

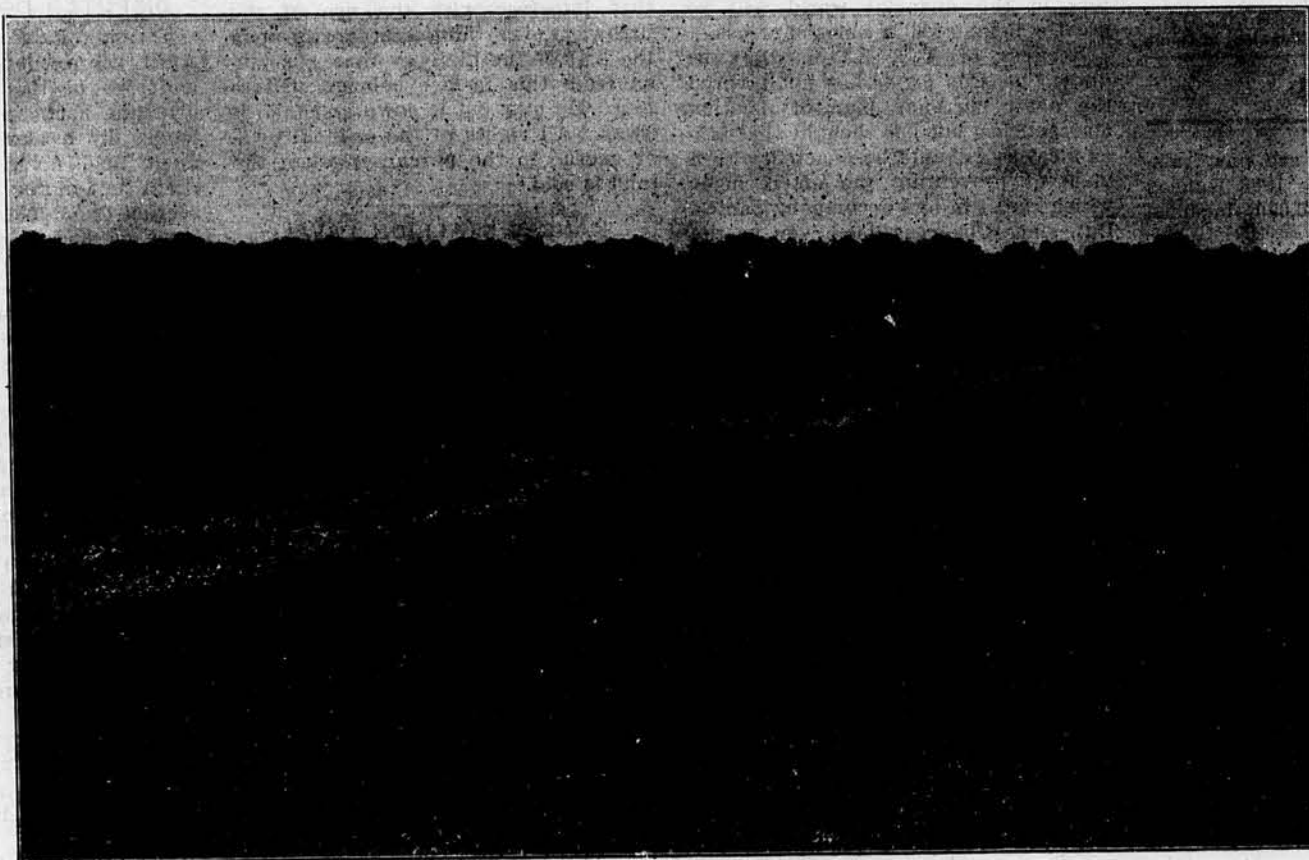
# KANSAS FARMER

Volume XLVI. Number 23

TOPEKA, KANSAS, JUNE 4, 1908

Established 1863. \$1 a Year

## The First Crop



ALFALFA—OUT THERE IN KANSAS.

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## KANSAS FARMER.

Established in 1868.

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The crop estimators are now raising their figures on the 1908 Kansas wheat crop to 100,000,000 bushels. "Barkis is willin'."

There is really only one good thing that we can recall about a hail storm. Yes, there are two. (1) It doesn't last long. (2) It covers only a small area.

Yes, corn planted at this date may make a good crop. If only the clerk of the weather will give a chance to plant, the corn-grower may yet be happy.

THE KANSAS FARMER has had from time to time inquiries concerning chemical analyses of soils. These are well answered in the excellent paper by Professor Willard in this issue. A careful reading of this paper will serve to remove much uncertainty in the minds of persons who are interested in knowing what ought and what ought not to be expected from the science which stands in so important a relation to agriculture. It is gratifying to know in this connection that Professor Willard speaks with the utmost accuracy with full knowledge of the subject as developed up to this time.

Frank Stahl's annual picnic will be again held at Stahl's Grove on Thursday, June 18. This picnic is planned in the interest of the Shawnee and Osage County Temperance and Sunday School Union. It was first held in June, 1880, and has been repeated in June of each year since. It is a whole day affair. The day will be taken up with recitations, readings, songs, and speeches by prominent Kansas men. A play will be given in the evening. There has been no more successful picnics than Stahl's for the past twenty-eight years, and the prospects are that the twenty-ninth one will be the best of all.

Alfalfa farmers in Kansas are having their troubles now. The first crop of hay should have been cut two weeks ago but the weather would not permit. There is talk to the effect that the postponement of the first harvest may reduce the season's cuttings to three or four instead of the usual four or five. The man who has plenty of hogs eating his alfalfa as

it grows is getting a lot of it safely cured and ready for sale at a good price. True, the hogs should not be numerous enough to keep the alfalfa down, but what they leave, under good management, makes excellent hay. The alfalfa field is both food and medicine for the hog. He can not keep from growing.

## FINANCIAL.

At a late hour last Saturday Congress passed an emergency currency measure. The provisions of the bill, which has now become a law, are not yet fully known here. The avowed purpose of the measure is to provide for the rapid expansion of the currency in case of panic, by authorizing the issuance of national bank notes based on assets of the banks. It is charged by its enemies with being a Wall Street measure, intended to relieve the strain when speculators have gotten into close quarters and must have more money at any price. A provision of the bill is understood to provide a high rate of interest on this emergency currency to be paid by the banks issuing it. It is thought that this will prevent its issuance except under stress of urgent need, and will secure its retirement as soon as the urgency shall have passed. The opponents of the plan say that only speculative profits or speculative emergencies can justify such interest. Again it is charged that none but the strongest banks can meet the conditions imposed, so that the preponderance of the great money centers in the financial world will be greatly augmented in times of stress.

Readers of THE KANSAS FARMER know that this paper has not favored the asset currency plan of meeting emergencies, but has thought that other measures should be enacted with a view of preventing the emergencies which result in and accompany panics. But, since Congress has given us the law just enacted, let it be hoped that it will never be necessary to act on its provisions, and that, should there be occasion to use it, the fears of its opponents will prove groundless.

One effect of the measure will probably be to promote the restoration of activity in the great money markets of the country. The prices of railroad and other great corporation securities are likely to be favorably affected, so that the money will be forthcoming for extensions and improvements.

The restoration of normal activity along these lines is greatly to be desired. If booms can be prevented, well. That one or the other of these conditions will soon prevail is scarcely to be doubted. The very great increase in the bank clearings of last week compared with those of the recent past tells much of the restoration of the confidence upon which the business and prosperity of the country so much depends.

## RIGHT TO THE TREES IN THE ROAD.

EDITOR KANSAS FARMER:—About twenty or twenty-five years ago, a farmer set out trees along his line of the fence, about 4 feet in the road. These trees are from 40 to 50 feet high.

Since, the land has changed hands, the farmer has moved the fence to the line of trees, claiming the trees are exactly on the line. Has he right to cut these trees down, even if they are on the line, or on the public laid-out road?

C. E. SMITH.

Kiowa County.

Presumably the land line is at the middle of the road, so that half of the road is on the land of the farmer who planted and protected the trees. This roadway is for the use of the public for purposes of passing and repassing and conveying their belongings over it. Late decisions have permitted the use of the roadway for other purposes such as the erection of telephone lines, etc. But while the public may cause to be removed, obstructions that interfere with the use of the highway, everything that grows upon the half of the highway that was taken from this farmer belongs still to him. He may cut it down and take it away. All rights of the original owner accrue to the purchaser when the land is sold.

## KANSAS STALLION LAWS.

EDITOR KANSAS FARMER:—How do the Kansas stallion laws compare with the Iowa law? Is a fellow violating the law, standing a jack and a grade stallion? Does he have to have license?

A. G. COOK.

Russell County.

The stallion law of Iowa was published in full in THE KANSAS FARMER of May 21. The laws of Kansas regarding stallions are scattered through the statute book and are not so complete as the law of Iowa. There is no license required for keep-

ing stallions or jacks for breeding. Penalty is inflicted for allowing stallions to run at large. The following is quoted from the Laws of 1885, Chapter 192, Section 1: "Any person who shall keep any stock of any kind or description for hire for breeding purposes, and shall wilfully misrepresent or in any manner knowingly falsely advertise the pedigree, stock, or blood of such animal, shall be deemed guilty of a misdemeanor, and shall be punished by a fine not exceeding \$500 or by imprisonment in a county jail for a period not exceeding one year, or both such fine and imprisonment, and shall forfeit to his patrons all pay for services rendered for that season."

The following, in regard to fees for services, is found in the Laws of 1887, Chapter 277, Section 1: "The owner of any stallion, bull, or jack, shall have a lien on the offspring of his stallion, bull, or jack for the full value of the services of said stallion, bull, or jack in the get of said offspring; provided, that at or before the time of foal or birth of said offspring, the owner of the stallion, bull, or jack shall file in the office of the register of deeds of the county where the dam of said offspring is kept, a list of the names of the owners of the dams of said offspring with a description of the dam on whose offspring he claims the lien. Such a lien shall be enforced as other liens upon personal property under chapter 142 of the Sessions Law of 1872 are enforced."

## DISPUTED BOUNDARY LINES.

EDITOR KANSAS FARMER:—Last April the owners had sections one and two of this township surveyed. The line between the two sections is longer by a chain than the Government field notes show. I own the north half of the southeast quarter of section two. The surplus has always been claimed by the men owning the north part of the section. When the surveyor came he found nearly all the outside corners, but the stones which marked the inside lines were some of them gone. The surveyor said the surplus should be divided equally between all owning land along these section lines. This took off some from the south side of my eighty and gave me some on the north side. I set my fence in on the south to conform to the survey, but my neighbor on the north side said, "No, sir, you shall not move that fence till it is settled." Now, the point is, when will it be settled? Isn't that land mine just as much now as it will ever be? And how shall I proceed? I only want what is mine.

We had the county surveyor to do this work and all in section two seemed satisfied and all signed the agreement to let it be permanent.

Jewell County. ALFRED BURGESS.

It is the duty of a surveyor to put the boundaries as near as possible where they were originally placed by the Government surveyor. A number of bits of evidence are accessible to the surveyor in determining this. These are the original marks when they can be found; the field notes of the Government survey; the testimony of old settlers; the fences which have been built on dividing lines. By such evidences as these, the lines of the original survey can generally be pretty accurately determined and much weight is given to them by the courts. When surplus is shown by the field notes, according to the law controlling Government surveys, the entire surplus should be thrown on the north and west half miles of the township.

But where the county surveyor's measurements do not agree with those of the Government surveyor as recorded in his field notes, the county surveyor must assume that his measurement is wrong and make the necessary corrections so that his work shall correspond with that of the Government surveyor. Or as the Kansas Statute—Laws of 1868, Section 6—says: "Said [lost] corners must be reestablished according to the Government field notes, adopting proportionate



T. A. Borman.

THE KANSAS FARMER takes pleasure in presenting the above excellent likeness of one of Kansas' prominent citizens. From his farm he entered upon the work of showing the partons of the great Continental Creamery Company how to get better profits from their cows. His proficiency was such that ere long his services were required in the administrative work of the Continental. Subsequent rises placed him in the position of superintendent. Further recognition made

him president of the Kansas State Dairy Association. His ability as a writer brought him the editorship of the Farmers' Advocate and a part in the new management. Again has promotion come and made him president of the Continental Creamery Company. It is announced that he will continue in the positions of editor of the Advocate and secretary-treasurer of the Farmers' Advocate Company. He is a strong man and will serve both interests ably.



measurements where present measurements differ from those given in the field notes."

The fact that all owners signed an agreement to let the work of this surveyor be permanent, may or may not effect the case. Much depends upon the kind of agreement entered into together with collateral facts.

The Statutes of Kansas provide that a survey by the county surveyor shall be permanent unless an appeal be taken within thirty days from the time the surveyor's report is filed. The surveyor is allowed thirty days in which to file his report after he has made the survey. There may yet be time to appeal from this survey. If the surveyor was prompt in filing his report and the thirty days allowed for appeal have elapsed, this survey probably settles the boundaries permanently.

