sale Circuit.

The Southeast Kansas sale circuit has been formed, and four of the well known and up-to-date breeders of Duroc-Jersey cattle of the State will participate in a series of sales to be held in November as per dates claimed in THE KANSAS FARMER. Those participating are: Samuel Drybread, Frank Drybread, J. J. Baker, and O. W. Simerley. The sales will be held in the order named, as follows: Samuel Drybread, Wednesday, November 11, at the Star breeding farm, six miles northeast of Elk City; Frank Drybread, Thursday, November 12, at his farm seven miles northeast of Elk City; J. J. Baker, Friday, November 13, at Thayer, Kans.; and O. W. Simerley on Saturday, November 14, at Parsons. These are all breeders of repute, and prospective buyers should not fail to arrange to attend this series of sales, for there will probably not be such another opportunity to obtain the quality and blood lines as will be found here.

Linscott Likes It.

R. J. Linscott, owner of the Linscott herd of Jersey cattle headed by Tommy Tormentor 67223 and Marygold's Lad C 22856, at Holton, Kans., writes as follows: "I am getting splendid results from my advertising in THE KANSAS FARMER—much more than I had hoped for. What is more to the point, they are buying the cattle. The demand for dairy stock of quality is very large. 'I notice in this week's KANSAS FARMER that you advocate a dairy cattle improvement association along the lines of those now in Iowa and Illinois. While I was in Illinois lately I heard their association spoken of very favorably and I should like very much to see something done along these lines and to become a member and do what I could to advance it.'"

Stops Asthma Attacks.

New York.—In order that the many sufferers from asthma, hay fever, catarrh, and bronchitis may test this truly remarkable discovery, The Toxic Laboratory, 1123 Broadway, New York, announce that they will send a trial treatment of Toxicol free by mail to all sufferers who write for it. Toxicol is not a palliative remedy but effects a radical cure and is entirely different from all "smokes," "sniffs," inhalations, or other symptom treating methods heretofore used in those diseases.

The Engine Question—a Tip.

It is no longer a question of whether or not the farmer needs an engine. He has already been assured of the many advantages of having a good engine handy for almost any kind of work. But there seems to be a growing tendency on the part of some of the manufacturers to make engines to sell rather than to give good service. This naturally puts the farmer on his guard, but some of them are dealing with the old reliable concern, the International Harvester Company of America. The engines this company distributes are manufactured on correct mechanical lines. They are required to be of the highest order. That implies not only correct principles, but materials best adapted to uses, and workmanship that can not be surpassed. The principles were carefully worked out and tested before manufacture began. The record of service of the engines at work has abundantly established their correctness, as well as the excellence of materials and workmanship.

One of the greatest things that has positive response of the engine when ever called upon. An engine that can not be depended upon to start quickly and positively is of little value anywhere, especially to the farmer whose power jobs require frequent stopping and starting.

Smooth, even running and generation of the full rating of power are other features that are next in importance to dependable starting; then comes the simplicity and ease of control for which these engines are noted; and lastly, economy. The engines are adapted to the use of gas, gasoline, or denatured alcohol for fuel. Well posted men agree that whatever the fuel, the minimum is consumed for the power delivered.

The engines are made in several styles and range in size from 1- to 25-horse power. A letter direct to the International Harvester Company of America will secure catalogue and the information you desire promptly.

He Likes the Birdsell.

"Byron, Okla., May 27, 1908. 'Birdsell Manufacturing Company, South Bend, Ind. Gentlemen:—Your letter of April 23 received and contents noted and in reply will say that the No. 7 alfalfa huller gave most excellent satisfaction to myself and patrons. There were several different makes of hullers sold in this vicinity last season, but from what I can learn from the farmers of the vicinity where the Birdsell No. 7 alfalfa huller is the only one that gave perfect satisfaction under all conditions whatever, wet or dry. I ran huller about thirty days but on account of the wet season and most of the jobs being small and most of the alfalfa being rained on it was impossible for me to make a correct estimate of what the machine would

LAND BARGAINS IN TEXAS AND ELSEWHERE

25,000 acres in Pan Handle country at \$8.00 to \$20.00 per acre. 22,000 acres in South Texas consisting of rice, cotton, sugar-cane, and all kinds of fruit lands at \$15.00 to \$25.00 per acre. Also choice fertile lands in the Artesian Belt of Texas. We also have a splendid list of Kansas ranches and farms for sale, and 10,000 acres in Colorado. For detailed information,

Address, H. P. RICHARDS,

205-6-7, Bank of Topeka Bldg.,

Topeka

Special Want Column

"Wanted," "For Sale," "For Exchange," and small want or special advertisement for short time will be inserted in this column without display for 10 cents per line of seven words or less per week. Initials or a number counted as one word. No order accepted for less than \$1.00.

