

# KANSAS FARMER

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## MUST HAVE INCREASED TRANSPORTATION FACILITIES.

The ever-important question of the probable duration of prosperity or the possible coming of a reversal of times appeals to all. It has been stated by persons who have tried to discern the causes of widespread financial reverses that they were followers, perhaps consequences, of excessive railroad building.

An article has just appeared in the Manufacturer's Record on the subject of railroad expansion, which is not written to the point of an impending or more remote crisis, but it does make it very plain that railroad expansion is something that has not been taking place lately, and insists that it must be accomplished on a very large scale in the next few years.

The proposition laid down by the Record is, "We have outgrown our railroads," and figures cited and calculations made in support of the proposition that the country has outgrown its railroads are striking. Between 1895 and 1904 the railroad mileage increased but 17 per cent, while the total ton mileage of freight traffic increased a little less than 100 per cent, and the

ed jointly by the U. S. Department of Agriculture and the Kansas Experiment Station. On the part of the Department of Agriculture Mr. J. E. Payne will be in charge. Mr. Payne is a graduate of the Kansas State Agricultural

easily absorbed. The first great crop of the new cereal year is that of Kansas, and with the exceptions noted this crop finds the market bare of wheat at cost of production. The volume of the Kansas crop is such that its pros-

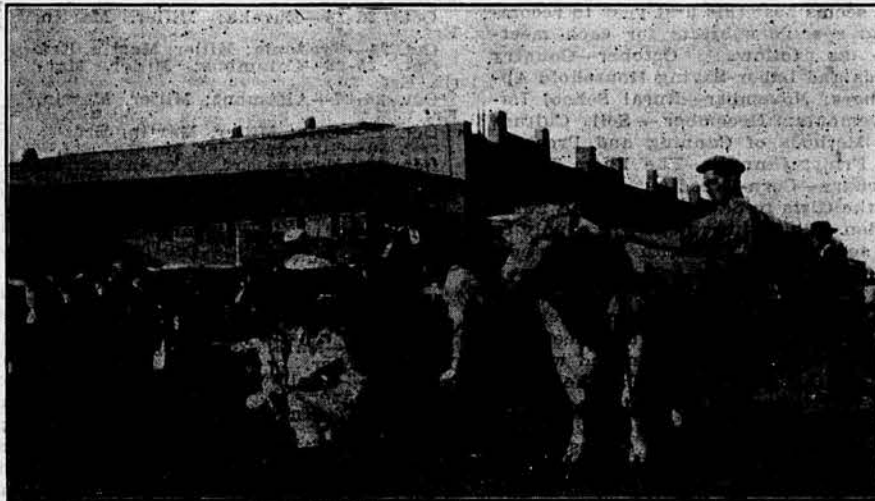
mean for each month, the expectation of prices for the several months may be approximated.

TABLE SHOWING THE AVERAGE LOW, THE AVERAGE TOP, AND THE MEAN PRICES OF WHEAT AT CHICAGO BY MONTHS FOR ELEVEN YEARS.

	Average low	Average top	Mean
January	74	84.4	79.2
February	75.6	84.9	80.2
March	75	84	79.5
April	72.6	85.1	79.3
May	75.6	84.1	79.8
June	74.4	88.9	81.6
July	73.5	84.4	78.9
August	72.1	85.2	78.6
September	73.1	84.1	78.6
October	74.5	82.8	78.6
November	75.6	83.1	79.3
December	75.7	85.2	80.4
Average mean			79.5

Considering the figures in the last column of the above table, it is seen that the mean price for the eleven years is 79.5 cents. Texas often markets wheat in May and June, and for this her farmers may reasonably expect to receive somewhat above the yearly mean price. By July the Oklahoma and Kansas crops are coming into view, and have produced a depression of nearly 3 cents below the June price.

The effect of the great Northern crop added to that of Kansas is seen in the



Champion Herd of Shorthorns, Interstate Live Stock Show, St. Joseph, Mo.



In the Judging Pavillon, Interstate Live Stock Show, St. Joseph, Mo.



Judging the Belgians, Interstate Live Stock Show, St. Joseph, Mo.

passenger mileage increased 75 per cent. As for the future, it is calculated that in 1916 the population of the country will be 105,000,000 and that between now and 1926 "the gain in population will be but a little less than the total population of the country as late as 1880." Omitting the details of the calculation, it is estimated the 173,000,000,000 mileage tons of freight traffic of 1904 "will probably have grown to between 300,000,000,000 and 350,000,000,000 tons ten years hence" as a minimum development, and that "if the railroads of the country are to measure up to the demands of the times, these figures mean that on a most conservative basis there must be a gain of 50 per cent in the total railroad facilities ten years hence compared with to-day.

"The estimate of the late Edward Atkinson that during the next ten or fifteen years this country must average 10,000 miles of new track a year seems not unreasonable."

Apparently, if the writer of the article in the Record had addressed himself to the subject of a crisis, he would take the view that one was impending if the railroads did not proceed to expand and keep on expanding for the decade to come.

The new branch experiment station at Garden City, Kans., is to be conduct-

College. For several years he conducted "dry farming" experiments for Colorado in the eastern portion of the State. He has of late been with the Department of Agriculture. He has just been transferred to the division having in charge the Garden City work. The importance of experimentation along lines of maintaining the fertility of the lands of Western Kansas is not likely to be over estimated. In Mr. Payne's hands this work will be conducted with the highest order of intelligence, honesty, and energy. Western Kansas should see to it that ample funds be provided by the Legislature for the prompt and vigorous prosecution of the investigations that mean much for the immediate and remote future of a vast region.

## SHOULD KANSAS FARMERS HOLD THEIR WHEAT?

Farmers are often advised to hold their wheat for a rise in the market. Does it pay the Kansas wheat-grower to follow this advice? The Texas wheat-crop matures at a time when the American markets are supplied only with wheat which has paid interest and cost of carrying from the last harvest. This Texas crop is not of sufficient volume to make considerable addition to the left-over supplies. The Oklahoma crop succeeds that of Texas and is likewise

pect influences prices, and its realization often brings quotations down rapidly.

But the Kansas wheat-grower inclines to sell on the early market, knowing that the wheat-producing region of the Northwest will be able to meet all demands of the near future.

The test of the wisdom of Kansas in its haste to sell can be found only in the prices that prevail at the time of and subsequently to the opening of the cereal year, July 1.

The U. S. Department of Agriculture has published compilations of the ranges of wheat prices at Chicago by months for a considerable series of years. According to these official statistics, prices have varied considerably in the eleven years ending December, 1905. The low cash figures in any January in these eleven years range from 55 3-4 cents in January, 1893, while in 1905 the January cash price never got below \$1.18. The average of all of the low prices in January for the eleven years was 74 cents. The average of the highest prices for the eleven Januaries was 84.4 cents. The mean of these highest and lowest prices for the eleven Januaries is 79.2 cents, figures which may be taken to represent the reasonable expectation for wheat prices in January. By thus computing the average of the low prices and the average of the high prices and striking a

mean prices for August, September, and October, making the means for these months the lowest of the year and just 3 cents below the mean of the closing month of the cereal year.

It is not the purpose now to enter into an analysis of the somewhat erratic movements of the means for the remaining months, further than to say that speculation doubtless enters as a considerable factor in making these prices.

Coming again to the question of the propriety of the Kansas farmer holding his wheat, it will be seen that if he can sell in June he probably gets the highest price of the year. If he sells in July he does better than to hold until August, September, or October. These considerations have taken no account of the three factors, interest, storage, and insurance. If money is worth six per cent and interest alone be taken into consideration, the farmer who could market his wheat in July at 78.9 cents should, to come out even, have 79.3 cents a month later, or in August; he should have 79.7 cents in September; and he should have a little above 80 cents in October against 78.6 cents, which he will probably receive in any of these three months. If he hold until November, he should have 80.4 cents instead of a probable 79.3; and if he hold until December, he should have 80.8 cents instead of a probable 80.4 cents.

Should this Kansas wheat-grower become desperate and declare that he will hold over for the probable highest price of the year in the following June, he should receive 86 cents instead of the probable 81.6 of the June market.

When grain is stored at home, the elements of insurance and storage are usually disregarded. But that these are realities becomes apparent the moment the farmer inquires about them at the elevator. Even the cooperative elevator finds it necessary to make stiff charges for these items in case of assuming them.

These figures show that in his haste to market his wheat immediately after harvest the Kansas wheat-grower is observing some business principles.

**HOUSEKEEPERS' CHEMISTRY.**

The September bulletin of the Kansas State Board of Health is interesting and valuable. A feature is the direction for making kitchen tests to detect adulteration in common foods by Prof. E. H. S. Bailey, of the State University. It is not likely that every housekeeper will at once provide herself with the comparatively inexpensive outfit needed for making these tests, or that all would have confidence in their ability to carry out the simple manipulations suggested. But there are a great many who would find this work exceedingly fascinating. Those who have taken a course in chemistry at the Agricultural College will take great delight in renewing their acquaintance with an interesting subject. These and many others may well prepare addresses for the farmers' institute, or for the club, or the Grange, to be illustrated as directed in this bulletin. An address of an hour's duration thus illustrated would be of surpassing interest and would show many how to detect adulterations that are always cheats and often very deleterious to health.

For copies of the bulletin, address State Board of Health, Topeka.

**BLOCKS OF TWO.**

The regular subscription price of THE KANSAS FARMER is one dollar a year. That it is worth the money is attested by the fact that thousands have for many years been paying the price and found it profitable. But the publishers have determined to make it possible to secure the paper at half price. While the subscription price will remain at one dollar a year, every old subscriber is authorized to send his own renewal for one year, and one new subscription for one year, and one dollar to pay for both. In like manner two new subscribers will be entered, both for one year, for one dollar. Address, The Kansas Farmer Company, Topeka, Kans.

Topeka and the country southwest to Council Grove, desiring a railroad, organized a company, made a survey, and did a lot of preliminary work. This company has sought capital for the enterprise. Recently W. L. Taylor has undertaken to interest the necessary capital in the East. He has made an elaborate statement of the situation in detail in a report to the board of directors of the proposed railroad. This report contains much that is interesting not only to those directly concerned in the project, but to all who desire information of the details of railroad promotion.

**Miscellany**

**Farmers' Clubs.**

EDITOR KANSAS FARMER:—The farmers' institute work during the past year has proved conclusively that the farmers of Kansas are very much interested in all matters pertaining to improvement in farm methods. One hundred and fifty-five institutes were held, with an attendance of nearly twenty-eight thousand farmers. Ten thousand farmers heard addresses on wheat and corn on the Rock Island educational train last October, and over ten thousand farmers heard addresses on wheat culture on the Santa Fe and Union Pacific educational trains in August of this year, making a total of forty-eight thousand listeners to discussions of agricultural subjects since October, 1905. This is a very remarkable record, but the best results will come from some method of bringing these discussions down to smaller audiences.

No matter how well the farmers' institute may be organized, it, as a business organization, can hardly do all the thoughtful farmer will hope to have accomplished. The "Farmers' Club"

has a distinct and valuable place in this agricultural educational system. Every school district might well have a farmers' club, where the farmers and their wives and older children might meet several times a year in a social way and at the same time discuss one or two subjects relating to the farm or household. This year we hope only to get a start in this matter, but in another year we hope to organize a thousand farmers' clubs in Kansas. No constitution and by-laws are needed; nothing but an agreement of at least six men and their wives to form such a club and meet at least six times each year in the members' homes. It is a club of sixes and sixes—six husbands, six wives, six meetings, but nine farm, domestic, and general subjects. When desired, this department will send for each meeting a printed brief of each subject to be discussed, provided a report be made to the department, written within ten days after the meeting, summarizing opinions of the members, especially any opinions or experiences differing from those sent in the brief.

Certificates of organization and affiliation with the Kansas Agricultural College will be sent to each club as soon as a report of organization is received. Printed blanks will be sent for reports of meetings with the "briefs" sent in advance. Each club should have a president and a secretary. It is recommended that membership be limited to ten families.

It seems best this first year to recommend specific subjects for each meeting, as follows: October—Country Roads and Labor-Saving Household Appliances; November—Rural School Improvements; December—Soil Culture and Methods of Canning and Preserving Fruit; January—The Farm Dairy; February—Corn-Breeding, and Teaching the Girls to Sew; March—The Farm Garden. This department will supply to all secretaries a month in advance, bulletins and briefs. It is thus seen that we provide for two subjects for each of three meetings and one general subject for each of the other meetings. It is thought that the men and women meeting in separate rooms at the alternate meetings may make their discussions more specific.

If this matter is to be successful, it will depend upon the spirit and energy with which farmers respond to this announcement. If they do not want to organize such clubs, of course they will not be organized. This department and the professors in the Agricultural College are willing to cooperate and help in this great educational movement. Possibly not many clubs will be organized this fall or winter, but if only a few hundred are started this year, it will be a very satisfactory beginning. Those interested should talk the matter over with their neighbors at once and plan for an organization.

Address all correspondence to  
J. H. MILLER,  
Manhattan, Kans.  
Superintendent Farmers' Institute Department, Kansas State Agricultural College.

**No Compensation for School District Clerk.**

EDITOR KANSAS FARMER:—I want some information as to the law in case of a school district clerk taking the census of the pupils in the district, which is required by law. The law says an officer of a school district can collect no pay for services.

Is it in the power of the school board to employ some other party to take such census outside of the board, and is it lawful for the school board to pay such person for the work? It is very difficult to get a clerk to serve on account of the extra service of taking the census, which ought to be paid for. This will be of general interest all over the State. The new law requiring the taking of the school census should have provided some means of paying for it. The office of clerk in our district is vacant and no one will have the office—and no law can compel any one to serve. This is a bad state of affairs. Apparently the only way of getting a clerk to serve is by taking up a subscription by private parties to pay for taking the census.

Morris County.  
D. P. NORTON.

The duties of district clerk can not be delegated to a deputy. There is no legal avenue through which he can receive compensation for taking the school census. The law should be so amended as to give the clerk reasonable compensation for his services. (See Laws of 1905, page 41, section 80.) It seems to me that some one could be found in the district mentioned who would have the welfare of the schools at heart sufficiently to take this office. Every good citizen must give so much of his time for the public good; serv-

ing on the school board is one way in which he can make a liberal donation.

I suggest that Mr. Norton appeal to some of his neighbors and persuade them to accept this important office.

I. L. DAYHOFF,  
State Supt. of Public Instruction.

**Farmers' Institute Schedule.**

EDITOR KANSAS FARMER:—So many complications have arisen that even now I am not able to announce the complete schedule. The following are places and dates now definitely fixed. Where three speakers are assigned, it will be understood that two are to be present on one day and the other on the other day. On some circuits two are present on the first day and on others it is reversed. Other circuits will be announced from time to time.

- Oct. 11-12—Waverly; Dickens, Miller.
- Oct. 13—Bucyrus; Dickens, Miller.
- Oct. 15-16—Mulvane; TenEyck, Mrs. Calvin, Miller.
- Oct. 18-17—Hackney; TenEyck, Mrs. Calvin, Miller.
- Oct. 18-19—Anthony; TenEyck, Mrs. Calvin, Miller.
- Oct. 19-20—Kingman; TenEyck, Mrs. Calvin, Miller.
- Oct. 22-23—Hutchinson; TenEyck, Mrs. Calvin, Popenoe.
- Oct. 23-24—Newton; TenEyck, Mrs. Calvin, Popenoe.
- Oct. 24-25—Peabody; TenEyck, Mrs. Calvin, Popenoe.
- Oct. 25-26—Emporia; TenEyck, Mrs. Calvin, Popenoe.
- Oct. 26-27—Council Grove; TenEyck, Mrs. Calvin, Popenoe.
- Oct. 22-23—Howard; Miller, Martin, Erf.
- Oct. 23-24—Eureka; Miller, Martin, Erf.
- Oct. 24—Frederia; Miller, Martin, Erf.
- Oct. 25-26—Columbus; Miller, Martin, Erf.
- Oct. 26-27—Altamont; Miller, Martin, Erf.
- Oct. 29—Erie; Miller, Martin, Erf.
- Oct. 30—Girard; Miller, Martin, Erf.
- Oct. 30—Moran; Erf.
- Oct. 31, Nov. 1—Fort Scott; Miller, Martin, Erf.
- Nov. 1-2—Paola; Miller, Martin, Erf.
- Nov. 2—(?) ; Miller, Martin, Erf.
- Oct. 29-30—Norton; TenEyck, Mrs. Calvin, Kinzer.
- Oct. 30-31—Phillipsburg; TenEyck, Mrs. Calvin, Kinzer.
- Oct. 31, Nov. 1—Smith Center; TenEyck, Mrs. Calvin, Kinzer.
- Nov. 1-2—Mankato; TenEyck, Mrs. Calvin, Kinzer.
- Nov. 2-3—Belleville; TenEyck, Mrs. Calvin, Kinzer.
- Oct. 25-6—Indian Creek; Willard, Schoenleber.
- Nov. 7-8—Clyde; Shoemith, Wheeler.
- Nov. 8-9—Clay Center; Shoemith, Wheeler, Miss Dow.
- Nov. 7-8—Lincoln; TenEyck, Mrs. Calvin, Burkett.
- Nov. 8-9—Abilene; TenEyck, Mrs. Calvin, Burkett.
- Nov. 12-13—Washington; TenEyck, Mrs. Calvin, Dickens.
- Nov. 13-14—Blue Rapids; TenEyck, Mrs. Calvin, Dickens.
- Nov. 14-15—Seneca; TenEyck, Mrs. Calvin, Dickens.
- Nov. 15-16—Hiawatha; TenEyck, Mrs. Calvin, Dickens.
- Nov. 16-17—Troy; TenEyck, Mrs. Calvin, Dickens.
- Nov. 19-20—Holton; TenEyck, Mrs. Calvin, Erf.
- Nov. 20-21—Oskaloosa; TenEyck, Mrs. Calvin, Erf.
- Nov. 21-22—Tonganoxie; TenEyck, Mrs. Calvin, Erf.
- Nov. 22-23—Ottawa; TenEyck, Mrs. Calvin, Erf.
- Nov. 23-24—Garnett; TenEyck, Mrs. Calvin, Erf.
- Nov. 26-27—Beloit; TenEyck, Burkett, Wheeler.
- Nov. 27-28—Minneapolis; TenEyck, Burkett, Wheeler.
- Nov. 26-27—Iola; Miller, Popenoe, McCormick.
- Nov. 27-28—Burlington; Miller, Popenoe, McCormick.

**Call for Convention.**

EDITOR KANSAS FARMER:—It is of great importance to the live-stock industry that more extended foreign markets be secured, in order to dispose of our increasing surplus of meat products and insure good prices for our live-stock at home. The United States raises more live-stock products than it can consume and, on the other hand, there is a marked scarcity of meat in many Continental countries. We should be able to supply this shortage abroad. Under fair and reasonable international trade relations we believe that a larger proportion of our surplus meat products could be sold to those nations that need them, thus benefiting both ourselves and the European consumers.

Therefore, for the purpose of formulating definite plans to secure such an extension of our foreign trade in our live stock and its products, a meeting of all interested is hereby called, to be held at the Midland Hotel, Kansas City, October 9, 1906, at ten o'clock a. m. This date is during the week of the Royal Show at Kansas City, and reduced rates have been granted from all points. The attendance of all concerned in this important question is earnestly solicited. Any suggestions from those who are not able to attend the meeting, as to the plans to be adopted, will be very much appreciated. American National Live Stock Association, T. W. Tomlinson, Secretary, Den-

ver, Colorado; Cattle Raisers Association of Texas, Capt. John T. Lytle, Secretary, Fort Worth, Texas; Corn Belt Meat Producers Association, H. C. Wallace, Secretary, Des Moines, Iowa.

**Wheat Grown Continuously.**

This experiment, at the Oklahoma Experiment Station, includes two half-acre plots situated side by side. The virgin soil for this work was broken in 1892 and up to 1897 the plot of ground was handled as an acre plot and continuously cropped to wheat, and up to 1898 no manure or fertilizer of any kind was applied. In the spring of 1897, the acre was divided and in the summer of 1898 plot one was manured at the rate of fifteen tons per acre. To this plot barnyard manure was again added in the summer of 1899 at the rate of eleven tons per acre, and again during the summer of 1904 at the rate of eighteen tons per acre. No other fertilizer at any time has been added to plot one, and none whatever to plot two. As before, both plots have been continuously cropped to wheat. The following table gives the yield of grain per acre in bushels:

ACRE PLOTS, NOT MANURED.	
	Bushels.
1893 . . . . .	10.6
1894 . . . . .	20.9
1895 . . . . .	Total failure
1896 . . . . .	7.1

HALF-ACRE PLOTS, NOT MANURED.		
	Plot 1.	Plot 2.
1897 . . . . .	17.8	17.9
1898 . . . . .	7.0	7.5

HALF-ACRE PLOTS.		
	Manured.	Not manured.
	Bushels.	Bushels.
1899 . . . . .	30.6	12.6
1900 . . . . .	36.8	18.1
1901 . . . . .	37.7	28.0
1902 . . . . .	17.4	15.3
1903 . . . . .	27.6	20.3
1904 . . . . .	15.7	12.6
1905 . . . . .	11.68	4.75
1906 . . . . .	23.2	7.1
Av. eight years	25.08	14.75

In return for twenty-two tons of manure applied to a half-acre plot, some 41 bushels of wheat was received in eight years. The manured plot produced an average for the eight years of 10.33 bushels of wheat per acre more than the unmanured plot. Both plots have been given the best of preparation such as deep, early plowing and frequent harrowing until seeding time and have been seeded with high-grade seed and at seasonable times. These plots are located on upland and the soil is a clay loam typical of much of the upland in Oklahoma.

**A Big Good Roads Meeting.**

Woodman Hall, at Eskridge, Kans., was filled last Tuesday with a big crowd of Kansas farmers and business men. They came to hear D. Ward King, the famous road drag man. The meeting had been highly advertised and people came from all parts of Wabaunsee County.

Mr. King is a forceful talker and held the attention of his hearers closely for an hour and a half, while he told the story of the King drag and how to build it; how to use it and when to use it.

At the close of his address, Mr. King gave a general privilege to ask questions and he got them from all directions. In every instance the questioner was well satisfied with the answer he received.

Several citizens who have used the drag told of the good results they have obtained. Before dismissing the crowd, Mr. King said: "I want to know how many of you men will build and operate a drag." More than thirty of the best farmers of the country responded.

The meeting was very enthusiastic, Mr. Arthur Cate presiding over the meeting. He is a prominent farmer of Mission Creek Township. He is very enthusiastic in his estimate of the result of the meeting. He says it is going to make good road-making popular. He states that in a ten-minutes' talk with Mr. King the information he received more than repaid him for coming.

**Cider For Winter Use.**

Why let your apples rot when 1 bushel of apples will make 3 gallons of cider worth 30 cents per gallon, which can be put up in barrels and kept sweet for winter use at a cost of one-half cent per gallon by using "Cuerline Formula," which meets the requirements of the Pure Food Law and will be sent for 12 two-cent stamps. Guaranteed to keep cider sweet. Chemical Supply Company, 825 Quincy street, Topeka, Kansas.

**Protect Your Alfalfa Fields.**

It has always been a puzzle to us why farmers would go to the expense and trouble of sowing alfalfa and then when it had gotten a nice start, sit idly by and watch the gophers ruin it. Flint Saunders, who advertises his gopher exterminator in this paper, has solved the problem of killing them, and his machine is endorsed by the Kansas State Agricultural College. Can you afford to do without one for the small sum of \$5.00 Write him now.

**Agriculture**

**Farmers' Institutes.**

REPORT OF J. H. MILLER, FARMERS' INSTITUTE SECRETARY OF THE KANSAS STATE AGRICULTURAL COLLEGE.

**OUTLINE OF WORK, 1905-'06.**

Since July 1, 1905, the Kansas State Agricultural College has been represented at one hundred sixty-nine farmers' institutes and farmers' meetings. The aggregate attendance at these meetings, according to the method of estimates, has been 35,300. This is a pretty safe estimate. All this ought to mean much for the agricultural interests of Kansas. When the intelligent farmers of any State begin to attend these meetings, to confer one with another, to hear experiences of neighbors, and to hear representatives from the Agricultural College, it is encouraging for the future of agriculture.

**Sessions.**—Most of these institutes held but two sessions, one day, as most of them were first meetings, at least for some years. The one-day institute it better than a two-day meeting, except where there is a strong local organization. The one-day meeting brings out a good crowd for the first session, and there is good interest from the start. Only a few subjects are on the program, and people do not get too tired to listen well. Of course, every county when thoroughly organized should hold, in fact is required by law to hold, a two-day session once each year. Such a session enables the local committee to have several subjects on the program, representing all interests of the community—agriculture, stock-raising, orcharding, etc. It also enables the committee to have a more general program for one evening.

**Corn-Breeding.**—The emphasis was placed this year on corn-breeding, that being thought the subject most needing attention in Kansas at this time. This was on practically every program after the middle of October. In all counties where boys' corn contests are to be held this fall, "Corn Breeding," "Corn Cultivation," "Corn Enemies," etc., will be subjects for one entire session, or at least this will be the recommendation of the institute superintendent.

**Literature.**—One of the most marked features of the institutes this past year was the eagerness of farmers to get literature, bulletins, booklets, books, papers, etc., on any and all phases of farming. Probably more interest was shown in regard to literature on alfalfa, dairying, and poultry than on any other subjects. This year thousands of United States and State bulletins and various pamphlets will be distributed at morning sessions of institutes, principally on soil culture, conservation of moisture, selection of seed of the small grains, dairying, and good roads.

**An Institute in Every County.**—The institute campaign this past year covered a wider extent than heretofore, meetings being held in 84 counties. It was also remarkable for the number of "first" institutes, probably one-third of the entire number being held in counties or towns where no meetings had ever been held, or where none had been held for several years. The college decided last fall to carry on an aggressive campaign and started out to organize a farmers' institute in every county. It is hoped that before January this may be accomplished.

**Circuits.**—Another plan ordered carried out by the regents of the Agricultural College was to arrange all institute work in circuits, thus saving much time and railroad fare. Thus the speaker would start out on a given railroad line and attend five or ten institutes in a series, often going away from Manhattan in one direction and making a circuit, holding the last institute probably in a county adjoining the one where the first institute was held ten days before.