It is inferred from the statement that, under the supposition that the extra chain not mentioned in the field notes should be given to the north half-mile the lines heretofore recognized were erroneously placed. The occupancy of land under an error of this kind does not probably give title. The man owning the northeast quarter of section two will, therefore, probably have to give up the two acres which he has occupied and claimed under a mistake. While the Kansas statute of limitation generally makes fifteen years adverse possession equivalent to a title, this statute of limitations does not apply to a case like this wherein the possession was mistaken.

The man on the north will doubtless learn on inquiry that it will be necessary for him to give up the two-rod strip which he has mistakenly supposed was his. If he is wise he will do this without waiting to be ejected by suit at law.

## Miscellany

### The Gospel of Good Cheer.

E. C. SIMMONS, CHAIRMAN OF THE EXECUTIVE COMMITTEE OF THE NATIONAL PROSPERITY ASSOCIATION OF ST. LOUIS.

We have formed a business organization to be called the National Prosperity Association of St. Louis—having for its object the encouragement of a return of prosperity sooner than might otherwise occur without help, or without some active efforts on the part of the business men. We believe that present conditions are exceedingly favorable to this. The body—commercial—has been very ill, and in a sense has had typhoid fever, but now the fever has entirely left—the disease is out, and the patient only remains sick and weak, so that permanent recovery is only a matter of time. How to quicken that recovery in a healthy manner is the problem we are undertaking, and we believe in the power of encouragement—by showing to the world at large that conditions are fundamentally sound and healthy, and that nothing now exists but a lack of confidence to restore us to a full measure of prosperity such as existed a year ago. We are making an effort, through the press and through other business associations, and through the traveling salesmen, to encourage the people to see the sunshine that is clearly in the pathway, and to believe that things are very much better than most people think they are, and that with the present crop prospects soon to be realized, if nothing unforeseen occurs in the immediate future, it is only a question of a very short time until the dinner pails will again be full and the unemployed will again be employed at fair wages, and that there will be no reduction in wages of those already employed. We believe there is a great change of sentiment with the intelligent people of the United States, and that it is increasing very rapidly. It therefore seems to us a most propitious time to do what we

can to encourage a quick return of prosperity, to the great benefit of the laboring man and to the benefit of all business interests.

With the full cooperation of the press of the United States—which we hope to have—and with the united efforts of the business associations of all the large cities, we feel confident of our ability to accelerate the speed of returning prosperity to a great degree. It is hardly necessary to say that everybody would like to have wages maintained at the highest figure, and without a cut. There is no doubt as to the wisdom of this course. We are most heartily in favor of it and are working to that end—giving our time and our money to accentuate better conditions and returning prosperity. We hope and expect to have the cooperation of manufacturers, merchants, bankers, railroads, and the labor element—in fact, every business interest of the United States. We ask every business man—and, in fact, every commercial man and house in this country—to lend us their aid—to work with us—to join hands in the gospel of good cheer, and scatter seeds of sunshine in the paths of all whom they meet. If they are pessimists, we want them to become optimists; if they are optimists, we want them to increase their optimism; we want them to hunt for the sunshine; we want them to be cheerful in their manner and in their conversations—in their predictions—in their hopes and aspirations.

Fundamentally, everything is all right—the basis of our prosperity comes from the soil, and the products of the soil have never had greater value than at present. The outlook for crops is marvelously promising. To illustrate—the winter wheat crop—which is the first one of importance that comes to our notice—is better than ever before in the history of this country. Kansas reports a condition of 105 on winter wheat—something heretofore unknown. When the lumber interests shut down, and the railroads laid off a lot of their employees, a large proportion of them went immediately to the farmers, or planters, so that these toilers of the soil have, for the first time in many years, had enough labor to put in a full or large crop—perhaps a larger crop than ever before, and the planting is still going on. With a larger planting than has ever gone into the ground, and with favorable weather, it seems reasonable to suppose that we may have most excellent crops this year—it looks exceedingly probable. Therefore, everything which is the base of our prosperity is right—all that is necessary now is to restore confidence—so that the wheels of commerce begin to move again with the same rapidity that they did a year or two ago, when we were at the height of our prosperity, and from which we went in a wonderfully short time to a very low stage of depression and hard times.

We ask the cooperation of everybody in the United States in this movement—which we think has great merit, and which has great possibilities.

### More Money Astray.

Mr. J. O. Rambo sent some money to THE KANSAS FARMER on subscription account but failed to give his post-office address and it is therefore impossible to credit him. Last week we had a remittance from Lawrence, Kans., from some one who failed to sign his name.

The fame of the only alfalfa club on earth has spread far and wide. Secretary Graham has just received an application for membership in the Shawnee Alfalfa Club from a resident of Bridgeport, Conn. Alfalfa is the most wonderful plant and its importance is being recognized all over the Union. The good which is being accomplished by the Shawnee Alfalfa Club can not yet be measured.

When writing our advertisers please mention this paper.

## WHEN YOUR SUBSCRIPTION EXPIRES

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

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

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

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

### Special Offer No. 1.

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

Review of Reviews.....	\$3.00
Woman's Home Companion.....	1.00
Success Magazine.....	1.00
The Kansas Farmer.....	1.00
Regular price.....	\$6.00

**Our Price \$3.75**

### Special Offer No. 2.

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

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

**Our Price \$5.35**

### Special Offer No. 3.

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

**Our Price \$2.50**

### Special Offer No. 4.

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

**Our Price \$2.00**

### Special Offer No. 5.

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

**Our Price \$3.00**

### Special Offer No. 6.

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

**Our Price \$1.50**

### Special Offer No. 7.

The American Magazine.....	\$1.00
Review of Reviews.....	8.00
Woman's Home Companion.....	1.00
The Kansas Farmer.....	1.00
Regular price.....	\$6.00

**Our Price \$3.75**

### Special Offer on Dailies.

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

Topeka Daily Capital.....	\$4.50	Kansas City Daily Star and Times.....	\$5.50
Topeka Daily State Journal.....	4.00		

### Special Offer on Weeklies.

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

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

### Special Long Time Offer.

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

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

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## Miscellany

### Is the Money Question Being Correctly Settled?

[The following interesting and able discussion of the money question is from the pen of a man of mature years who has been a close observer of monetary events. He has been an occasional contributor to the columns of THE KANSAS FARMER for nearly a quarter of a century and his respect for Kansas conditions and his respect for Kansas intelligence and thought date from the time when he was engaged in farming on a large scale in this State. He now believes that the welfare of the country depends upon appreciation of the situation, and action upon it, by farmers. While not agreeing fully with all of Dr. Miller's positions, THE KANSAS FARMER regards his views as worthy of careful consideration.—EDITOR.]

**EDITOR KANSAS FARMER:**—The questions of sound money and protection to American industries are regarded by most Republicans as the two main pillars on which business prosperity of the country depends. At the present time both the old parties are in a very precarious position in regard to these two great questions. There is a wide difference of opinion between members of both parties in regard to them.

The country at the close of the year 1907 passed through one of the most

**THE VREELAND BILL.**  
The Vreeland Bill asks for 500 to 750 millions of National bank notes guaranteed by the Government and have them issued by the clearing houses and by the combination of the strong banks in the country with such securities as they furnish.

### WHAT THESE PARTIES SAY ABOUT THEIR BILLS.

Senator Aldrich in the speech he made introducing his bill said:

"Mr. President, the financial crisis from which the country has just emerged, which culminated in a serious panic in October, was the most acute and destructive in its immediate consequences of any which has occurred in the history of the country. Nothing but the heroic measures taken by the representatives of the great business and financial interests of the country acting in cooperation with the Secretary of the Treasury, prevented a total collapse of private credit and a disastrous destruction of all values. It is impossible to conceive, much less to measure the losses which would have resulted from such a calamity. The country was saved by the narrowest possible margin, from an overwhelming catastrophe whose blighting effect would have been felt in every household.

forts which were made to avoid the serious results, prevented a general suspension of payments by National banks, with most deplorable and far-reaching results. It is impossible to estimate the losses which were inflicted by this suspension of payments by the banks and the resultant interruption of exchanges."

The total amount of means contributed to stop the panic was, according to Senator Aldrich, about \$467,000,000. Of this the Senator says:

"The clearing-house certificates were unquestionably the most effective.

"Their employment has been beneficial at times in preventing a serious disaster, but it has sometimes resulted, as in 1907, in such a derangement of exchanges as to make it doubtful whether, from the standpoint of the public interest, the disadvantages were not greater than the benefits derived from their issue.

"The great losses which the people of the country suffered from the partial breakdown of our credit system through bank suspensions, and which the abnormal increase in the volume of money and its substitutes, legal or illegal, failed to avert, should lead Congress to seriously consider the question whether it is possible to provide such a legislative remedy as shall pre-

## Simpson-Eddystone Zephyrette Gingham

Remarkably durable new dress gingham of great beauty, fine fabric and absolutely fast colors. These results are obtained by our scientific new process which marks a decided advance in the making of stylish and economical dress gingham.



To insure getting the genuine, be sure to ask your dealer for Simpson-Eddystone Zephyrette Gingham. Write us his name if he hasn't them in stock. We'll help him supply you.

The Eddystone Mfg. Co. Philadelphia

The form of currency now recommended is almost identical to that which brought on the panic of 1907, only the banks pay interest on the notes, and retire them at their pleasure.

### WHAT CONGRESSMAN FOWLER SAYS ABOUT THE QUESTION.

Congressman Fowler in his speech introducing his bill into the House said:

"The importance of this question, Mr. Chairman, can hardly be appreciated. We are dealing with bank resources amounting now to \$19,645,000,000 in this country, while the banking power of all the rest of the world amounts to, according to the same calculation, \$30,500,000,000. In other words, we have in the United States two-fifths of all the banking power of the world; and we produced last year products of various kinds valued at \$25,000,000,000.

### THE WORST FINANCIAL SYSTEM IN THE WORLD.

"Now, everybody knows that there is something wrong, radically wrong, and those who have studied the situation know that we have the worst financial and currency practise in the world instead of the best.

"What is the acute and most urgent question before the American people? What is the question that will not down until the people themselves have settled it?

"What is the immediate and direct cause of the present deplorable situation? What is the cause of the most disgraceful incident in the business life of the nation?

### A BOND-SECURE CURRENCY THE CAUSE OF THE PANIC.

"It is a bond-secured currency which bears no relation whatever to the business of the country."

The difference between the Aldrich and the Fowler Bills is that the Aldrich Bill requires the banks to put up Government, State, or city bonds, and stocks, etc., as security, while the Fowler Bill wants the currency issued upon the bank assets, that is, just the property of the banks with some security of notes which may be valuable to the clearing-house.

Mr. Fowler makes the following statement in regard to our currency during the Civil War:

"In 1863, when Secretary Chase wanted to raise money to carry on the war, he devised this scheme of basing our currency upon Government bonds; and, by imposing a 10 per cent tax upon bank note circulation, compelled the banks to buy United States bonds, and issue circulation based upon them. It was a bond-selling scheme in its inception, and it has never been anything but a bond-speculating scheme."

**THE DANGER FROM ISSUING BANK NOTES.**  
In pointing out the danger to the country from the present bank notes, he says:

"From 1882 to 1891 this bond-se-



Percheron stallion and four mares which won the championship at the American Royal of 1907, owned by J. C. Robison, Whitewater Falls Stock Farm, Towanda, Kansas.

dangerous panics that has ever been known. What was the cause of that panic?

### THE THREE EMERGENCY BILLS.

Three bills have been introduced into Congress for the purpose of making provisions against a repetition of such a panic. One of these bills was introduced into the Senate by Senator Aldrich, the Chairman of the Committee on Banking and Currency in the Senate. Another was introduced by Congressman Fowler, Chairman of the Committee on Finance in the House of representatives. The third was introduced by Congressman Vreeland, of New York. These bills are all of the same stamp. Their aim is to provide what they call "emergency currency" which they think if secured will put an end to all panics in the future.

### THE ALDRICH BILL.

The Aldrich Bill demands the issue of \$500,000,000 more of National bank notes that are guaranteed by the Government, and secured by bonds and stocks of the Government or of the States or cities.

### THE FOWLER BILL.

The Fowler Bill demands the same amount of bank notes, only that they should be issued on the assets of the banks without Government security in bonds to guarantee the payment of the bank notes that would be thus issued.

"Although the total collapse was avoided, yet the injury to business amounted to thousands of millions of dollars.

"It is not my purpose to consider the panic of 1907 with a view of indicating the causes which led to the widespread destruction of confidence which characterized it.

"Serious distrust existed in the public mind as to the value of the security of the whole or some portion of the currency.

"Our currency, in character, was beyond question.

"The aggregate amount of money in the banks of the people had increased from \$877,000,000 in 1897 to \$1,866,500,000 in 1907, an actual increase of \$989,500,000 and a relative increase of from \$12.19 to \$19.36 per capita. Our currency prior to the crisis was adequate in amount to meet all legitimate demands under normal conditions.