MISCELLANEOUS.

JOB PRINTING Write us for prices on anything in the job printing line. Address B. A. Wagner, Mgr., 625 Jackson Street, Topeka, Kans.

SEEDS AND PLANTS.

FOR SALE—Early Learning seed corn \$1.25 per bushel. Cane, millet, cow-peas and other seasonal seeds. Quality and prices right. T. Lee Adams, Kansas City, Mo.

FOR SALE—Seasonable Seeds and Plants: Millet, cane, buckwheat, cowpeas, turnip and all other seeds; sweet potato, cabbage, tomato, celery, egg plant and pepper plants. Ask us for prices. The Barteldes Seed Co., Lawrence, Kans.

PLANTS—Cabbage and Sweet Potato plants, all varieties, 20c per 100, \$1.40 per 1000. Tomatoes, all varieties, 30c per 100, \$2.40 per 1000. Peppers 10c per dozen, 60c per 100. Special prices in large quantities. F. P. Rude & Son, North Topeka, Kans. Both phones.

PLANTS—Cabbage: Early Winningslad, Henderson's Early Summer, All seasons, Succession, St. Louis Late Market, Late Flat Dutch; 20c per 100, \$1.50 per 1000. Tomato: Early Dwarf Champion, Dwarf Stone, Early Kansas Standard, Matchless, Beauty, Stone; 30c per 100, \$2 per 1000. John McNoun, North Topeka, Kans. Ind. phone 6551.

200,000 Celery Plants.

200,000 large, healthy celery plants for sale. White Plume, Golden Self Branching, and Silver Self Branching are the best varieties. 300 plants packed carefully and delivered at express office for \$1, or 1,000 for \$3. Plants ready to ship any time from June 10th to July 15th. A leaflet telling how to grow crisp, tender celery mailed on receipt of 2 cent stamp to pay postage, or free with plants.

600,000 Sweet Potato Plants

600,000 Yellow Jersey and Yellow Nansamond sweet potato plants at \$1.50 per 1,000. Ready to ship now. No order accepted for less than 1,000. We are large growers and guarantee our celery and potato plants to be the best you can get anywhere. Write for circular today. Henry S. Jeffries, Ottawa, Kans.

SEED CORN—Early maturing Western Yellow Dent, Farmer's Interest and Boone County Special. Each ear tested, sold on approval crated or shelled. DeWall Bros, Box "F," Proctor, Ill.

CATTLE.

REGISTERED ABERDEEN-ANGUS—7 yearling bulls for sale. American Royal prize calf at head of herd. Wheeler & Baldwin, Delphos, Kans.

FOR SALE—Three richly bred Shorthorn bulls from 8½ to 10½ months, and a number of good females. Owing to limited pasturage will sell these bulls so the buyer can grow them out and save some good money. C. W. Merriam, Topeka, Kans.

FOR SALE—One richly bred Shorthorn bull and a number of good females. Call on or address C. W. Merriam, Topeka, Kans.

ABERDEEN-ANGUS—Yearling bulls, extra good. Sired by Blon Erica 78022, for sale at reasonable prices. T. R. Culver, Garnett, Kans.

REGISTERED Holstein-Friesian bull for sale; 8 years old. J. E. Huey, R. 6, Sta. A, Topeka, Kans.

SWINE.

DUROC JERSEYS—Glits either sired by or bred to Tip Top Perfection 24579, due to farrow in April and May. Cheap if taken soon. L. L. Vrooman, Topeka, Kans.

HORSES AND MULES.

FOR SALE—One black team, 6 and 7 years old, weight 2600 pounds. Mr. and Mrs. Henry Schrader, Waukena, Kans.