**Expenses.**—With the limited fund hitherto appropriated for farmers' institutes, it was necessary this past year to ask local committees to provide hotel entertainment for the speakers sent by this department. The State prints posters and programs and pays the railroad fare and the salaries of the superintendent and other speakers. Last year institutes were held in some communities where it did not seem best to ask the local committees to meet any part of the expense. But hereafter local committees will be expected to provide the hall for the meeting, as heretofore, and all purely local expenses, including the hotel entertain-

ment for the speakers sent by this department, and also any livery bills where such are necessary to get to the institute, unless the committee is able to make other arrangements for getting the speakers to and from the meeting.

**New Organizations.**—During the year seventy-seven county and local institutes were organized according to law. In almost all cases the officers were chosen from the very brightest and most progressive farmers. In several counties the county school superintendent was drafted for secretary. Where he was not made the regular secretary, he was asked to handle the boys' corn contest. In most counties three or more vice-presidents were chosen to represent several parts of the county. These new officers have shown a commendable spirit of promptness in responding to letters from this office. A few, however, have not answered any of the communications. This ought to be looked upon as a business matter—it is for the advancement of agriculture in Kansas.

**Cooperation of the Railroads.**—Throughout the year the railroads have cooperated with the college in this agricultural education movement. The Rock Island company led out in a far-sighted manner last November by furnishing a special lecture train for a two-weeks' series on their Kansas lines. The college furnished three speakers, while the railroad company provided a train consisting of two lecture cars and a living car, the speakers being the guests of the road during the whole trip. One hundred thirty-five stops of thirty minutes each were made, two hundred thirty-six addresses were given, and over ten thousand farmers attended the meetings.

The Missouri Pacific company, through its industrial department, sent its exhibit car with the agricultural agent, a practical farmer and horticulturalist, for cooperation with the college for nearly seven weeks, the speakers having sleeping accommodations in the car. Practically the entire lines of that company in Kansas were included on these trips. The twelve meetings held with this car on the Central Branch of the Missouri Pacific had an aggregate attendance of 5,280 people, almost exclusively farmers.

The Santa Fe, Union Pacific, and Frisco railroads, have also shown great interest and have cooperated with the college practically as far as we were ready for their cooperation this past year. Next year more work will be done on these roads, and probably less on those that helped us this year. It is almost impossible for the college to furnish many speakers, except during the fall term.

**The Boys' Corn Contest.**—Early last winter it was decided to organize a boys' corn contest in Kansas, by counties. The plan was to ask the farmers' institutes to have county contests, and where there was no institute organization the county school superintendent was asked to take up the work. The local committee was to secure its own seed and give to each boy one quart of corn, about one thousand grains. Each contestant was to be allowed to plant and cultivate his corn as he pleased and to bring to the institute in the fall his "best ten ears," with a report on soil, cultivation, yield, etc. Then this department planned for a State contest to be held at the Agricultural College, Manhattan, on December 31, 1906, and January 1, 1907, to be open to all the "winning" boys in the several county contests. At once there was great interest in many parts of the State and contests were organized in fifty counties, with an aggregate enrollment of over five thousand boys, one county, Dickinson, through the energetic county superintendent of schools, giving out 480 quarts of corn. This plan insures at least fifty good institutes this coming fall and the awakening of great interest in corn-breeding and cultivation among five thousand boys. About \$2,000 will be paid out by these several counties for prizes to the boys, and \$275 will be paid to the boys who enter for the State contest. Next year it is to be hoped that at least twenty-five other counties will take up this important work, and that many counties now in the list may rival Dickinson County. Other lines of work for the young people may also be recommended after the January conference of institute officers.

**More Institute Work Demands a Larger Appropriation.**—For years the Agricultural College has been aiding in holding institutes and getting for that specific work only \$2,000 per year. This year the regents, recognizing its importance, took from other important work \$500 more, making for the institute department for the year from July

1, 1906, to July 1, 1907, a total of \$2,500—less than half enough to do what the farming interests of Kansas have a right to ask. Nebraska has for years received \$6,000 a year for institutes, and Missouri and many other States have received that much or more. Kansas has one hundred five counties and each should hold at least two county institutes, and many of the counties in Central and Eastern Kansas should hold from three to six county and local meetings. This will call for organization, for additional institute workers. The college has grown so that additional assistants must be engaged to enable the department heads to devote at least a few weeks each year to this work of instructing the farmers at first hand. The institute department should have not less than \$7,000 a year to do what we see clearly should and can be done for the greatest advancement of the farming interests of Kansas.

**SUGGESTIONS TO LOCAL OFFICERS. PREPARING FOR INSTITUTE.**

**Enthusiasm of Officers.**—The first and most important point in the preparation for a successful institute is faith in the institute idea. Officers must believe in it and must make others believe in it. Nothing is so fatal to the success of a meeting as to have a set of officers who never think of the meeting until they are reminded of it by the institute superintendent. Officers must talk it "in season and out of season." When a crop subject is under discussion on the street corner on Saturday or at a thrashing or at a sale, let the officer say, "We must have that discussed at the next institute." In one county, last winter, where there was very little interest and where the institute superintendent was determined to have a meeting, one young farmer took hold of it and by his sheep-enthusiasm, talking it with the people on the street, telephoning, writing letters, and using the papers, he succeeded in having one of the largest institutes in the State, at least seven hundred being in attendance.

**Making the Program.**—Most committees make two mistakes in this part of their work: (1) in not planning for their program soon enough and thus getting the benefit of really "worked out" papers, and (2) in putting too many subjects on the program. A program made up in a week is not usually very helpful. Men should have enough time to work out some new points or verify some former experiments. Nothing is better for an institute than to have one or two subjects assigned a year in advance—a crop or a feeding experiment, for example. Some of the younger men who might not be willing to prepare a paper will take an experiment, keep accurate data, and make a report at the next institute as valuable to his hearers as any Government bulletin. Original observations or experiments are worth more than fine-sounding, theoretical essays. Then the second mistake is all too common. Programs have been received here with as many as ten subjects for a two-session program. Hereafter this department will decline to send speakers to assist at a meeting with such a program. It looks too much as though the committeemen wanted to compliment too many people. As a rule, two or at the most three subjects will be ample for one session, one of them being the major or most important subject and the other less important. It is always well to have one or two people assigned to open the discussion of the important subject, and also to have a few minutes for general discussion. I would rather have two subjects and six speakers for each session than to have six subjects with six speakers. Leave off unimportant subjects. Take the bigger subjects and possible the minor subjects may be discussed incidentally.

Keep off the program all political and religious subjects. Make it a business meeting. The program should be made out complete at least three weeks before the date of the meeting and should be printed in the newspapers two weeks in advance. No one should be placed on the program unless he is certain to be present and certain to be prepared. Make out the program on a time-limit plan, having a certain time to start, and then start on time, having a certain number of minutes for each paper or talk or discussion, and call speakers down at end of time. It is not courtesy nor justice to the following speakers to let one man encroach on their time. It is decidedly discourteous for one member of the institute to move an extension of time, no matter how interesting the speaker nor how important the subject. These subjects that can not be thoroughly discussed should be taken

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up after the closing hour. At one institute last winter a first speaker of an evening session was talking a lot of "funny stuff" when he, finally, as an excuse to quit, remarked that he supposed he was about to the end of his time, when the chairman enthusiastically said, "You can have all the evening," forgetting that a prominent business man from an adjoining city had been invited there to deliver the real address of the evening, and who even then had to shorten his able address because of the time taken by the first speaker.

**Advertising the Institute.**—Most committees are entirely too modest in this matter. Too often I have been unable on the day of the meeting to find a poster or a program. The State prints posters and programs free, but the institute department expects them to be used. Posters are to be used as posters, no to cover store counters. They should be put up in front windows, at court-houses, post-offices, and other prominent places. Let them line the streets until everybody is talking about the institute. They should be sent to all surrounding towns and properly posted. They should be put up by men actively interested in the farmers' institute work, not by small boys. The State furnishes programs, also, and these are to be used, one-fourth for advance distribution and the remainder for the meeting. A program should be mailed to every rural school-teacher in the county and to from twenty to fifty prominent farmers in the county. Others should be handed out to men and women interested in the movement. They should not be thrown around in wagons or dumped out in any promiscuous way. Local committees are urged to send to me copy for programs at least two weeks before the date of the institute. Then, Kansas newspaper men are the most liberal men I ever knew for advertising farmers' institutes. Much of the success of this past year's work must be credited to the cooperation of Kansas newspaper men. But committees should furnish the "copy" or complete data for articles to be written by the editor. Many editors last winter gave, voluntarily, valuable space for advertising the institutes, some of them giving from one-eighth to one-half page of display advertising, although this should never be asked. Then, too, each institute president should call a general meeting of his entire committee (all vice-presidents are members of the committee) to determine upon program and general character of the meeting. Each member should be assigned a certain territory in which to work for the success of the institute, exhibits, attendance, etc. A special committeeman might also be named for each township to assist in advertising the meeting.

**Confer With Business Men.**—Finally, committees should attend to all this advertising and planning as though they were working for a good cause, not a charity. It is a matter of business for everybody. They should never forget to confer with the merchants and bankers who are or should be deeply interested, in everything that will advance the cause of agriculture. Some of the most successful meetings held last winter—Beloit, Clyde, Washington, Ottawa, Howard, Emporia, and many others—were held under the auspices of the commercial clubs. I want to recommend that the institute officers confer with these organizations, or where they do not exist, ask the mayor to appoint a committee to look after certain local matters. The business men of a town are vitally interested in the work of farmers' institutes and should be urged to attend all meetings.

**Have the Women Represented.**—No institute program is complete without having the women represented and women in the audience. Whenever there is enough interest and where this department can send a lady speaker, it will be recommended that women's auxiliaries be formed this year. At any rate it is recommended that one separate session be held for the women and girls. Where there is a boys' corn contest and a bread and sewing contest for girls, it is recommended that the contests and the short essays by the young people be assigned to the morning of the first day and the afternoon sessions should also be held separate, one to be devoted to "corn" and the other to domestic subjects.

**Attending to Details.**—The president and secretary should attend rigidly to all details, securing suitable hall, making sure of heat and light when needed, cleaning hall, having ample seats, tables for exhibits and the placing the exhibits, etc.

The exhibits should be in place before the hour for opening the meeting.

**Rule out everything not in place at opening hour.** The judging should be done outside of regular session hours.

#### HANDLING THE MEETING.

**Begin on Time.**—The importance of this can not be overestimated. There must be a time for beginning. No matter what hour you fix, some will be late. But having set a time, having announced the hour, be ready and begin on time if the only persons present are the chairman and the first speaker. If the speaker is not present, the chairman should "call the room to order" and engage in silent prayer; ordinarily under such circumstances he should not try to express his emotions.

**What to Cut Out.**—(1) Bear in mind that this is a business meeting of home folks, and hence addresses of welcome and response are unnecessary and useless. (2) Mere music for the sake of music is also unnecessary. Music where it brings in the program young people belonging to the institute "family" is a different thing and has two values. (3) Cut out all irrelevant subjects, extra topics requested, talks from distinguished visitors, all resolutions or motions to politics or religion, or any other matters likely to provoke inharmonious.

**Keep Things Moving.**—The president of the institute should not do much waiting. When a speaker is through speaking, the next one on the program should be called at once. If there is time for general discussion, give opportunity for volunteers, and if it is not taken either pass to the next subject or call on some one to open the discussion. If a period is marked on the program for "general discussion," it is often wise for the chairman, in advance, to ask some person who is well qualified, to open the discussion on a certain subject, with the understanding that he is to "take the floor" immediately after the chairman announces that the subject is open for discussion.

**Close Promptly.**—A chairman who begins late often holds late. Do neither. Close sharp at 12 o'clock noon if a speaker has to be stopped in the middle of a syllable. Close as promptly at 4, or possibly 4:30 in September or April, and at night close at 9:30. Do not tire people or let many go before the orderly dismissal. If some are interested and want to ask some speaker a lot of questions, adjourn the meeting on time and then let those interested stay as long as they want to. Next year I am going to give a chromo to every president who calls and dismisses every session of his institute on time.

**Appoint Committees early.**—Whenever committees are to be appointed, this should be done at the close of the first session and committees should be required to report at opening of the last session. It is always recommended that a nominating committee be appointed to report a list of new officers. This report must always be ratified by the whole institute.

**Report Finances.**—The treasurer should have all his bills paid and be ready to submit, at the opening of the last session, an exact report of all financial matters. If a special committee has been appointed to raise money for premiums, this report should be ready, showing where money came from and to whom paid and for what. It is needless to say that all premiums should be paid before the opening of this last session. Form a habit and make a reputation for paying premiums promptly.

#### ABOUT DATES AND DAYS.

**Don't Fix Exact Dates.**—If the college is to assist in holding two hundred institutes this year, this department must ask committees not to fix exact dates for their institutes. All institutes must be held in circuits, to save time and expense, and if college help is desired, I must ask the privilege of finally fixing the exact date of each institute. Preferences are asked, and should committees notify me of any seriously conflicting dates—fairs, stock sales, etc.—preferences will always be considered and met whenever possible.

**About Preferred Days of the Week.**—It is remarkable how many committees ask for Saturday institutes, thinking, no doubt, because farmers come to town on that day that it is the only day for a meeting. I do not hesitate to say that Saturday is the worst day of the week for a farmers' institute. When there is interest among the farmers, or where there is an enthusiastic committee, any day is good. The biggest institute held last year, the one at Washington, was on Tuesday. The meeting at Clyde the day before was almost as good, with nearly six hundred people. We had very few good meetings last year on Saturday.

People come to trade and visit on Saturday, and most of those who attend on Saturday just "drop in," and they usually "drop out" in a little while. Take whatever day is assigned and work for people who will attend the meeting to get benefit, not from idle curiosity or because you ask them.  
(To be continued.)

#### Manure and Fertilizers.

PROF. A. M. TENEYCK.

There is no waste on the farm which is so wanton and inexcusable as the too common waste of stable and barnyard manure. It is true that is necessary to have well-drained yards, yet a side hill barnyard may result in a great loss of the soluble elements of the manure unless provision is made for spreading the drainage from such yards over meadows or pastures. Also, in an open barnyard a liberal use of straw or other absorbents will often save in manure much more than the value of the bedding.

Probably the most economical method of handling manure is to haul it directly to the fields as fast as it is made and spread it at once. This is practicable in the handling of stable manure, but not with manure in open yards and sheds. However, if barnyard manure is exposed in open yards, the sooner it can be removed to the fields after the winter's feeding the better. Do not throw the manure from the stable out under the eaves of the barn to leach; neither throw it in large piles and allow it to fire as is so often done.

It is a good plan to feed cattle and other stock under sheds, simply for the purpose of better preserving the manure.

The manure-spreader is a useful implement, and when the manure is handled regularly as made and spread in the fields, the spreader may be very profitably used on the farm which carries much live stock. On the small farm, or on the farm where the practice is to haul the manure out at intervals and turn all hands to the work for a time, the spreader can not be used so advantageously. There is little question, however, but that in the spreading of large amounts of manure each year a good spreader will soon pay for itself, not only in the saving of labor but in the more even spreading of the manure, thus giving more uniform results and making the manure cover more land. Put the manure on the grass land when grass is used in the regular order of rotation, as described above.

Manure should be spread thinly, the purpose being to cover a large area of land with a relatively small quantity of manure, rather than to give a heavy dressing of manure to a small area of land. When the manure is spread thinly over a large area, the crop grown on the land may get all the value of the manure and the manure can do no harm to the crops, but with a heavy coat of manure, especially when the manure is plowed under, the crops may not make full use of the manure, and there is often danger, especially in dry seasons, that the manure may injure or destroy the crop by "burning out" the soil, which merely means that the heavy coat of manure breaks the capillary connection between the soil and sub-soil and in a period of drouth the crop suffers for want of water because the supply of water in the sub-soil is largely cut off for the direct use of the crop. The purpose and methods of green manuring have been discussed under rotation of crops.

It appears from the reports of Eastern experiment stations that a large part of the farming of the Eastern States relates to the use of chemical fertilizers. Perhaps the extensive use of chemical fertilizers in the East is necessary, but not in the West. The small farmer and specialist on high-priced land near the city or town can well afford to feed the special crops in this way. Also, there may be lands in the West which are originally deficient in some element of plant-food, when, to make such land productive, this element must be supplied by the use of chemical fertilizers. In general, however, the soils of the Western States are rich in the mineral elements of plant-food. Only the humus and nitrogen of the soil has been exhausted by continuous cropping, and this part may be restored by the growing of grasses and legume-crops in rotation with grain-crops, with the addition of the manure made by feeding to live stock on the farm the roughage with part of the grain produced by a proper rotation of crops, such as has been described. In some parts of the West, lands which were originally somewhat deficient in lime, after long periods of cropping, have become

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somewhat acid because of the great accumulation of organic acids from the decay of vegetable matter. A fertile soil should be neutral or slightly alkaline, and it may become necessary to add lime to such soils to correct this acidity the same in the West as is practiced in the East. Usually, however, on the vast farming lands of the West, excessively rich in the mineral elements of plant-food, a simple rotation of crops, as described above, in which the roughage and part of the grain is fed to live stock on the farm, with a return of the manure to the soil, will not only maintain these soils in their present state of fertility, but in my judgment a large part of this land may be made even more fertile after fifty or one hundred years of such management than it is at present, after one-fourth to one-half a century of more or less continuous cropping with fertility-exhausting crops.

I do not oppose the use of chemical fertilizers where it can be shown that profit may be gained by their application to the soil in the growing of certain crops, but I do not think the general use of chemical fertilizers should be encouraged in the growing of ordinary farm-crops throughout the great central and western farming areas of the United States.

**To Measure Hay in Stack.**

Could you tell me through the columns of your valuable paper how many cubic feet of alfalfa hay from the first cutting last spring will make a ton, or is in general figured for a ton of hay? The hay stands in the field in stacks and is therefore well settled (almost liked baled hay).

R. B.

**Wabaunsee County.**

The rules for measuring hay in the stack will vary according to the length of time the hay has been stacked and the kind and quality of the hay, and also according to the character of the stack. With alfalfa or prairie hay which has been stacked for thirty days it is usual to compute an eight-foot cube or 512 cubic feet as a ton. When the hay has been stacked five or six months, usually a 7½-foot cube or 422 cubic feet is calculated for a ton. In old stacks which have been stacked for a year or more a 7-foot cube or 343 cubic feet is allowed for a ton.

There are different methods of measuring stacks, depending upon the shape of the stack and also upon its size. For a long stack or rick the usual method is to throw a line over the stack, measuring the distance over the stack from the bottom on one side to the bottom on the other; add to this the average width of the stack, divide this sum by 4 (which equals one side of the square) and multiply the quotient by itself and this product by the length of the stack. This will give you the number of cubic feet in the stack, which may be divided by 512, 422, or 343 in order to find the number of tons. For small, low ricks, the rule is to subtract the width from the "over," divide by 2, multiply by the width, and multiply the product by the length, dividing the result by the number of cubic feet in a ton.

There is no established rule for measuring round stacks, but this one will approximate the contents of a stack of the ordinary conical form. "Find the circumference at or above the base of bulge at a height that will average the base from there to the ground, find the vertical height of the measured circumference from the ground and the slant height from the circumference to the top of the stack. Multiply the circumference by itself and divide by 100 and multiply by 8, then multiply the result by the height of the base plus one-third of the slant height of the top." The hay in a round stack is necessarily less compact than in a rectangular stack, hence a greater number of feet should be allowed for a ton, with well-settled hay probably 512 cubic feet.

The rules given may also be used for measuring any kind of hay, cane, or Kafir-fodder in the stack. However, for cane or Kafir-fodder only approximate results can be procured by stack measurements, because the fodder is apt to vary very greatly in weight according to the moisture which it contains.

A. M. TENNEYCK.

**Hairy Vetch—Cow-Peas.**

In the spring I sowed some hairy vetch and I wish to ascertain from you the best way of getting the seed. So far there seems to be little seed on the vetch, and it is not thick. Does it reseed itself best? For forage, is it best to sow with some kind of a grain for a support? Also have about 35 or 40 acres of cow-peas. Is the best way to get this seed to pick it? Do you know of any quicker method? What

is the best method to put it up as hay? Is it well to pasture it off on the ground, and when may I turn the stock into it?

I also tried some Bromus inermis and soy-beans which did not materialize. Volunteer sorghum grew thickly in the field where these were sown. Would this kill them out?

I would appreciate any literature or bulletin you might send me on these subjects. An immediate reply in regard to the harvesting of seed would be appreciated.

THOMAS N. HOGAN.

**Iowa County.**

The hairy vetch (*Vicia villosa*) is an annual plant. The pods burst open when ripe and reseed the field if the crop is not pastured too closely. If you wish to save the seed, it is necessary to harvest the crop, the usual method being to cut with the mower, rake into windrows, and thrash from the field, or the fodder may be placed in stacks, when well cured, and thrashed later.

Vetch seeded in the spring does not usually produce much seed at this station. Perhaps the better method is to sow in the fall about the first part of September, when the vetch may be seeded with wheat, rye, winter oats, or winter barley, the whole crop being cut for hay. The grain supports the vines, making it easy to cut the crop with the mower. Also the vetch will make a second growth after the first cutting, producing pasture or winter forage. It is usual to sow about a bushel of vetch with a bushel of grain, per acre. When vetch is grown for seed, it is usual to sow it alone, using the vine-lifter attachment to the mower in cutting the vetch.

I have mailed copy of circular No. 8 giving information regarding the culture of cow-peas. In order to get a good selection of early-maturing peas, true to type, the method of hand-picking is to be recommended. At this station we usually harvest the cow-peas with the bean-harvester, or else cut them by hand, thrashing the whole crop in order to save the peas. The ordinary separator breaks the peas very badly, and if the peas are to be used for seed, it is necessary to fail them out or thrash with a bean-thrasher.

Cow-peas should be cut for hay when the pods first formed are beginning to mature. The hay cures slowly, and it is necessary to leave it in the field several days in the windrow, and cock before stacking. The fodder should be raked soon after cutting, so as not to allow the leaves to become too dry and brittle.

Perhaps the best method for handling the crop for forage is to pasture it on the ground. The cattle may be turned on the field as soon as the peas come into blossom, or any time after that stage of maturity.

Doubtless the volunteer sorghum choked out the Bromus inermis. The soy-beans should be planted in rows and cultivated in order to produce a successful crop. We find that the objection to soy-beans is that they are not productive enough. Cow-peas are to be preferred, both for forage and grain production.

Under separate cover I have mailed you a copy of press bulletin No. 129 regarding the culture of Bromus inermis.

A. M. TENNEYCK.

State Grain Commissioner Anderson has compiled reports showing that 27,000,000 bushels of grain were harvested in Washington this season, the average yield being reported at 35 bushels to the acre. "Considerable 40-bushel wheat was raised in the Spokane district," State Grain Inspector Arrowsmith says in his reports, "and now and then we found 50 and 60 bushels, but the average is between 35 and 36 bushels, a little lower than last year. No particular part of the State was damaged, and all the grain harvest is in good condition; in fact the crop is a large and clean one."

**Farm Telephones a Necessity.**

The utility of the telephone to the farmer is becoming more pronounced every year. The endless satisfaction of being in close touch with neighbors, the railroad station, creamery, and city, appeals not only to the farmer but his family as well. The Jul. Andrae & Sons Co., 323 W. Water St., Milwaukee, Wis., specialize in supplying farmers and independent lines with everything pertaining to telephone systems. The Andrae people, who have been very successful in establishing telephone systems throughout the entire country, make a special telephone for farmers' use. Their instruments are constructed in such a manner as to enable them to be subjected to extra hard usage. We would advise our subscribers to write for the large book that is being given away free by the Andrae Company.