"The clearing house transactions in New York increased from \$13,377,760,947 in 1897 to \$95,315,421,237 in 1907. The bank deposits also increased from \$628,200,000 in 1897 to \$1,106,500,000 in 1907.

"We have no means whatever for providing the additional issue necessary to meet or to prevent panic conditions.

"Neither the strength of our monetary system, nor the extraordinary ef-

vent the recurrence of these conditions in the future.

"The suspension of bank payments with its resulting strain upon the credit of the country and its resources, will not be tolerated again.

"Under these circumstances I believe it to be the imperative duty of Congress in its wisdom, to provide some means of escape from another calamitous crisis. There seems to be but one way in which this can be accomplished, namely, by some provision for the authorization of additional notes to be used only in emergencies."

The Senator demands a central bank of issue and central clearing-house with limited banking functions under the Government control, and claims that the sole power of issuing notes be lodged in the banks, the security for such notes to be based upon a general pledge of the assets of the bank, their convertibility to be undertaken by the banks and to depend upon an insurance fund.

At the close of his speech he recommends the ultimate retirement of outstanding United States notes and gold and silver certificates.

Senator Aldrich evidently wants only one kind of paper money in the country and that must be bank notes. He says:

"Bank notes are essentially Government money, the banks being merely the instrumentalities of issue."



cured currency, though the country was expanding and growing in every direction, fell from three hundred and sixty-two millions to one hundred and twenty-five millions; and this, I say, in face of the fact that the period was one of prosperity and expansion. It contracted two hundred and twenty-five millions simply because it did not pay to hold the bonds.

"No, it was simply to pocket the premium that the bonds sold for.

"The bond-secured currency bears no relation to the business of the country, but increases and decreases according to the profit or loss in buying or selling the bonds.

MR. FOWLER'S VICIOUS ATTACK ON LEGAL TENDER NOTES.

"I desire to call the attention of the House to the \$346,000,000 of United States notes still outstanding—mere promises to pay, mere pieces of fiat—issued during the Civil War more than forty years ago, and under the stress of supposed necessity.

"These United States notes have remained to this day a disgrace to our economic wisdom, a monument to our political cowardice, and what is more, a serious menace to our National credit."

Was anything ever uttered more outrageous or more falsely insinuating than this statement? Does not Mr. Fowler know that these notes are as valuable to the people as gold coin itself? What keeps them from being redeemed if anybody wants them redeemed? Any one who holds them can at any time get coin for them if he so desires.

Every one of these statements is without foundation in truth. He does not seem to know what fiat money is. Fiat money is "irredeemable paper currency made a legal tender for debt." The greenbacks are not irredeemable. Every one of them is redeemable in gold coin or bullion at any time, while the banks have not 20 cents on the dollar with which to redeem their notes and pay their deposits and other debts.

THE HORROR OF PRESIDENT CLEVELAND'S TARIFF POLICY.

Again Mr. Fowler says:

"Mr. Chairman, all of us remember the horror of 1895, when the credit of this Nation hung over the precipice of dishonor, and when we were certainly within forty-eight hours—possibly twenty-four hours—of National repudiation, for apprehension had set the endless chain of greenbacks at work, and our one hundred millions of gold had dwindled to forty-one millions of dollars.

"At that critical moment Mr. Cleveland had the intelligence, the courage, and the patriotism to grasp this monster by the throat, and, against the protests of practically the entire Democratic party, appeal to that great financier, Mr. Morgan, through whose aid our National honor was maintained by controlling the exchanges until we could recoup our gold."

Was ever a statement uttered by a member of Congress more ridiculous than these statements? The critical moment of 1895, was when Mr. Cleveland found that there was not money enough in the treasury to pay the current expenses of the Government. His tariff policy had caused a falling off of custom receipts to the extent of \$71,000,000 during his first year, and during his entire term the receipts were \$203,122,589 less than during the preceding term under Harrison. (See page 90 of Finance Report for 1907.) "That great financier, Morgan," saw a good chance to buy Government bonds at 4 per cent interest, with which he could get more bank notes and he got them, and by this means increased the bonded debt just that amount, and it has been fastened upon the people for thirty years.

THE SLUMBERING DANGER.

Mr. Fowler says:

"Mr. Chairman, who can tell when this slumbering danger shall again threaten the credit of the Nation and shake the finances of the Government and the commerce of the United

States to its very center? Do we not know that we are carrying \$700,000,000 of bank notes, \$6,000,000,000 of silver, and \$346,000,000 of greenbacks on a mere pinpoint of gold amounting to only \$15,000,000? And yet it is suggested that we may with safety add \$250,000,000 more of Government guaranty of paper, or \$500,000,000 more of Government paper; yes, a billion more of Government paper, which must in the very nature of things lead on to hundreds of millions and billions more of fiat."

The only trouble with our present currency is the enormous issue of bank notes, and Mr. Fowler is right in wanting no more of them. What the people want is legal tender notes in the place of these cowardly swindling bank notes. Let Congress put a legal tender note in the place of every National bank note and they will stop all panics; business will revive, confidence be restored, and everything move along more smoothly and harmoniously and prosperously than ever before. There is now sufficient gold and silver in the treasury and in circulation to redeem every dollar of our gold and silver certificates, United States notes, bank notes, and treasury notes, and still leave a surplus of over \$90,000,000.

THE LEAK IN THE DYKE. THE HERCULES OF FINANCE.

Mr. Fowler says:

"Mr. Chairman, I do not believe that I am far from the exact truth when I say that the unfortunate experiences through which we have passed during the last three months had their beginning, and were precipitated by conditions that were wholly due to this character of banking in New York City.

"What was the situation? The trust companies of New York had been making war upon the National banks of New York for years by bidding up on deposits. The Knickerbocker Trust Company, because, of course, it was not compelled to carry adequate reserves, would take a deposit from everybody, practically, and give 4 per cent on it. Its required cash reserve was just 5 per cent. Of course, it could take deposits from the National banks who could not possibly afford to pay more than 2 per cent in reason. The story of the Knickerbocker was only the story of several others. Hence a feeling grew up in that city that amounted to actual war between the National banks and trust companies which had withdrawn from the clearing-house association, because, forsooth, the National banks insisted upon their carrying larger reserves.

"When this trouble came on and the Knickerbocker appealed for help, at the conference to consider the application, one president of a National bank said, 'If I had my way I would let every trust company go to the wall; I would make an example of such banking methods.' To this Mr. Morgan replied: 'You don't know what you are saying. There is a leak in the dyke, and you can stop it now by putting forth your hand. Later on you may throw your dead body into the breach without being able to stop the flood.'

"What might have happened in New York City, what might have happened to the whole country, no one will now ever know. Mr. Morgan, a giant of giants, the Hercules of Finance, a banker statesman, a banker patriot, a man with a great heart as well as a great intellect, stood like Gibraltar protecting the nineteen billions of resources of our banks, protecting the occupations of 25,000,000 American men and women, protecting the National welfare against the consequences of a more destructive, terrific and appalling cataclysm than has ever swept over the commerce of the country.

"Is it wise to remain in a position where you must depend upon some one man? And who will take his place when he is gone? Is it not high time that we had a scientific, sound, and wise system of finance and currency—one that can stand alone; one

## Which Do You Prefer



Profit Makers

or

Profit Takers



It means Profit Making for you to thoroughly rid your poultry houses and poultry of "profit takers" at the earliest possible moment. **Red Label Lice Killer** is easily used and quickly destroys all lice and mites. To thoroughly rid your poultry of lice and mites paint the roosts and dropping boards with **Red Label** direct from the can. The fumes will kill the vermin.

## RED LABEL LIQUID POULTRY LICE KILLER

AND DISINFECTANT

Mixes Readily With Water; Makes a Perfect Emulsion.

To effectively rid your poultry house of lice and mites spray or sprinkle every nook, crack or crevice with one part **Red Label** mixed with twenty parts water and you can be assured that every "profit taker" will be killed. In addition to destroying the lice and mites **Red Label Lice Killer**, being a strong and efficient disinfectant will kill every germ and prevent poultry diseases. Guaranteed under Food and Drug law, Serial 4809.

Cans Are Full Standard U. S. Measure.

**At Dealers** Quart, 35c; half-gallon, 60c; gallon, \$1. If your dealer cannot supply you, or will not order for you, we will ship a trial gallon, express paid east of Rockies, on receipt of \$1.25. Satisfaction guaranteed. Send for booklet.

**Moore Chemical & Mfg. Company**  
827-29 S. W. BLVD. KANSAS CITY, MO.

Made by the makers of Car-Sul Dip for Hogs, Sheep and Cattle. Booklet Free.



that can stand the strain of contracting credit when the hour comes?"

Yes, it is "high time we had a currency that can stand alone"—"one that can stand the strain." etc., and the United States legal tender notes will do it every time. There will be no need of any "one man" to lean upon, for the money will belong to the whole people and every man will help in its upholding.

COMMENTS ON THE ABOVE.

The foregoing is a very correct picture of the immediate cause of the late panic. It started in a fight between the National banks and the trust companies.

It is reported that the National banks took a large amount of their own funds and deposited them in the Knickerbocker Trust Company for the purpose of teaching that company a lesson, and at the proper time they withdrew their deposits from the Trust Company. This attracted the attention of other depositors and hence the run that took place on the Knickerbocker, which probably was as sound an institution of that kind as any in the country; but when it started on one trust company it went on to others and finally to the National banks.

The "Hercules of Finance" knew exactly what must be done in order to stop this panic. He already had his clutch on the United States Treasury and he simply requested aid from the Government, and the Hercules part of the transaction came from his having the Secretary of the Treasury to help him stop the "leak in the dyke." It is currently reported that his net profits out of his efforts were \$8,000,000.

It is to be hoped that the lesson taught by this panic will open the minds of the masses of the voters and lead them to see that an end should be put to this National bank scheme

of issuing money. Ever since the close of the Civil War, the National banks have been at war with the legal tender notes, and why the members of the Finance Committee at Washington do not see the true way to forever settle the question of money and panics, it is beyond the ability of ordinary minds to conceive.

United States legal tender notes will meet every requirement. What the people want, and what the country needs, is to have Congress make provision for the Secretary of the Treasury to issue \$700,000,000 of legal tender notes, and put them in the place of the bank notes that are the cause of the trouble. You can not mention an enterprise that requires money but what the legal tender notes will fill the bill just as well as gold coin, except it is in our transactions with foreign countries.

E. P. MILLER.

11½ East 29th St., New York City.

In the Portland cement industry, Pennsylvania, with a production of 20,393,965 barrels in 1907, valued at \$19,698,006, is the leading State by a large margin. New Jersey, with an output of 4,449,896 barrels, worth \$4,738,516, is second; Indiana, with a production of 3,782,841 barrels, valued at \$4,757,860, is third; Michigan is fourth, with an output of 3,572,668 barrels, valued at \$4,384,731; and Kansas fifth, with an output of 3,353,825 barrels, valued at \$4,240,358. These five States contributed almost three-fourths of the total production, and none of the remaining States produced as much as 3,000,000 barrels during the year.

Nor scour the seas, nor sift mankind,  
A poet or a friend to find;  
Behold he watches at the door,  
Behold his shadow on the floor.  
—Emerson.



## Field Notes

## LIVE STOCK REPRESENTATIVES.

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

C. W. Taylor, who owns the Pearl herd of Shorthorns, Route 2, Enterprise, Kans., states that he has sold 8 head of bulls to go to Western Kansas in the last few days since THE KANSAS FARMER representative, Mr. Hutchings, visited his place and that the demand for helper stuff has been very strong. He says that his cattle are doing very nicely and that grass is farther advanced than it has been for several years at this season. The Pearl herd is headed by Scottish Ruler 365500, Royal Hero 246747, Headlight 2d 243305, and Bold Knight 179054. By referring to Mr. Taylor's advertising card it will

## Freelove's Tamworths.

At Carbondale 18 miles southwest of Topeka, is located the fine herd of Tamworths owned by G. W. Freelove. Mr. Freelove owns the largest and best herd of this valuable breed of swine in the State, and he has spared neither time nor expense in securing and producing some of the best specimens of this valuable bacon breed that we have seen.

Last year Mr. Freelove sent East and purchased at a long price, from O. I. Simpson of Palmer, Ill., the best boar produced in his entire crop.

This fellow was named Simpson's Select, and has grown out one of the best individuals of the breed that we have ever seen. He not only has size and finish, but is proving an outstanding breeding animal.

Mr. Freelove's entire spring farrow of 53 pigs are by him, and they are certainly good ones, with broad, thick-fleshed backs, fancy heads and ears, good bone, and are chuck full of quality.