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A Safe, Painless, Permanent Cure GUARANTEED. 30 years' experience. No money accepted until patient is well. CONSULTATION and valuable BOOK FREE, by mail or at office. DR. C. L. COLE, 616 N. 10th St., Topeka, Kans.

do. The best hulling I did was 50 bushels of clean alfalfa seed ready for market in just three hours and this alfalfa was rained on several times and also reshocked. Furthermore will say that when I first got huller and saw how much there was to it I was afraid it would be next to impossible to keep the huller going without serious trouble, but in this I was gladly mistaken, for after I got the belts properly adjusted it ran right along from morning till night without the least trouble whatever. I hulled some alfalfa that was like wet manure, yet the huller did good work, and on account of so much rain and sleet this last winter I did not finish hulling until March 20, yet when I pulled home the huller looked just about as good as it did when I pulled out last August and the best of all is that I will not need 6 cents worth of repairs. Yours truly, "HENRY SCHUMM."

It does not require the penetration of the ordinary hay-press operator to understand some of the advantages of a self-feeder such as the "I-M-Itt," made at Kansas City. But the man who fed the other kind is competent to discuss the saving in labor of the most exacting kind. The I-M-Itt is shipped on trial. Write to the I-M-Itt Hay Press Company, Dept. L, Kansas City, Mo., and get full information.

IMPROVED WHEAT, alfalfa and stock farm, 800 acres, 320 cultivated, 220 wheat, 50 alfalfa land, 8 miles of fence, springs in pasture, orchard, county seat, R. R. 8 miles, school 1 mile. \$12.50 per acre. Terms. Thos. J. Stinson, Spearville, Kans.

FOR SALE AT A BARGAIN—A good, well improved farm of 146 acres 6 miles from Mound City, Linn County, Kans. Good alfalfa or wheat land; \$8500. J. D. Bower, Mound City, Kans.

FOR SALE—Good 7-room house, barn, well, 6 lots, fenced, near Washburn. Mrs. Theodore Saxon, 1237 Harrison St., Topeka, Kans.

"Do You Want to Own Your Own Home?" If so write for catalogue to Hurley & Jennings, Emporia, Kans.

QUARTER SECTION of fine land in Sherman County, close to Goodland, to trade for part horses, cattle or mules. T. J. Kennedy, Osawkee, Kans.

WRITE J. D. S. HANSON, HART, MICH., for best list of fruit, grain and stock farms.

FOR QUICK SALE.

160 acres, well improved, near Geneseo, fine quality wheat and alfalfa land, 100 acres in wheat. Will bear closest investigation. Bargain at \$9100. \$5100 cash will handle. I. R. Krehbiel, Cashier Lorraine State Bank, Lorraine, Kans.

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quickly for cash; the only system of its kind in the world. You get results, not promises; no retaining fees; booklets free. Address, Real Estate Salesman Co., 488 Brace Block, Lincoln, Neb.

OKLAHOMA FARM.

160 acres 9½ miles from Kingfisher, on rural route and rural telephone, close to two churches and school. 120 acres in cultivation, 8-room house nearly new, and other buildings, fine grove, orchard, 2 wells and cistern, good wheat, corn, oats, cotton and alfalfa land. A great bargain at \$31.90 per acre. H. F. Stephenson, Kingfisher, Okla.

MISSOURI FARMS FOR SALE

Everman has a farm for every man. Write for description and price list.

John W. Everman, . . . Gallatin, Mo.

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In Shawnee and adjoining Counties for our own investment; not to sell—payable at Topeka.

RESOURCES - - \$1,100,000

SHAWNEE SAVINGS BANK,
Topeka, Kansas.

A Cheap Wheat Farm in Stanton Co., Kans.

160 acres level as a floor. Deep, black soil, ready for the plow. In German settlement south part of the county. Price only \$800.

ALBERT E. KING,
McPherson, Kans.

PURE-BRED STOCK SALES.

Herefords.

September 15, 16—J. F. Gulic, Jasper, Mo.
November 19—Leyhe & Purcell, Marshall, Mo.
November 20—Sensittaff Bros., Brookfield, Mo.

Shorthorns.

June 11—H. E. Hayes, Olathe, Kans.

Poland-Chinas.

May 30—H. H. Harshaw, Butler, Mo.
August 4—J. F. Hastings, Edgerton, Kans.
September 3—T. P. Crabb, Moberly, Mo.
September 10—Leslie McCormick, Ladonia, Mo., and M. D. Porter, Vandalia, Mo., at Vandalia.
September 11—G. W. McKay, Laredo, Mo.
September 23—B. F. Ishmael, Laredo, Mo.
September 23—Knorr, Bros., Pleasant Hill, Mo.
September 30—A. K. Sell, Fredonia, Kans.
October 10—H. H. Harshaw, Butler, Mo., at Harrisonville, Mo.