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**PURE-BREED STOCK SALES.**

Dates claimed only for sales which are advertised or are to be advertised in this paper.  
October 10, 1906—H. L. Faulkner, Jamesport, Mo.  
October 11, 1906—American Galloway Breeders' Association Combination Sale, Kansas City, Mo.  
October 13, 1906—O. A. Cook, Salem, Nebraska, bear sale.  
October 16, 1906—Poland-Chinas, J. B. Myers, Canton, Kans.  
October 16, 1906—Poland-Chinas, C. M. Garver & Son, Abilene, Kans.  
October 17, 1906—W. J. Honeyman, Madison, Kans.  
October 17, 1906—Poland-Chinas, W. A. Pruitt, Asherville, Kans.  
October 18, 1906—East Lynn Herefords, Will H. Rhodes, Tampa, Kans.  
October 17, 18, 19, 1906—Frank Rockefeller, Herefords at Kansas City, Mo.  
October 18, 1906—Choice Duroc-Jerseys, C. A. Wright, Rosendale, Mo.  
October 18, 1906—Poland-Chinas, W. A. Davidson, Simpson, Kans.  
Oct. 18, 1906—Frank Michaels, Summerfield, Kansas, Poland-Chinas.  
October 19, 1906—Shorthorn and Hereford cattle at Eureka, Kansas, H. E. Bachelder, Fredonia, Kans., manager.  
October 20, 1906—W. E. Dowling, Norcat, Kans. Poland-Chinas.  
October 22, 1906—J. E. Joines, Clyde, Kansas, Duroc-Jerseys.  
October 23, 24, 1906—Herefords, E. A. Eagle & Son, Rosemont, Kans.  
October 24, 1906—Poland-Chinas, Frank A. Dawley, Waldo, Kans.  
October 25, 1906—D. W. Dingman, Clay Center, Kans., Poland-Chinas.  
October 25, 1906—J. W. Myers, Galva, Kans., Poland-Chinas.  
October 25, 1906—Poland-Chinas, T. J. Triggs, Dawson, Neb.  
October 26, 1906—Poland-Chinas, O. W. Stalder, Salem, Neb.  
October 27, 1906—Poland-Chinas, Chas. A. Lewis, Beatrice, Neb.  
October 28, 1906—Jno. W. Jones & Son, Concordia, Duroc-Jerseys.  
October 29, 1906—Poland-Chinas, B. M. Bell, Beatrice, Kansas.  
October 29, 1906—Klaus Bros., Bendena, Kansas, Poland-Chinas.  
October 30, 1906—Leon Calhoun's sale of Poland-Chinas at Atchison, Kans.  
October 30, 1906—J. B. Davis & Son, Fairview, Kans., Duroc-Jerseys.  
October 30, 1906—Herefords at Mt. Pleasant, Iowa, D. R. Mills, Des Moines, Iowa, Manager.  
October 31, 1906—C. O. Hoag, Calvin Bros., and Geo. P. Dawson, Poland-Chinas.  
October 31, 1906—Poland-Chinas, O. B. Smith, Cuba, Kans.  
November 1, 1906—Poland-Chinas, Carl Jensen & Sons, Belleville, Kans.  
November 1, 1906—Frank Zimmerman, Centerville, Kans.  
November 1, 1906—Shorthorns at Mt. Pleasant, Iowa, D. R. Mills, Des Moines, Iowa, Manager.  
November 1 and 2, 1906—Herefords and Shorthorns, Kansas City, Mo., W. C. Motavook, Mgr., Springfield, Ill.  
November 2, 1906—Champion herd O. I. C. Swine, Dr. O. L. Kerr, Independence, Mo.  
November 5, 7, 8, 1906—Sale of all beef breeds—Kansas City Sale Pavilion, R. A. Ford, Lawson, Mo., Manager.  
November 8, 1906—T. P. Sheehy, Huma, Mo.  
November 9, 1906—Poland-Chinas at Fredonia, Kans., H. E. Bachelder, manager.  
November 10, 1906—Duroc-Jerseys at Fredonia, Kans., H. E. Bachelder, manager.  
November 13, 1906—Howard Reed, Frankfort, Kans.  
November 14, 1906—Poland-Chinas, H. B. Walters, Wayne, Kans.  
November 14, 1906—Poland-Chinas, F. R. Barrett, Cadmus, Neb.  
November 15, 1906—Herefords, Marion and Dickinson (County Hereford Association), J. B. Shields, Hope, Kansas, Secretary.  
November 16, 1906—G. M. Heberd, Peck, Kans. November 17, 1906—Herefords, Henry Ackley, Wellsville, Kans.  
November 20, 21, 22 and 23, 1906—Blue Ribbon Sales of Shorthorns, Herefords, Aberdeen-Angus and Galloways at Fine Stock Pavilion, Kansas City, D. R. Mills, Des Moines, Iowa, Manager.  
November 23, 1906—H. E. Haynes, Olathe, Kans.  
November 24, 1906—Duroc-Jerseys, Marshall Bros., & Stodder, Burden, Kans.  
November 24, 1906—Shorthorns, Hall Brothers & J. P. Newell, Carthage, Mo.  
November 27, 1906—L. C. Caldwell, Moran, Kans.  
November 27, 28 and 29, 1906—Shorthorns, Herefords and Aberdeen-Angus at South St. Paul, Minn., D. R. Mills, Iowa, Manager.  
November 28, 1906—Snyder Bros., Winfield, Kans. Poland-Chinas.  
November 30, 1906—U. S. Leon, Butler, Missouri Poland-Chinas.  
December 6, 1906—American Galloway Breeders' Association Combination Sale, Chicago, Ill.  
December 11-12, 1906—Imported and American bred Aeresfords, James A. Funkhouser and Charles W. Armour, sale pavilion, Kansas City.  
December 13, 1906—Hereford cattle at Coffeyville, Kans., H. E. Bachelder, Fredonia, Kans., manager.  
December 14, 1906—Shorthorn cattle at Coffeyville, Kans., H. E. Bachelder, Fredonia, Kans., manager.  
December 15, 1906—Poland Chinas, Duroc Jerseys and Berkshire at Coffeyville, Kans., H. E. Bachelder, Fredonia, Kans., manager.  
December 18, 19, 20 and 21, 1906—Shorthorns, Herefords, Aberdeen-Angus and Galloway at South Omaha, Neb., D. B. Mills, Des Moines, Iowa, Manager.  
December 19, 1906—Herefords, E. R. Morgan, Blue Rapids, Kans.  
Jan. 17, 18 and 19, 1907—Shorthorns, Aberdeen-Angus and Herefords, South Omaha, Neb., W. C. McCavook, Mgr., Springfield, Ill.  
Feb. 7, 1907—Ward Bros., Republic, Kans., Duroc-Jerseys.  
February 9, 1907—Poland-Chinas, C. O. Parsons, Clearwater, Kans.  
February 12, 1907—Duroc-Jerseys, T. P. Teagarden, Wayne, Kans.  
February 13, 1907—Poland-Chinas, H. B. Walters, Wayne, Kans.  
February 13, 1907—J. B. Davis & Son, Fairview, Kans., Duroc-Jerseys.  
Feb. 18, 1907—C. W. Taylor, Pearl, Kans., Durocs.  
February 19, 1907—Jno. W. Jones & Son, Concordia, Duroc-Jerseys.  
February 20, 1907—Poland-Chinas, Lemon Ford, Minneapolis, Kans.  
Feb. 20, 1907—J. E. Joines, Clyde, Kansas, Duroc-Jerseys.  
Feb. 21, 1907—Leon Carter & Co., Asherville, Kans Duroc-Jerseys.  
February 22, 1907—Wichita, Kansas, Poland-China bred sow at 26, J. G. Larrimer, Derby, Kansas, Mgr.  
February 27, 1907—Poland-Chinas, W. H. Bullen, Belleville, Kans.  
April 3, 4 and 5, 1907—Herefords, Aberdeen-Angus and Shorthorns, Kansas City, Mo., W. C. McCavook, Mgr., Springfield, Ill.  
May 1, 2 and 3, 1907—Aberdeen-Angus, Shorthorns and Herefords, South Omaha, Neb., W. C. McCavook, Mgr., Springfield, Ill.  
Improved Stock Breeders' Association of the Wheat Belt—November 13, 14, 15, 1906, at Arkansas City, Kans., I. E. Knox, Nardin, O. T., manager; Dec. 5, 6, 7, 1906, at Anthony, Kans., Chas. M. Johnston, Caldwell, Kans., manager; Dec. 13, 19, 1906, at Wichita, Kans., J. C. Larrimer, Derby, Kans., manager; Feb. 13, 14, 15, 1907, at Caldwell, Kans., Chas. M. Johnston, Caldwell, Kans., manager.

**Stock Interests**

**Food Value in Bacon.**

Lean bacon which contained fairly large proportions of both protein and fat formed a part of the ration in a number of experiments made by Professor Snyder, of the Minnesota Experiment Station, about nine ounces being eaten per man per day. It was out in thin slices and baked or broiled in the oven until crisp and brown. All the fat which cooked out was saved and eaten with the bread and other foods which make up the daily fare. On an average, about 90 per cent of the protein and 96 per cent of the fat of the ration containing bacon were digested, and about 88 per cent of the energy was available. Calculated values for bacon alone showed over 90 per cent protein and 96 per cent digestible fat—figures which compare favorably with those which have been obtained for other animal foods.

Allowing 5 per cent for waste, a pound of bacon will contain from 0.1 to 0.3 pound digestible protein and from 0.4 to 0.6 pound digestible fat, which is about two-thirds as much as is found in butter. "Lean bacon contains as much protein and about twice as much digestible fat as other meats,"

be said of the liberal use of disinfectants and hot water in the feeding- and watering-troughs.

**Maintenance Rations for Beef-Breeding Cows.**

(Continued from last week.)

HERBERT W. MUMFORD, CHIEF IN ANIMAL HUSBANDRY, ILLINOIS EXPERIMENT STATION, IN BULLETIN NO. 111.

**RECORD OF THE COWS THAT CALVED.**

Cows about to calve were removed from their respective lots, usually a few days prior to calving, and individual records kept both of the feed consumed and the increase or decrease in weight of cows and calves. As the oldest calf at the end of the test was only 70 days old, the calves in no case received any feed other than the milk of their dams. It is true that some of the calves began to pick at the bedding when no more than a week old, but what they consumed was so slight that this factor was immaterial.

When a cow was removed, her ration was made up of the same kind of feeds to which she had previously been accustomed. Soon after calving the amounts were greatly increased in order to insure a good flow of milk for the calf and not permit the cow to run down in condition to any great extent.

The accompanying tables present the important data concerning gains and losses in weight, feed consumed, and cost of feeds:

No. cow.	WEIGHT, GAIN, AND COST OF FEED.		Birth wt. lb.	Wt. calf, May 16, 1906, lb.	Total gain, lb.	Daily gain, lb.	Length at day, cal.	Daily cost of feed, per cow, cents.	Cost of 1 lb. gain on calf, cents.
	Wt. cow after birth of calf, lb.	Wt. cow May 16, 1906, lb.							
486 (lot 2)	935	835	58	170	112	1.69	66	6.831	4.044
487 (lot 2)	945	848	72	200	128	1.83	70	6.843	3.731
478 (lot 1)	920	893	66	191	125	1.98	63	7.489	3.789
471 (lot 1)	945	885	74	165	91	1.49	61	7.630	5.121

says Professor Snyder, making it at the same time and even at a higher price per pound a cheaper food than other meats. Bacon fat is easily digested, and when combined with other foods it appears to exert a favorable mechanical action upon digestion."

Many who are fond of bacon hesitate to eat it, since they believe that being very rich in fat it is a frequent cause of indigestion. As has been pointed out by a number of writers, it seems fair to say that in the majority of cases such digestive disturbances are not due to the fatty nature of the food, but to the fact that the bacon was overcooked, or rather cooked at too high a temperature. It is not surprising that this should be the case when it is remembered that fat heated to a high temperature is decomposed, and one of the products given off in acrolein, an unpleasant smelling compound which attacks the eyes, making them smart, and irritates all mucous surfaces.

This compound is plainly noticeable in the acrid fumes of burning or scorching fat. When bacon fat is heated to 350° F., this chemical change is brought about to a greater or less extent. Very often bacon is hurriedly cooked in a very hot frying-pan over a bright fire, and more or less scorched fat is an almost inevitable result. When broiled or cooked in the oven, there is less danger of scorching, but under all circumstances great care should be taken to avoid too hot a fire.—National Provisioner.

**Overfeeding—Indigestion.**

A. T. Peters, V. S., of Nebraska Experiment Station, gives the following rule for treatment in cases of derangements from overfeeding:

The treatment for overfeeding is a balanced ration. Use some slaked lime with the feed; also charcoal, and allow the animals to root. By thus changing the feed and removing the cause, they are certain to soon recuperate.

The same is true for hogs which are shut up in dusty places; when this cause is removed, and with a light tonic, such as a tincture of iron and water, the animals will soon be on the road to recovery.

When affected with parasites, small thread-worms, it is wise to feed something to drive off these worms. The most efficient remedy is turpentine or gasoline, which should be administered in the swill, and best on an empty stomach. The proper way to feed this medicine is to omit the morning feed and give a teaspoonful in the feed for an average hog. Two or three applications usually suffice. The breeder must not rely upon the use of chemicals alone to be given the animal, but he must also inaugurate immediately thorough disinfection; because the eggs of these parasites are laid in the feeding- and watering-troughs, and for this reason they must be thoroughly cleansed, or the hogs will be reinfected in a short time. Too much can not

No. cow.	FEED EATEN DAILY PER COW.			
	Corn silage, lb.	Shock corn, lb.	Clover, lb.	Oat straw, lb.
486 (lot 2)	17.0	4.79	2.23	
487 (lot 2)	16.9	4.90	2.13	
478 (lot 1)	32.5	4.83	1.73	
471 (lot 1)	32.8	4.85	2.83	

Notwithstanding the fact that the cows were fed much more after calving than before, they fell off very materially in weight. This loss of weight was not as marked with the cows in lot 1, where silage was fed as it was in lot 2 where shock-corn was fed. Obviously the data are not available to determine whether this difference was due largely to the difference in the rations fed or whether it was due to the varying quantities of milk produced by the individual cows involved. If the amount left by the calves for a time after calving be taken as an indication of milking qualities, it would seem that in general the shock corn-fed cows were naturally heavier milkers than the silage-fed cows.

Other things being equal, it would be expected that the calves from cows giving the largest flow of milk would make the most rapid gains. If so, and if the shock corn-fed cows gave more milk than the silage-fed ones, why did the calf or cow number 478 (silage-fed) gain most and the cow suffer the least loss in live weight? In order to determine this matter accurately it would require that the cows be milked and a careful record kept of the yield. Enough is already known to satisfy the writer that if the cows in lot 1 (silage-fed) did not give as much milk as the cows in lot 2 (shock corn-fed) it was because of a non-milking tendency in the silage-fed cows for which the ration was in no way responsible.

The feed of each cow, as soon as she calved, was increased a third from what had been found approximately a maintenance ration when she was dry. This amount, however, was inadequate to maintain the cow while suckling a calf. The amount was therefore quite rapidly increased until the shock corn-fed cows received twenty pounds shock corn and five pounds clover hay, and the silage-fed cows received a daily allowance of thirty-eight pounds of silage and five pounds of clover hay. This amount seemed about right to keep the cows from shrinking in weight while nursing their calves and was approximately twice the amount necessary to maintain the same cows while dry. It might be added that none of these cows were heavy milkers.

The cost of feed for the shock corn-fed cows was not as great as for the silage-fed cows. Reference to the table will show that cost of gains on calves was also computed. The high-priced gains on the calf of cow number 471 were apparently due to the fact that this cow was a poor milker, ap-

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parently never giving milk enough for the calf.

It has been stated elsewhere that there was but little difference in the thrift of the cows in lots 1 and 2 before calving. A few days after calving, however, it was manifest that there was a marked difference between the cows wintered on silage and those wintered on shock-corn. The former ration was clearly superior.

The data derived from this experiment are of value also in adding weight to the evidence which has been accumulating the last few years, that the German maintenance standard should be revised.

The table shows that in no case was the amount of protein fed as large as the German standard calls for to maintain a one-thousand pound animal, but as far as the general appearance of the cows in lots 1 and 2 were concerned no one would doubt that they were sufficiently supplied with all the nutrients. It is again interesting to note in this connection that, although lot 1 received a smaller ration per cow throughout the test, they made larger average daily gains than did the animals in lot 2. The different results which these two rations produced can be ascribed only to some indefinite property which one contained that the other did not; we might call this the difference in palatability of the two feeds. The silage-fed lot received feed which was more palatable than that given in lot 2, which had shock corn.

mended because the cows so fed lacked thrift at the end of the test.

3. The corn-plant fed either in the form of shock corn or silage supplemented with a limited amount of clover hay proved satisfactory rations for wintering beef-breeding cows.

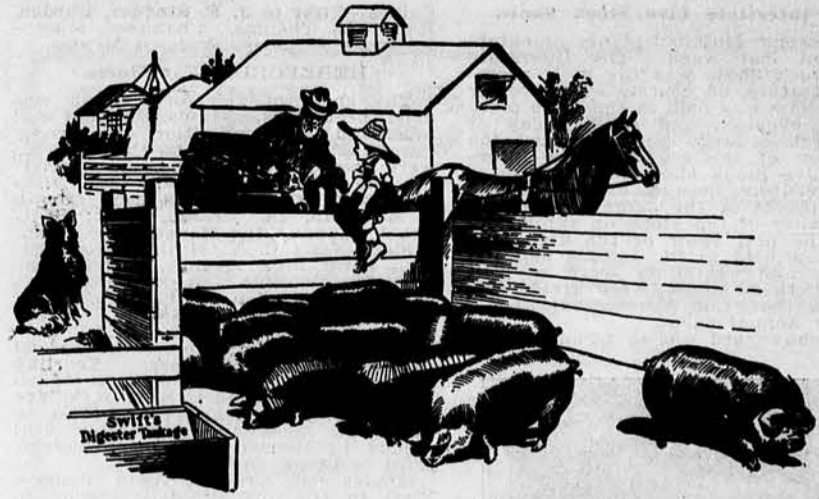
4. Although the rations fed the cows receiving silage were smaller than those given the ones receiving shock corn, the gains were larger.

5. Before calving the general condition of the cows in lots 1 and 2, the lots receiving silage and shock corn respectively, was about the same; however, those cows in lot 1 which gave birth to calves during the experiment showed more thrift than did those of lot 2 under like conditions.

6. The amounts of feed consumed in terms of the acreages involved in producing these feeds were as follows: Lot 1 (silage fed), .9528 acre; lot 2 (shock corn), 1.0388 acres; lot 3 (corn stover), 1.1402 acres.

7. A comparison of the three rations in terms of relative efficiency of the acreages involved by taking into consideration the money value of the grain grown on the acreages involved but not fed the cows, is as follows: Lot 1 (silage), .3428 acre; lot 2 (shock corn), .3475; lot 3 (corn stover), .2046.

8. Figuring corn at 35 cents a bushel, clover hay \$8.00, shock corn \$5.50, corn stover \$2.25, and oat straw \$1.50 per ton, it cost 4.9 cents a day per head, or \$1.47 a month or \$6.873 for 140 days to maintain lot 1 (silage fed);



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### DIGESTIBLE NUTRIENTS, CALORIES, AND NUTRITIVE RATIOS.

	Ave. weight cows	Ave. daily grain	Dry matter per 1000 lb. live wt.	Digestible nutrients per 1000 lb., live wt.			Energy per 1000 lb. live wt. calories	Nutritive ratio
				Protein	Carbohy-draes	Ether extract		
Lot 1—Silage.....	930	1.07	16.2	.567	7.44	.27	16047	1:14.2
Lot 2—Shock corn.....	910	.75	19.2	.631	9.05	.25	19054	1:15.3
Lot 3—Stover (42 days).....	880	.95	17.8	.456	9.74	.18	19716	1:22.1
Shredded stover (69 days).....	895	.29	17.8	.557	8.54	.21	17837	1:16.2
Wolf's standard.....	1000	.00	18.0	.700	8.00	.10	16000	1:11.7

### FINANCIAL STATEMENT.

The following statement forms an interesting study. The corn involved in the rations of the cows in lots 1 and 2 is figured at 35c, 40c, 45c, and 50c per bushel. No account is taken of the labor involved in the care of the cattle nor the fertilizer produced.

\$.046 a day or \$1.39 a month or \$6.504 for 140 days to maintain lot 2 (shock corn-fed); \$.031 a day or \$.937 a month, or \$4.374 for 140 days to maintain lot 3 (corn stover fed).

9. It cost 37 cents more to winter a cow fed silage for 140 days than it did one fed shock corn. However, the

LOT 1, (SILAGE FED.)				
Price of corn.....	\$0.35	\$0.40	\$0.45	\$0.50
Average cost of keeping one cow for 140 days.....	6.873	7.263	7.679	8.095
Average cost of keeping one cow one month.....	1.470	1.556	1.646	1.735
Average cost of keeping one cow one day.....	.049	.52	.055	.058
LOT 2, (SHOCK CORN-FED.)				
Price of corn.....	\$0.35	\$0.40	\$0.45	\$0.50
Average cost of keeping one cow for 140 days.....	6.504	6.911	7.318	7.725
Average cost of keeping one cow one month.....	1.390	1.481	1.568	1.655
Average cost of keeping one cow one day.....	.046	.049	.052	.055

As no corn was fed in lot 3, no statement involving variation in price of corn is possible. The stover, straw, and clover hay used throughout the test are figured at the one price stated in the early pages of the bulletin without any reference to the change in price of corn.

In lot 3 the total average cost of keeping one cow for 140 days was \$4.374, the average cost of keeping one cow for one month was \$0.937, and the cost of keeping one cow for one day was \$0.031.

By referring to the data given it will be seen that figuring corn at 35 cents per bushel, it cost practically 37 cents more to keep a cow on silage for 140 days than it did to keep one on shock corn, the same supplements being used in both instances. Since the silage-fed cows gained in this 140 days 150.10 pounds to the shock corn-fed cows' 106.19 pounds, it strikingly emphasizes the superiority of silage for this purpose.

### CONCLUSIONS.

1. It is assumed that the maintenance ration of a pregnant breeding cow should be regarded as the ration necessary to permit of sufficient gain in weight to account for the weight of the foetus.

2. Breeding cows of the beef type may be wintered without grain provided they are given all of the corn stover and oat straw they will consume during the early part and supplemented with a small amount of clover hay during the latter part of the season. While the cows in lot 3 used in this test were so fed, and while they weighed 57.53 pounds more per head at the end than at the beginning of the test, this method is not recom-

cows fed silage, lot 1, gained 150.10 pounds while those in lot 2 gained but 106.19.

10. In this test it took approximately twice as much feed to maintain a cow when suckling a calf as it did during her pregnancy.

11. The average daily cost of keeping the cows that calved in lot 1 was 7.56 cents while the average in lot 2 was 6.84 cents. Before calving the average daily cost of keeping a cow in these lots was 5.8 cents and 5.5 cents, respectively.

12. The data with reference to the relative efficiency of rations fed lots 1 and 2 for the maintenance of cows and gains on calves after calving, are not based on a sufficient number of animals to eliminate individuality, hence should not be regarded as conclusive.

13. The cows in lot 1 (silage-fed) ate less oat straw than did either of the other two lots, which may be accounted for by the fact that they were eating for the whole of the corn-plant. That is to say there was practically no waste.

14. Corn-plant fed in the form of silage is more palatable than if fed in the form of shock corn, which may be the cause of its being more efficient for the maintenance of beef-breeding cows.

15. The amount of feed required for maintenance is apparently less than that given in the German standards.

16. The experimental data presented will materially aid in a study of the practicability of raising calves and producing our own feeding cattle in the corn-belt.

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### AGRICULTURAL COLLEGE FINE STOCK

SHORTHORNS—Ravenwood Admiration 186157, by the champion Lavender Viscount. Also one of his good sons and some heifers.  
HEREFORDS—Soldier Creek Columbus 4th 253179 by the \$5,100 Columbus 17th. Also two good bulls sired by him.  
Also one good ANGUS coming yearling bull.  
HOGS—A few of the best from 200 spring pigs—DUROC—JERSEYS, POLAND-CHINAS, BERKSHIRES, TAMWORTHS, and YORKSHIRES.. Only the tops will be sent out on order.  
Department of Animal Husbandry, Agricultural College, Manhattan, Kansas.

The Interstate Live Stock Show.

St. Joseph, Mo., had plenty of entertainment last week. The Interstate Live Stock Show was the most prominent feature of course. The society horse show was held in the same place in the evening, and on one day of the week a large circus divided the attention of the crowds. The Interstate Live Stock show was a surprise to all visitors, because of its size, and the completeness of the arrangement, and the quality of the stock on exhibition. It is the first show of the kind that has been held in St. Joseph, and the visitors and exhibitors were so well pleased that hopes were freely expressed that this show would be a regular annual event.

The show-yard was so arranged that



Captain Archer 205741, at the Head of Silver Creek Herd, Owned by J. F. Stodder, Burden, Kans.

the permanent brick barns of the stock yards were available for stabling, and they were beautifully decorated and supplied with every convenience for the comfort of their animals. The show itself was held in an enormous tent which was 210 feet long and 70 feet wide. The tent was beautifully decorated and the amphitheatre of seats was very solidly constructed so that there was no possible danger of collapse. The weather was all that could be desired, and as a first attempt the show was a wonder. It did not, however, receive the patronage that it merited, for the reason, as we believe, that the people did not understand its nature or quality. General Manager M. B. Irwin proved himself a very capable man in getting up and managing this show, and many were the compliments that were paid him on the success he has attained.

One of the prominent attractions on the grounds was the exhibit of Shire horses made by King Edward VII and Lord Rothschild of England. When these animals appeared in the show, led by their English herdsman, they were met with much applause and when the band played "God Save the King," it became an ovation.

The most attractive show of heavy horses was that made by McLaughlin Bros., of Columbus, Kansas City, and St. Paul, with their string of wonderful black Percherons. The quality, evenness in size, style and color, and the fine action of each of these animals made it a show worth looking at. We have never seen a bunch of horses that made so impressive a showing as did this bunch of black Percherons. Finch Bros., of Joliet, Ill., were present with a fine showing of horses, but their strong exhibit was in the Belgian classes, and here they were very strong.

This show came at a time when it was convenient for a number of prominent breeders of cattle to exhibit here, and several well known herds were present. T. K. Tomson & Sons, of Dover, Kans., and T. J. Wornall & Son, of Liberty, Mo., again showed for the ribbons, after having won prizes in the Iowa, Nebraska, and Kansas State Fairs. The other breeds of beef cattle were strongly represented as will be seen by referring to our list of awards.

The swine show was not large but the quality was excellent. H. C. Dawson's Sons were present with their Expansion herd of Poland-Chinas, fresh from their victories at the Kansas and Nebraska State Fairs. C. A. Wright, of Rosendale, Mo., had his show-herd which won ribbons at the Iowa State Fair, and with which he won his share of the premiums here.

There were few exhibits other than live stock on the grounds. Swift & Co., had a handsome booth in which were displayed their digester tankage and other concentrated feeds, and the Zenner Disinfectant Company made a handsome display of Zenoleum dips, etc. The only exhibit of agricultural machinery on the grounds was made by the International Harvester Company of America.

While not advised as to the financial success or failure of the Interstate Live Stock Show, we do know that it was a success in all other respects and hope that its history may be a long one.

The awards on fat stock are as follows. Awards on breeding stock will begin next week.

SHORTHORNS—Fat Steers.

The show of pure-bred Shorthorn steers introduced competition between exhibitors by the Kansas State Agricultural College, Manhattan, and Thomas, Jameson & Mitchell, of Allen, Kas. The show was not strong numerically, but some of the entries were exceptionally good. The awards were as follows:

Pure-Breds, Aged steers—First to the Kansas Experiment station on Tim. Yearling steers—First to Thomas, Jameson & Mitchell on Coleridge; second to Kansas College on Lord Hanna. Steer Calf—First to Kansas College on Col. Harriman. Champion Steer (Hammond Special) Kansas College, on Tim. Steer Herd—First to Kansas College.

Grades and Crosses, Aged steers—First to Leeper Bros. Maitland, Mo., on Judge Leeper. Yearling steers—First to Kansas College on Pride of Maples.

Calves—First to J. F. Stodder, Burden, Kans., on Thomas. Champion steer—Kansas College on Pride of Maples.

HEREFORDS—Fat Steers.

The show of Hereford steers was good throughout. All classes were well filled and the competition was strong. Cargill & McMillan, of La Crosse, Wis., were awarded the "Hammond Special" for the best steer of any age. Exhibitors in these classes were Cargill & McMillan, La Crosse, Wis.; S. L. Brook, Macon, Mo.; Mousel Bros., Cambridge, Neb.; C. V. Hull, Platte City, Mo.; Yates Bros, Agency, Mo.; Cornish & Patten, Osborne, and the Kansas Experimental station, Manhattan, Kans. The awards were as follows:

Pure-Bred, Aged steers—First to Cargill & McMillan on Round Up; second to Brock on Disperser. Yearling steers—First to Cargill & McMillan on Fair Lad 1st; second to Kansas College on Merryman. Steer calves—First to Cargill & McMillan on Fulfiller 6th; second to Mousel Bros. on Principal; third to Brock on Rare Roast.

Grades and Crosses, Aged steers—First to Hull on Mitchell; second to Yates Bros. on Sunny Jim; third to Hull on Pride of Platte. Yearling steers—First to Cornish & Patten on Goggles; second to Yates Bros. on Dobber. Steer calves—First to Cargill & McMillan on Bonnie. Champion Grade steer—To Hull on Mitchell.