There are 12 sows of breeding age in the herd, among which are some outstanding individuals, and all of them

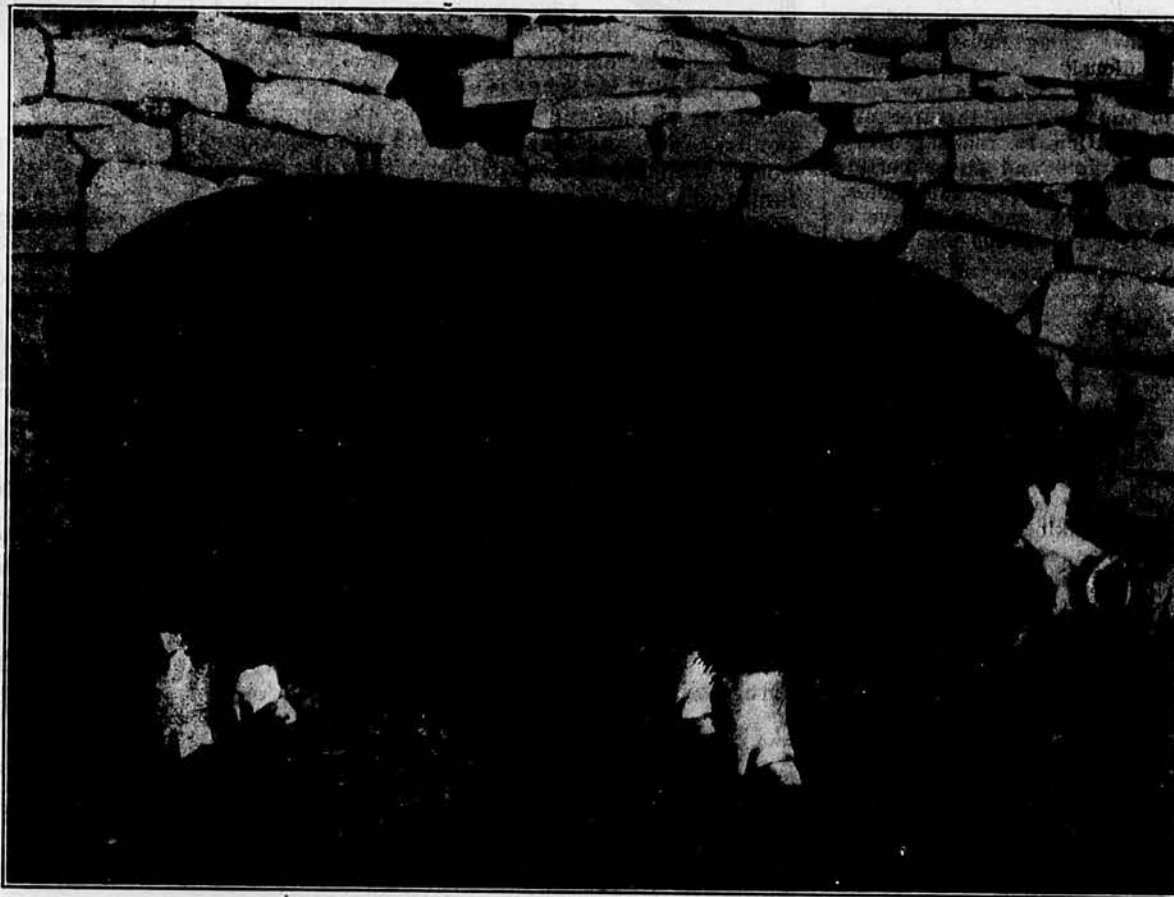
Keep On Prince is a grand good individual himself and possesses the ability to transmit this degree of excellence to his get, which is the supremest testimony of the value of a breeding boar.

Mr. Divinia claims October 8 as the date for his next annual sale.

## Don't Overlook This.

August Johnson, of Clearwater, Kans., is offering for sale through his advertisement in THE KANSAS FARMER five Hereford males of serviceable age that are the tops of that year's entire crop of bulls. These are growthy, thrifty fellows, with plenty of bone and stretch, and have lots of quality. Mr. Johnson says that they are among the best of the many good ones that he has raised. He is also advertising a few choice young females for sale. This young stuff is by his chief stock bull, the 2,400-pound Dale Duplicate 2d, a son of the great Columbus, and are out of some of his best cows.

Maplewood Herefords have established a reputation for size, bone, finish, and breeding qualities, and any of these young things, will be a good



We take pleasure in calling attention to the cut of Revelation, one of the Guthrie Berkshire herd boars. Revelation was very fitly named. He is a "Revelation" practically in every respect. He is not only a prize-winner himself, but his pigs are prize-winners. He is acknowledged to be one of the greatest sires in existence, and is especially noted as the boar who has never sired a pig that had poor feet. It would be very hard to fault him in any way, and he is one of the most intelligent hogs that we ever saw. He is one of the most popular boars in America. He has a beautiful head, long, deep body, very wide, and stands on the best of feet of any Berkshire boar of our knowledge. He is big and strong, and for all of his size, he is neat, smooth and active, and measures and weighs beyond the guess of everybody, and with all, has a most excellent disposition, which is one of the strongest traits of any animal. Better than this, are the pigs sired by him. They are not only typical Berkshires, with the best of dispositions, but the smooth, easy feeding kind, that gladden the heart of every hog man.

be noted that he has some very choice young bulls for sale. These are a good lot and well grown. They are either solid red or roan, and are of the early maturing and easy keeping kind. The yearling and two-year-old heifers are far above the average.

J. C. Robison, who owns the big Percheron breeding establishment known as Whitewater Falls Farm at Towanda, Kans., is just in the midst of alfalfa and clover cutting. On May 30 he writes, "I wish that some of the fellows who think that Mammoth Red clover will not grow in Kansas could see my clover meadow that I am mowing now and also my stallion pasture, either of which will make two and one-half tons per acre for this cutting. It is the best I ever saw. I sowed 125 acres more of alfalfa and clover this spring and got a fine stand on all of it. My pastures of mixed clover, alfalfa, and English blue grass that I sowed last year are simply fine. I am now feeding 60 Percheron mares and young stallions for my sale to be held on February 16, next. I want to say right here that THE KANSAS FARMER is doing me lots of good in making sales of my Percherons."

A visit to Mr. John Brennan at his home in Esbon, Kans., last week found him busy taking care of his correspondence for sales and sale dates for the fall and winter, but not too busy to have a good word to say for the breeders and stock in his and adjoining counties. Rarely do we meet a man who is so broad minded and full of good stock judgment and ability. And we have not spent a more pleasant or profitable hour in a long time. Mr. Brennan is known as the Jewell County orator and this, coupled to his sound stock judgment, his knowledge of the correct breed types, and family lines that nick well together to produce the best results, his large acquaintance with the farmers and stockmen through the Middle West has placed him in the foremost ranks as a seller of fancy stock. Any one wishing to secure an auctioneer for their fall or winter sales can not do better than correspond with Mr. Brennan for terms and sale dates. His card will be found elsewhere in this paper.

are very prolific. We were shown several fine litters of ten pigs each.

Mr. Freelove has great faith in this, his favorite breed of hogs, and they have certainly not disappointed him in any way. They are very prolific, invariably farrowing and raising large thrifty litters. They are growthy, and easy feeders, and when placed in the fattening pen take on flesh rapidly. They are an ideal bacon hog on account of their long, deep sides, and because their flesh is well marbled with lean.

Mr. Freelove's herd will certainly be headquarters for Tamworths this fall. Watch for advertising which will soon appear in THE KANSAS FARMER, and in the meantime let him book you for a pig, a pair, or a trio. Mr. Freelove has different families and can sell you pigs not related.

## Divinia's Good Poland-Chinas.

Out at Cameron, Mo., there lives a young breeder of Poland-Chinas (J. M. Divinia, by name) who is destined to make his mark in the breeding world.

In addition to being a good judge of hogs, he possesses that power of decision that is so necessary to the successful conduct of any business, he knows what he wants and does not buy simply because somebody has advised him to do so, but because he sees his need.

He carries the same wisdom and judgment in the building and maintenance of his herd that the successful business man does in manipulating the affairs of a substantial commercial enterprise.

Some time ago he felt the need of a boar to place at the head of his herd, so he set out to look for a hog that in his judgment would nick well with his sows and produce the best results.

His eye finally fell on a young boar by Keep On and out of a Chief Perfection 2d dam. In this pig he thought he saw a future, so he bought him and gave him the very best sows of his herd and the result is a grand lot of youngsters of the Poland-China persuasion.

On this farm there are 75 healthy, robust pigs of this spring farrow that are full of possibility, and promise, and most of them to the credit of Keep On Prince. (This is the hog we have been talking about.)

"buy" at Mr. Johnson's attractive prices.

If you are in the market for something good write Mr. Johnson and mention THE KANSAS FARMER. His address is Clearwater, Kans., which is located twenty miles south of Wichita on the Santa Fe and Missouri Pacific. Prospective buyers would do well to visit the herd and inspect these cattle.

## Last Call for Hayes' Shorthorn Sale.

The leading Shorthorn event of the season will be the sale of 40 richly bred Scotch and Scotch-topped cattle at Olathe, Kans., Thursday, June 11. These are from the herd of H. E. Hayes who is known as one of the most careful and discriminating breeders of Shorthorn cattle in the State. His offering, which has been carefully selected and well fitted, will consist of 30 choice females and 10 extra good young bulls of serviceable age. Nearly one-half of the entire offering will be straight Scotch, the remainder will be Scotch-tops, with only a few outcrosses.

In Mr. Hayes' consignment will be 25 young things by Lord Banff 2d, one of the greatest breeding sons of Imp. Lord Banff. A dozen of his heifers are bred to Baron Marr, a son of the International champion, Cumberland's Last, dam Imp. Lady Moore.

The attractions of this sale are numerous, among them are the roan yearling bull, Cumberland's Last; Commodore, a roan Duchess of Gloster by Lord Banff 2d, Spartan Champion, a red Village Blossom by Prince Imperial 2d; Victoria of Meadow Farm by Baron Goldust 3d; Norwood Jennie Lind by Imp. Red Knight, and a sire of many prize-winners; Ingie Queen by Ingleside, a good breeding son of Ingleside, who sired several St. Louis World's Fair winners; Choice Violet, a two-year-old Marsh Violet, by Choice Goods, Jr., one of the best breeding sons of the celebrated Choice Goods; two yearling daughters of Imp. Mutineer, out of the same dam as the Champion Whitehall Marshall.

The individuality of these cattle in every way equals their breeding, and there are many others that we have not mentioned that should be classed among the attractions. In addition to

You Can't Talk  
It too strong. What?Gombault's  
Caustic Balsam  
As a Liniment  
For the Human Body

Springfield, O., Sept. 10, 1904.  
Lawrence-Williams Co., Cleveland, O.—Lewis Kestler, Urbana, R. F. D., a farmer, had a bad cancer on back of his hand. When I first saw it he was on his way to have his hand amputated. I persuaded him to first try GOMBALT'S CAUSTIC BALSAM, which he did, and on second application could rest well at night—the first for weeks. In less than three months he was at work on the farm. He will certify to this statement over his signature. Then Mr. Jenkins, storekeeper and postmaster at Sed, O., had a bad cancer on his cheek-bone. I saw him at a grange meeting and told him to use CAUSTIC BALSAM twice a day, rubbing it in for five or ten minutes. In three months it was healed over and is now all sound. These two are all that I have the address of just now. I have had CAUSTIC BALSAM used on old shin sores. One man had walked with crutches for more than a year, and several pieces of bone had come out. I persuaded him to try CAUSTIC BALSAM, and today you would not know he was ever lame. Then, it is a sure cure for piles, using it with sweet oil. I could tell of dozens of cases where I have induced different ones to use CAUSTIC BALSAM. I have been the means of more than fifty bottles being bought, because I know just what it will do. You can't talk it up strong enough. I wish you success.  
R. L. HOLMAN,  
In charge Co-operative Work of Ohio State Grange.  
Price \$1.50 per bottle. Sold by druggists, or sent by us express prepaid. Write for Booklet H.  
The LAWRENCE-WILLIAMS COMPANY, Cleveland, O.

## SCOURS Cured in pigs, calves, colts and sheep by feeding ANTI-SCOUR. Send for circular. The Agricultural Remedy Co., Topeka, Kansas.



DEATH TO HEAVES  
Guaranteed  
NEWTON'S Heave, Cough, Diarrhea and Indigestion Cure. A veterinary Remedy for wind, throat and stomach troubles. Strongly recommended. \$1.00 per can. of dealers, or exp. prepaid. The Newton Remedy Co., Toledo, Ohio.

## Learn Auctioneering

at Jones' National School of Auctioneering and make from \$2,000 to \$5,000 a year. Summer term opens July 20. Free catalog. Carey M. Jones, Pres., 1215 Washington Boulevard, Chicago, Ill.



For getting in foal from 1 to 6 mares from one service of a stallion or jack, \$3.50 to \$6.00. Safety Impregnating Outfit, especially adapted for getting in foal so-called barren and irregular breeders, \$7.50. All goods prepaid and guaranteed. Write for Stallion Goods Catalog.  
CRITTENDEN & CO., Dept. 31, Cleveland, Ohio.