October 10—N. R. Riggs, Lawson, Mo.
October 12—E. E. Axline, Oak Grove, Mo.
October 17—J. F. Burnham, Fayette, Mo.
October 19—Frank Michael, Erie, Kans.
October 19—Herman Groninger, Bendena, Kans.
October 20—J. L. Dorsh, Huron, Kans.
October 20—Bolan & Aaron, Leavenworth, Kans.
October 21—Leon Calhoun, Potter, Kans.
October 22—T. R. Pitcher & Son, Topeka, Kans.
October 23—A. P. Young, Lexington, Mo.
October 26—Geo. J. Hibbs, Pattonburg, Mo.
October 27—C. E. Tennant, New Hampton, Mo.
October 28—B. E. Maupin, Pattonburg, Mo.
October 29—F. D. Fulkerson, Brimson, Mo.
October 30—Geo. W. McKay, Laredo, Mo.
November 6—J. E. Summers, Clifton Hill, Mo.
November 7—D. C. Stayton, Blue Springs, Mo.
November 10—H. H. Harshaw, Butler, Mo.
November 19—Leyhe & Purcell, Marshall, Mo.
January 21—H. H. Harshaw, Butler, Mo., at Sedalia, Mo.

January 25—Frank Michael, Erie, Kans.
February 4, 1909—F. G. Nies & Son, Goddard, Kans.
February 21—J. W. Hoyle, Dwight, Kans.
February 25—H. H. Harshaw, Butler, Mo.

Duroc-Jerseys.

October 6—N. J. Fuller, Garnett, Kans.
October 7—J. F. Staadt, Ottawa, Kans.
October 8—H. R. Glunich, Wellsville, Kans.
October 9—C. R. Green, Spring Hill, Kans.
October 28—Watts & Dunlap, Martin City, Mo., at Independence, Mo.
October 28—B. A. Adams & Son, Thayer, Kans.
October 28—S. A. Hands, Thayer, Kans.
October 29—G. W. Colwell, Sumnerfield, Kans.
November 11—Sam'l Drybread, Elk City, Kans.
November 12—Frank Drybread, Elk City, Kans.
November 13—J. J. Baker, Thayer, Kans.
November 14—O. W. Simerley, Parsons, Kans.

Horses.

November 23, 24, 25—Draft breeds registered horses at Springfield, Ill., W. C. McGavock & Co., Mgrs.

Combination Sales.

February 16, 17, 18—J. C. Robison, Mgr., Towanda, Kans., at Wichita, Kans.

DUROC-JERSEYS

Deep Creek Herd Duroc-Jerseys

Choice spring boar pigs and glits for sale; also fall glits. C. O. Anderson, Manhattan, Kans.

MADURA DUROCS.

BROOD SOWS—Some fine brood sows bred to Major Roosevelt and Miller's Nebraska Wonder, he by Nebraska Wonder.

FRED J. MILLER, Wakefield, Kans.

Vick's

DUROCS are bred for usefulness. Choice young stock for sale by such great boars as Vick's Improver 4785, Red Top 3224, Fancy Chief 2492 and other noted sires. Correspondence invited. Visitors coming to Junction City and telephoning me will be called for. W. L. VICK, Junction City, Kans.

HILLSIDE DUROCS AND HEREFORDS

Choice boars ready for service. Bred glits and fall pigs, both sexes. Mc's Pride III, Oom Paul V, and Crimson Knight 62579 in service. Six good Anxiety bred Hereford bull calves. Prices to correspond with the times.

W. A. WOOD, Elmdale, Kans.

PEERLESS STOCK FARM

DUROC-JERSEY HOGS

FOR SALE.

R. G. SOLLENBERGER, Woodston, Kans.

Silver Lake Durocs.

Fifty fall pigs will be priced right, either sex. Bred glits will be priced right on mail orders. Boars in service, Lone Jack 30291, Paul Jumbo 42209.

W. C. WHITNEY, Agra, Kans.

Howe's

DUROCS. 100 early spring pigs, the best I ever raised. Improver, Top Notcher, Sensation and Gold Finch blood lines. Call or write.

J. U. HOWE, Wichita, Kans.

SPECIAL!

I have a car of long yearling bulls, a car of bull calves, a car of yearling heifers and a car of heifer calves for sale. These cattle are all in good growing condition and are mostly reds. They were sired mostly by Baron Ury 2d 124670, Bold Knight 17904 and Heald 2d 24390.