ABERDEEN-ANGUS—FAT STEERS.

The show of Aberdeen-Angus fat steers was quite an event. This breed had the largest number of entries in each class and the judges took more time to decide the classes than in any of the other breeds. There was great rejoicing in the Angus camp when W. J. Miller's aged steer, Dutch Lad, won the "Swift Trophy" for the best steer of any age or breed. Exhibitors in this class were W. J. Miller, Newton, Ia.; Parrish & Miller, Hudson, Kans.; A. C. Binnie, Alta, Ia.; C. D. Hooker & Son, Marysville, Mo.; Kansas Experimental Station, Manhattan, Kans., and Davis Bros., Maryville, Mo. The awards were as follows:

Pure-Breds, Aged Steers—First to Miller on Dutch Lad. Yearling steers—First to Hooker & Son on South Oaks Chance; third to Miller on Highball. Steer calves—First to Kansas College on Ideal; second to Davis Bros. on Valley Home 3d; third to Miller on Proud Lad. "Hammond Special"—To Miller on Dutch Lad.

Grades and Crosses, Aged steers—First to Miller on Louie; second to Kansas College on Kansas Laddie; third



to Miller on Wild Tom. Yearling steers—First to Miller on Black Prince; second to same on Black Victor; third to Hooker & Son on South Oaks Eber. Calves—First to Hooker & Son on South Oaks Josie (spayed); second and third to Miller on Victor and Novice. Grade champion—To Miller on Black Prince.

SPECIALS—ALL BREEDS.

Aged steer or spayed heifer—First to C. V. Hull, (Hereford); second to W. J. Miller (Angus); third to Leeper Bros. (Shorthorn).

Yearlings—First to Miller (Angus); second to Kansas Station (Shorthorn); third to Cornish & Patten (Hereford). Senior calves—First to Cargill & McMillan (Hereford); second to Davis Bros. (Angus); third to J. F. Stodder (Shorthorn).

CARLOTS—FAT CATTLE.

Shorthorns—First and second to Wertz Bros., Alma, Neb.

Herefords—First to Drake Bros., Frankfort, Kas., on a load of "S. M. S." yearlings; second to C. V. Hull.

FEEDERS.

Shorthorns—First to Wertz Bros.; championship to same.

Herefords—First to Thompson and Bohart Ranch, Limon, Col.; champion Herefords to same.

SPECIALS.

"Hammond" special; for best load of yearling fat steers—Wertz Bros., on Shorthorns. "Davis & Son special;" for best load

ner, Fremont, O.; Chas. Wells & Son, Maryville, Mo.; W. T. Williams, Harrisonville, Mo.; L. R. Caldwell, Dover, Kan.; S. C. Hanna, Howard, Kan.; Kansas State Agricultural College, Manhattan, Kan.; Missouri Agricultural College, Columbia, Mo.; S. H. Woods, Kansas City, Mo.

Herefords—S. L. Brock, Macon, Mo.; C. A. Baker, Leeton, Mo.; Cargill & McMillan, LaCrosse, Wis.; Cornish & Patten, Osborn, Mo.; Mrs. K. W. Cross, Emporia, Kans.; T. W. Carmichael, Odessa,



of fat cattle any breed—Wertz Bros., on Shorthorns.

"Davis & Son special;" for best load of feeders—Thompson, on Herefords. "Lee Co. special;" for best load of fat cattle of any age or breed—First to Wertz Bros., on Shorthorns; second to Drake Bros., on Herefords; third to Hull on Herefords.

Special—For best load of feeders any age—Thompson, on Herefords.

Exhibitors to Be at the American Royal Next Week.

Everything is in readiness for the eighth annual American Royal Live Stock show which will open at Kansas City, Mo., Monday, October 8, and continue throughout the week. Entries in all departments are larger than last year, which was the banner year in the show's history. The entries aggregate 721 breeding cattle, 105 pure-bred and grade steers in the individual classes, 250 horses and 600 hogs. It is expected that the entries of Angora goats will exceed 100 head.

Entries have been made in the several department by the following:

Shorthorns—Geo. Bothwell, Nettleton Mo.; W. W. Brown, Weston, Mo.; Bellows Bros., Maryville, Mo.; W. A. Batteridge, Pilot Grove, Mo.; Carpenter & Ross, Mansfield, O.; C. E. Clark, St. Cloud, Minn.; Creswell & Carpenter, Braymer, Mo.; Frank W. Cotton, Manila, Ind.; Converse & Forbes, Maryville, Mo.; Fred Case, Harrisonville, Mo.; H. R. Clay, Plattsburg, Mo.; H. C. Duncan, Osborn, Mo.; Guilford Dudley, Topeka, Kan.; W. W. Durham, Fredonia, Kan.; William Ernst & So, Graf, Neb.; W. A. Forsythe, Greenwood, Mo.; Forest Fulington, Clark, Mo.; N. H. Gentry, Sedalia, Mo.; Otto Gehlbach, Trenton, Mo.; A. F. Graves, King City, Mo.; H. M. Hill, Lafontaine, Kan.; H. J. Hughes, Trenton, Mo.; R. G. Hodges, Glencoe, O. T.; F. W. Harding, Waukesha, Wis.; D. R. Hanna, Ravenna, O.; Harriman Bros., Pilot Grove, Mo.; A. F. Huse, Manhattan, Kan.; C. E. Leonard & Son, Bunce-ton, Mo.; O. E. Morse & Sons, Mound City, Kan.; J. W. McDermott, Kahoka, Mo.; J. P. Newell, Carthage, Mo.; C. S. Nevius, Chiles, Kan.; Jno. G. Overton, Trenton, Mo.; John O'Kane, Bancroft, Neb.; Purdy Bros, Harris, Mo.; J. R. Peak & Son, Winchester, Ill.; John Regier, Whitewater, Kan.; D. P. Rickabaugh, Sheridan, Mo.; Abram Renick, Winchester, Ky.; J. F. Stodder, Burden, Kan.; Henry Stunkel, Peck, Kan.; T. K. Tomson & Sons, Dover, Kan.; Thomas Jameson & Mitchell, Allen, Kan.; T. J. Wornall Son, Liberty, Mo.; N. W. Wag-

Mo.; Samuel Drybread, Elk City, Kans.; W. A. Dallmeyer, Jefferson City, Mo.; J. J. Early, Baring, Mo.; Estate of Jas. A. Funkhouser, Plattsburg, Mo.; James A. Gibson, Odessa, Mo.; G. H. Hoxie, Thornton, Ill.; William Halsey, Odessa, Mo.; Dr. J. E. Logan, Kansas City, Mo.; J. S. Lancaster & Sons, Liberty, Mo.; E. R. Morgan, Blue Rapids, Kans.; Mousel Bros., Cambridge, Neb.; F. A. Nave, Attica, Ind.; Norman Ochsner, Madison, Neb.; E. R. Pendleton, Princeton, Mo.; Steward & Hutcheon, Bolckow, Mo.; Scott & March, Belton, Mo.; C. A. Stand-nard, Emporia, Kans.; S. L. Standish, Hume, Mo.; Stanton Breeding Farm Co., Madison, Neb.; R. T. Thornton, Kansas City, Mo.; W. S. Van Natta & Son, Fowler, Ind.; F. T. Wadsworth & Sons, Monroe City, Mo.; Hugh Whiteford, Guilford, Mo.; R. C. Wilson, Belton, Mo.; Yates Bros., Agency, Mo.; C. V. Hull, Platte City, Mo.; Kansas State Agricultural College, Manhattan, Kans.

Aberdeen-Angus—Omer Catterston, Maryville, Mo.; Berry Lucas, Hamilton, Mo.; W. A. McHenry, Denison, Ia.; J. B. Withers, Missouri City, Mo.; Parrish & Miller, Hudson, Kans.; F. L. Sullivan, Afton, Ia.; H. W. Elliott, Estill, Mo.; A. C. Binnie, Alta, Ia.; C. D. Hooker & Son, Maryville, Mo.; W. J. Miller, Newton, Ia.; Geo. Kitchen, Jr., Gower, Mo.; T. J. Donohoe, Holbrook, Ia.; Wilmer N. Foster, Veedersburg, Ind.; Davis Bros., Maryville, Mo.; Paul M. Culver, Edgerton, Mo.; McAdam Bros., Holton, Kans.; T. J. McCreary, Highland, Kans.; C. J. Off, Peoria, Ill.; McLachlan Bros. & Johnson, Estill, Mo.; W. B. Cox, Graham, Mo.; W. C. White, Carrollton, Mo.; Kansas State Agricultural College, Manhattan, Kans.; G. H. Hoxie, Thornton, Ill.

Galloways—W. M. Brown & Son, Carrollton, Mo.; Brookside Farm Co., Ft. Wayne, Ind.; G. W. Lindsey, Red Cloud, Neb.; S. H. Croft & Sons, Bluff City, Kans.; A. F. Craymer, Morris, Ill.; F. P. Wild, Cowgill, Mo.; Robert Dey, Newton, Kans.; A. M. Thompson, Nashua, Mo.; F. E. Moore & Sons, Gardner, Kans.; Michigan Premium Stock Co., Davisburg, Mich.; J. E. Bales & Sons, Stockport, Ia.; C. E. Clarke, St. Cloud, Minn.; O. E. Matson, Burrton, Kans.; W. C. Woods, Smithville, Mo.; W. B. & J. B. Thompson, Smithville, Mo.; O. H. Swigart, White Health, Ill.

SWINE DEPARTMENT.

Poland Chinas—W. T. Hammond, Portis, Kans.; John M. Belcher, Raymore, Mo.; William Wingate, Trenton, Mo.; W. T. Williams, Harrisonville, Mo.; W. M. Williams, Harrisonville, Mo.; J. S. Lancaster & Sons, Liberty, Mo.; Harry E. Lunt, Burden, Kans.; J. H. Saville & Son, Mt. Ayr, Ia.; Thos. B. Link, Mt. Ayr, Ia.; F. A. Tripp & Sons, Meriden,



The great Duroc-Jersey show sow, Topnotcher Lass 71084 by Topnotcher 8803. Owned by Jno. W. Jones & Son, Concordia, Kansas.





Miller, Newton, Ia., consigns the show-cow, Metz Ogarita, a daughter of the Blackbird topped Rosebud bull, Wash of Treaty. He also includes the yearling Durmin Lucy bull, Elaine's Prince, by the Queen Mother bull Black Prince of Estill, a son of Imp. Prince of Kerrera, and Lucia Estill 2d a sister to Gay Lad. Elaine's Prince was from a dam by the noted Blackbird bull, Black Jam. W. F. Eckles, Green City, Mo., consigns the get of the double Pride bull, Pride's Albion 5th by the noted Pride of Albion. McAdam Bros., Holton, Kans., includes a good two-year-old bull of the Kinnaird Fanny family and topped with the blood of the Prides, Ericas, and Heather Blooms.

The offering is not large, but is believed to be the best that has been made at Kansas City in several years and it furnishes an opportunity to obtain there some of the best specimens of the breed. The catalogue can be obtained by addressing W. C. McGavock, Mrs. Springfield, Ill.

#### Dawley Buys Grand Chief.

Frank Dawley, of Waldo, Kans., has bought Grand Chief, the great prize-winning boar of F. M. Lail, for \$3,000, the highest price ever paid for a hog in Kansas. Kansas always does the right thing at the right time and the purchase of this great hog by Mr. Dawley at this time places him in the front rank of Western breeders. Grand Chief made a great reputation for Mr. Lail and he will add greatly to the prestige of Mr. Dawley's already strong herd of Poland-Chinas. At Mr. Dawley's sale at Osborne, Kans., October 24, will be the only opportunity this year to buy any gilts by Grand Chief, and we understand that in this sale he will offer a number of sows with a breeding privilege to this great sire. Write for his catalogue now and arrange to attend this sale.

#### American Royal Attractions.

When B. O. Cowan recently made his tour of inspection of the animals offered for the combination sale of Short-horns to be held under the auspices of the American Shorthorn Breeders' Association at the American Royal Live Stock Show this year, he visited Harriman Bros.' herd at Pilot Grove, Mo., and asked to be shown the animals intended for the sale. Col. "Bob" Harriman showed him the herd and said: "Take your choice." Mr. Cowan prides himself on the quality of the animals annually offered in the American Royal sales, and proceeded to pick the best there was in the herd. The result is that the Harriman consignment of five head will consist of not only the pick of the herd, but of some of the best young stuff to be offered at public auction this year. Foremost in the offering stands a senior bull calf, Mayflower Chief 264248, a son of Highland Chief 188717, and out of a Bruce Mayflower cow. This young bull combines practically all the qualities desired in a high-class herd-bull. He is bred in the purple, to begin with. Then he has a body that for depth, width, and perfection of contour has few equals, and this is set low down on four good legs. His head and horns are ideal. For thickness and mellowness he could not be improved upon. His color is red, and a good red at that. For smoothness, finish, and style he just fills the eye. Already this young bull has attracted the attention of a number of parties who are looking for herd-bulls, and his advent into the ring at Kansas City is sure to be the signal for some lively bidding. The Harrimans are also offering in this sale a good young Orange Blossom bull, and three choice yearling heifers, two of them Orange Blossoms and one a Young Mary. The Mary heifer is a show animal throughout, while the others are choice young things that any Shorthorn breeder would be proud to own.

#### Silver Creek Shorthorns and Duroc-Jersey Swine.

One of the oldest breeding establishments in Kansas is the Silver Creek Stock Farm, belonging to J. F. Stodder, Burden, Cowley County, Kansas. A visit to the farm will convince anyone that, as a place to buy Shorthorns and Duroc-Jerseys with quality and size, it is one of the best in Kansas. The Shorthorn herd was founded about fifteen years ago. The result of this fifteen years' persistent breeding for good ones is a herd that the owner is justly proud of and that merits the patronage of the best breeders and farmers of the State. It is not necessary to go into details as to how this success has been attained, more than to say that the best herd-bulls that money can buy have been used. Did it ever occur to you, Mr. Breeder, and Mr. Farmer, that when you buy of such an establishment as this that you are purchasing the result of years of successful experience? The twenty young bulls that are now offered for sale by Mr. Stodder are well worth a visit to the farm. They are sired by the Scotch bulls, Lord Thistle and Imp. Aylesbury Duke, and many of them are ready for the show-ring now. They will be priced within the reach of anyone wanting a good one.

The Silver Creek show-herd is entered for the leading Western State fairs of 1906, and also the Inter-State Live-Stock Show at St. Joe and the American Royal at Kansas City. By inspecting this exhibit, an idea can be obtained of what has been accomplished by Mr. Stodder in the breeding of good Shorthorns. The herd numbers something over 100 head, of which about twenty-five are of Scotch breeding. Several of these young bulls now for sale are from these Scotch cows and as herd-headers are bred right and priced worth the money.

The Duroc-Jersey herd has not been established as long as the Shorthorn herd. The foundation stock was purchased of the leading breeders, and boars have been used that have both pedigree and individuality in a marked degree. May Boy 29281 is now chief stock hog and perhaps stands as high in the estimation of those who have seen him as any hog in the West. He is a World's Fair prize-winner, also first at Missouri State Fair and Amer-

ican Royal. His pigs are the type that find ready market, and last year they were first-prize winners at several State fairs. There are something like 100 spring pigs now for sale by May Boy and Wonder Wonder. Wonder Wonder was one of the highest-priced hogs sold last year at public sale, and Mr. Stodder was considered lucky in having secured him for his herd. His pigs are large and growthy like their sire and should prove profitable investments to those wanting Durocs. Write Mr. Stodder for either Short-horns or Durocs, or better still, arrange to spend a day on the farm.

#### Newton Fair Notes.

John Regier, of Whitewater, Kans., had the only exhibit of Shorthorn cattle and carried off all of the first and sweepstakes prizes.

M. Molzen, Newton, Kans., exhibited the only herd of Whitefaces, and received four first-prizes and two second-prizes on his display.

There was a creditable display of Percheron horses, and C. F. Molzen received first on colt. Dr. J. T. Axtell, of Newton, received first on yearling mare. J. H. Tangeman, of Newton, too first on aged stallion, first and second on aged mare, first and second on 3-year-old mare, first on filly colt, first on stallion and four of his get, first on stallion and four mares, and sweepstakes on stallion, Perfection, and sweepstakes on mare, Lena.

H. W. Tangeman took first on yearling stallion and second on filly colt.

The show of Duroc-Jersey hogs was made by H. H. Hague, Bert Ferguson, and Frank Naylor, of Newton, Kans. Mr. Hague won first in all classes except young pigs, Mr. Ferguson winning first on boar pigs and Mr. Naylor second. Mr. Ferguson also won first on sow six months old, also second on get of sire.

#### Prize-Winning Durocs.

John W. Jones & Son, of Concordia, Kans., owners and breeders of the Famous Fancy Herd, will sell at their annual fall public sale at Concordia, Kans., October 23, 1906, 40 head of boars and gilts, carefully selected from their noted herd. Watch for the next issue of THE KANSAS FARMER, and be sure and see their sale advertisement, and what we have to say for them. All breeders and lovers of fine hogs should avail themselves of this opportunity and attend this great sale. Write them for catalogue at once. Don't delay.

When Col. L. S. Kent first made his appearance in the auction business, he was still in his teens. He has been a breeder practically all his lifetime, though for the past twelve years he has devoted his attention entirely to the auction business. He is sometimes spoken of as the father of the Kansas Auctioneers' Association. This was because he wrote the original call for the meeting which resulted in the or-



ganization of that association in December, 1899. At this first meeting, Colonel Kent was elected secretary of the association, and he has held this office ever since. He is also a member of the International Auctioneers' Association. He is a wonderfully rapid, accurate worker. He has a record of 1,183 different articles sold in seven hours, or an average of three sales per minute. This was done a number of years ago, before he adopted as his specialty the selling of horses and mules. Col. Kent is remarkable for the motto which he tries to live up to. He says if he had the whole United States to sell, he would begin with Texas and close out Rhode Island in time to take up Canada and New Mexico the next day. This is mentioned simply to show the energy of the man when working for patrons. He begins working as soon as he books a date and keeps at it until the last animal is sold. With his experience he is a sure winner and it will pay to give him a trial at least.

#### The Feed Question Solved in Kansas.

The introduction of alfalfa in Kansas has solved the question of winter feed for the farmers of Kansas. Not many years ago at this time of the year the greatest worry of the farmer was how to provide enough feed to carry his stock through the long winter months. Corn-fodder, soy-beans, millet, sorghum, and Kafir-corn were utilized for this purpose, and even then the rations would fall short long before the early grasses were forward enough for the cattle to subsist on. The change wrought by alfalfa has been a wonderful one and where we one time saw nothing but vacant stock-yards, we now see them filled to overflowing with this wonderful grass. In selecting a farm for a home one of the things a farmer should be sure about is whether alfalfa will grow on it. A farm that will produce this grass is always worth fifty per cent more than one that will not. Central Kansas is one of the greatest alfalfa regions in the world, and farms are still to be had at a reasonable price. If you want a farm in this great agricultural dis-

## EXPANSION SALE

Young Poland-China Boars and Brood Sows  
Junction City, Kansas, October 13, 1906  
Whitehairs Feed Barn, 1:30 P. M.

### 25 Spring and Fall Boars

of Expansion breeding, large bone and growth, ready for service.

### 15 Sows and Spring Gilts

of the same type. They are the large, roomy, prolific type, the breeders' kind, the farmers' kind. THE EXPANSION HERD won its share of premiums at the recent State and World's Fairs. We will have boars fit for herd headers and sows worthy to grace any breeder's pens. They will all be sold as represented—a large, growthy, useful offering. Hogs to be shipped, crated free. Catalog on application. Terms made known on day of sale.

**H. C. Dawson's Sons, Owners**  
Endicott, Nebraska

Col. Lafe Burger, Auctioneer

## Dawley's Poland-China Tops

AT OSBORNE, KANSAS, OCTOBER 24, 1906

---YOU KNOW THE KIND---

### Herd-Headers and Sale-Toppers

6 by the great and only Grand Chief; 3 by the \$8,000 On and On; 2 by the Grand Champion boar at St. Louis, Meddle; 5 by the Perfection I Know sire the sweepstakes sow at St. Louis, and champion of Iowa in 1906; 2 by the sensational boar of 1905, Spellbinder; 1 by the King of the Keep Ons, Impudence.

Admiral Togo by Woodbury, Orpheus by Perfection I Know, and Aggressor by Keep On are special attractions. Other good ones of the most popular strains. Everyone an attraction. Come where the good ones abound. Some killers sold with breeding service to Grand Chi-f and E. L. 2d.

**Auctioneers: Burger, Kramer and Clark.**

Bids may be sent to C. E. Shaffer, care F. A. Dawley.  
Send for catalog to Yours truly,

**F. A. DAWLEY, . . . WALDO, KANS.**

### THE GREAT

## U. C. PERFECTION SALE MADISON, KANS.

Wednesday, Oct. 17, 1906

### 60-Head of Great Sows and Boars 60

A large number of these animals are sired by U. C. Perfection, ten by On and On, including On's Galelie, and seven spanking good boars, besides the great Lady Foster and her fine On and On litter. There is also Hazel Perfection by Proud Perfection, Fancy by Corrector out of the \$650 Runaway Girl with her great litter by Perfection I Know, half brothers and sisters to the Iowa champion boar of 1906 and the World's Fair champion sow of 1904. Also the show boar by Chief Perfection 2d out of Impuda, litter sister to Impudence, champion boar at the Iowa State Fair in 1905. Send for the catalogue and see all the great breeding offered. Send bids to the auctioneers, Jas W Sparks, Lafe Burger, John D. Snyder, A. B. Wood, B. B. Freeman.

**W. J. Honeyman, . . . Madison, Kans.**

strict, Garrison & Studebaker, of Salina, will sell you one right. They are the leading real estate firm in Salina and have sold hundreds of farms in that district. Write them and ask for their list of improved farms.

Farmers are beginning to realize the great superiority of the little 1 h. p. gasoline-engine over wind-mill for pumping, churning, etc. With one of

these little engines the farmer can pump as much water as he wants, whenever he wants, without waiting for the wind to blow. Furthermore, the same engine will operate his cream-separator, churn, grind-stone, corn-sheller, and any other light machinery used in his work. It is manufactured by the Gilson Manufacturing Co., of Port Washington, Wis. The price of the 1 h. p. engine is only \$60, which is within the reach of every farmer.

**Club Department**

**OFFICERS OF THE STATE FEDERATION OF WOMEN'S CLUBS.**

President.....Mrs. May Belleville Brown, Salina  
 Vice-President.....Mrs. L. H. Wishard, Iola  
 Cor. Secretary.....Mrs. N. I. McDowell, Salina  
 Rec. Secretary.....Mrs. W. D. Atkinson, Parsons  
 Treasurer.....Mrs. H. B. Asher, Lawrence  
 Auditor.....Mrs. Grace L. Snyder, Cawker City

**Our Club Roll.**

Excelsior Club, Potwin, Kansas, (1902).  
 Women's Literary Club, Osborne, Osborne County, (1902).  
 Women's Club, Logan, Phillips County (1902).  
 Domestic Science Club, Osage, Osage County (1888).  
 Ladies' Social Society No. 1, Minneapolis, Ottawa County (1888).  
 Chaltee Club, Highland Park, Shawnee County (1902).  
 Cullus Club, Phillipsburg, Phillips County (1902).  
 Litterateur Club, Ford, Ford County (1903).  
 Sabeau Club, Mission Center, Shawnee County Route 2 (1899).  
 Star Valley Women's Club, Iola, Allen County (1902).  
 West Side Forestry Club, Topeka, Shawnee County, Route 8 (1903).  
 Fortnight Club, Grant Township, Reno County (1903).  
 Progressive Society, Rosalia, Butler County (1903).  
 Pleasant Hour Club, Wakarusa Township, Douglas County (1899).  
 The Lady Farmer's Institute, Marysville, Marshall County (1902).  
 Women's Country Club, Anthony, Harper County.  
 Taka Embroidery Club, Madison, Greenwood County (1902).  
 Prentiss Reading Club, Cawker City, Mitchell County (1903).  
 Cosmos Club, Russell, Kansas.  
 The Sunflower Club, Perry, Jefferson County (1906).  
 Chaldean Club, Sterling, Rice County (1904).  
 Jewell Reading Club, Osage County.  
 The Mutual Helpers, Madison, Kansas (1906).  
 West Side Study Club, Delphos (1906).  
 Domestic Science Club, Berryton, Shawnee County (1906).  
 Mutual Improvement Club, Vermillion, Marshall County (1903).  
 (All communications for the Club Department should be directed to Miss Ruth Cowgill, Editor Club Department.)

**Centennial of the Flag in Kansas.**

At the Pike Centennial, Mrs. E. W. Hoch, wife of the Governor, was present and on Woman's Day gave the opening address. She said:

"I am glad, indeed, to be with you here to-day, not because I have any good thing to offer, for I am not a public speaker, but because I love to see a people whose hearts are full of and overflowing with patriotism and love of country. There is something about this country of ours, this land of the free and home of the brave, which makes our hearts glow with pride and causes us to breathe a prayer of thankfulness that our lot has been cast in beloved America. Doubly glad should we Kansans be that it is ours to live right in the center of this country, right up against the beating heart of the Nation. Indeed it is a pulsing part of it, and happily Kansas pride is based not alone upon its marvelous material resources and possibilities, but upon its splendid place in history, upon its thrilling historic achievements. Among these things of heroic history stands the incident we have met to commemorate, an incident from which the rounded century has taken no luster, but to which it has added new radiance. To my mind the taking down of the Spanish flag and the raising of the beautiful stars and stripes on this spot, the 100th anniversary of which we have met here to-day to commemorate, was one of the most heroic and patriotic acts recorded in human history.

"Think of a young man, with not more than twenty-four officers and soldiers, meeting in council 500 savage warriors with the Spanish flag floating over them, while all around him and his little party there were thousands of Indians who wore the war-paint and carried the tomahawk, ready at the least provocation to give the war-whoop. And yet in the face of all this, this young American had the courage to ask, yes demand, that the Spanish flag be lowered and be replaced with the star spangled banner. I imagine that this young man stretched himself just a little bit taller and his heart beat just a little bit faster, when that old Indian warrior took from that pole the Spanish emblem and raised in its stead the stars and stripes. It seems to me I can hear the song of praise as it swelled in the young man's breast. "The star spangled banner, O long may it wave, O'er the land of the free and the home of the brave."