GALL CURE  
Money refunded if Bruises, Cuts, Harness and Saddle Galls, Scratches, Grease Heel, Chafes, Ropes Burns and similar affections are not speedily cured with Bickmore's Gall Cure. The old and tried remedy for these troubles. At all Dealers. Be sure you get Bickmore's. Above trade-mark on every box. Sample and Horse Book 10 cents.  
Bickmore Gall Cure Co., Box 916, Old Town, Maine.

## Barnett SYSTEM GUARANTEED LIGHTNING PROTECTION

FARMERS! Have your buildings any protection from the unexpected dangers of lightning? If not, we ask you to investigate the Barnett System of Copper Cable Lightning Rods. Our rods are over 98% pure copper. Are scientifically made and endorsed by Mutual Insurance Companies. Guaranteed to protect. Investigate!  
Write today for catalog and booklet explaining the Barnett System and prices. We want honest, reliable agents in every territory not already taken up. Special terms to agents. Investigate! Address  
Cos. Barnett & Co., Dept. 26, Riverside, Ia.

these, the Scotch and Scotch-topped animals that will be offered are more than a useful lot. One of the special features of this sale will be the large number of big, lusty calves at foot, among which are a number of show prospects. These are largely sired by Lord Banff 2d, chief stock bull in Meadow Farm herd. This will be one of the best opportunities of the year to obtain foundation material or new blood for your herd. Everything points to higher prices for good cattle, and there can be money saved by attending this sale and buying now.

Look up Mr. Hayes' advertisement in this issue of THE KANSAS FARMER and write him for a catalogue and arrange to attend this sale.

## Pitcher &amp; Son Will Hold Fall Sale October 22.

T. B. Pitcher & Son, proprietors of Shady Lawn herd of Poland-Chinas, have claimed Thursday, October 22, for the date of their fall sale.

The Pitchers are among the oldest settlers in this part of the State, and their beautiful place, Shady Lawn Stock Farm where their up-to-date herd of Poland-Chinas are kept, is located six miles north of Topeka.

Pitcher & Son believe in having the best, and have spared neither time nor expense in securing some of the best blood-lines of the breed. Their herd is headed by Great Excitement 45645, a good breeding son of Meddler 2d 11111. He is a thick fleshed, mellow individual with good bone and excellent feeding qualities. His dam is Excitement 109921 by Corrector, which makes him



a three-fourths brother to Voter, the \$5,000 show boar owned by Smitz Bros. of Alma, Kans. The matrons of the herd are sired by such well-known sires as Meddler the World's Fair champion, Chief Perfection 2d, one of the greatest sires of the breed, Kemp's Perfection 2d, Empire Chief, by Empire Chief, Medium Chief, a grandson of Mo. Black Chief, Reid's Perfection by Chief Perfection 2d, and Kansas Tecumseh by that king of the breed, Chief Tecumseh 2d. These sows are a smooth, uniform lot, with plenty of size, bone and finish, and very prolific, 12 of them farrowed 81 pigs this spring and are raising 72 of them in splendid shape. A most prolific family is represented in the herd by Whiteface Queen, a granddaughter of Chief Perfection 2d out of Model Queen. Her average has been 10 pigs to the litter, her mother, Model Queen averaging 10 pigs for 8 litters, and her grandmother 10 pigs for 13 litters. A number of choice females from this prolific family are doing good service in the herd.

The Pitchers are excellent feeders and developers, and this young stuff is being brought along in a manner that will insure a choice growthy lot of stuff for their fall trade and sale. One thing that attracted our attention was the very careful manner in which Wm. Pitcher, the junior member of the firm, kept the herd records. There is no guess work in this herd, but every animal is carefully marked and recorded, and a complete history of each litter is kept, so that those ordering from Shady Lawn Stock Farm can be positive of the blood-lines of the animals they purchase.

Watch for future advertising in THE KANSAS FARMER, and for the best in Poland-Chinas write T. B. Pitcher & Son, Station A, Topeka, Kans., and don't forget that October 22 is the date of their fall sale.

#### Harshaw's Successful Poland-China Sale.

H. H. Harshaw's public sale of the big Poland-Chinas at Butler, Mo., which took place May 30, was in every respect a pronounced success.

Much had been said through the columns of the agricultural press as to the size and quality of the offering that he was preparing for this event, and when the animals were run into the ring it was everywhere manifest that the picture had not been overdrawn. The hogs were in the best of condition and carried that style and finish that comes from careful and systematic breeding and feeding.

Notwithstanding the sale fell on a holiday the big tent that had been prepared for the occasion was packed to capacity by enthusiastic breeders and farmers. Col. R. L. Harriman, of Banecton, Mo., opened the sale with one of his characteristic addresses and in an able and forceful manner conducted it to an eminently satisfactory conclusion. He was assisted in the effort by Colonels Robbins, Williams, and Green, and obtained the nice average of \$46.50.

The following is a list of the representative sales:

1. G. B. Appleman, Drexel, Mo.	\$50.00
2. Fred Merton, Creighton, Mo.	42.50
3. W. H. Charters, Butler, Mo.	39.00
4. J. R. Young, Richards, Mo.	30.00
5. J. C. Patterson, Marshall, Mo.	34.00
7. I. A. Novenger, Kirksville, Mo.	97.50
8. G. B. Appleman, Drexel, Mo.	50.00
9. Frank Michael, Erie, Kans.	50.00
11. W. A. Baker, Butler, Mo.	42.50
12. Frank Michael, Erie, Kans.	55.00
13. Francis Prockish, Westmoreland, Kans.	47.50
14. F. E. Muller, Hamilton, Mo.	30.00
20. W. A. Baker, Butler, Mo.	50.00
21. H. O. Sheldon, Wichita, Kans.	58.00
22. C. E. Robbins, Amoret, Mo.	50.00
23. Frank Michael, Erie, Kans.	100.00
25. O. F. Feldmeir, Appleton City, Mo.	50.00
26. O. F. Feldmeir, Appleton City, Mo.	100.00
27. Daniel Cresap, Rich Hill, Mo.	47.50
28. J. R. Young, Richards, Mo.	40.00
29. H. O. Sheldon, Wichita, Kans.	74.00
30. Fred Morgan, Creighton, Mo.	66.00
31. O. F. Feldmeir, Appleton City, Mo.	49.00
32. O. F. Feldmeir, Appleton City, Mo.	50.00
34. F. E. Muller, Hamilton, Mo.	51.00
40. C. S. Nevius, Chiles, Kans.	49.00

#### Cedar Lawn Durocs.

F. M. Buchheim of Lecompton, Kans., proprietor of Cedar Lawn herd of Durocs is making a change of copy in this issue, and is offering special bargains for thirty days on a choice lot of fall males and gilts. These are by Parker 67633, and they are extra good ones, well grown, with good heads, fine color, and lots of quality. The gilts will be sold open or bred to Long Wonder 21867. Mr. Buchheim is also offering Parker for sale or will trade him for young females. Parker 67633 is a grandson of the famous Parker Mc., and is being sold through no fault of his own, but because he can no longer be used on the herd. He is an excellent individual, is only two years old, and has proved himself a strong breeding animal. Mr. Buchheim is located about three miles from Lecompton, Kans., and prospective buyers telephoning him from town will be called for and returned to the station. Anyone needing good stuff at reasonable prices will do well to write Mr. Buchheim at once.

#### Duroc Prospects at the Watts & Dunlap Farm.

One of the good Duroc-Jersey herds of Missouri is the one owned by Messrs. Watts & Dunlap, of Martin City, Mo. These gentlemen are breeders of considerable ability and are producing a lot of hogs that are well up to the standard in point of quality and excellence with that of the good Duroc herds of this country. Last fall they had a show herd on exhibition at some of the best live stock shows of the country and made a creditable record. They now have about 100 spring pigs sired by Durling, a grandson of Proud Advance, and Emperor, a grandson of

Nevada Prince. These pigs are doing fine and are the best bunch, take them all through, that they have ever produced. These gentlemen will hold their annual sale on October 26, at Independence, Mo., and are planning for a bred sow sale in the late winter, and if nothing happens to them from now on they will have an offering that will warrant the support of the very best breeders of this character of swine. Watch these columns from time to time for further mention of this good herd.

#### Stewart & Downs' Shorthorns.

We call the attention of our readers to the change in Stewart & Downs' advertisement in this issue of THE KANSAS FARMER. They write us that they have recently sold three of their bulls through their KANSAS FARMER advertisement, one of these is the straight Scotch bull Scotch Sybil. He has gone to head the Shorthorn herd at the Hutchinson reformatory. This young fellow, who is a two-year-old, was sired by Scottish Count, dam Long Branch Sybil 23d by Victoria Baron, and is in every way qualified to head a good herd. Stewart & Downs write that they only have one more bull of serviceable age, and he will be sold at a reasonable price if taken soon. They also have a very fine line of heifers by Forest Knight. They might be induced to part with a few of these, and they would certainly be a good buy for any one desiring choice young females. Reno County herd is headed by Forest Knight by Gallant Knight and Victor Archer by Victor. These are both great breeding bulls, and are exerting a strong influence on the herd. Prospective buyers would do well to write Stewart & Downs in regard to this young stuff. In doing so please mention THE KANSAS FARMER.

#### Savage for Governor.

M. W. Savage, who is well known to many Kansas people by reason of his ownership of the horse Cresceus which made an exhibition mile on the Topeka track some time ago and also because he is the owner of the International Stock Food manufactory at Minneapolis, Minn., received a very flattering testimonial from his townspeople the other day. At a mass meeting which was called for the purpose Mr. Savage was endorsed as their candidate for governor by the unanimous vote of the people in attendance. The resolutions voicing this action were very complimentary to Mr. Savage's honesty, integrity, and business ability.

#### A Reliable Commission Firm.

One of the most successful institutions at the Kansas City Live-Stock Exchange is the Evans-Snyder-Buell Company, who are live stock commission agents there.

This concern has been located at Kansas City for a great many years, and has always given very satisfactory services to its customers. They have offices also at Chicago, St. Louis, and Fort Worth, and are prepared in every respect to give the best services at all times.

The readers of THE KANSAS FARMER will do well to remember them when shipping stock to any of these points.

#### THE MARKETS.

##### Kansas City Grain.

Kansas City, Mo., June 1, 1908. Receipts of wheat in Kansas City to-day were 188 cars. Friday's inspections were 45 cars. Shipments, 74 cars; a year ago, 66 cars. Prices were generally unchanged, with the demand unequal to the liberal offerings. More than 100 cars of wheat were carried over unsold and some late sales were said to be lower. The sales were: Hard wheat—No. 2, 1 car 99c, 1 car 98½c, 1 car 98c, 3 cars 97½, 2 cars 97c, 1 car 96c, 2 cars 95½, 6 cars 95c, 4 cars 94½c, 12 cars 94c, 1 car 93c; No. 3, 1 car 98c, 3 cars 96½c, 10 cars 93c, 4 cars 92½c, nominally 91½c; No. 4, 1 car 93½c, 6 cars 93c, 2 cars 92c, 1 car 91½c, 1 car 91c, 2 cars 90½c, 1 car 90c, 2 cars like sample 78c, nominally 84½c; rejected, 1 car 82c; no grade, 1 car live weevil 80c, 1 car live weevil 82c, 1 car live weevil 78c. Soft wheat—No. 2 red, nominally 96½c; No. 3 red, 2 cars 95c, 2 cars 94c, 1 car like sample 92c, 1 car like sample 91½c; No. 4 red, nominally 89½c; no grade, 1 car live weevil, 93c. Durum wheat—No. 2, 1 car fancy 85c, nominally 81½c.

Receipts of corn were 42 cars; Friday's inspections were 26 cars. Shipments, 26 cars; a year ago, 51 cars. Prices were 10c higher, with a good demand. The sales were: No. 2 white, 1 car 70½c, 8 cars 70½c; No. 3 white, 1 car 70½c; No. 2 mixed, 9 cars 70c, 6 cars 69½c, 2 cars 69c; No. 3 mixed, 1 car 70c, 1 car 69½c, 2 cars 69c, 1 car ear 69c; No. 2 yellow, 5 cars 70c; No. 3 yellow, 1 car 69½c. Receipts of oats were 14 cars; Friday's inspections were 4 cars. Shipments, 8 cars; a year ago, 6 cars. Prices were unchanged to 1c higher. The sales were: No. 2 white, 1 car 53½c, 3 cars 53c, nominally 52½c; No. 3 white, 1 car fancy 54c, 1 car 53½c, 3 cars 53½c, 1 bulkhead car color 53½c, 1 car 53c, nominally 52½c; No. 2 mixed, 1 car 53c, nominally 51½c; No. 3 mixed, 1 car light color 53c, nominally 50½c; No. 4 mixed, 1 car 50c. Barley was quoted at 60½c; rye, 74½c; flaxseed, \$1.02; kafir-corn, \$1.15; per cwt.; bran, \$1.10; 1.11 per cwt.; shorts, \$1.12; 1.17 per cwt.; corn chop, \$1.27; 1.31 per cwt.; millet seed, \$1.65; 1.35 per cwt.; clover seed, \$8.15 per cwt.