C. W. Taylor, R. 2, Enterprise, Kans.

K. & N. Herd Royally Bred Duroc-Jersey Swine

Have a few glits that I will sell at reasonable prices, bred for April farrow. Also a few fall boars of September, 1906, farrow. Write for prices and description.

R. L. WILSON, Chester, Neb.

FOUR-MILE HERD DUROCS

Choice fall boars by Orion Jr. 31497 and Ohio Chief 24 1197, 50 spring boars, growthy, heavy bone, good feet, nice color; sired by the above named males, and E's Kant Be Beat 57563. Crimson Chief 31283, Rose Top Notcher 54059, You Bet 31111, Tip Top Notcher 29729, and other noted sires. Sows of the best and leading families. Write or visit herd. Visitors met at trains.

E. H. Erickson, R. 1, Olsburg, Kans.

Timber City Durocs

Three herds under one management. Breeding stock for sale. Let us book your order for a growthy spring boar of February and early March farrow. Write to either place.

SAMUELSON BROS.,

Cleburne, Manhattan, Moodyville, Kans.

Orchard Hill Herd Duroc-Jerseys

A few good spring boars yet for sale.

R. F. NORTON, Clay Center, Kans.

OAK GROVE HERD OF DUROCS

Herd headed by Choice Goods H. 36471 by Hunt's Model and Corrector's Model 34381. I have for sale a few choice males of spring and fall farrow that will be priced worth the money.

Sherman Reedy, Hanover, Kans.

DEER CREEK DUROCS

100 pigs of March and April farrow by sons of Ohio Chief, Tip Notcher and Kant Be Beat. Ready for shipment after July 1.

BERT FINCH, Prairie View, Kans.

Fairview Herds--Durocs, Red Polls

Some good young boars by Crimson Challenger 43877 for sale. No females or Red Polled cattle for sale now.

J. B. DAVIS, Fairview, Brown Co., Kans.

Stray List

Week Ending June 4.

Saline County—J. P. Burns, Clerk.
STEER—Taken up by W. H. Todd, in Smoky Hill tp., one red and white yearling steer; no marks or brands visible; valued at \$18.

Week Ending June 11.

Neosho County—O. M. Johnson, Clerk.
MARE—Taken up by D. E. Kyle in Mission tp., May 13, 1908, one 7-year-old bay mare pony, branded M H on right shoulder; valued at \$30.

Wilson County—W. H. Conan, Clerk.
MARES—Taken up by W. W. McCarty, May 16, 1908, one bay mare, horseshoe brand on left hip; valued at \$25. One yearling black mare colt, valued at \$12.

Week Ending June 18.

Jackson County—J. W. Martin, Clerk.
HORSE—Taken up by E. G. Brown in Liberty tp., May 23, 1908, one 12- or 15-year-old gray horse; valued at \$25.

When writing our advertisers please mention this paper.

DUROC-JERSEYS**RALPH HARRIS FARM
DUROC-JERSEY HERD**

ANTE 163-68, second in class American Royal 1907, farrowed 12 pigs by Red Wonder, Grand Champion Iowa State Fair, 1907, on 22d of April. All are living. Average weight at 13 days old, 7 pounds, 13 ounces. Remember this litter when looking for a boar in a few months. Address: RALPH HARRIS, Prop., B. W. WHITE, Mgr., WILLIAMSTOWN, KANS. Farm station, Buck Creek, on the U. P., 45 miles west of Kansas City.

Lamb's

is built along the most fashionable blood lines and is noted for the individuality of its makeup. Fifty fine pigs sired by the great Hanley, Lincoln Top, Buddy L. by Buddy K. IV, Crimmon Jim, Ambition and other great sires. We invite correspondence with prospective buyers.

Elmer Lamb, Tecumseh, Neb.

SPRING CREEK HERD DUROC-JERSEYS
73 choice spring pigs of both sexes for sale, by 7 noted sires and out of popular breeding dams. Tried sows and gilts bred to farrow in August and September. Boars in service, Raven a Pride 6314 and Nordstrom's Choice 75741. Ole Nordstrom, Clay Center, Kans.

GAYER'S DUROCS: 36 choice fall gilts and 14 top fall boars by Golden Chieftain, a good son of Ohio Chief. These will be sold cheap to make room for my spring crop. Also 1 good yearling boar, \$25.
J. H. GAYER,
R. R. 1, Cottonwood Falls, Kans.