"To the woman heart this is a happy and proud hour. And this celebration is to us of peculiar significance, because of the fact that it was an intelligent, enterprising, pioneer, Kansas woman who discovered this historic spot, and made the perpetuation of this thrilling incident in Kansas history possible in this definite and tangible manner.

"This marble shaft will forever stand not only as a memorial of Pike and his

immortal act, but also as a monument to the memory of this thoughtful, persistent, plucky, pioneer Kansas woman, Mrs. George Johnson, whose presence here to-day gladdens all our hearts and glorifies this occasion.

"She it was who first furnished positive proof as to the exact location of the Pawnee village where this flag incident occurred, who contributed to the State the land upon which this monument stands, and whose perseverance, like the perseverance of other saints, finally triumphed and wrung from a reluctant Legislature the appropriation which resulted in the erection of this beautiful monument.

"We pay grateful homage to-day to the heroes of this occasion—to Zebulon Pike and his gallant band. We salute with affection the heroine of this hour, our sister Johnson. But, friends, all our hearts go out in love and devotion to the real king and queen of this occasion, our precious symbol of liberty, our dear old flag—Old Glory."

Mrs. Cora G. Lewis represented the Woman's Kansas Day Club and spoke eloquently of Kansas and her people. The following is a sample:

"The organization I have the honor to represent on this historic occasion, the Woman's Kansas Day Club has for its special objects the collection and preservation of our early history, the teaching of patriotism, and the promotion of comradeship.

"In a State settled by such women as Kansas has attracted to her it seems unnecessary to teach patriotism.

"Yet it is by constantly tending the flame that we keep the sacred fire burning, and like those who guarded the sacred fires of Rome, the women who keep the heart aflame with love of country, and comradeship, are simply being true to their heritage.

"The story of Pike teaches us the profound lesson that the destiny of Kansas was foreordained.

"In order that we might live here in peace and comfort, a generation of pioneers had to face these vast prairies and to conquer them by subduing the nature that environed them.

"Fate decreed that the heart and center of the Union should be a State whose name should breathe of freedom, equality, and justice.

"The first people who came to live after Pike's discovery were nearly overcome by the spirit of the prairie. They were smitten by the blizzard; they were parched by drouth; scorched by fiery winds, and scourged by grasshoppers.

"Their souls were tried by fierce experiences, and those who were not of the hard type gave up in despair and returned to more genial climes, leaving the desert and the unfriendly plain to those who were determined to dominate.

Many of these pioneers are with us yet, and of many who have passed on we have the stock, and because like attracts like—this brave, hardy race of pioneers has drawn, by ties stronger than blood, others who were willing to do and to dare for principles, and because they needed land for homes."

**Points for Teachers.**

If teachers would observe the following simple rules published by an exchange, their classes would be greatly benefited:

1. Never disappoint your class; always be there or have some one else.
2. Never scold. You can not right things that are wrong in that way.
3. Don't waste time. It is too precious. Fill up every moment.
4. Do not say things to show how much you know.
5. Be patient.
6. Be cheerful in your work.
7. Have an opinion of your own, but respect the judgment of others.
8. Be prompt, punctual, persistent, and regular in your work.
9. Pray over your lessons with your fellow teachers, and for your class.
10. Never go to your class without having made special preparation for teaching the particular lesson of the day.

**\$13 to Buffalo and Return**

from Chicago, on October 10, 11, 12, and 13, via Nickel Plate Road. Return limit from Buffalo, October 19, or October 29 by extension of ticket. Three through daily trains. Vestibuled Pullman sleepers and Club Meals from 35 cents to \$1 in Nickel Plate dining cars; also a la carte. No excess fare charged on any train on Nickel Plate Road. Write John Y. Calahan, General Agent, Chicago, No. 107 Adams St., for further particulars and reservation of berths.

Used 20 Years—Best on the Market. Hartwell, Ga., Feb. 6, 1906. Dr. B. J. Kendall Co.

Gentlemen:—I have been using your remedies for over 20 years, and find they are the best on the market. Very truly yours,

A. A. JONES.

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Q We are so sure that Amatite is better than any other roofing that we want to send a Free Sample to every one who will mail us their name and address. We know Amatite is a great improvement on the ordinary ready roofings.

Q It doesn't require painting or coating every year or two to keep it tight.

It has a non-conductive mineral surface, which gives it long life and offers absolute protection against rain, snow, hot weather, cold weather, frost and ice. You can depend upon it under the most difficult conditions.

Q Any one can lay it. No

skilled labor required. Nails and Cement free with every roll.

Q It is a fire retardant. And of importance, its price is very low.

Q Do not omit this chance to get a Free Sample and Booklet about it.

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 Minneapolis, Kansas City, St. Louis, New Orleans, Allegheny.

**UP THE CHIMNEY**

**Is Where Half Your Fuel Money Goes In Winter**

**When the Ordinary Stove is Used**

**N**OW, that's a big amount to waste in expensive coal every year. But that is what you can expect with stoves—as the majority of manufacturers build them. The joints of the ordinary stove are plastered up with stove putty in an endeavor to make them air-tight. Then it isn't long before the putty dries up, contracts and falls out—cold air is sucked in through the cracks—and the valuable gases which should be burned, and a large part of the heat is allowed to escape up the chimney. You are wasting DOLLARS in high-priced hard coal through leaky joints and poor radiating surface. You also waste HALF the Gas Heat, the best heating half of soft coal, by imperfect combustion.

This great fuel saver gives cleanliness and even heat day and night with soft coal you never dreamed possible. Uses less hard coal and gives more heat than any base burner. Half a Million in use that have been sold on our guarantee as follows, which cannot be made on any other heating stove in the world. Your home dealer will set one up in your house on our guarantee, backed \$10 and by his guarantee, at prices, \$10 up

**GUARANTEE:**

- 1—We guarantee a saving of one-third in fuel over any lower draft stove of the same size with soft coal or slack.
- 2—We guarantee Cole's Hot Blast to use less hard coal for heating a given space than any base burner made with the same size fire-pot.
- 3—We guarantee that the rooms can be heated from one to two hours each morning, with the soft coal or hard coal put in the stove the evening before.
- 4—We guarantee that the stove will hold fire with soft coal thirty-six hours without attention.
- 5—We guarantee a uniform heat day and night, with soft coal, hard coal, or lignite.
- 6—We guarantee every stove to remain absolutely airtight as long as used.
- 7—We guarantee the feed door to be smoke and dust proof.

**Built on Honor**

Cole's Original Hot Blast was invented after 12 years' continuous experimenting to find a way to save the enormous waste in fuel through the escape of gas and heat up the chimney in the ordinary stove. Our reputation as manufacturers of the Original Successful Hot Blast goes with every stove; and will not be sacrificed by the use of inferior material or cheap workmanship.

**Would You Lose \$50.00 in Fuel to Save \$1.00 on the Cost of Your Stove?**

That is what you do when you buy a cheaply constructed, putty jointed, showy made stove. Like all successful inventions, Cole's Original Hot Blast has many inferior imitations, avoid them. They all lack our patented top Hot Blast construction, the patented collar connection for the elbow casting to stove body, making an everlasting tight joint which cannot open by action of the fiercest heat; the patented compound hinge for ash door, the guaranteed smoke-proof feed door, which prevents dust, soot or smoke from escaping when fuel is put into the stove, and other patented features which are essential to the success of our stove.

The big expense of heating your home is in the fuel and not the first cost of your stove. Do not let any dealer persuade you to buy anything but Cole's Original Hot Blast. We guarantee to remain always airtight and to be just as economical after 10 years' use as the first day set up.

**CAUTION**—See the name "Cole's Hot Blast from Chicago" on the feed door of each stove. None genuine without it.

The best dealer in every town generally has the agency for Cole's Original Hot Blast Stoves. Write us for name of local agent and for FREE BOOKLET on the scientific combustion of fuel, which also tells about Cole's Hot Blast. In towns where there is no agent, mail order purchasers are protected by the above guarantee.

**COLE'S Original Hot Blast Stove**

**SAVES all wasted with other Stoves**

**A hat full of the Cheapest Coal, cost 1 cent, holds fire over night.**

Our free Booklet on Scientific Combustion explains fully. Send postal for it today. It tells you all about the nature of soft coal and hard coal and other fuels, and how you can save the cost of a Cole's Original Hot Blast Stove in fuel each winter.

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We furnish insurance at cost; 13 years of successful business. Why carry your insurance with others when you can get it in this company at much less cost? Write for full particulars of our plan.

**C. F. Mingenback, Sec., McPherson, Kansas**

# Home Departments

CONDUCTED BY RUTH COWGILL.

### No Sect in Heaven.

WRITTEN BY MRS. E. J. H. CLEVELAND IN 1860.

Talking of sects till late one eve,  
Of the various doctrines the saints believe,  
That night I stood in a troubled dream  
By the side of a darkly flowing stream,  
And a "churchman" down to the river came;  
When I heard a strange voice call his name:  
"Good Father, stop; when you cross this tide  
You must leave your robes on the other side."

But the aged father did not mind,  
And his long gown floated out behind,  
As down to the stream his way he took,  
His pale hands clasping a gilt-edged book.  
"I'm bound for heaven, and when I am there  
I shall want my book of common prayer;  
And, though I put on a starry crown  
I shall feel quite lost without my gown."

Then he fixed his eye on the shining track,  
But his gown was heavy, and held him back,  
And the poor old father tried in vain  
A single step in the flood to gain,  
I saw him again on the other side,  
But his silk gown floated on the tide,  
And no one asked in that blissful spot  
Whether he belonged to the "church" or not.

Then down to the river a Quaker strayed,  
His dress of a sober hue was made;  
"My coat and hat must be all of gray,  
I can not go any other way."  
Then he buttoned his coat straight up to his chin,  
And staidly, solemnly waded in;  
And his broad-brimmed hat he pulled down tight  
Over his forehead so cold and white.

But a strong wind carried away his hat—  
A moment he silently sighed over that,  
And then, as he gazed to the farther shore,  
His coat slipped off, and was seen no more.  
As he entered heaven his suit of gray  
Went quietly sailing away—away;  
And none of the angels questioned him  
About the width of the beaver's brim.

Next came Dr. Watts with a bundle of psalms,  
Tied nicely up, in his aged arms,  
And hymns as many; a very wise thing,  
That the people in heaven "all round" might sing.  
But I thought he heaved an anxious sigh,  
As he saw that the river ran broad and high,  
And looked rather surprised, as one by one,  
The psalms and hymns in the waves went down.

And after him, with his MSS.,  
Came Wesley, the pattern of godliness;  
But he cried, "Dear me, what shall I do?  
The water has soaked them through and through."  
And there on the river far and wide,  
Away then went down the swollen tide;  
And the saint, astonished, passed through alone,  
Without the manuscripts, up to the throne.

Then, gravely alking, two saints by name  
Down to the stream together came;  
But as they stopped at the river's brink,  
I saw one saint from the other shrink.  
"Sprinkled or plunged, may I ask you, friend,  
How you attained to life's great end?"  
"But I have been dipped, as you'll see me now,  
And I really think it will hardly do,  
As I'm 'close communion,' to cross with you;  
You're bound, I know, to the realms of bliss,  
But you must go that way and I'll go this."  
Then straightway plunging, with all his might,  
Away to the left, his friend to the right,  
Apart they went from this world of sin—  
But at last together they entered in.

And now, when the river was rolling on,  
A Presbyterian church went down;  
Of women there seemed an innumerable throng,  
But the men I could count as they passed along.  
And concerning the road, they could never agree,  
The old or the new, which it could be,  
And never a moment paused to think  
That both would lead to the river's brink.  
And a sound of murmuring, long and loud,  
Came ever up from the moving crowd:  
"You're in the old way, and I'm in the new;  
That is the false and this is the true."  
Or, "I'm in the old way and you're in the new,  
That is the false and this is the true."  
But the "brethren" only seemed to speak;  
Modest the sisters walked, and meek,  
And if ever one of them chanced to say  
What troubles she met with on the way,  
How she longed to pass to the other side,  
Nor feared to cross over the swelling tide,  
A voice arose from the brethren then—

"Let no one speak but the Holy Men;  
For have ye not heard the words of Paul—  
'Oh, let the women keep silence all'?"

I watched them long, in my curious dream,  
Till they stood by the borders of the stream;  
Then, just as I thought, the two ways met,  
But all the brethren were talking yet,  
And would talk on till the heaving tide  
Carried them over side by side.

Side by side, for the way was one,  
The toilsome journey of life was done,  
And all who in Christ the Savior died  
Came out alike on the other side.  
No forms or crosses or books had they,  
No gowns of silk, or suits of gray,  
No creeds to guide them, or MSS.—  
For all put on Christ's righteousness.

### Seasonable Hints.

The children are well started in school; the fruit is about cared for—what next? Housewives have very few moments when they can sit with folded hands waiting for something to do next. Instead, this thing and that stand all around asking to be attended to next, and they must choose. Perhaps some of them—yes I may as well speak positively—some of them will not get attention. But there are some things that must be done in their season if they are done at all. If you want to add to the cheer and attractiveness of your home, plan to have some plants and flowers in your window. Now is the time to pot geraniums and other plants for winter blooming. Set them on the north side of the house until they have recovered from the shock of being disturbed, then place them on the porch until there is danger of freezing when they may be moved to the window—an east or south window is the best. Candytuft and alyssum are liked for the window, and there are often new plants that have started from the summer bloomers that may be taken up carefully for the house and will add to the beauty of your window garden. Do not neglect to break off some vines from your nasturtiums before frost, and put them into a vase or other receptacle of water with some charcoal in the bottom and set or hang it in the window. It will be a "thing of beauty" all winter with its bloom and fragrance. Change the water occasionally.

October is the month in which to pot bulbs, and for the amount of time and money expended, they are very satisfactory, repaying in such beauty of blossom and fragrance. Hyacinths and fuchsias are probably the easiest bulbs to grow and require very little attention after being potted. Hyacinths should be potted in a rich sandy loam, and some charcoal should be put in the bottom of the pots. They should be placed about three inches apart and the bulbs just covered with the soil. Water them well and place them in a dark place for about six weeks, until the roots and tops are well started. Then they should be brought to the light gradually when they may be placed in the window and cared for with the other plants. Fuchsias do not need to be put in the dark to start, but after they are well started require plenty of water. Do not allow them to become dry. Narcissus and jonquils require the same treatment as the hyacinths and are beautiful bulbs but not quite so easy of culture.

In these beautiful autumn days how lovely it is to get out of doors, and there are many excuse to do so if you need one to urge you. Have you ever had a tulip bed? If you ever do you will always value one. Tulips are so bright and cheery after the long winter and stick their lovely heads up almost before the snow and north winds have gone. Now is the time, if you have not already done so, to plant them. Dig deep and prepare a good bed for them and plant them from three to six inches below the surface. The same bed may be used for other plants when the tulips have finished their blooming, sowing the seed right over them. This is an excellent time to divide and reset herbaceous plants, such as the iris, peony, yucca, hardy phlox, etc. It has been my experience that the fall is the best time to plant or transplant almost any shrub or tree.

As the days grow cooler, we are prone to close up the windows of our

**Mayer HONORBILT SHOES FOR MEN**

The highest degree of style, fit and workmanship are embodied in these splendid shoes. There are none that equal them in appearance and wearing quality at the price. They are **BUILT ON HONOR**.

That's what the name means. That's what a trial will prove. By all means wear "Honorbilt" shoes. Demand them of your dealer—INSIST. Sold everywhere. If you cannot get them write to us.

We also make the "Western Lady," and the "Martha Washington" comfort shoes and a full line of men's, women's and children's shoes. Our trademark is stamped on every sole.

**F. Mayer Boot & Shoe Co.,**  
Milwaukee, Wis.

homes and shut out the sweet pure air. Let us not do it. It is life. Let us keep the house open as long as possible, and if we are not warm enough put on more clothing—or build a fire. It is cheaper than medicine or doctor's bills and oh, so fine to feel exuberant and well. These chill nights invite us to close the windows, but don't do it. Keep out of the draught and use more covering, but let there be a free circulation of air. The morning will find you refreshed and invigorated, reinforced with a new supply of energy.

### The Wrong We Are Doing Our Children.

G. S. H.

As the years advance over our heads, each one finds his or her point of view constantly changing. Often we find that it has veered in exactly the opposite direction to what it once stood. I find this thought especially emphasized in my views upon education. In my schoolma'am days, no 'ology or 'ism was too useless to be admitted to the course of study; the more flowery and useless, the more necessary it seemed that the poor children pore over it. But now—well sometimes I think that the only really important studies are the old three r's, "readin'," "ritin'," and "rithmetic," with the addition of grammar and spelling and a good dose of physical development thrown in with singing and drawing as recreations.

Why do we condemn our children to sit six hours of the day for ten months in the year on a hard bench, stooping over a desk in ill-lighted, ill-ventilated rooms, narrowing their chests, stooping their shoulders, and straining their eyes to acquire a lot of absolutely useless facts—facts that have no place save in encyclopedia or atlas, and where, after he has been out of school six months, your boy will have to go to find them, for his memory has not retained them.

Did it ever occur to you, my reader, that possibly there is some connection between compulsory education and the advance of tuberculosis? And did it ever occur to you that there is a vast difference between the old log school house with its roaring fireplace, creating a perfect ventilation, and with its four months of school and our air-tight hothouses of modern schoolrooms with their ten long months of confinement? It isn't natural, it isn't God-intended for young creatures of any species, and especially children, to be closely confined. It will prove the death-knell of our race. Only in a perfectly developed body can a perfect mind develop.

What, my friend, has it profited you to know that the Mississippi is so many miles long; that Mount Popocatepetal is so many feet high? How many times in your business have you been able to make use of the list of Presidents in their order, the number of terms they served, and the date of each? I'll venture to wager not once—yet many an aching throb the knowledge cost you.

And those nerve-destroying, heart-breaking examinations! Who under heaven invented them anyway? The curses of countless multitudes of helpless innocents who fill early graves be upon him! No one save a mature per-

## For Over 60 Years

**Mrs. Winslow's Soothing Syrup**  
has been used for over FIFTY YEARS by MILLIONS of Mothers for their CHILDREN while TEETHING, with perfect success. IT SOOTHES the CHILD, SOFTENS the GUMS, ALLAYS all pain, CURES WIND COLIC, and is the best remedy for DIARRHOEA. Sold by Druggists in every part of the world. Be sure and ask for Mrs. Winslow's Soothing Syrup and take no other kind. 25 Cents a Bottle.

### An Old and Well-tried Remedy

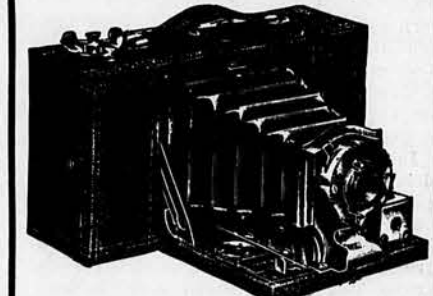
## SHOTGUN SHELLS FREE

**AS A GUARANTEE** that our smokeless powder, loaded 12, 16 and 20-gauge shotgun shells are the HIGHEST GRADE MADE IN THE WORLD, and will shoot stronger, kill farther, make better pattern and penetration, give less smoke and recoil, and give better satisfaction in every way than any other shotgun shells made, although our special prices are about one-half what others charge, **WE MAKE THIS GREAT FREE OFFER:**

**WE WILL GIVE ANYBODY** one full large size box of **OUR SPECIAL PRICE** shotgun shells FREE TO TRY. For smokeless shells is 39 cents per box of 25; \$7.25 for a full case of 500; much less than others charge for black powder shells, about one-half what others charge for smokeless shells that will not compare with ours.

**FOR OUR BIG FREE BOX TRIAL OFFER,** and for our inside prices, on a postal card or in a letter to us simply say, "SEND ME YOUR AMMUNITION OFFER," and the great offer will go to you by return mail, postpaid, together with our new Sporting Goods Catalogue, showing metallic rifle and revolver cartridges at 19 cents per 100; \$5.00 revolver for \$2.99; \$5.00 rifles for \$1.99; \$5.00 breech-loading shotguns for \$2.25; \$25.00 double barrel hammerless shotguns for \$9.95. Don't pay three prices. Write for our ammunition offer today. Address, **SEARS, ROEBUCK & CO., CHICAGO**

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son ought ever to be compelled to undergo an examination.

Not that I want the future generation to grow up ignorant of our country's history (our Washington and Lincoln must ever be an inspiration), or without knowledge of the geography of our globe, or the many interesting facts of science. But I contend that all the knowledge necessary in history, geography, physiology, physics, etc., can be acquired by reading. The bulk of the facts, such as populations, dates, boundaries, length, and all the useless rubbish that goes to make up the ordinary text-book, is never retained in the memory with the exception of a very few that stand out most prominently. If I had my say there would be a huge bonfire at the beginning of the school year, and hereafter those people who have been earning a livelihood by making text-books full of useless knowledge would have to get to work at something else.

Let us teach our children first how to live, care for, and develop their bodies, how to earn a livelihood, how to be useful and happy. Let them, when the time comes, decide on a career and then specialize along that line; and let us not try to cram into their poor little craniums all the knowledge necessary for every calling under the sun, making them Jacks of all trades and masters of none.

[There has been a feeling for some time, and it is growing, that our children are being crammed with knowledge at the expense of the physical strength and to the neglect of the physical culture. There are apt now to be extreme views taken, and I am glad to have the above. There will be a happy medium reached before long when our children will be truly educated.—R. C.]

**A Few Good Omelets.**

**Bread and Milk Omelet.**—One-half cupful sweet milk, one cup fine bread crumbs, without crust; add two well-beaten eggs, salt and pepper to flavor, and beat well together. Heat a small spoonful of butter in a frying pan, turn in the omelet and cook slowly until well set; fold when brown. A nice dish for children who are averse to eating bread "when they know it's bread."

**Rice Omelet.**—Add to one cupful cold boiled rice four teaspoons milk, two eggs, whites and yolks beaten separately, and a little salt. Heat a table-spoonful butter in a pan having short handle, pour in the mixture, bake in a hot oven about ten minutes or until firm double and turn out on a hot platter.

**Scalloped Omelet.**—Soak three table-spoonfuls of stale crumbs in a cupful of milk for two hours. Beat six eggs—whites and yolks separately—very light. Into the yolks stir the soaked crumbs, and season the mixture with salt and pepper. Last of all, stir in, with a few light strokes, the stiffened whites. Butter a deep pudding dish, pour the mixture into this, set it on the lower grating of a quick oven and bake until and brown. Sift brown crumbs over the top and serve the omelet as soon as it is removed from the oven.—Neary Myers, Sterling.

**Time for Study and Sleep.**

Mothers know that the new-born infant must sleep about twenty-two hours, and that this amount is so slowly lessened that the child still demands twelve hours when it is about twelve years old. It is quite likely that the normal amount is not reduced to ten hours until about eighteen years of age, or perhaps until twenty-one years. Nine hours may be required until well along in years.

To let boys of fourteen sit up until ten o'clock at night and then rout them out at six o'clock in the morning is nothing short of criminal, but it is a long-established custom. Lower animals can be quickly killed by depriving them of sleep—the boy is not killed, but perhaps he is so exhausted that he loses resistance to disease. Medical students not infrequently make the same mistake, forgetting that a tired brain never absorbs anything. The midnight oil frequently represents wasted time and money, and the student sleeps during the next day's lectures when he should be wide awake. A good test of exhaustion is the tendency to sleep during a dry lecture—and this is no joke.

Experience has proved that those who retire in time to sleep at least nine hours, and occasionally ten, get far more out of their course than the "grinds." Some of the best men habitually take ten hours. Theoretically, a student should be as fresh at the end of the term as at the beginning—the vacation is for another purpose

than sleep. The whole subject, though very old, is so new to the laymen who do the damage to school boys, particularly in boarding schools, that there is urgent need of wider publicity and much discussion for enlightenment. Not only will proper sleep permit more to be gained for less effort, but it will prevent the exhaustions which so frequently follow school courses.

Physicians might teach mothers that it is harmful to waken children of any age—they should waken in the morning naturally. If they are not in time for school, they do not retire early enough. If they are sleepy heads, it is either the fault of the parents or the result of ocular defects. There is much comment upon the large number of midshipmen who fail at the Naval Academy in a course not worse than in many colleges. It is suspected that they would do better if they had ten hours' sleep daily.—American Medicine.

**A Lemon Has Many Uses.**

The usefulness of the lemon begins in the morning, even before you are out of bed. The juice of half a lemon squeezed into a glass of water and drunk unsweetened the first thing in the morning is an excellent remedy for bilious disorders.

If girls appreciated the lemon's usefulness as a beautifier, they would always have one at hand. The fingers or finger nails may have stains that refuse to yield to soap and water, in which case a little lemon juice will usually prove successful. Before man-icuring the nails, you should always soak them for at least five minutes in a basin of water in which are a few drops of lemon juice. The skin which grows so offensively around the nails is pushed back by orange wood sticks first dipped in lemon juice; and as for the teeth, no more effective cleanser or purer mouth wash can be found than half a dozen drops of lemon juice in a wine glass of water.

After washing the hands, lemon juice and water makes a splendid bleach, but one curious thing should be remembered. Lemon juice pure darkens the skin, so do not make the mistake of rubbing in plain lemon juice, instead of diluting it with water.

Lemon juice and glycerine is good for chapped hands. If you have a

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anything you choose—milk for instance or alone.

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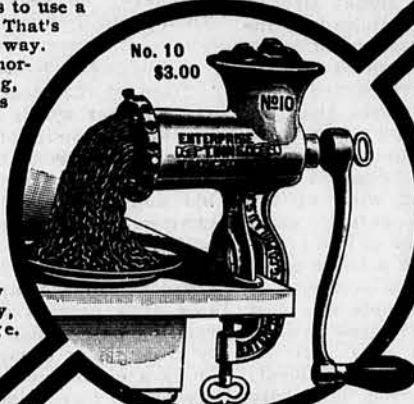
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hoarse voice in the morning lemon juice, squeezed on to soft sugar till it is like a sirup and a few drops of glycerine added, relieves the hoarseness at once, while a cold on the chest, or consumption itself, finds a formidable enemy in the following prescription:

Squeeze the juice of three lemons over three whole eggs, shell and all. In two or three days' time the shell will have softened because of the ef-

fect of the lemon's acid on the lime composition of the shell. Then add a pint of rum and a pound of pulverized brown sugar candy. You can bottle this, and take a spoonful every morning before rising. It is simply wonderful as a tonic.—Chicago American.

By proper training, the depressing emotions can be practically eliminated from life, and the good emotions rendered permanently dominant.