The range of prices for grain in Kansas City for future delivery and the close to-day, together with the close Friday, were as follows:

	Open.	High.	Low.	Closed to-day.	Closed Sat.
July	81	84½	83½	84½	83½
Sept.	81½	82½	81½	82½	81½
July	62½	64½	62½	63½	62½
Sept.	59½	60½	59½	60½	59½
Dec.	51½	52½	51½	51½	50½

Buyers took little interest in the hay market and only 30 cars out of the 88 received were sold. Timothy was especially weak and all grades except No. 3 were quoted 50c lower. Receipts included 55 cars of prairie, 10 cars of timothy, 12 cars of clover mixed, 8 cars of alfalfa, and 8 cars of straw, a total of 88 cars, compared with 71 cars a week ago and 100 cars a year ago.

UNTIL Ammatite was put on the market a few years ago, practically everybody who used ready roofings had to paint them regularly. Some of the roofings required a coat every year; others every two or three years.

In all cases a good deal of expense and trouble was involved. The popularity of Ammatite is largely owing to the fact that its use does away with all such trouble and expense. This is due to its real mineral surface which is far more durable than any paint made. It is not affected by weather and will last indefinitely.

All that is necessary after laying an Ammatite roof is to leave it alone. Leaks and dissatisfaction are left behind.

Every practical man will doubly appreciate the "no-paint" idea when we add to that statement the fact that Ammatite is lower in price than most of the "paint me every two years or leak" roofings.

In addition, Ammatite with its smooth lap edge, is easy to lay, and the necessary nails and liquid cement for laps are supplied free, packed conveniently in each roll.

Can any reasonable man ask more!

A Sample Free. Write to nearest office today.

Illustrations at top, from left to right, show: Chas. Johnson's residence, Atlantic City; East Machias Lumber Co., East Machias, Me.; Walton Skating Rink, Lockport, N. Y. All covered with Ammatite.

BARRETT MANUFACTURING COMPANY,

New York, Chicago, Philadelphia, Boston, Cleveland, Cincinnati, Minneapolis, St. Louis, New Orleans, Allegheny, Kansas City.



Quotations are as follows: Choice prairie, \$9.50@10; No. 1 prairie, \$9@9.50; No. 2 prairie, \$7.50@8.50; No. 3 prairie, \$5.50@7; timothy, choice, \$11@11.50; No. 1 timothy, \$10@10.50; No. 2 timothy, \$8@9.50; No. 3 timothy, \$6@8; clover mixed, choice, \$9.75@10.75; No. 1, \$8.75@9.25; No. 2, \$7@8.50; No. 3, \$6@7; clover, choice, \$9@9.50; No. 1, \$7.50@8.50; No. 2, \$6.50@7.50; No. 3, \$5@6.50; new alfalfa, choice, \$13@14; No. 1 alfalfa, \$11@12.50; No. 2 alfalfa, \$9.50@10.50; No. 3 alfalfa, \$7@8; wheat and oat straw, \$4.

#### HIDE AND WOOL.

Prices of hides are no higher, but a better feeling prevails in the markets, owing to the improved quality of the offerings.

Manufacturers are buying wool more freely. Local dealers report an improvement in the market, with slight advance in some cases.

Quotations for hides are: Green salted, No. 1, 7c; No. 2, 6c; side branded, over 40 lbs., flat, 6c; under 40 lbs., ½ per lb. less. Bull hides, No. 1, 6½c; No. 2, 5½c.

Quotations for wool are as follows: Missouri and similar bright medium, 16@16½c; pounds; territory and Western medium, 14@16c; fine medium, 12@14c; light fine, 12@14c; heavy fine, 8@10c. Burry, earthy, and defective wool proportionately lower.

#### Kansas City Live Stock.

Kansas City, Mo., June 1, 1908. Floods in the South and crippled railroad service held down cattle receipts all of last week, and the small total of 22,000 head arrived. The market improved rapidly after Tuesday, and closed the week with a gain of 15¢@40c on steers, the medium kinds showing greatest gains, while cows and heifers closed 15¢@25c higher. Receipts are moderate to-day at 9,000 head, and light at other markets, and the market is again higher. Steers strong to 10c higher, and cows and heifers up 10¢@15c. While the market made a good gain last week, it was solely because of the meager receipts, and not because of any broadening of the outlet for the meat, which packers claim is still unsatisfactory. The light run enabled killers to clean out their coolers to a certain extent, and proved a good tonic, but the situation will not stand any heavy receipts at present. Several sales of prime steers were made to-day at \$7@7.25, the latter price highest this year, except for a sale of two loads on last Wednesday at the same price. Steers sold at \$7 in the quarantine division here to-day, highest on record for quarantine cattle here. Wintered cattle from Oklahoma will start free this week and next. Bulk of fed steers sell at \$5.75@6.50, cows range from \$3@5.25, heifers \$4@6.25, bulls \$3@5, calves \$3.75@6.25. Stockers and feeder trade is of small volume, and will continue so for another month yet, prices 10¢@20c higher than a week ago, strong to-day, stockers \$3.50@5.25, feeders \$4@5.40.

Hog run last week was 80,000 head, market stronger most of the time, but finally closing with a net loss of 5c. Run is 12,000 to-day, market 10c higher, top \$5.60, bulk \$5.35@5.55, weights below 200 pounds at \$5.25@5.50, exclusive of pigs, which bring \$4@4.50. The month of May showed a small shortage from May last year, mainly because of bad marketing conditions the last week. The total run was 355,000 head. Average weight for May was 205 pounds, as compared with 212 pounds in May last year.

Sheep and lambs continue to come freely, 30,000 last week, market steady for the week on lambs, but 15¢@20c higher on sheep. To-

day there is 10,000 head here, market 10¢@20c lower, most loss on lambs. There seems to be plenty of mutton appearing at all the markets, and as the meat does not move freely, congested conditions are easily forced, resulting in an unhealthy state of trade. Woolled lambs bring \$5.50@6.10, clipped \$5.25@5.60, best spring lambs \$6.50, wethers and ewes \$3.50@4.40, feeding sheep \$3.25@3.75, goats \$3.10@3.50. J. A. RICKART.

#### South St. Joseph Live Stock.

South St. Joseph, Mo., June 1, 1908. The marketing of cattle at all central points has continued light for the past three weeks, and while the demand for beef does not appear to have opened up liberally, this lighter marketing has finally caused a decided turn to strength in prices. Beef steers sold here to-day at prices unevenly 15¢@25c higher than late last week, and in some instances of half-fat medium weights, 40c would not more than cover the advance. The strength of the market has also been apparent in the butcher grades of cows and heifers, and everything in the she line, except shelly old canners, is selling 10¢@15c better than late last week. The trade in stockers and feeders has not as yet responded, but this is perhaps largely due to the absence of considerable numbers of cattle suitable for this trade, and possibly the prevailing wet weather has kept out some inquiries. Choice heavy beefs sold here to-day at \$7.10, and it is generally conceded that on a sort, a large proportion of the big bunch bringing the price, might have made \$7.25 or better. Good kind of medium to strong weight dressed beef and shipping steers sold readily at \$6.50@6.85, with a good class of light weights at \$6@6.40. Short-fed grassy steers of medium weight are selling in a range of \$5.25@5.50, while common to fair light grassers can be quoted at \$4.60@5.25. The best cows and heifers are selling at \$4.75@5.35, and bulk of useful kinds \$4@4.75, while canners and cutters range down as low as \$2. Best veals are worth around \$5.50. There is hardly enough of the stocker and feeder trade to establish quotations. The market is in good condition to use more cattle of all kinds than are coming, and prices are being held fully in line with all other markets.

The marketing of hogs has continued fairly liberal for some time, but the opening day of June did not bring out the big showing that has been predicted by the market. The fact that receipts are to fall off largely. The fact remains, however, that on the opening day of this week the total at the five principal markets this week fell off nearly one-half from receipts on the same day the preceding week. This at once started the packers to bidding for hogs, and with a fairly normal Monday run at this point, the market ruled big 10c higher than on close of previous week, with sales not infrequently showing a full 15c advance. Hogs are seasonably good in quality, although carrying quite long light ends in mixed droves. The bulk to-day sold at \$5.37@5.50, with tops making \$5.55.

The general movement of sheep and lambs to market is not large for the season of the year, although showing a natural tendency to increase. Fed stock is mostly out of the road and prices are rapidly being established on a grass basis. There is good demand here for fat muttons of all kinds, both sheep and lambs. Following are the quotations: Lambs \$5@6.50; yearlings and wethers, \$4.10@5.25; ewes \$3.75@4.40. WARRICK.



## THE SAND-HILLS COUNTRY.

The recent announcement in the daily press of Kansas that a company had been formed for the purpose of planting a large area of the sand-hills region of the Arkansas Valley of Kansas to orchards, and the later announcement that the Agricultural Department at Washington had arranged to greatly extend the timber-growing experiments in this same region, serve to attract attention to this section of Kansas which is so little known even by residents of the same counties.

Sand-hills are to be found in different districts along the Arkansas River, and, in a general way, they seem to be alike. The pictures given herewith were taken in the range of sand-hills lying between Hutchinson and Medora. As this range extends from near Sterling to a considerable distance below Hutchinson it is consid-

and winds will continue this and start the hill to traveling and its entire location may be changed in the course of years. One of our pictures shows the encroachment of a sand-hill upon a grove of trees, the tops of some of which may yet be seen above the surface.

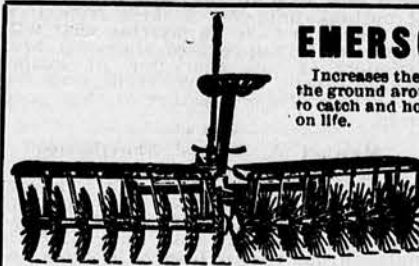
It is believed that the Government experts who are experimenting in the sand-hills regions with forest plantations are going a long way towards solving a problem, the results of which will prove of value in the furnishing of a wood and lumber supply; the local modification of climatic conditions; the reclaiming of what has been considered practically useless land and the development of a great fruit region.

## The Value of Commercial Fertilizers.

EDITOR KANSAS FARMER:—It is no longer possible for the manufacturers

Big Profits  
Baling Hay

Two men can run it. Record, 3 tons in one hour.  
**Auto-Fedan Hay Press—Three Stroke**  
Smooth bales, easy draft, automatic feed, free trial.  
Satisfaction guaranteed. Ask for catalog 64.  
Auto-Fedan Hay Press Co., Topeka, Kas.  
Or 1521 W. 12th Street, Kansas City, Mo.



## EMERSON'S ALFALFA RENOVATOR

Increases the yield of alfalfa, kills weeds and crab grass, cultivates the ground around the plant without injuring it, puts soil in condition to catch and hold moisture. Gives an old alfalfa meadow a new lease on life.

Will pay for itself twice over on ten acres in one season. No man with alfalfa on his farm can afford to be without one. Use it after each cutting if desired. Write us for further information and testimonials from users.

Address, EMERSON-NEWTON COMPANY,  
1318 West 11th, Kansas City, Mo.



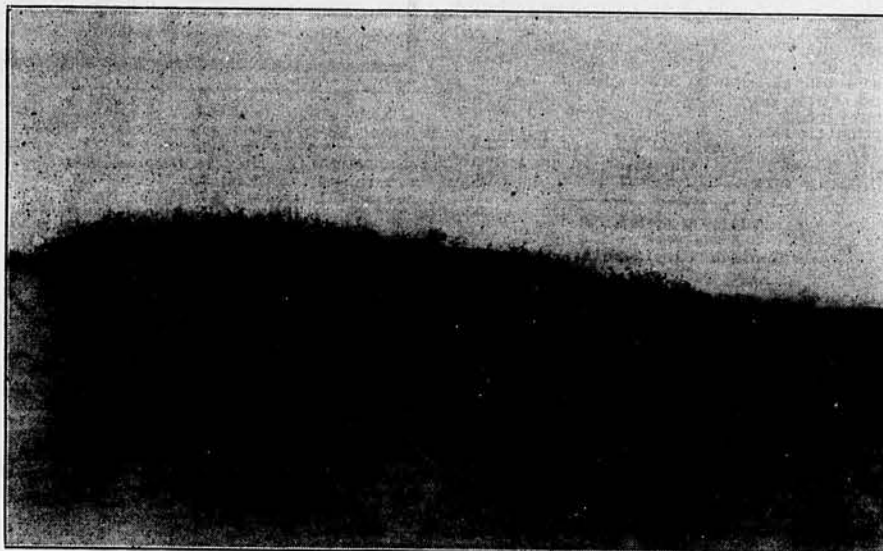
Avenue of cottonwood trees leading to a farmhouse in the sand-hills and serving as a windbreak to the orchard, just left of the picture.

ered typical of all. Here the region is made up of more or less stationary hills which are underlaid by an impervious stratum of clay. Sometimes the hills are constantly changing for years through the action of the elements, while at other times and places they seem to be practically permanent. This difference is caused entirely by the vegetable growth which readily finds a foothold and which, if not disturbed, will cover the hills and secure their permanency. Formerly and in a general way the sand-hills region was thought to be of little or no value, if not indeed the very abomination of desolation. That these regions are of value for many agricultural purposes has long been known, however, by local residents. They have always been used for pasture and hay land, as the grass produced is of a quality worth saving and every little depression, contains clear water in varying sized ponds. It is also well known that this region is a great fruit country, and near-by citizens have learned to expect fruit from the sand-hills when they do not raise it themselves. Good crops of corn will grow here on the flat lands between the hills except in wet seasons when the crop is easily drowned out because of the impervious sub-soil.