CEDAR LAWN DUROCS.

Special bargain for 30 days. My herd boar Parker 67633 and a choice lot of his get, both sexes. Tried sold open or bred to Long Wonder 21867. Prices right. Call or write.

F. M. BUCHHEIM,
R. R. 3, Lecompton, Kans.

Jackson's Durocs

Special Bargains in fancy, well grown spring pigs, both sexes, and choice fall males richly bred; 2 of these are double cross Ohio Chief. Also 1 good herd boar, a grandson of Desoto 15155. 2 extra good registered Shorthorn bulls for sale.

O. L. JACKSON, New Albany, Kans.

**ROSE LAWN
Duroc-Jerseys**

Gilts bred to farrow in April and May, either sired by or bred to Tip Top Perfection 34879, by Tip Top Notcher, grand champion of the breed, also pigs in pairs or trios. And a few Hereford cattle and Lincoln sheep for immediate sale.

L. L. VROOMAN,
Rose Lawn Place, Topeka, Kansas

BERKSHIRES**MAPLE HEIGHTS HERD BERKSHIRES**

Kansas Longfellow, champion Nebraska State Fair, 1907, and Berryton Boy in service. Have some choice sows and gilts bred for fall litters, for sale. Nice lot of spring pigs to choose from. Write me.
J. M. NELSON, Marysville, Kans.

60 Berkshires For Sale 60

from weaning pigs up to matured animals, including herd boars and old herd sows of Lord Premier, Black Robinhood, Berryton Duke, Masterpiece and Lord Bacon families.

G. D. WILLEMS,
Inman, Kans.
Thirteen years a breeder of Berkshires.

Guthrie Ranch Berkshires

The Guthrie Ranch Berkshire herd, headed by Berryton Duke, assisted by Revelation, General Premier and Sir Ivanhoe (all three winners). Berkshires with size, bone and quality. Individuals of style and finish. You will find our satisfied customers in nearly every state in the Union.

T. F. GUTHRIE, Strong City, Kans.

King's Berkshires

Have weight, quality and constitution developed by rustling for the best pork producing food on earth, alfalfa and blue-grass, supplemented with a light ration of grain and millfeed. They are bred right, and best of all they are priced right. Write for anything in Berkshires to,

E. D. KING, Burlington, Kans.

Knollwood Berkshires

Headed by Pacific Duke 56691, dam Marjorie 37491 by Baron Duke 23d 50000, a son of Baron Lee 4th, the sire of Lord Premier and Dutchess 120th 28675, grand dam of Premier Longfellow. Stock of all ages for sale. All stock guaranteed as represented.

E. W. MELVILLE, Eudora, Kans.

**GEO. W. BERRY,
High-Class Berkshires**

R. F. D. No. 4, Lawrence, Kans.

Breeder of Masterpiece, head of the superb Masterpiece family; also Black Robinhood, head of the great Black Robinhood family.
For Sale—Show pigs and herd headers, fall of 1907 farrow. Choice boars and gilts at moderate prices.

BERKSHIRES**Ridgeview Berkshires
—FOR SALE—**

One aged and one yearling boar, and spring pigs of both sexes

MANWARING BROS.,
Route 1, Lawrence, Kansas

POLAND-CHINAS**Becker's POLAND-CHINAS.** Choice fall and spring pigs, either sex, by Dandy Rex 42706, first in class at Kansas and Colorado State Fairs, 1905-6. Prices reasonable.

J. H. BECKER, R. 7, Newton, Kans.

SUNNY SLOPE POLANDS

A number of spring pigs, either sex, the farmers' kind, at bottom prices. Gilts will be sold bred or open. Also a litter of Scotch Collie pups, the great watch and cattle dog.

W. T. HAMMOND, Fortia, Kans.

BOARS! BOARS!

Choice spring males, at right prices, by Grand Chief, Masterpiece, Nonpareil. Choice Chief, E. L. 2d, and other noted sires. Call on or write

THOS. COLLINS, R. 4, Lincoln, Kans.

Stalder's Poland-Chinas.

I have pigs for sale from the leading strains of the country. Prices reasonable. Write for full particulars.

O. W. STALDER, Salem, Neb.

Maple Valley Herd Poland-Chinas

Some fine gilts bred for April farrow that were sired by On The Line 113401s and Col. Mills 42911, and are bred to Mendler's Dream 43921. Also some choice young boars; one fine Shorthorn bull calf; B. P. Rock eggs \$1.50 per 15. Have 120 Poland-Chinas and can fill any kind of order. C. P. Brown, Whitling, Kans.