## The Young Folks

**Young Women's Christian Association.**  
Any Young Woman who is planning to come to Topeka, will find peculiar advantages at the rooms of the Young Women's Christian Association, 523 Jackson Street. Rest rooms, reading room and lunch room are at the disposal of all women at any time. A boarding house directory is kept at the rooms, and also an employment bureau, free of charge. On each Sunday afternoon, at 4:15 a gospel meeting is held to which all women are invited. The first week of October is the time set for the opening of the club work, and the classes in Bible Study, in English, Parliamentary Law, Sewing, Water Color and Travel. The Gymnasium also opens then, with classes in Physical Training under a competent instructor. The printed announcements will be mailed on application to the General Secretary. A cordial invitation is extended to out-of-town women, especially to make use of the rooms.

### Flower Talk.

Oh Dahlla, Dahlla, blushing red,  
Why hang your pretty graceful head,  
For surely dear there's naught amiss  
In sun's caress and wind's light kiss  
These mellow golden autumn days  
When all the world's enwrapped in haze.

Now there's Miss Gentian, dressed in blue,  
Would e'er those same endearments woo,  
And yonder field of corn so brown  
And all the trees with fruit bent down;  
E'en milkweed pods invite the sun  
'Neath silvery veils that they have spun.

From purple grapes the odors rise  
To catch the sunlight's golden prize,  
And wildwood flowers from every nook  
And all the asters by the brook  
Do court the zephyr's light caress  
And seek November sun's address.

Then modest Dahlla be of cheer  
When forest leaves are brown and sear,  
And let your charming face be seen  
Above your leaves of jolly green,  
For Dahlla dear the sun loves you,  
And I'm almost sure the wind does too.  
—C. S. Gorline.

### How the Coyote Got His Marks.

Have you ever spent a night in a forest listening to the sounds? If not, there is a new world, a new language open to all who will tread softly and give attention.

The voices of the night have different cadence and pitch from those of the day. The melody of the day birds is missed. The love-call of the whip-poor-will contrasts with the lusty call of Bob-white; the weird hoot of the owl and bellow of bull-frogs, with the low of kine; the bark of foxes in caution or distress, the thrilling howl of the panther, with the glad or warning bark of dogs. The rasp of the katydid and cricket, the rattling, prolonged notes of toads and marsh frogs, the bittern's cry and the boom of falling trees, have no counterparts in the daytime. Even the midnight songs of the mocking-bird and nightingale have not the ring of gladness in them. Night sounds are not those of rejoicing.

One spring night at Mount Gretna, Pa., I stepped from my cottage into the black of the forest, intent upon a listening tramp. The first sound I heard was the squeak of a frightened warbler. The next—it was odd that the rhythmic strokes of wood upon wood should spread its unique resonance among the rocks and trees at that hour or any other. Following up the sound—trailing by ear-craft—I came upon a man sitting astride of and striking a white oak log with a home-made mallet. Beside him, on a stump, was a coal-oil lamp. His costume was half hunter, half bicyclist. He was hatless. His thin hair straggled over a broad brow, red, scarred, covered with sweat; his face was sharp, scarred, markedly intellectual, and his bright eyes, looking up at me (for even amid the noise of the blows he had detected my approaching steps), were full of power and piercing inquiry. I introduced myself; we cordially shook hands. Thus Frank Hamilton Cushing and myself became acquainted; he, the renowned American ethnologist, who in his devotion to scientific investigation spent eight years with the Zuni Indians to become a priest, medicine man, and ruler among them, that he might learn their rites, legends, laws, and language. Three days of this time he was buried naked to his neck in an ant hill, and left for the ants to gnaw at, as a part of the ordeal of initiation.

Short, yet strong, was the friendship so strangely begun. He died two years later. Great is his loss to science, country, and friends.

On this the odd occasion of our meeting, he was, by crushing the strata of sap cells, loosing the annual layers of the oak's growth from each other, one by one, that they might be stripped off straight and smooth for weaving into facsimiles of Indian baskets. Whenever and wherever I found him, excepting in my own den, he was engaged in imitating with exactness some tool or weapon he had seen used by the

Zuni and he usually squatted on the ground, Indian fashion, to do it.

In my den, with all the expressions, gestures, and sign language of a Zuni, he told me "How the Coyote Got His Marks."

"A woodpecker, with fiery red feathers in a bunch on top of his head, was hammering with his beak on the trunk of a dead tree, going thuck, thuck, thuck, thuck. A coyote came trotting along through the woods and saw the bird. He sat down and looked at him, and was very much pleased. He said, 'Why can not I have such a fine red head as that? If I had such a red top-knot as that bird has, I would not stay up a tree and hammer my nose against it; I would walk about among the other coyotes, and I would make them all wish they had heads like mine.'

The coyote sat there thinking how he could get something to make his head look as pretty as the bird's. He got so mad thinking that he barked all night—wow! wow! wow!

"In the morning he trotted—thum, thum, thum, thum—to see if he could not find something to fix his head with. He came to a prairie and he saw some dead grass. 'This will do,' he said. So he bit—snap, snap—the grass off with his sharp teeth. But he could not find any place to fasten the grass on the top of his head. He was so mad that he barked—wow! wow! wow!

"He felt his ears with his paws. Then he laughed—yeh, yeh, yeh. He made two bundles of the dead dry grass, and he made a rope of some. Then he tied a bunch of the grass to each of his ears, and fastened them with the rope around his neck. Then off he trotted—thum, thum, thum, thum—to the other coyotes. He held his head up high in the air, and shook his ears, waved the bunches of grass, and did all he could to make the other coyotes admire him. They only stared at him and laughed—yep, yep.

"The coyote ran off to a stream of water to look at himself. When he looked in the water he saw that his head was not red, only brown like dead grass. So he hunted around again to find something to make the grass red. After a while he came to a fire—yep-yep-yep-yep, he laughed. Here it is. Now I will make my head fiery red like the bird's. He put his head down each side and set fire to the grass. When it was lighted he trotted off—thum, thum, thum, thum—to show the other coyotes how fine he looked.

"Pretty soon the fire burned down to his ears and he began to howl, and he howled all night, just like the coyotes do to this day. The fire burned his ears, and the rope burned his neck. And that is why the coyote has a red streak back of his ears; where the rope burnt there is a black one that the fire made. To this day the coyote howls whenever he sees fire."—Charles McIlvaine, in Delinicator.

### The Gray Squirrel.

"One of the most familiar sounds of the summer woods is the rattling bark of the gray squirrel," writes an observer. "The tones of his voice are varied, and there is a great difference between his angry bark, his cry of fear, the chattering monologue with which he addresses an intruder on his domain, the running fire of repartee which is the constant accompaniment of the antics of a pair at play, and the long, rattling call which he utters apparently from sheer enjoyment of the sound or as a challenge to some unseen enemy of his own tribe, and which reverberates through the woods with often sufficient force to carry the sound for as much as half to three-quarters of a mile. If we listen for an instant when we hear one of these challenges sent forth, we may hear it answered, from some distant point so faintly that we can not be certain that it is not an echo. Some other male has heard the challenge and, detecting the self-satisfied note in it, has answered, and we may be fairly certain that they are hastening toward each other, each with the intention of annihilating his foe or at least teaching him a lesson.

"Gray squirrels, unlike most of the rodents, do not hibernate in the winter time, but are abroad and very active during most of the season. Their nests are then in hollow trees, but they usually leave these retreats in March and build airier and less vermin-infested abodes in the tree-tops of leaves and twigs. If you watch a gray squirrel gathering nuts in the fall, you will see him take a nut in his cheek pouch and hop along the ground, testing it, every few yards with his front feet. When he has found a spot entirely to his liking, he will scoop out a shallow hole, and, placing the nut in it, will cover it up with the loose earth. This he will



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stamp down and restore to its former condition by scraping the loose leaves and small stones over it.

"This performance he repeats again and again in that and other localities until he has hidden away in this manner a large quantity of nuts, one squirrel often burying several hundred. In the winter, as he needs them, he unearths these nuts, and it is wonderful how unerringly he can go to his various caches, even though, as frequently happens, they may all be covered with a foot or more of snow."—Ex.

**The Little Ones**

**Little Nut People.**

Old Mistress Chestnut once lived in a burr Padded and lined with the softest of fur. Jack Frost split it wide with his keen silver knife, And tumbled her out at the risk of her life.

Here is Don Almond, a grandee from Spain, Some raisins from Malaga came in his train. He has a twin brother a shade or two leaner, When both come together we shout, "Philopenal!"

This is Sir Walnut; he's English, you know, A friend of my Lady and Lord So-and-So. Whenever you ask old Sir Walnut to dinner, Be sure you have wine for the gouty old sinner.

Little Miss Hazelnut in her best bon-lina, She's not 'ristocratic, but no nut is finer. Sometimes she's roasted and burnt to a cinder, In Georgia they call her Miss Goober, or Pinder.

Little Miss Nazelnut in her best bon-net Is lovely enough to be put in a son-net; And young Mr. Filbert has journeyed from Kent, To ask her to marry him soon after Lent.

This is old Hickory; look at him well, A general was named for him, so I've heard tell. Take care how you hit him. He sometimes hits back! This stolid old chap is a hard nut to crack.

Old Mr. Butternut, just from Brazil, Is rugged and rough as the side of a hill; But like many a countenance quite as ill-favored, He covers a kernel deliciously flavored.

Here is a Southerner, graceful and slim, In flavor no nut is quite equal to him. Ha! Monsieur Pecan, you know what it means To be served with black coffee in French New Orleans.

Dear little Chinquapin, modest and neat, Isn't she cunning and isn't she sweet? Her skin is as smooth as a little boy's chin, And the squirrels all chatter of Miss Chinquapin. —Pearl Rivers.

**Patty.**

Teddy got hold of a spoon and was making a dive into the batter bowl. Patty tried to seize the spoon and Teddy jerked back. His chair tipped and Patty sprang toward him. There was a crash—and then Patty, with a white, frightened face, was holding Teddy very tightly and Ella was running in to see what was the matter.

For, in her quick fear that Teddy would have a fall, Patty had struck her hand against the bowl and it lay in pieces on the floor.

"Well, well!" cried Ella, angrily; "I might have known better than to let you stir the batter."

"But," cried Patty with a tremulous voice, "Teddy—"

"I don't want to hear a word. You're always more trouble than help."

"But, cousin," pleaded Patty.

"Go along and get the dust-pan and pick up these pieces. Not a word, now! Words can't help any."

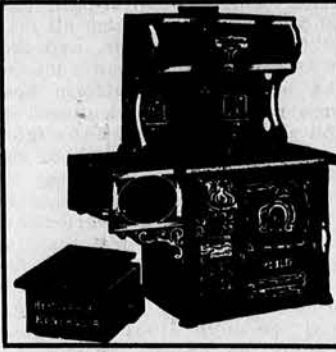
Poor Patty, with little lips set tightly and a great pain at her heart, did as she was told, and then went out to cry by herself. She felt that her cousin was unjust.

"If she'd only let me tell her that Teddy was going over and would 'a' been hurt. Oh, dear! here's her geranium drying up. I won't water it."

But ugly thoughts never stayed with Patty, and before long she was watering the drooping plant.

It was with a sad face that she went into the house some time later. Their pleasant-faced, next-door neighbor was just coming in at the gate.

"Oh," she said, with a kind look at Patty, "here is the dear little girl who is always so quick to see a thing to



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be done and then do it. A terrible fall Teddy would have had but for her, Ella. I was coming in and just saw it when I heard a scream from my little Jim. She caught Teddy as he fell; his head would have struck on his tricycle here."

Cousin Ella was warm-hearted, and her arms were around Patty in a minute.

"Oh, you dear little thing," she said, "and to think I scolded you so. Do you think you can forgive me?"

"I have already," answered Patty, happy at the thought of the geranium. —Frank Sweet in Farm, Field and Fireside.

**THE INTERNATIONAL SUNDAY-SCHOOL LESSON.**

(Copyright, Davis W. Clark.)

Fourth Quarter. Lesson I. Mark xii, 28-34; 38-44. October 7, 1906.

**The Two Great Commandments.**

Handel, when composing his oratorio, "The Messiah," was found bathed in tears. What touched him was the prophet's words, "He was despised." The despising of Jesus was as evident in the temple as at the cross. And physical pains are not so severe to a spiritual soul as wounds inflicted upon that higher nature. Lowell says: "Our modern martyrdoms are done in type." So Jesus was crucified again and again before ever He came to the cross. We come now to the last onset of His despising critics.

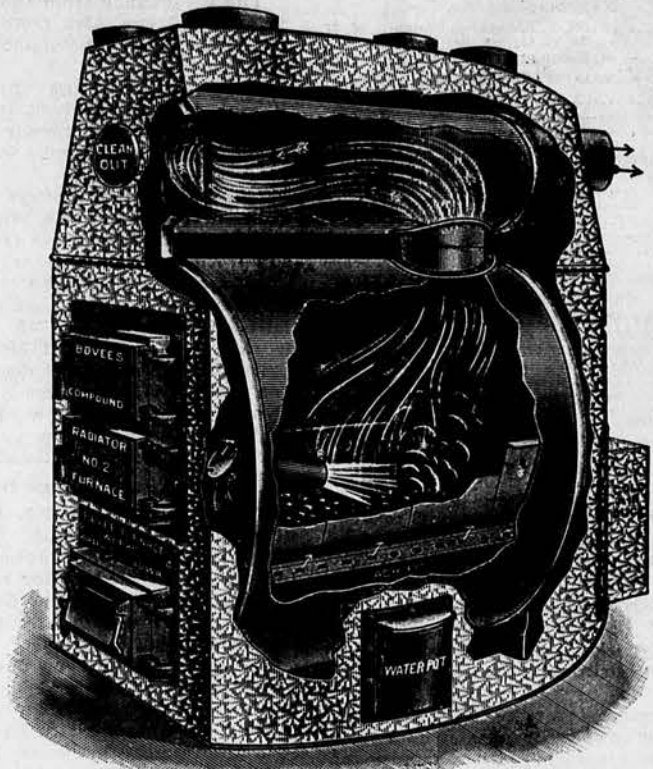
It is led on by the Pharisees. They have heard of the bewildering defeat Jesus had given their rivals, the Sadducees; how, in a dialectical way, He had put an end to them forever. Now, if they, the Pharisees, could get the better of this brilliant young rabbi in debate, they would score a point against the Sadducees at the time that they blocked the way of a Teacher whose success meant the end of their system.

We can not know whether the questioner was disingenuous or not. To assert (Expositor's) that the question was asked by "a true man," "a genuine inquirer," is an assumption, and, at any rate, aside from the real point at issue. What the Pharisees wanted was to elicit from Jesus a sentiment, if possible, a categorical statement which could be used against Him in the trial for heresy impending.

The question itself illustrates the character of religion then current. It was technically gone to seed. Literalism had killed spirituality. There was such a batch of commandments that classification seemed imperative; so there were the little and great, light and weighty. And the question which was the chief of all was naturally much mooted. A spiritual virtue was not thought of. It was for some, washing hands; others, how to build a booth for the Feast of Tabernacles, or, at best, circumcision and keeping Sabbath.

The answer of Jesus has been called a miracle of genius, a flash of inspiration. He escaped the snare of the fowler. He alluded Himself with no bickering faction. He carried the question over into an entirely new realm, where there are no disjointed commands and sacramental offices; but where there is a Life which gives continuity, vigor, and progress to the whole. With one splendid flash, as of a heavenly searchlight, Jesus discloses the permanent and fundamental element in religion—for all time and all people. Absent, it makes the Christian a heathen; present, it makes the heathen a Christian, though he may have never so much as heard of Christ. The disputatious coterie fades away. Jesus is speaking to the universal human heart. The man of to-day, technically rated an unbeliever, must recognize the divineness of this message, and, receiving it into an honest heart, must begin the life of love toward God and his fellows. And that is religion.

Too great technicality must be avoided in defining the manner of our loving God—viz., heart, soul, mind. It means, as Meyer aptly says, "the complete, harmonious self-dedication of the entire inner man to God." It seems



**Bovee's Compound Radiator Furnace.**

We present herewith an illustration of the Bovee Compound Radiator Furnace, a furnace that gives perfect ventilation and uses any kind of fuel. It is one of the most popular furnaces that is being sold in this territory. The fact that you can burn any kind of fuel, and use less of the same, explains why it is a great seller. Any of our readers who are interested in a furnace for their home should not fail to write this advertiser for one of their fine catalogues. One of the

strongest claims for the Bovee furnace, in addition to its reasonable price and easy management, is the very large amount of clean radiating surface and the draught of air over the fire, causing the gas to burn. This causes these furnaces to require one-third less fuel than other furnaces and stoves; in fact, fuel burned in this furnace will produce almost double the heat produced by the same fuel burned in stoves or other furnaces, and will hold an even, steady fire with hard coal, soft coal, or wood.

**THE COMBINATION OF THE YEAR**

- The Kansas Farmer, one year.....\$1.00
- The Review of Reviews " " ..... 3.00
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Regular Price.....\$6.00

We will send this grand combination of papers, all, one year for.....**only \$3.75**

—ADDRESS—

**THE KANSAS FARMER CO., :- Topeka, Kans.**

**Save Money on Oil**

**We Sell Premium Machine Oil at Less Than Half the Price You Now Pay.**

Our Premium Machine Oil is sold at \$3.50 per barrel. Thousands are using it and find it all right.

Every barrel guaranteed, and you be the judge. Other oils cost 35c to 40c per gal.; ours costs \$3.50 per barrel. Freight rate is 32c per barrel all points within 100 miles of Benedict, Kans. For each additional 25 miles add 2c.

After receiving and using 5 gal., if not satisfactory, return the balance, with bill of lading, and I will refund full price paid for said oil.

**We Can Save You Money on Cylinder Oil. Write for Particulars.**

**T. C. Davis, Benedict, Kansas**

worth while, however, to emphasize the fact that we can love God with the mind. It is to be feared that, as Phillips Brooks says, "there are ignorant saints who come very near to God and live in the rich sunlight of His love; but none the less for that is their ignorance a detraction from their saint-hood. Give your intelligence to God! Know all you can about Him!"

These two principles—love to God and love to man—from which all religion flows, must be consistent with one another, otherwise they could not both be principles of the same religion. (Homiletic.) Love to God is also love to His children, our fellow-men.

(Geike.) Nothing is or ought to be esteemed religion that is not reducible to one or the other of these principles. (Sherlock.)

Now the questioned turned questioner. It was no Scripture conundrum, however. Jesus was really proffering them the clew of faith. If, with the spirit of teachableness, which is the prerequisite to entering all other kingdoms, as well as the kingdom of heaven, they had followed the thread, they would have escaped the labyrinth of Phariseism. Alas! They loved the maze; and they would none of the leadership of Jesus. They would not welcome Him as Son of David and Son of

God. So it ended with their finding themselves in the same plight as the Sadducees. But the mouths that were gagged might have been vocal with hosannas.

The Grange

"For the good of our Order our Country and Mankind."

Conducted by Geo. Black, Olathe, Secretary Kansas State Grange, to whom all correspondence for this department should be addressed. News from Kansas Granges is especially solicited.

NATIONAL GRANGE.

Master.....N. J. Bachelder, Concord, N. H. Lecturer.....Geo. W. G. Gaunt, Mullica Hill, N. J. Secretary.....C. M. Freeman, Tippecanoe City, Ohio

KANSAS STATE GRANGE.

Master.....E. W. Westgate, Manhattan Overseer.....A. P. Reardon, McLouth Lecturer.....Ole Hibner, Olathe Stewart.....R. C. Post, Spring Hill Assistant Stewart.....Frank Wiswell, Ochiltree Chaplain.....Mrs. M. J. Ramage, Arkansas City Treasurer.....Wm. Henry, Olathe Secretary.....George Black, Olathe Gatekeeper.....J. H. Smith, Lone Elm Caretaker.....Mrs. M. L. Allison, Lyndon Pomona.....Mrs. S. M. Phinney, McLouth Flora.....Mrs. S. J. Lovett, Larned L. A. S.....Mrs. Lola Radcliffe, Overbrook

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STATE ORGANIZER.

W. B. Obyrhlm.....Overbrook

Vacations for Farmers.

During the summer and early fall of each year is a slack time for professional and business men, and that time is taken by them for vacations or outings, a relief from business, a rest. But for the farmer it is usually the busy season of the year; in fact, there is no rest for the farmer unless he arranges his business so that he can take a rest.

The farmer, after he tries it, finds that a few weeks or a month or two away from his farm with a change of scene, new thoughts, a change in his living, and a rub against the outside world will become as necessary to him as food and raiment. In the majority of cases the farmer feels that he can not afford it; that he has not the ready money. He will be compelled to do like city people, save up his money for vacation purposes. The time when farmers can get away best is in the fall and winter.

The National Grange will hold its fortieth annual meeting in Denver, Col., commencing on November 14, the first Wednesday after the second Monday in November. It is expected that there will be a large attendance from Kansas, and this will furnish the farmers with a splendid opportunity for a vacation. The Santa Fe railway has offered a rate of one fare plus two dollars for the round trip. The tickets will be placed on sale November 10 to 13, and will be good to December 10.

The session of the National Grange will last 8 or 10 days, and after that you will have to December 10 to see the sights or visit your friends. After you return from Colorado, the Kansas State Grange will hold its annual meeting at Garnett, Kans., December 11, 12, 13. This will be a nice three-day vacation that you will enjoy very much. Think this over and act on it.

A Successful Grange Fair.

An agricultural fair was held at Spring Hill, Johnson County, Kans., September 12, 13, and 14, under the auspices of Spring Hill Grange No. 279, which proved very satisfactory to the management and also to the large number in attendance.

Last year Spring Hill Grange conceived the idea of holding a fair, and with very little preparation made the exhibit of cereals and fruits in its grange hall over the grange store, and made the exhibit of stock in the street. This exhibit was for one day, but was so successful that the management decided to make a permanent fair.

Five acres of ground were leased for five years and stables and pens for stock were erected, also a temporary grandstand, and this year a three-days' fair was held.

The horticultural and cereal exhibits, the textile fabrics, art, etc., were very artistically arranged in the grange hall, which is very large, and were pronounced by experts who have been attending fairs this fall to be the best of the season.

The exhibits of horses and cattle, swine, sheep, and poultry were shown on the five-acre tract adjoining the town. Special premiums were offered by some of the business men of Spring Hill, among them being one for the best lady rider, the best lady driver, and others.

One of the pleasing features of the

three-day festival was a grange drill by sixteen ladies and sixteen gentlemen armed with shepherd's crooks and pruning hooks under the command of Mrs. Lula Blair. The drill was simply perfect and elicited rounds of applause from the large and appreciative audience. There was also a military drill which proved very attractive.

One other thing which had a great deal to do with the success of the fair was the interest manifested by the business men of Spring Hill. On the afternoon of each day they closed their places of business and attended the fair. They not only gave of their abundance, but they gave their personal presence. The attendance from Olathe each day was very large, also from all the surrounding towns in Johnson and Miami Counties.

Spring Hill Grange appreciates the liberal patronage given it in its first effort, and feels encouraged to go ahead and even improve on its present success.

The success of an effort of this kind generally falls on the shoulders of a few persons. The labor is assumed by some who are willing or else it falls upon a few persons who are appointed. Mr. Paul C. Coons, the master of Spring Hill Grange, is one of these hard-worked men. Mr. and Mrs. Ed. Blair have also given a great deal of thought and labor to its success. There were also several other workers whose names we did not learn.

Bellefleur Grange No. 621.

Bellefleur Grange No. 621 held an all-day session recently at its hall northwest of Gardner, Johnson County. In addition to the regular routine business and program for the day, the main feature was a fair or a local exhibit of the products of the farm.

The exhibit was very fine. The rivalry was friendly, and each member brought of his best. The horticultural exhibit was the finest in years, and the corn was simply immense, both in variety and size. Two ears to the stalk, thirteen to fourteen inches long are common. It is not intended to develop the fair into anything large. It is for home, calculated for amusement and instruction, and to develop into the best everything that is grown on the farm.

Bellefleur reports a very pleasant and profitable day.

Agriculture.

We hear a great deal about the importance of agriculture as the great basic industry of the country, upon which all other industries depend, but comparatively few people appreciate the full significance of such a statement. The volume of agricultural products can be expressed in figures and the number of people engaged in agricultural pursuits stated, both of which are so vast as to be almost staggering, and yet convey no comprehensive idea of the important place that agriculture fills in the business of the country because its relation to other industries is not therein indicated. The dependence of manufacturing, transportation, and commercial affairs for prosperity upon the prosperity of agriculture is the vital point in the great supremacy of this industry. The patriotic citizen who most sincerely desires to contribute to National wealth and National prosperity will most effectually accomplish his purpose by contributing to the promotion and development of agriculture.

To do this means something more than producing crops and feeding stock, for it means making such efforts as will enable every farmer to produce crops and feed stock at an increased profit. Those men and women who have worked out difficult problems in agriculture and established principles that have become a science are entitled to as much honor as those who have manifested their patriotism in the discussion of important public questions or directed great public matters. In a smaller way those who have been leaders in the adoption of scientific methods in the operation of their farms, furnishing object lessons for those inclined to follow rather than lead, are as much entitled to be termed patriots as those who have rendered the people loyal service in the management of the smaller public affairs. A person can become a patriot in building up agriculture, either working for himself or for the advantage of others, as well as in the supervision of affairs which depend upon agriculture for a foundation.

The promotion of agriculture depends upon three matters—the intelligent cultivation of the soil for the production of crops, the intelligent feeding of animals for merchantable products, and the disposition of such crops and products to the best possible

advantage. These constitute the agricultural platform upon which all progress in this industry rests, and from which all agricultural advancement must be made. This platform bears the same relation to agricultural instruction as does the Bible to religious creeds or the inexorable laws of supply and demand to the business and commercial world. It constitutes the beginning and end of all agricultural theories and all agricultural teaching. The person who can grow crops, feed animals, and market products in the most profitable manner has made agriculture a thorough study and knows how to apply the information gained in his own farm operations.