That some value is attached to these lands is shown by the fact that last fall a section of hay land in the midst of the sand-hills was sold for \$12,000.

The natural vegetation of this region is coarse though plentiful. The Yucca is a common plant here. The sand-hill plum thrives and grass grows abundantly wherever it secures a foothold. The cottonwood tree makes a very rapid and perfect growth as shown by our picture of the avenue leading to a farmer's house in the sand-hills.

As before stated, when once these hills become covered with wild grass and plum brush they are more or less permanent. The constant passing of a herd of cattle in one trail or the driving of a hay wagon over a side hill sometimes serves to start the sand in motion and the heavy rains



Sand-hill in motion—showing a grove of trees nearly covered with sand.

of commercial fertilizers to practise a swindling game on farmers. The laws of the different States have thrown safeguards around the farmer so that he is reasonably sure of getting his money's worth of plant-food and the competition between the different factories has reduced the price about as low as the fertilizers can be profitably made. But the competition between one brand and another, after it reaches the hands of the dealers, is still very active.

One dealer will handle the "Cow Brand" analyzing, we will say, 8-2-2, which means, 8 per cent phosphoric acid, 2 per cent ammonia and 2 per cent potash, for which he will probably charge \$18 or \$20 per ton. Another dealer will tell you he has a fertilizer "The Cow-Boy," which is just as good, has just as many pounds of plant-food in it, which he will sell for \$1 or \$2 less. This fertilizer will analyze probably 10-1-1, that is 10 per cent phosphoric acid, 1 per cent ammonia, and 1 per cent potash. Now the fact of the matter is that the last man can sell you his fertilizer cheaper and still make a larger profit than the first dealer. Now why is this? It is because of the difference in the price of the different elements of plant-food which go to

make up a fertilizer, and this is one reason why you should post yourself as to what these elements are and their value on the market.

There are only three elements of plant-food which it is necessary for us to purchase in commercial fertilizers, and these are ammonia, phosphoric acid, and potash. Ammonia is worth about 20 cents per pound, phosphoric acid 5 cents per pound, and potash 5 cents per pound, and this explains the difference in price. You see, when they take away 1 per cent of ammonia, or one pound in every hundred, this means 20 pounds from every ton, which at 20 cents per pound, amounts to \$4. Then they put 20 pounds of phosphoric acid in its place, worth, at 5 cents per pound, \$1, and you have a fertilizer containing the same number of pounds of plant-food, but costing \$3 per ton less. It is not as good a fertilizer, however, and will not give you as good results in most instances, because it is not well balanced.

By a well-balanced fertilizer I mean one which has the three principal elements of plant-food, ammonia, phosphoric acid, and potash, combined in the right proportions. You see, plants will not grow in soil, where only one

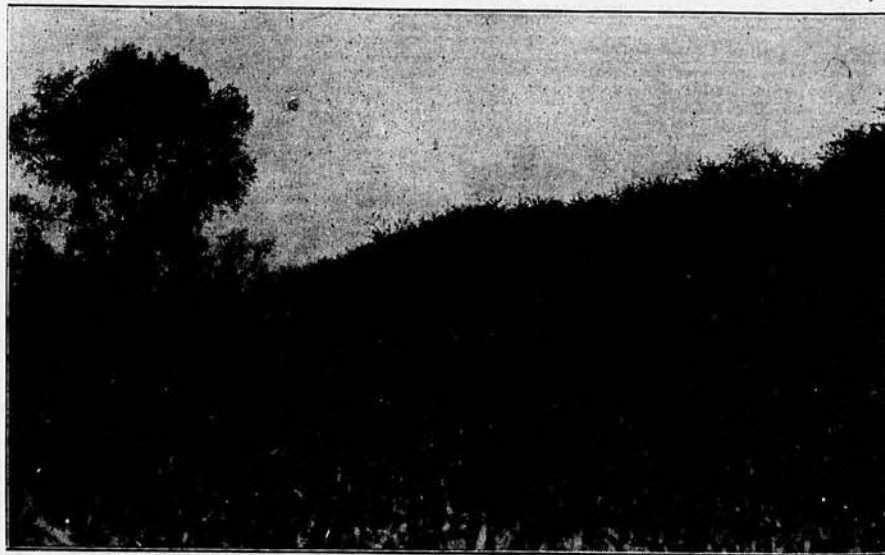
which will give you comparatively little benefit, unless your soil already contains an abundance of other elements. This fact you can find out definitely only by experimenting on your soil, using the different elements of plant-foods in different combinations.

You can form some idea of what your soil needs by the way your crops grow. If the plants are dark green and grow off rapidly, it shows that ammonia is abundant; if they are pale or yellowish in appearance, ammonia is needed. If the plants seem weak and easily affected by disease, potash is needed; also, when root crops do not fill out well, or the lint on cotton seed is light, potash is lacking. Phosphoric acid makes the plants fruit early and heavily, and has a general tendency to bring crops to early maturity. While lint cotton contains very little plant-food, the principal element of which it is composed is potash, and if we want a heavy yield of lint cotton, we must be sure this element is well represented in our fertilizer.

Now an 8-2-2 is a very good standard fertilizer for cotton, but a 9-3-3, or 9-3-4 would give much better results. First, because it is better balanced for this crop, and second, because it is a higher grade. A 10-1-1 would not do at all, unless you are pretty sure that your soil already contains a sufficient amount of available ammonia and potash, in which case it would be cheaper to use straight acid phosphate.

In most cases it is safest to purchase a high-grade complete fertilizer which is adapted to the crop you intend to grow, and to do this intelligently you must understand the value of the different elements of plant-food, which enter into the make-up of the fertilizer. You must know what the analysis means and purchase by the analysis and not by the brand or the number of pounds of bulk you can get for the dollar. Any one, you know, can sell dirt cheap, and you have plenty of this at home.

At present the demand for cheap fertilizers has flooded the country with low-grade brands. The manufacturers are trying to see how cheap they can make them to supply this demand,



Sand-hill made permanent by a growth of grass and sand-hill plums.

or even two of these elements are present. They require all three, and they not only require their presence, but require them in the right quantity for their fullest and best development. When you purchase a one-sided fertilizer, therefore, you are very likely spending your money for something

which has been caused by the farmer's ignorance of the real value of the fertilizer.  
J. F. ROMER.

Mr. Patten of Chicago seems to be demonstrating that a corn fed fortune can be made as fat as a corn fed steer—Kansas City Times.



## Agriculture

### Weeds in Alfalfa.—Alfalfa Injured by Frost.

I sowed my alfalfa early this spring and got a good stand but the smartweed has come up very thick. Would you advise me to let it alone or keep it mowed off? Will cutting injure the young plants?

My fall sowing is not growing as it should; the frost has turned the foliage yellow. Would you advise mowing it now? This is my first experience. I would be pleased to have your advice.

C. E. BELKNAP.

Cowley County.

I would advise to mow the smartweed, raising the sickle bar several inches high so as not to cut the young alfalfa plants too closely. Repeat the mowing whenever it is necessary. The smartweed will smother out the alfalfa if allowed to grow thick and rank.

If the frost killed the tops of the stems of the plants, it will be advisable to mow at once. It may be advisable to mow in any case if the alfalfa is turning yellow and has ceased growing.

A. M. TENEYCK.

### Preparation of Seed-Bed for Wheat.

Please give me your experience and any information you may be in possession of, in regard to listing stubble land for fall wheat. I am informed that the system is practised extensively in some localities, but I have not yet seen it done. It is claimed that wheat does much better on listed land than it does on plowed land. What is your experience? If listing has proven or given better results than plowing, I intend to list wheat, oats, and spelt stubble after harvest preparatory to drilling in winter wheat, as soon as the grain is removed and list the land again later on. I will plank and harrow the ridges until nearly level, during August or early September relist the ridges, plank and harrow again until the land is level and well pulverized, by plowing and harrowing. I have always been troubled with crab-grass and foxtail during the summer, especially if we had frequent rains during July and August. If plowing has given better results than listing, please advise me through THE KANSAS FARMER as early as you can. I wish you would write an article on "Listing vs. Plowing for Winter Wheat for Eastern Kansas," as I have not read anything on the subject yet. I am an old subscriber of THE KANSAS FARMER and greatly interested in various topics that you have written about in the past.

W. H. WATKINS.

Lyon County.

We are just undertaking an experiment in preparing the seed-bed for wheat by early listing, plowing, disking, etc., but have no data yet of yields to report. Similar results are being carried on at the Fort Hays Experiment Station at Hays, in Ellis County. If you will write to Supt. C. K. McClelland he will give you such information as they have to this date. These experiments have been carried on for a couple of years at least. In my judgment, listing out the wheat ground soon after harvest is more practicable perhaps in the western part of the State than here or in Southern Kansas. Opening the soil with the lister has an advantage in accumulating moisture and also prevents the soil from blowing, and when cultivated occasionally with the disk and harrow, the soil is worked back into the furrows, holding the water that has been stored in the subsoil below.

I doubt whether it is advisable to practise the plan of late listing which you describe. I rather prefer to leave the ground firm and well settled as it will be after disking and harrowing to fill the furrows.

In parts of the State the disk-sled cultivator is being used to refill the lister furrows and an advantage is claimed for this implement. This is the same or similar to the sled used

for cultivating listed corn. However, the ordinary disk harrow and common harrow will do the work if the ground is cultivated enough, and it really needs several cultivations, especially if the listing is done early in the season, soon after harvest. Of course if the crab-grass gets such a start that the disk and harrow do not destroy it, then it will perhaps be necessary to relist as you suggest but the relisting should take place as early as possible in order that the soil become settled and in a firm condition before seeding time.

I am not prepared to write the article which you suggest, but shall continue our experiments here and gather information from the experience of farmers. I shall be pleased to hear from farmers who have tried the listing method in preparing the seed-bed for wheat, through the columns of THE KANSAS FARMER.

I have mailed you circular No. 9 on "Wheat Culture," in which you will find the subject of seed-bed preparation discussed quite fully.

A. M. TENEYCK.

### Alfalfa Injured by Freezing.

I have read a great deal in your paper on alfalfa and should like a little advice on a patch I have. I sowed it during the fall of 1906. It came up fine and I had a good stand. The following January we had a very hard rain and the freezing after the rain was the cause of a great many of the little plants lifting out, which caused the young roots to break and die. But it left a pretty fair stand which I cut last June, while going out of the blooming stage, getting about one-half ton per acre. Since then it has done no good. It is of a yellowish green and seems to just live and that is about all. I cut it once after taking off the hay crop. The ground is clean from weeds and pretty good upland that will produce from 40 to 50 bushels of corn to the acre. I put a thin coating of manure on the ground last fall but it does not seem to help it any as I can tell. I sowed some red clover along the side of it a year ago which looks fine, only a small ditch between it and the alfalfa. This ground is a black loam with clay subsoil and is well drained. Can you tell what is the trouble? I wanted to sow more alfalfa last fall but I did not like to waste more land on it if I can not get this piece to produce.

Jefferson County. A. A. MEYER.

It is rather difficult to diagnose the case which you propose. I take it that the heaving of the soil by freezing has been the cause of the inferior growth of the alfalfa. The fact that many of the plants were heaved out and destroyed would indicate that others were injured in the winter of 1906-'07 and possibly there may have been some heaving last winter. This heaving may be the fault of the ground; some soil heaves much worse than other soil. Or, it may be due, in part at least, to an improper preparation of the seed-bed. You state that you had the ground in fine condition, but you do not give any details. Possibly the soil was too loose and mellow. Mellow soil will heave worse than finely pulverized, well-settled soil. The ideal seed-bed for alfalfa must be firm beneath the seed. I have mailed you circular No. 10 on "Seeding Alfalfa," which gives more detailed information on this point.

Again, the soil in question may be acid in character. Clover is not as much affected by the acid condition of soil as is alfalfa. You might prove whether this is the trouble or not by applying lime to small areas in reseeded. I would advise to plow up the present stand of alfalfa, prepare a good seed-bed and sow again this fall. Lime may be applied to a part of the land and manure to another part.

Again, the soil in question may be lacking in alfalfa bacteria. Secure some soil from an old alfalfa field and spread it thinly (300 pounds per acre), over the field when you reseed again next fall. By making some experiments, in a small way, you may

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determine "what the trouble is" and profit by the experience, overcoming the difficulty for future seedings.