SUNFLOWER HERD.
POLAND-CHINAS—Herd boars, Meddler's Defender (119147) by Meddler (99999), dam Excitement (2695-8) by Corrector (63379); Allen's Corrector (128613) by Corrector (63379), dam Sweet Brier (261790) by Chief Perfection 2d (42549); Kansas Chief (12983) by Chief Perfection 2d (42549), dam Corrector's Gem (250720) by Corrector (63379). G. W. Allen, Route 4, Tongonoxie, Kans.

**JONES' COLLEGE VIEW
POLANDS.**

Several first class boars that are herd-headers; from 6 to 12 months old. Prices reasonable.

W. A. JONES & SON, Ottawa, Ks.
Formerly of VAN METER, In., and breeders of CHIEF TECUMSEH 2d.

JOHN BOLLIN,

Route 5, Leavenworth, Kans.

Breeds and Sells Popular Poland-Chinas

The State and World's Fair winning boars, Nemo L's Duke and The Piquet, in service. Bred sows and serviceable boars for sale.

Highview Breeding Farm

Devoted to the Raising of

Big Boned Spotted Poland-Chinas

The biggest of the big. The prolific kind. Big bones, big hams, big spots. Young stock for sale.

H. L. FAULKNER, Prop., Jamesport, Mo.

10 BOARS.

One by Mischief Maker, dam by Perfect I Know. One by Corrector, dam by Proud Perfection. One by Corrector 2d, dam by Impudence. Three by H. L. and On, dam by Mischief Maker. Two by Mischief Maker I Know. Two by Grand Perfection 2d. Prices reasonable; call or write.

W. R. PEACOCK, Sedgwick, Kans.

CHESTER-WHITES

O. I. C. SWINE
Fall boars and gilts, also spring pigs. They are bred right and will be priced right. Let me know your wants. S. W. ARTZ, Larned, Kans.

O. I. C. BARGAINS

Bred sows and gilts all sold. Have a fine bunch of spring pigs for which I am booking orders. Write your wants and get prices.
W. S. GODLOVE, Otago, Kans.
Prop. Andrew Carnegie herd O. I. C. swine.

GALLOWAYS**Smoky Hill Galloways.**

Choice young stock of both sexes for sale. Large herd to select from. Acclimated to buffalo grass country, equally good for Eastern breeders.
Smoky Hill Ranch, Wallace, Kans.

HEREFORDS**Maplewood Herefords**

5 bulls, all tops, from 13 to 16 months old; and a few choice females, by the 2400-pound Dale Duplicate 2d, son of the great Columbus. Stock guaranteed. Prices reasonable. A. Johnson, Clearwater, Kans.

HORSES AND MULES**HORSES AND MULES****ROBISON'S PERCHERONS**

FOR SALE—Two extra good 2-year-old stallions; and some good young mares bred to Casino.

J. C. ROBISON, Towanda, Kans.

SHORTHORNS**TENNEHOLM SHORTHORNS.**

Herd headed by the Dutchess of Gloster bull, Glad-lator 261035 and Barney 275678, a Crulckshank But-terfly. Cows of Scotch and Scotch topped Bates breeding. 1 yearling Barmpton bull (a good one) for sale. Will make tempting prices on a few females. E. S. Myers, Chanute, Kans.

New York Valley Herds Shorthorn Cattle and Berkshire Hogs.

A large number of my Shorthorns will be sold at private sale, for lack of room, including 3 bulls from 15 to 24 months old; also 10 fall and winter bulls and heifers, and 20 head young females. Two September boars and 61 May pigs from prize winning stock. See them or write. J. T. Bayer, Yates Center, Kans.

SELDEN STOCK FARM.

Scotch and Scotch topped Shorthorns for sale. 8 young bulls from 8 to 24 months old, all reds and good quality. Sired by Baronet of Maine Valley 17876 and Secret Emporor 23247. Prices reasonable. Inspection invited.

HOADLEY & SIGMUND, Selden, Kans.

Prospect Farm Shorthorns

The oldest Shorthorn breeders in Kansas. Herd headed by Violet Prince 145647 and Orange Commander 220590. Young stock of both sexes and some cows for sale. Quality and prices right.

H. W. McAFEE,

Bell Phone 59-2, Topeka, Kansas

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