The cause of unprofitable agriculture to-day, where such conditions exist, is the lack of definite knowledge upon the subject or a neglect to apply such knowledge. Farmers as a class work as industriously and live as economically as any other people, but it must be admitted that they fail to make available the information that may be obtained in regard to their occupation to a greater extent than people in other occupations do in regard to their work. The advantage that has been taken by those engaged in manufacturing, transportation, and domestic and foreign trade in shaping legislation, both State and National, favorable to those industries is recognized in this discussion, but we must also recognize the fact that as farmers we come far short of doing as well as we might, even under existing conditions. The Grange has a grand opportunity to improve agricultural conditions and increase the farmers' profits by stimulating greater interest in agricultural study and securing the adoption of scientific methods to a greater extent. If a paper should be prepared upon the topic assigned for each month in every grange in the country and read at a grange meeting, followed by a general discussion of the topic and of the points brought out in the paper, it would to some extent secure this result and at the same time promote the mental development of those participating. We should not lose sight of the fact that mental development can be obtained as well in the consideration of questions of a practical nature bearing upon every-day practices as in the consideration of questions that only appeal to the imagination or tickle the fancy. It is equally as enjoyable, from an intelligent standpoint, to discuss the principles of plant growth or the habits and usefulness of birds as whether there is more enjoyment in anticipation or realization, and vastly more information of a practical nature obtained. A faithful consideration of the topics suggested for this quarter will demonstrate the soundness of our position in this matter.—Grange Bulletin.

Gossip About Stock.

C. W. Taylor, owner of the Pearl Herd of Duroc-Jersey swine, has announced a public sale of his choicest pigs to be held at Abilene, Kans., November 3, 1906.

Any one needing a good boar should write A. J. Russel, of Crab Orchard, Neb. His hogs represent the strains of Tip Top Notcher, Arion, Higgins, Model, Nebraska Belle, and other leading animals. Write him.

We desire to call attention to the advertisement of Webber, Apperson & Co., of Tecumseh, Neb., who have a number of fine Berkshire boars for sale sired by Sunnyside King 7th 7/193 by Lord Lee 61138. If you need a boar write to them for prices.

Wm. Brandow, of Humboldt, has a Red Polled bull for sale. He is two years old and is a great breeder. Mr. Brandow tells us that 85 of his calves are hornless. His record name is Happy Surprise 42847 by Surprise 12639, dam Happy Nelle 98490. Write to him if you need a bull.

The herd-book of the American Aberdeen-Angus Breeders' Association from January, 1905, to March, 1906, has been received at this office. It contains 11,999 entries, beginning with 76,501 and ending with 88,500. The book also contains the constitution and by-laws of the association.

J. W. Myers, Galva, Kans., has claimed his fall sale of Poland-Chinas. The offering is a good one sired by the McPherson sweepstakes boar, W. B. Perfection, and a number of them will be bred to the prize-winning Take Warning. Watch for future announcements.

John Jones, of Clyde, Kans., is one of the breeders who has been carrying away a lot of ribbons at the fairs in Northern Kansas this year. He writes us that he carried away six blue and four red ones at Concordia last week. Mr. Jones is one of the coming Duroc-Jersey breeders of Kansas. His clean business methods and the quality of the stock he raises makes his stuff always in demand.

Dr. O. L. Kerr will be at the Kansas City Royal with an exhibit of ribbon pullers, and is ever ready to make acquaintances and to tell about the good O. L. C.'s to be sold in his No-

vember 2 sale. He will have some catalogues to distribute and mail. See or write him. He will have some great descendants of his World's Fair winners in the offering beside other breeding, and each lot has been selected with due regard to highest quality.

In this issue we present an illustration of a bunch of prize-winning steers shown at the Interstate Live Stock Exposition at St. Joseph last week, that were sold by Clay, Robinson & Co., through their St. Joseph office. This firm has headquarters at Chicago, also at Kansas City, and they make a specialty of handling the best grade of live-stock, being one of the largest live-stock commission firms in the world.

Bolln & Aaron hold their fall sale October 16, at Leavenworth, Kans. These gentlemen raise Poland-Chinas in great numbers, and make a sale each fall and always offer a class of desirable stock that helps to better the pig-crop produced in the States of Missouri, Nebraska, Kansas, and Oklahoma, into which they sell. Their catalogue gives details and will be mailed to all sending their address to either Mr. Bolln or Mr. Aaron. Write for it at once.

Our live stock representative carefully inspected the herd of Hereford cattle to be dispersed at Agricola, October 23 and 24, by E. A. Eagle & Son, and found them to be a very desirable type of cattle of the most popular breeding. Herd-bulls and breeding females good enough for the most exacting can be found in this offering, and those looking for strong things for their next year's show-herds should get a catalogue and attend the sale. This offering is bred right and fed right.

We call attention to the sale announcement of registered Poland-Chinas from the Yukon herd owned by J. B. Myers, Canton, Kans. The offering consists of 55 head of sows, spring and yearling boars, sired by Perfect Tecumseh, Meddler's Prince, Prince Proud, U. C. Perfection, Rambler's Look, and Expansion. Some of the animals in this sale have been shown at the fairs, winning their due share of premiums. Write at once for catalogue and be sure to attend this sale.

G. E. Newton, of Whiting, Kans., writes us as follows: "I will hold no annual fall sale, as has been my custom for the past eight years, but will offer to those in need my entire crop of spring and summer pigs, both sexes, sired by such grand herd-headers as Sir Thomas 23795, a 1,000-pound son of old Kansas Wonder; Improver 2d 13365 N 9835 A; S. R.'s Advance 40905, a son of Proud Advance; St. Paul 10745; and Chandler's Wonder 43441, a son of Crimson Wonder; West's Compromise 44423, and Chief Model, a son of Hunt's Model, World's Fair winner at St. Louis."

Leon Calhoun, ever on the alert for high-class Poland-Chinas, bought Harmonizer and a number of the best bred sows in the M. S. Babcock sale. Harmonizer was secured at \$105, and sold at a liberal advance to M. C. Vansell, Muscotah, Kans., and L. B. Bell, Nortonville, Kans., before he left the grounds. Leon Calhoun is registering applications for his sale catalogue of his November 30 offering, which will contain the tops of his crop of pigs produced from the sale-topping sows, which he purchased last season. If your name is not already on the list, address Mr. Calhoun at Potter, Kans.

The department of animal husbandry of the Kansas Agricultural College has a number of bargains in live stock that ought to attract attention. It is necessary to change some of the herd-bulls, and Ravenswood Admiration 186157, a son of the grand champion, Lavender Viscount, will be among the Shorthorns offered, also a son of the \$5,100 Hereford bull, Columbus 17, that was pronounced the best bull of his age in the Hereford rings at the International Show at Chicago. There are some young Angus bulls and a number of Duroc-Jersey, Poland-China, Berkshire, Tamworth, and Yorkshire hogs. They are all bargains, being tops of the crop of pigs in each breed. The

13 WEEKS FREE Or 15 Months for Only \$1.00

The Kansas Farmer

The "old reliable" KANSAS FARMER, established in 1863, the best genuine agricultural weekly paper in the West. It solves the problems for the busy farmer. It helps and interests every member of the farmer's family. It has 12 regular departments. Its contributors are expert authorities. It contains 24 to 32 pages each week. Sent on trial three months free. Test it. Clip the coupon below.

THE KANSAS FARMER CO., Topeka, Kansas. I accept your trial offer to new subscribers to send me THE KANSAS FARMER three months free. At the end of the three months I will either send \$1.00 for a full year from that date or write you to stop the paper, and you are to make no charge for the three months' trial. Name..... P. O.....





Horticulture

Destroying Insects and Fungi.

The Oklahoma Agricultural Experiment station at Stillwater has just issued a bulletin giving complete information about the methods which orchardists should use in fighting insect pests and fungus diseases.

It is too often the custom to pay no attention to preventing the attacks of insects and fungi and then expect to find a remedy which will repair the damage done by them late in the growing season.

In discussing the number of sprayings, the bulletin states that: Spraying every two weeks from the middle of April to the first of August has given the highest per cent of perfect fruit, but the most profitable returns for the work done have been produced by spraying four times in the spring.

The spraying must be well done if it is to be of any value. Slipshod work will never pay. It is just so much time and material used, and still the plants are not protected.

Spraying is a preventive and not a remedy. There are a few fungus diseases that can be destroyed by spraying but they can also be prevented by the same operation.

To make Bordeaux mixture and Paris green, dissolve 4 pounds of copper sulfate in 2 or 3 gallons of water by placing the sulfate in a sack and suspending in the top of a jar or tub of water.

add about 20 gallons of water. Stir the lime and water thoroughly and strain before mixing. Pour these two solutions into the barrel or tank at the same time, and stir vigorously while mixing.

The Beet-Sugar Industry in Kansas.

Kansas first made sugar from beets in 1889. In that year and in 1890 beet-sugar was made at Medicine Lodge quite successfully under unfavorable circumstances, but the new industry died with the languishing of the sorghum-factory, of which it was an adjunct.

The Medicine Lodge experiment was due to the enthusiasm of Henry Hinze, sugar-boller and superintendent for the Medicine Lodge Sugar Works and Refining Company. He came to Kansas with a thoroughly practical experience in beet-sugar work, particularly in German methods.

An attempt was made to secure a crop of 100 acres of beets at Medicine Lodge in 1890, but contracts and instructions were not closely followed. The harvest was 290 tons, from which 48,260 pounds of sugar were obtained.

The sorghum-sugar factory at Ness City planted several acres in beets in 1890, but the factory was burned in August, and the only result was a very satisfactory analysis of the beets grown.

Claus Spreckels distributed German seed to farmers in Western Kansas in 1888, and plats were grown in several sections. The Kansas Agricultural College began experiments in sugar-beet growing on the college grounds in 1890.

Provision was made by law in 1901 for payment by the State of one dollar per ton upon beets grown in Kansas and actually used for sugar manufacturing.

Seventy-seven growers in Hamilton,

Kearny, and Finney Counties harvested a total of 1,747.36 tons of beets, which had been contracted for and were manufactured into sugar by the factory at Rocky Ford, Colo.

In 1902 seventy-five growers in Finney and Kearny Counties shipped to the American Beet Sugar Company, at Rocky Ford, 4,250 tons of beets, harvested from 439 acres.

The year 1903 was a discouraging one in the Arkansas Valley. About 800 acres of beets had been contracted for, but the excellent stand secured went down before the unprecedented storm of April 30, when the mercury dropped eight to fourteen degrees below freezing-point.

Growers in the northwestern counties of Cheyenne, Rawlins, and Decatur harvested 1,488 tons of the 1904 crop, and 121 tons were grown by the Commercial Club of Arkansas City.

The 1905 harvest in the Arkansas Valley was 8,032 tons, which was purchased by the new factory at Holly, Colo. The total tonnage was an increase of 35 per cent over that of any previous year.

Table with 3 columns: Year, No of growers, Yield in tons. Rows for 1901, 1902, 1903, 1904, 1905.

Yield in five years.....21,679.07

Prior to the campaign of 1905-'06 a group of Colorado capitalists made investigations of the district adjacent to Garden City, Deerfield, and Lakin. As a result the United States Sugar and Land Company was incorporated, 27,000 acres were purchased in Finney and Kearny Counties, and work was begun early in 1906 on a factory at Garden City to be ready for the 1906 campaign.

The management of the United States Sugar and Land Company is vested in the following officials: C. M. MacNell, president; R. P. Davis, vice-president and general manager; J. R. McKinley, treasurer; O. H. Shoup, secretary, and E. H. Every, assistant manager.

This step in Kansas beet history will be contributory to giving the year 1906

How to Exercise the Bowels

YOUR Intestines are lined inside with millions of suckers, that draw the Nutrition from food as it passes them. But, if the food passes too slowly, it decays before it gets through.

The usual remedy for this delayed passage (called Constipation) is to take a big dose of Castor Oil.

This merely make slippery the passage for unloading the current cargo.

It does not help the Cause of delay a trifle. It does slacken the Bowel-Muscles, and weakens them for their next task.

Another remedy is to take a strong "Physic," like Salts, Calomel, Jalap, Phosphate of Sodium, Aperient Water, or any of these mixed.

It merely flushes-out the Bowels with a waste of Digestive Juice, set flowing into the Intestines through the tiny suckers.

Cascarets are the only safe medicine for the bowels.

They do not waste any precious fluid of the Bowels, as "Physics" do.

They do not relax the Intestines by greasing them inside like Castor Oil or Glycerine.

They simply stimulate the Bowel-Muscles to do their work naturally, comfortably, and nutritiously.

They are put up in thin, flat, round-cornered Enamel boxes, so they can be carried in a man's vest pocket, or in a woman's purse, all the time, without bulk or trouble.

The time to take a Cascaret is not only when you are Sick, but when you first suspect you need one. Price, 10c a box.

Be very careful to get the genuine, made only by the Sterling Remedy Company and never sold in bulk. Every tablet stamped "CCC." All druggists.

Make More Money on Fruit Crops

Everyone who grows fruit, whether a large commercial grower, or one who has only a few fruit trees, a berry patch or a garden, should be interested in knowing how to get the most profit from his crops.

THE FRUIT-GROWER

is the only magazine in America which is devoted exclusively to the interests of those who grow fruit. It is handsomely illustrated, and contains from 58 to 76 pages each month.

Three Months Free

We are so confident The Fruit-Grower will please you that we will send it to you three months absolutely free if you will mention paper in which you saw this advertisement.

Name \_\_\_\_\_
Route or P. O. Box Number \_\_\_\_\_
Town \_\_\_\_\_ State \_\_\_\_\_

Fruit Trees and Plants True to the name. guaranteed to live. Highest quality. materially less than agent's price. Illustrated Catalogue Free. Box 25

CHATTANOOGA NURSERIES Chattanooga, Tenn.

STARK TREES ARE FAMOUS wherever planted; are planted everywhere trees are grown. Free Catalog of superb fruits—Black Ben, King David, Delicious, etc.—Stark Bro's, Louisiana, La.

SEEDS That will Grow PLANTS That will Bloom

More better, even at the high price. Special bargain SEEDS, 10 pkts. Annual Flowers, 10¢; 5 pkts. Vegetables, 10¢. FLOWERS, 6 pkts. 25¢; 10 pkts. 50¢; 20 pkts. 1.00. SEEDS, 5 pkts. 25¢; 10 pkts. 50¢; 20 pkts. 1.00. Catalog and packet Royal Great Potatoes free. No. C. Anderson, Columbus, Nebraska.

about four times the tonnage of the five previous years combined. But in those five years it had been well demonstrated that Kansas has much sugar-beet territory, and the industry should yearly assume a more important place, both in the agriculture and the manufactures of the State.

**Weevil in Granary—Questions About Apples.**

I would like to ask through the columns of THE KANSAS FARMER (1) how to get rid of and prevent weevil in granary. I would also like to ask (2) how to prevent apples and peaches from getting wormy. (3) Could apples be gathered now and put in the ground like potatoes? They seem to be matured.

E. MILLS.

**Rice County.**

1. Be sure that your bin is free from weevil when the grain is put in. This may be done, if the bin was infested last year, by having it very clean, and for safety, burning sulfur in sufficient quantity in the bin before placing the new crop therein. A heavy fumigation with carbon bisulfide should do as well. Have the grain dry when binned. Some kinds of wheat pests called weevils are attracted by moisture in the grain. If weevils appear in grain properly stored, they may be destroyed by fumigation with carbon bisulfide, as already described in these columns. (Page 963, September 20).

2. The complete answer to this is a long story. Briefly, the most common fruit worms may be practically kept in check by careful attention to the recognized methods of spraying with insecticides, for which directions have been given in full many times in every agricultural and horticultural journal in the country. The U. S. Department of Agriculture furnishes free on application bulletins giving complete directions for the work, as do also the various experiment stations.

3. The storage of apples in pits may be regarded as an annual experiment, so far as my experience goes, resulting sometimes in failure and sometimes in success. The winter, and especially the fall, being favorable, apples will come from pits in spring in the best of condition, but will not stay so long. They must be used at once. Gather the fruit to be stored as late as consistent, avoiding frosts of course. Gather it when perfectly free from surface moisture, and place in close, high, conical piles of about thirty or forty bushels on the shady side of a tree. Throw over the pile clean straw a foot deep, and leave till there is danger of freezing, when you should add a layer of dry soil, increasing the thickness of soil a few inches at a time, as the weather grows colder, and topping out at last with another good covering of straw to keep the pile cool, but of a uniform temperature until spring. Of course, none but sound picked fruit of late winter varieties should be thus stored. The ground on which the fruit is piled should be naturally dry, and it is well to keep it so by a trench about the foot of the pile outside to catch the superficial drainage. From such piles I have had such apples as Willow-twig, Winesap, and Rawles' Genet come out in fine condition for the table. With care to prevent the change of temperature and moisture conditions in the interior, it is possible to draw from the store by opening through the covering in mild weather, but the fruit keeps poorly if opened before it is to be sold, or otherwise disposed of.

E. A. POPENOE.

Kansas Experiment Station.

**How to Build a Fruit-Cellar.**

The construction of a fruit-cellar will, of course, depend largely upon surrounding conditions, but there are a few rules and principles that will apply in a general way to nearly all cases, writes F. W., in Ohio Farmer. To obtain best results, do not excavate in ground for the cellar. The objection to this is that in the fall when the apples are first picked, and the weather is warm, the most critical period in the life of the winter apple, the warmth of the surrounding soil keeps the temperature in the apple-room too high, and if ice is used to cool it, an unnecessarily large amount will be required. In my building I excavated, but use the basement for potatoes and keep the apples above, and ice in chamber above the apples.

I would use cement blocks and make a double wall of blocks about four inches thick with dead air space of two or three inches between. Inside of this I would set up wooden strips, two by two, and lath and plaster it. Use double floor and double windows, double glazed, and but very few of them on outside. Have several openings near bottom of room where the

cool air may be admitted frosty nights, and corresponding openings at top of room for warm air to escape, thus affording ventilation when required. In my building the cold air enters through two registers in bottom of floor, and warm air escapes through pipes leading from top of room and discharging into top of ice chamber, where it is cooled and descends again into the apple-room. Of course, the lower openings are open only when the air outside is cooler than in the apple-chamber.

Keep the room away from the warming influence of the earth. Keep it an even temperature, and as near 33 degrees as possible. Do not let the apples be exposed to air more than necessary, and if the room is rather damp, the fruit will keep all the better and plumper and crisper. You can keep many varieties of apples in this manner quite well all winter without ice; but if you have the softer varieties, or wish to hold till late in spring, you will find it better to have an ice-chamber above and fill just before picking begins. I have a small furnace in the basement under my sorting-room adjoining the fruit-house, and can warm up the storage-house with it if necessary, but I use it principally for the work-room.

Have as few outside openings as possible, and if some of them open into another building, so much the better. We try to haul the apples into the sorting room as soon as possible after picking, except that we do not put them in during the heat of the day, unless the weather is quite cool. On warm days we allow them to stand in crates in sheds or orchard over night and put in storage when cool in morning. In a large storage building, it is a decided advantage to be able to drive into it with a load of apples.

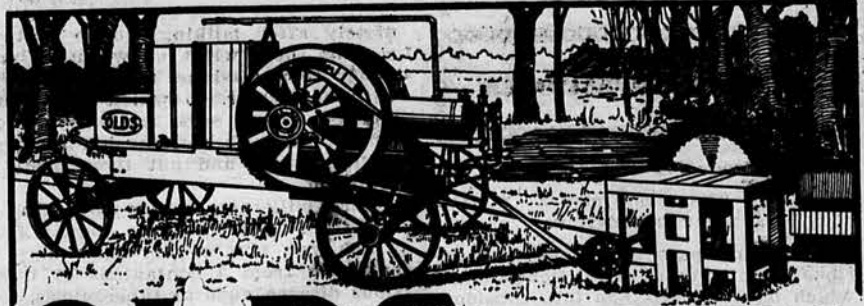
I would either build a wooden floor a foot or two above the surface of the earth or make the floor of some good non-conducting material to shut off the warmth of the soil. It is better to have a chance for cool air to circulate under the floor.

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**Dairy Interests**

**Producing Pure Milk.**

PROFESSOR HUNZIKER, BEFORE INDIANA DAIRY CONVENTION.

In making pure milk, there are various points that are essential and which have to be taken into consideration. Pure milk is milk that comes from healthy animals, fed on pure, clean food, and that receive clean, pure water. It is milk that is relatively free from mechanical impurities, such as dirt and filth of any kind; it is milk which is relatively free from bacteria which will decompose it and cause various undesirable fermentations; it is milk that is absolutely free from disease germs. If we expect to produce pure milk, we must have healthy animals. That animal only which is in the best of physical condition will be able to produce a good and wholesome milk. Rotten slage, musty hay and grain, decayed roots, as well as obnoxious weeds, such as leaks, rape, etc., impart to milk undesirable odors and flavors. In order to obtain a milk with a sweet, desirable odor and flavor, we must keep obnoxious weeds out of the pastures; we must take care of the animal in such a way that her general physical condition is good; we must feed nothing but clean and fresh food and we must give the animals pure water. Polluted and impure water not only affects the quality of the milk, but may also impair the health of the animal.

Keep the dirt out of the milk. In any business, and especially in dairying, cleanliness is a virtue which is closely associated with the financial, domestic, and social success and happiness. The absence of cleanliness furnishes us with the missing link that lowers man to the level of the beast. An ounce of prevention is worth a pound of cure, sixteen to one, of course. It is easy enough with reasonable care to keep a great deal of the dirt that gets into the milk out of it, but it is exceedingly difficult after the milk has become polluted with dirt to get some of that dirt out of it again, and it is impossible to get all of the dirt in polluted milk out, because a large portion of it is dissolved before the milk reaches the strainer. Therefore, if the cows are allowed to wade knee-deep in swamps and in barnyards which serve as receivers for manure, if they are allowed to lie down on stall floors covered with manure so as to become covered with a coating of filth, if the milker milks with unclean and wet hands so that brown juice runs down his hands into the milk-pail, if he milks into a pail the seams of which are filled with yellow deposit that comes from the remains of the previous milking, if after milking the milk is allowed to stand in a room with a filthy, dusty atmosphere and high temperature, we are far from producing milk that is pure.

There are several points which make the presence of dirt in milk objectionable. The first is that dirt taints milk, that is, it imparts to milk that odor which it contains. I think no man relishes drinking milk which, after a few hours' standing, deposits a layer of mud in the bottom of the glass; it is objectionable to the taste and smell and to the eye. And third, the presence of dirt in milk means an enormously large number of bacteria. The distribution of bacteria in nature is a very wide one, in fact it is hard to name any place or substance that does not contain more or less bacteria. We find bacteria in the water, in the soil, in the dust floating in the air, on the skin, on the hair, and in the intestines of man and beast, and they are especially abundant in dirt, manure, dust, and filth of any kind. Bacteria, then, are very closely connected with dirt; therefore, in order to produce milk free from bacteria, or nearly free from bacteria, keep your pastures well drained; remove manure from your barnyard and drain your barnyards; ventilate your stables; construct your barn floors in such a way that they will easily drain off and so that the cows are not obliged to lie down in the manure, but the droppings will fall in the gutter; supply them with plenty of clean bedding; milk with clean, dry hands into a clean, sweet pail. After milking, remove the milk to a place free from barn odors, strain it through a clean strainer and cool it at a temperature of 60° F. or lower if possible, in order to prevent the bacteria which did get into the milk from multiplying; keep the milk at that temperature until it leaves the farm. Clean all your milking utensils immediately

after milking, do so first by rinsing them with lukewarm or cold water then washing them thoroughly with hot water, to which some soap, powder, or sal soda has been added; rinse them with scalding hot water or boiling water and put them aside to drain off.

Pure milk also means milk that is free from disease germs. Animals from which you obtain your milk may be suffering from a contagious or infectious disease, such as tuberculosis, foot and mouth disease, etc. Some animal diseases are carried over to man also, such as tuberculosis. Tuberculosis is probably the most widespread, the most common, the most dreaded, and the most dangerous animal disease in our country. If the animal has advanced in the stage of that disease to a certain degree of bacteria, it will cause the disease to pass from the animal body through the weakened tissues into the udder and in that way get into the milk, and the consumption of such milk will threaten and endanger the health and lives of the consumer, unless such milk has been heated to a temperature at which the germs of tuberculosis are killed. In order to overcome this danger we apply the tuberculin test. This test means that cows that are afflicted with the disease show a higher temperature by the injection of tuberculin. It is the duty of every dairyman to know that his cows are free from tuberculosis; it is the duty of every dairyman to have his cows subjected to the tuberculin test and isolate such animals as have been found tuberculous.

Again, polluted water will make milk the carrier of such diseases as diphtheria, typhoid-fever, scarlet-fever, etc. Epidemics in many cities have been traced back to the milk supply. It is, therefore, essential if pure milk is to be produced that the water used for dairy purposes be known to be pure and clean, that wells which serve as cess-pools for the draining from graveyards, from outhouses, and from barnyards be closed up.

To sum up: I wish to repeat that the greater the attention paid to the health of the animal, to the feed it receives, and the scrupulous cleanliness in handling the milk at all stages, the shorter the time that elapses between the milking and straining of the milk and the cooling, the lower the temperature at which the milk is cooled, the greater will be its freedom from bad odors due to mechanical impurities, such as dirt and filth, and its freedom from bacteria, the longer it will keep sweet, the fewer will be its abnormal fermentations, the higher will be the quality of butter, cheese, and condensed milk manufactured from it, and the more profitable will be its production and the more wholesome will it be for old and young.

**Dairying in Japan.**

The Japanese imports of cream-separators are as yet limited, the number

**Lost Strayed or Stolen—One Cow**

That is about what happens each year for the man who owns five cows and does not use a Tubular cream separator. He loses in cream more than the price of a good cow. The more cows he owns the greater the loss. This is a fact on which Agricultural Colleges, Dairy Experts and the best Dairymen all agree, and so do you if you use a Tubular. If not, it's high time you



did. You can't afford to lose the price of one or more cows each year—there's no reason why you should. Get a Tubular and get more and better cream out of the milk; save time and labor and have warm sweet skimmed milk for the calves. Don't buy some cheap rattle-trap thing called a separator; that won't do any good. You need a real skimmer that does perfect work, skims clean, thick or thin, hot or cold; runs easy; simple in construction; easily understood. That's the Tubular and there is but one Tubular, the Sharples Tubular. Don't you want our little book "Business Dairymen," and our Catalog A.165 both free? A postal will bring them.

The Sharples Separator Co.  
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**CREAM SEPARAMOR HONESTY**

Each and every manufacturer of a cream separator claims his machine to be "the best." This is good business, but it is hardly giving the buyer a square deal. There can be only one "best" machine, which really means that the others are trying to secure buyers under false pretenses. Fancy catalogues, big "claims," flashy "challenges" and liberal "free trial" offers are good advertising, but may all go hand-in-hand with the poorest and trashiest machine on the market. You may have thought of this without knowing just what to do about it. But if you are about to buy a machine why not look up the real facts—the proven facts about separators. Consult the experienced creamery and dairy operators, the agricultural experiment station records, the government records, the results of all important butter scoring contests, and the records of tests and awards made at all important expositions and agricultural shows. You will then know the truth about cream separators and can tell the manufacturer who has misrepresented matters to you to seek business elsewhere. If you have investigated well and carefully you will find that there is but one separator which will do all that is claimed for it and can honestly be called "the best." That machine is the DE LAVAL. Wherever tests have been made of different separators the DE LAVAL has always averaged best. Wherever records have been kept of the work of different separators the DE LAVAL has always been first. Once again we say, look up the proven facts concerning separators and learn the truth for your self. Will the other manufacturers give you the same advice? We think not. There is a very good reason why they will not do so. It would mean business suicide for them. A DE LAVAL catalogue may be had for the asking. Write for it today.

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I made up my mind to get a No. 6 U. S. Separator and try it. By keeping an accurate record I found that with the U. S. I was getting about 40 quarts of cream per day from 20 cows, a difference of \$2.50 in favor of the

**U. S. CREAM SEPARATOR**

making a gain of \$75.00 in 30 days. Then I value the skim milk at 33 1/3 cents per hundred quarts for feeding purposes on the farm, amounting to \$15.00 for 30 days at 150 quarts per day. As the total amount gained by the U. S. paid for it in 30 days, I will say that it is the best investment I ever made.

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**The Atchison, Topeka & Santa Fe Ry.**  
**Topeka, Kansas.**

being five in 1905 and the value \$203. There is no present demand for them on the island of Kiushu, as few farmers have more than one cow, except the few small dairymen near the town. The island of Houshu has somewhat better dairy-cows.

In all probability the thrifty Japs are using these five separators for the purpose of learning which is the best and with the intention of appropriating the best characteristics of each and making better separators than have ever appeared in other parts of the world. America furnished about one-half of Japan's 170,164 butter imports in 1902, but less than one-fourth of the \$66,930 imports in 1905. America also furnished nearly two-thirds of Japan's 15,156 cheese purchases in 1902, but less than half of the \$12,755 purchases in 1905. But the United States is gaining the condensed-milk trade in Japan, the total imports of which were \$323,641 in 1901 and \$804,190 in 1905. The shipments from America were \$125,458 and \$457,247 respectively.

**The Ratio of Increase in Cows.**

Replying to an inquiry Hoard's Dairyman figures the probable increase of a cow as follows:

Taking one cow for eight years, the matter works out in actual practice about as follows: We start with her first calf, a heifer, when she is 2 years old and assume that each alternate calf will be a heifer and that all calves live and all heifers breed at 2 years old.

AGE OF FIRST COW	2	3	4	5	6	7	8	9
Cow's Progeny	H	B	H	B	H	B	H	B
First Heifer's Progeny			B	H	B	H	B	H
Second Heifer's Progeny					H	B	H	B
Third Heifer's Progeny							B	H
First Granddaughter's Progeny						H	B	H
Second Granddaughter's Progeny								B
Third Granddaughter's Progeny								
First Great Granddaughter's Progeny								B

H, Heifer. B, Bull. Total, 14 Heifers; 13 Bulls.

The following is the matter worked out in another form, assuming the same premises:

**PROGENY OF ORIGINAL COW.**  
 Age 2 3 4 5 6 7 8 9  
 Sex H B H B H B H B  
 Total 4 Heifers—4 Bulls.

The first heifer breeds when she is 2 years old and we assume it is a bull calf, because we assumed that the first calf born to original cow was a heifer.

**PROGENY OF FIRST HEIFER.**  
 Age 2 3 4 5 6 7  
 Sex B H B H B H  
 Total 3 Heifers—3 Bulls.

The first heifer would give birth to six calves while her mother gave birth to eight.

The second heifer, which was born when her mother was 4 years old, we assume gives birth to heifer calf when she is two years old.

**PROGENY OF SECOND HEIFER.**  
 Age 2 3 4 5  
 Sex H B H B  
 Total 2 Heifers—2 Bulls.

The third heifer was born when her mother was 6 years old and this heifer breeds at 2 years.

**PROGENY OF THIRD HEIFER.**  
 Age 2 3  
 Sex B H  
 Total 1 Heifer—1 Bull.

The fourth heifer will not give birth to any calves, because she will be only one year old when her mother has given birth to eight calves.

Before the end of the assumed time has expired, the granddaughters of the original cow will have given birth to several calves.

**PROGENY OF FIRST GRANDDAUGHTER.**  
 Age 2 3 4  
 Sex H B H  
 Total 2 Heifers—1 Bull.

**PROGENY OF SECOND GRANDDAUGHTER.**  
 Age 2 3  
 Sex B H  
 Total 1 Bull—1 Heifer.

**PROGENY OF THIRD GRANDDAUGHTER.**  
 Age 2  
 Sex H  
 Total 1 Heifer.

**THE GREAT GRANDDAUGHTER.**  
 Age 2  
 Sex B  
 Total 1 Bull.

Reverse the order of succession and start the first cow with a bull calf, we will come out with three heifers less, or 11 heifers and 10 bulls. This is the increase barring all accidents. But in the nature of things it is hardly safe to count more than 10 heifers increase to the single cow in eight years. The increase of cows is very much slower than most people imagine. In Wisconsin the increase from 1850 to 1890 was only 5 1/2 per cent yearly.

**Kill the Parasites.**

"My stock is lousy; what can I use to kill the lice and not hurt the animals?" For the benefit of these inquirers, and the many stockmen who are having the same trouble but have not written, the first thing to be said is, these pests should not be there. They are expensive at any time, and especially so now, when all feeds are high-priced. Besides the feed it takes to keep them, they make the stock look rough and skinny; giving to all who see them an impression that the owner is not a good manager.

If this applies to any of your stock, whether it be horses, cattle, sheep, hogs, or chickens, go after the parasites. Use a coal-tar dip that is non-carbolic; then you are sure you will not injure the stock if you follow directions. A non-carbolic dip is one from which the poisonous and irritating qualities have been removed. These, if allowed to remain, are likely to do injury by blistering or excoriating the skin, irritating the eyes or membrane whenever it comes in contact with it. For these reasons it will pay to see that the dip you use is non-carbolic. You can get such a coal-tar dip free from these objections, of any druggist, for about \$1.35 per gallon. Each gallon will make 75 to 100 gallons of dip. The Kreso Dip is entirely satisfactory and not expensive. Get some of your druggist, or write the manufacturers, Parke, Davis & Co., Detroit, Mich., asking for their booklets telling how to use it and where it can be bought.

After you get it, use it as directed. For horses and cattle mix in proper proportion (don't guess at it) with water and put in on with a brush, broom, or coarse cloth. Use plenty of muscle on this job, so you will get right down to the skin, where the trouble is. Repeat in ten or twelve days to kill any lice that have hatched out since the first treatment.

In treating calves, pigs, or sheep, it is well to dip them. If you don't feel like buying a steel dipping-tank, make one of cement or wood. No farm uten-

sil will pay for itself quicker than a dipping-tank. Even after you get the stock clean, you will find it a decided advantage to dip frequently, just to keep them in good health.

Whether you hand-dress or dip, there should be a second application a week or ten days later to kill the parasites that have hatched out since the first treatment. This is very important, for unless the new brood is destroyed the stock will soon be in as bad shape as before. Do not undertake to use any dip strong enough to kill the eggs or nits at one dipping. These eggs are usually enclosed in a tough, resistant covering. Anything strong enough to penetrate this covering will be very apt to injure the eyes, ears, or skin of the animals.

Another point to be remembered is that no matter how thoroughly you rid an animal of vermin, if you put it back in a stall or pen that is alive with parasites, your work counts for little. Use new quarters for a month or more if possible. If you can not do that, clean out the old ones thoroughly. Get all the litter, loose boards, etc., out of the way, then sprinkle or spray with the dip solution. If this is well done, you will probably have no trouble on that score.

The whole job is not so hard or long as it might seem. With a supply of the dip and a determination to clean up, one man can do a great deal in a day, and by keeping at it for a few days accomplish the end sought. The main thing is to get at it. Do it now, as the office men have it. If it can not be done now, cut this slip out, fasten it up on the barn door, keep it there until you find a day when you can do the work, and remember every day you neglect acting on its advice you are throwing away good money in feed that goes to fatten lice, mites, ticks, fleas, and other insect pests instead of the stock.

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 The Cleveland is the only all-ball-bearing machine made. Do you need to have us prove to you that the ball-bearing is the easiest running bearing ever made? Every other separator manufacturer would use them if he could. We can. We do. The aluminum skimming device and the fact that the Cleveland has the fewest parts of any separator made, make it the easiest to clean and the longest-lived. The fewer the parts, the less wear, the less repairs. The Cleveland is a guaranteed perfect skimmer.  
 Don't take our word. Try a Cleveland. It won't cost you anything. The new free catalog tells you how. Write for it. Address  
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**Better than Ever**

No matter how you handle your milk  
 No matter what separator you may be using,  
 No matter what separator you may be thinking of buying, for your own convenience sake, and your pocket-book's sake, don't fail to see and examine



**The Improved Frictionless EMPIRE Cream Separator**

Without doubt or chance of question, it is as far ahead of the old style cream separators as the cream separator itself is ahead of the deep-setting system.  
 It is the simplest in construction, has the lightest bowl, turns more easily and is more easily cleaned than any other cream separator made.  
 Its improved bearings make it as nearly absolutely frictionless, as it is possible for a machine of any kind to be built—it almost "runs itself."  
 Why put up with a machine of the heavy, hard-to-turn type, when you can get the Improved Frictionless EMPIRE?

At any rate why not examine it?  
 That is all we ask:—You certainly want the best separator you can find; the EMPIRE, always the leader, is now better than ever.  
 We know, for experience has proven, it is to your advantage to put our claims to the test.  
 The great present army of Empire users made up their minds that way.  
 Send for our catalog and our valuable free dairy books. You will be interested in learning how the EMPIRE is made—why it does such good work, and how it will make dollars for you.

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**The Veterinarian**

We cordially invite our readers to consult us when they desire information in regard to sick or lame animals, and thus assist us in making this Department one of the most interesting features of The Kansas Farmer. Kindly give the age, color, and sex of the animals, stating symptoms accurately, and how long standing, and what treatment, if any, has been resorted to. All replies through this column are free. In order to receive a prompt reply all letters for this Department should give the inquirer's postoffice, should be signed with full name and should be addressed to the Veterinary Department of The Kansas Farmer, Topeka, Kansas, or to Dr. C. L. Barnes, Veterinary Department, Kansas State Agricultural College, Manhattan, Kansas. If in addition to having the letter answered in The Kansas Farmer, an immediate answer is desired by mail, kindly enclose a 2-cent stamp. Write across top of letter: "To be answered in Kansas Farmer."

**Bone Spavin.**—I have a dark bay mare, 4 years and 10 months old, that has a bone spavin on left leg, which she has had for two years. I purchased her only three months ago. She does not walk lame very badly except when driven for some distance, say ten or twelve miles. The swelling, or rather bony growth, is not large, about as large as a teaspoon. Have used Kendall's Spavin Cure according to directions for eleven weeks and applied their blister, but it does not seem to do the work. Have not used her at all for four weeks, up to which time did not drive her over eight miles at a time and then only twice. Will you kindly tell me what to do for her and also mail me press bulletin on treatment of spavin? R. D. Bridgeville, N. J.

**Answer.**—I would advise your using a fly blister. Rub thoroughly over the spavin, allowing the fly blister to act for twenty-four hours, then wash off and grease. Give three applications at intervals of a month. Give the animal, as near as you can, absolute rest. Feed sloppy bran mash during this time in order to properly regulate the bowels when the animal is not exercising. Failing to get favorable results, then resort to the treatment prescribed in the press bulletin I am sending you.

**Horse Out of Condition.**—We have a team of grey geldings, 6 years old, that are bothered while passing water. Have had the sheath washed a couple of times and a bean removed from the penis of one, but it does not seem to help any as when passing water they strain and water comes slowly. The horses are otherwise in fine health and I have been working them steady. Also have a team of ponies that we bought about one month ago which have a cough and running at the nose. The man claims they had the pink eye before we got them. Will the cough get all right or will they need medicine? Please advise me in regard to same. R. J. M. Mentor, Kans.

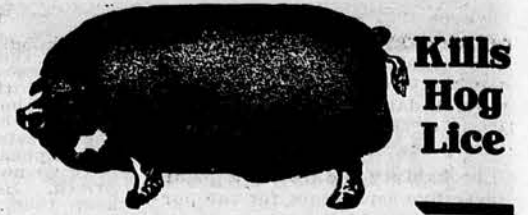
**Answer.**—We are sending you a press bulletin on poll evil and fistulous withers which you requested in your letter of recent date. Also will say in regard to your team of geldings, would advise you to give each of them a handful of buchu leaves three times daily in their feed of oats or bran or whatever you may be feeding them. For the ponies that have the pink eye, feed them the following tonic: 1½ ounces nux vomica, 2 ounces gentian, 4 ounces ginger, ½ pound sulfur, 6 ounces sodium hyposulfite, 1 ounce pulverized digitalis, 8 ounces pulverized glycyrrhiza root, 10 pounds oil-meal. Mix, give a level teaspoonful three times daily in ground feed.

**Lumps on Colt's Stiffles.**—I have a fine suckling colt about 3 months old that has a lump on each stiffler joint about as large as a goose egg, and they are soft as though they were filled with water or wind. Can you tell me what to do for them to take them off? P. R. Peabody, Kans.

**Answer.**—I would suggest that you use the following liniment, put up at your drug store: Sulfuric ether 4 ounces, tincture of iodine, 2 ounces, tincture of cantharides 2 ounces, turpentine 4 ounces, sufficient compound soap liniment to make a quart. Mix and shake well before using. Rub the liniment over the enlargements on your colt's stiffles daily until sore, then withhold the medicine for a few days and begin again.

**Stiffed Joint.**—About five weeks ago while driving the horses from pasture to barn, one of them became suddenly lame in left hind leg. On examination we find he is stiffed. Have made some effort to put it in place. We put a rope around the leg at hock and pulled forward and upward at the same time pressing on the joint with hands inward. He is a 1300-pound horse. The stiffler would go in place, but as soon as we would release the

**Zenoleum, The Agricultural College Preventive For Hog Cholera**



FROM the great hog raising state of Iowa, where they have made a special study of the plague, comes this unequivocal testimony:

**Iowa Agricultural College**  
 "We had an outbreak of hog cholera but we stopped it. We attribute our success in no small way to the use of Zenoleum."  
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Why should you? If the cholera attacks your herd you may lose them all. Forty-three of the Agricultural Colleges, whose business it is to find out the best methods of dealing with this plague, are now using and recommending Zenoleum. Is it not just common sense for you to follow their advice?

**Write Today for Piggie's Troubles.**

This is our 64-page free book which shows you why Zenoleum is used by the Agricultural Colleges, why it renders hogs immune to cholera, why it checks the disease when it has once taken hold, why leading hog raisers and feeders everywhere as well as the Agricultural Colleges are using it.

**Almost Every Druggist Sells Zenoleum.**

One Gallon Zenoleum, sent prepaid, \$1.50.  
 Five gallons, prepaid, \$6.25

Don't take a cheap substitute. Zenoleum goes so far and does so much for your animals' health that there is no excuse for taking anything but the standard, genuine preventive, Zenoleum.

ZENNER DISINFECTANT CO.,  
 61 Lafayette Avenue, Detroit, Michigan.

leg the stiffler would come out. Please advise me. E. J. G. Ogallah, Kans.

**Answer.**—You might try using a fly blister over your animal's joint that is stiffed. This will create sufficient swelling to hold the joint in place. Be sure and tie your animal so that it can not reach the part that is blistered for at least twenty-four hours when blister is acting. Then wash off and grease.

**Fles in Cow's Head.**—I am writing to you for information about a cow. I have dehorned my cow and the fles have got into her head and nothing that I put into it seems to do any good. I thought perhaps you could send me a bulletin, telling me something that would cure her. W. M. Attica, Kans.

**Answer.**—I would advise your using turpentine on a swab and try and dispose of the fles that have gotten into your cow's head.

**Warts on Colt's Mouth.**—I have a black mare colt about 1 year old. Her lips and nose are covered with little warts, some in nostrils and some in the corners of her mouth where the bit should be. These warts have come since turning her to grass this spring. Have given no treatment as yet. Can they be removed and if so what is the treatment? C. R. W. Cedarvale, Kans.

**Answer.**—Replying to your favor of recent date mentioning warts on your colt's mouth, etc., will say that I would suggest that you secure from your druggist a 30-per-cent Thuja oil ointment. Apply this ointment to the colt's warts daily.

**Calloused Shoulder.**—I have a bay mare, 9 years old, that weighs 1100 pounds. She has a callous on her left front shoulder. It was there before I got her and I have had her about six months. It was caused by the collar. I have used different kinds of liniments and have used iodine, but it doesn't seem to do much good. When she is worked, it gets raw and soft, but next morning it is as big as ever. Can you give me any information? Rose, Kans. J. F.

**Answer.**—I would advise you to have some one cut the calloused part off of your horse's shoulder, then heal the wound with a good dusting powder. The Alum Dusting Powder put up by Parke Davis & Co. is a good one, which I think can be secured from your drug store.

**Cow Gives Bloody Milk.**—I have a cow that is giving bloody milk. She is 4 years old and calved four months ago. Her milk was all right up to three weeks ago when it became bloody. There are no lumps in milk. She is apparently well otherwise with good appetite and in good condition. To my knowledge she has not injured her udder. I. E. M. Thayer, Kans.

**Answer.**—You had better melt together 4 ounces of gum camphor and 6 ounces of lard. Stir thoroughly and apply to the udder three times daily.

**Hogs Out of Condition.**—Although I am just a new subscriber, I would like to ask a few questions about my hogs. I have a nice bunch of small pigs, but they have a disease that I am unable to find out about. Old hog-raisers never heard of it before, they say. When the pigs come they are as fat and healthy as any pigs I ever saw.

They keep that way until they are about a month old, when they begin to get poor, their hair grows long, and scabs form all over them. They cough and run at the nose like a horse with the distemper. Some have small sores all over them and when opened, matter runs out. Some think they have worms that cause this trouble. They are out on green alfalfa and I feed them corn and bran. My hogs are also lousy. What will kill these ticks? I clipped every hog I had in the spring with "Mephisto," made at Wichita, but it did not seem to help them. Can you tell the trouble and suggest a remedy for my pigs and something to prevent the lice? Cherokee, Okla. F. N. H.

**Answer.**—I am sending you a press bulletin of lime and sulfur dip which I would suggest you to use on your hogs, giving three applications of the dip ten days apart. Also a press bulletin on "Some Troubles of Swine," which contains a formula of a tonic for hogs, recommended by the Government. It might be well for you to get this tonic for your hogs to tone up their system and stop their coughing.

**Mule With Skin Wound.**—I have a 6-year-old mule that got the skin scraped off of the front of one of his hind legs about three years ago in the coal mines. I turned him out on pasture and think the leg became poisoned with the dew, and he has been gnawing it with his teeth. Proud flesh formed and the leg was enlarged some. Have worked him on the streets for the past three years. Have tried everything I was told and I have had a veterinarian attend him but he didn't do any good. The wound is still raw and watery matter comes from it almost all of the time. What can I do for him or is there any cure? Let me know in the next issue. Fort Scott, Kans. D. R. K.

**Answer.**—I would suggest that you secure a box of Alum Dusting Powder from your druggist prepared by Parke Davis & Co. Use it on your mule's raw surfaces daily until it is healed.

**Bloody Milk.**—I have a cow that gave bloody milk when she became fresh about six weeks ago. Her udder became hard and finally about two weeks ago the affected quarter broke. The calf is running with her. We used turpentine, also camphor and lard, but as she is in pasture, some distance away, have not done anything lately thinking she was getting along all right. Discovered last night that the sore had become very offensive. Can you tell me what the trouble is and what to do for her. She is young, second calf, and was in good condition. Nickerson, Kans. W. N. S.

**Answer.**—I have no doubt but that your cow has gangrene of the udder, and you had better have her attended to at once by a competent veterinarian.

**Fistulous Withers.**—I have a 4-year-old mare that has fistulous withers. There has been an enlargement for about four weeks but it has never broken. I have been using corrosive sublimate on it. Would be very glad if you will kindly send me the formula for the same. Would it be best to open it or not, and where shall I open it? J. F. D. Canton, Kans.

**Answer.**—I would advise your using a fly blister over the enlargement on

**Combination Thief-Proof Whip and Walking Stick**

The Greatest Novelty of the age. No buggy is complete without one. Price, \$1; postage paid to any part of U. S. Address: E. T. Davis Co., Tippecanoe City, Ohio. Send your orders quick.

**KILL the LICE**  
 Why let lice eat up your poultry profits? Kill the lice with the **LIGHTNING Lice Killing Machine**  
 Guaranteed to do the work better, quicker, more easily and more thoroughly than any other method. Sold on a positive guarantee—your money back if you are not perfectly satisfied.  
 Get one at once and double your egg profits.  
 Write today for free booklet.  
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**How Is Your Heart?**

Is your pulse weak, too slow, too fast, or does it skip a beat? Do you have shortness of breath, weak or hungry spells, fainting, smothering or choking spells, palpitation, fluttering, pains around the heart, in side and shoulder; or hurt when lying on left side?

If you have any of these symptoms your heart is weak or diseased, and cannot get better without assistance.

**Dr. Miles' Heart Cure** strengthens weak hearts, and rarely ever fails to cure heart disease. Try it, and see how quickly you will find relief.

"About January 1st, 1902, I took down with weakness and droopy and gradually grew worse. I was told by my family physician that my case was hopeless. My neighbors and family had given me up to die. My limbs and body were swollen to one-third larger than normal size, and water had collected around my heart. For at least three months I had to sit propped up in bed to keep from smothering. I sent for five bottles of Dr. Miles' Heart Cure, and by the time I had taken them all I was entirely cured. I feel better than I have for twenty years, and I am able to do any kind of work on my farm. My attending physician told me that if it hadn't been for Dr. Miles' Heart Cure I would now be in my grave."  
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Dr. Miles' Heart Cure is sold by your druggist, who will guarantee that the first bottle will benefit. If it fails he will refund your money.  
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your mare's withers. Repeat the blister in two weeks. Allow the blister to act for twenty-four hours at each application, then wash off and grease. Be sure and have your animal's head tilted so that it can not reach the blistered area. C. L. BARNES.









# GREAT AUCTION SALE

Of

## 165 REGISTERED HEREFORDS 165

Wednesday, Thursday and Friday, October 17th, 18th and 19th

At

**Fine Stock Pavilion, KANSAS CITY, MO.**

This will be one of the largest and best offerings of Hereford cattle in recent years. There are 115 mature cows bred or with calves at foot. 25 heifers and 25 bulls. Never before in one sale has there been offered an opportunity to buy the get of so many great sires as are represented in this sale. Among which are,

Columbus 17th, Jack Hayes 2d, Beau Brummel, Beau Brummel Jr., St. Louis, Free Lance, Lars, Elvina's Archibald, Diplomát, Earl of Shadeland 22d, Earl of Shadeland 73d, March On 6th, Java, Lomond, Corrector, Kansas Lad, Climax, Hesiod 2d, Hesiod 29th, Hesiod 54th, Hesiod 55th, Hesiod 26th, Hesiod 85th, Lord Pretty Face, Lord Saxon, Roderick, Onward 8th, Onward 16th, Beau Donald and Keep On.

These cattle will come direct from the pasture to the sale barn and will be in the best possible condition for the buyer.

**SOLDIER CREEK FARM**  
**Frank Rockefeller, Owner, Cleveland, O.**

For catalogue and all information, address

**C. A. STANNARD, Sale Manager, Emporia, Kansas**

## PUBLIC SALE

-OF-

### Shorthorn Cattle

--AND--

### Poland-China Hogs

**TUESDAY, OCTOBER 16, 1906.**

To be held at farm, 2½ miles northeast of Abilene. Fifteen cattle, consisting of 3 yearling bulls and 12 cows and heifers. All Scotch-topped and cows have calves at foot. Heifers mostly bred to pure Scotch bulls. One yearling Scotch bull well enough bred and good enough individually to head any herd.

Poland-Chinas consist of 25 boars and 50 sows and gilts. About two-thirds of the offering were sired by Highland Chief Jr., and out of sows by Kansas Chief, U. C. Perfection, Prince Proud, Hadley I Know, and other first-class boars.

Free entertainment at Central Hotel for parties from a distance. Free lunch at noon and sale will begin promptly at 12.30. Send for catalogue.

**C. M. GARVER & SON**

Auctioneers: L. R. Brady, J. N. Burton, W. C. Murphey.

## GRAND PUBLIC SALE

To be held at the farm, 6 1-2 miles northwest of Valley Falls, and 4 1-2 miles southeast Dennison, Kansas...

**Friday, October 5, 1906**

### 43 Red Polled Cattle and 35 Pure-bred O. I. C. Hogs

This offering consists of 43 high-grade Red Polled cattle, including 1 bull, 3 cows, 10 heifers, 10 calves and 19 steers.

The pure-bred O. I. C. swine comprise 25 boars and 10 gilts. For further particulars address the owner

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**L. R. BRADY, Auctioneer**

## WALNUT GROVE FARM

...FOR SALE...

Upon the advice of several specialists I am going to New Mexico for my health. On this account I must dispose of all my Kansas property, including the famous Walnut Grove farm, the most complete and profitable stock farm in Kansas. This includes 130 acres of the best land in Kansas, two miles from Emporia. Over 200 good O. I. C. hogs. All our Banded Plymouth Rocks, 36 Collies, 44 head of cows, 8 head of horses, the best farm house in the State. Also one small farm house, 2 large barns, 2 large cattle-sheds, one 300-foot hen house, one 250-foot broiler house, 20 brooder-houses, capacity of plant, 4,000. The best hog house in the West, double-deck cement floors; many small hog houses. This is not an experiment, but a successful stock farm. Price, \$20,000 cash.

**H. D. NUTTING, Emporia, Kans.**

## HARLEM HEIGHTS DUROC-JERSEY SALE

ROSENDALE, MO., THURSDAY, OCT. 18, 1906.

### 80---HIGH CLASS DUROCS---80

Thirty-four Boars and Forty-six Sows, prize winners at Iowa State Fair and St. Joseph Interstate Fair will be included in sale. Greatest offering of Duroc-Jerseys ever made in Western Missouri. Sale at Farm and under cover. Free transportation and lunch. Hon Henry Wallace will deliver an address before sale. This will be the event of the year. Only 20 miles from St. Joseph. Remember that all sows bringing \$50 or more will be bred to the great Butler Orion 17177 A., 48579 N., free.

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