I have mailed circular letter giving some information regarding the inoculation of new land with the alfalfa bacteria. I have also mailed you circulars No. 2 and No. 3 on "The Use of Manures and Fertilizers," including lime, and circular No. 5 on "Crop Rotation."

A. M. TENEYCK.

### Alfalfa Might Grow.

I have a farm in Barton County, Missouri. The soil is of chocolate color underlaid with sandstone coming to the surface in some places, but in the field in question in which I would like to sow alfalfa, the stone is probably three to four feet below the surface at the shallowest places. We have also a so-called hardpan at the depth of from one to three feet. Would you advise me to risk sowing alfalfa, if other conditions are right, and would I be able to retain a stand and may it pay?

O. W. SCHIDE.

Crawford County.

I would not advise you to seed a large area of alfalfa on such land as you describe until you have proven by experiment whether the alfalfa will succeed well or not in the soil and under the conditions stated. The proposition would appear to be a difficult one for establishing and maintaining a stand of alfalfa on such land. The alfalfa will succeed as well as any other crop on the soil underlaid with rock, but it could not produce large yields for a very long period. Again, the hardpan subsoil is an undesirable condition; soil above the hardpan is apt to fill up with water and drown out the alfalfa. However, after alfalfa has been grown on such land and has penetrated the subsoil it will greatly improve the soil for the growing of other crops or for the growing of alfalfa again. I have mailed you circular No. 10, "Seeding Alfalfa," which gives some information regarding soils adapted for growing this crop.

A. M. TENEYCK.

### Crab-Grass—Oats or Corn.

1. What can you say as to the feeding qualities of what is known here in Central Kansas as crab or fall grass?
2. What quantity oats will be required to do as much work in a horse as one bushel of corn? What must be the price of oats weighing 32 pounds per bushel to make it as cheap a feed for horses as corn, a bushel of corn valued at 50 cents?

ABRAHAM BRECHBILL, JR.

Dickinson County.

I know of no experimental data on what is commonly called "Crab-grass" or "fall" grass. The general observations of many Kansas farmers is that crab-grass makes a very fine quality of hay.

So far as total digestible nutrients are concerned, corn is richer than oats, pound for pound. The nutrients in oats, however, are a little better balanced than they are in corn and the oat contains a hull around every grain which in a way dilutes the grain so that it is not as concentrated. Oats have always been considered a standard feed for horses. Where corn is

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fed we are using a grain which contains much more carbohydrate material and fat; but is deficient in protein and contains a very small amount of crude fibre, consequently is much more concentrated.

A standard ration for a 1,000-pound horse at severe work would be about 14 pounds of oats daily and 10 pounds of timothy or prairie hay. This would supply in digestible nutrients approximately 1.56 pounds of protein; 10.96 pounds of carbohydrates, and .73 pounds of fat. With a larger horse more oats and hay would be required. If the work was somewhat less severe the grain would be reduced and the hay increased. Now in substituting corn for oats if we attempt to supply the nutrients in the same proportions we must add something to the corn. Nine pounds of corn and 2 pounds of oil-meal would supply the nutrients in about the same proportions in total amounts as the 14 pounds of oats. In physical character this combination is lacking in hulls which dilutes the nutrients in the oat.

A substitution of a couple of pounds of wheat bran for a pound of oil-meal or a complete substitution of three or four pounds of bran for all the oil-meal, would give about the same proportions and total amounts of nutrients and more nearly approach the physical character of the clear oats. At 50 cents per bushel for corn and \$1.00 per hundred for bran, a mixture of 9 pounds of corn and 3 pounds of bran would cost about 11 cents. Oats would have to be less than 28 cents per bushel to make the cost of the 14 pounds necessary for full ration as low in price as this combination. For most practical purposes a mixture of two-thirds corn and one-third bran makes a good substitute for oats.

G. C. WHEELER.

#### The Uses and Limitations of Soil Analysis.

J. T. WILLARD, CHEMIST KANSAS STATE AGRICULTURAL COLLEGE.

In the early history of Kansas no attention was paid to the composition of its soils except to boast of their inexhaustible fertility. The voice of the chemist has been lifted constantly, warning the people that this idea of possession of a fertility that is practically limitless is a delusion that can lead only to squandering of our natural resources, and to leaving posterity handicapped in the struggle for existence. To-day he is seeing his warnings justified. People in many localities of the eastern part of the State are making inquiry concerning chemical analysis of their soils with reference to learning what fertilizers should be applied and to what crops their soils are best adapted. A consideration of some of the aspects of this problem would seem to be timely.

The chemical composition of a soil is the most fundamental limit upon its usefulness. No matter what its depth, physical state or climatic environment, a soil that is actually deficient in one or more of the chemical elements essential to plant growth can not be productive. Hence a thorough-going investigation of a soil can not be made except it be on a chemical basis. However, the difficulties of a chemical investigation that shall lead to results that can be translated into definite statements concerning the special adaptation of a soil to a given crop, or into a prescription to meet its needs in the way of applications of fertilizers, are so great that at present they have been very incompletely surmounted.

#### SOIL AS MECHANICAL SUPPORT.

All but a very small proportion of a soil is unavailable for the nutrition of plants and serves only for their mechanical support. The roots penetrate through to relatively great distances, both downward and sidewise, and thus the plant is anchored to a weight that enables it to stand upright. This mechanical function of a soil may be performed by material that is wholly inert in respect to nourishing the plant, or by material that to a certain extent is capable of undergoing changes whereby it becomes available. The nature of this more or less inert por-

tion of the soil is thus of the greatest importance in respect to the endurance of its fertility. It can be readily seen that, if a chemical analysis of the total matter of a soil be made, and it be found wanting, the soil is hopelessly poor. It is, however, only with soils that consist almost entirely of quartz sand that such results would be obtained. On the other hand, the presence in a soil of adequate amounts of all the chemical elements essential to plants is no proof that the soil is fertile, since these elements may be in forms of combination such that plants can not get them. Chemists have therefore sought for special means of analysis that will enable them to ascertain what amounts of the several elements are available to plants, rather than the total quantities of those elements.

#### CHEMICAL MEANS OF TESTING SOILS.

No chemical means have yet been discovered that will test soils as a plant does. One difficulty in the way is that different kinds of plants differ greatly in their power to acquire nutriment from a given soil. If by prolonged research a mode of investigation should be devised by means of which quantitative results could be obtained that would be proportional to the yields given by a certain crop, under otherwise favorable conditions, the results would not be completely applicable to other crops. This adds greatly to the complexity of the problem.

The nutriment that a plant gets from the soil enters it dissolved in the soil water. It might at first sight seem that simply ascertaining what amounts of the substances in a soil are soluble in water would disclose its crop-sustaining power. This is not the case, however. In the first place, if water be kept in contact with a soil until there is reason to believe that it is saturated, and it then be removed, a fresh addition of water will dissolve more from the soil, and a third amount will dissolve yet another portion. The soil may be treated indefinitely with these successive portions of water and continue to yield material which goes into solution. In the second place, it seems undeniable that the roots of plants influence the extent to which soil particles in contact with them are dissolved, by means of substances which pass from them to the soil. In this way some crops are enabled to extract more nutriment from a given soil than others can. Again, the presence of decaying organic matter, humus, in the soil, by its production of carbonic acid, increases the solvent power of the soil water, an effect that extends over years of time. For these reasons analysis of a water solution of a soil will not teach us what capacity for nourishing plants the soil possesses.

As plants have some specific solvent effect upon soils, chemists have attempted to find a solvent that will imitate their action. In this they have only partially succeeded. The use of a two-per-cent solution of citric acid suggested by Dyer has in many cases given consistent indications. In others the cultural experience has been at variance with what would be suggested by the analytical results. We have not thus far any solvent that will upon all soils give results that will be consistent with the yield returned by a single kind of crop, much less by all kinds, and it is not to be expected that such a solvent will ever be discovered. The conditions of absorption of plant-food by the living cells of the rootlets are different from those presented by an indifferent substance. This is indicated, not only by recent observations on osmosis, but more simply by the fact that different kinds of plants growing together in the same solution or soil take up quite different quantities of the nutritive salts. This so-called selective action must determine that each kind of plant is for itself an independent case for investigation in respect to its relations to soil fertility and soil analysis.

#### USE OF HYDROCHLORIC ACID.

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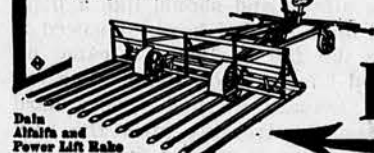
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plished in devising means of imitating the action of plants upon soils the results so obtained will indicate the immediate capacity of the soil rather than its aggregate fertility. As previously stated, soils may have a part of the chemical elements in such stable and insoluble combinations as to put it entirely outside the probably more or less remotely available plant-food supply. Aside from this nearly insoluble part we have another that dissolves in moderately strong hydrochloric acid. What will dissolve in a few days in hydrochloric acid will dissolve in weaker acids, such as are found in soils containing humus, if a few years or centuries be given, and the amounts progressively dissolved be removed by the roots of plants. The ultimate quantities of the elements of fertility that can be utilized by crops is thus taken to be practically those that may be brought into solution by hydrochloric acid of specific gravity about 1.12. A chemical analysis of such a solution may be of great value in determining the probable permanent durability of a soil, and to a less extent its immediate capacity.

It has been found that any virgin soil that shows an ample supply of nutritive substances soluble in acid as described will be fertile provided there are no greatly opposing influences in the physical condition of the soil or in the climate. With soils long under cultivation, however, by whatever means they may be analyzed results may be obtained that are more or less contradictory to cultural experience.

#### NON-PRODUCTIVITY.

Soils may get into a condition of non-productivity, the causes of which are obscure as yet. The influence of the previous cropping, whether different or the same, may greatly affect the yield of the present season. In some cases failures are traceable to fungus diseases with which the soil becomes affected. In other cases there is reason to believe that crops leave something in the soil that hinders the growth of succeeding crops of the same kind until it is removed. Some experiments by the bureau of soils have shown that in certain cases this condition seems to be corrected by the use of substances which do not themselves contain chemical elements of fertility. It is not impossible that a part of the beneficial effect of commercial fertilizers and barnyard manure is due to such action, though there can be no doubt that their effect is not limited to this, but that they supply

needs of the crop in respect to chemical elements. The need of rotation of crops in order to maintain proper soil conditions is probably greater with many soils than is its need on account of any partial exhaustion of chemical elements.

#### IMPORTANCE OF PHYSICAL CONDITIONS.

The difficulty of drawing inferences concerning crop-producing power from chemical analyses only may be illustrated by referring to an experiment by Hilgard, in which a highly productive but heavy clay soil was mixed with one, three, four, and five times its weight of purified sand. Plants were grown in a pot of the original soil, and in pots of soil of the four degrees of dilution by sand. It was found that up to and including the dilution with four times its weight of sand the plants made better growth in the diluted than in the original soil. Here, then, was an example of a soil-mixture with only one-fifth as much of the nutritive elements, and these in the same ratios to each other as in the original soil, that gave even better results than the undiluted soil. In short, chemical composition is very important, but it is only one of the important considerations in respect to productivity.

Not only is the physical state of the soil an important factor in determining crop yield, but its depth, and the depth, composition and general character of the subsoil are of the greatest significance. Further, in respect to sampling a soil for analysis, if this be not properly done, so that the sample analyzed actually represents the land under investigation, the results of the analysis are worthless as a basis for any general conclusion.

It will be seen from the foregoing that a chemical analysis of a single soil sample may mean very little, but to be of any service it must be considered in connection with many other things. To be of the most use it should be possible to compare it with the results of analysis of adjacent uncultivated soils and of other soils in similar climatic environment. The physical conditions must also be carefully considered.

#### PARTIAL CHEMICAL ANALYSES.

Partial analyses of soil directed toward answering definite limited questions are often very useful. Soils have been known to contain an abundance of nitrogen and yet to be deficient in that element in an available form. Organic matter may be so slightly decomposed as not to be in a condition to furnish nitrogen to crops, while



the fully humified part can undergo nitrification promptly and thus supply this element, hence a distinction in the analysis between these two forms of nitrogenous matter may contribute much information. So, too, it has been found that phosphorus in humus is more available to the wheat crop than when in some other forms of combination.

So-called alkali soils are soils containing an excess of soluble mineral substances which do not in all cases give an alkaline reaction. An analysis of a soil with reference to excessive amounts of such mineral substances may be made a useful preliminary to any treatment to improve the condition. A qualitative analysis is certainly necessary, as the nature of alkali differs greatly and proper treatment of it can not be prescribed without knowing the nature of the excessive salts present.

Some soils are deficient in lime, or, speaking more exactly, in calcium compounds, especially the calcium carbonate which is capable of neutralizing organic acids. A fertile soil for agricultural crops must be in a neutral or faintly alkaline condition. Analyses with reference to soil acidity are therefore often of much value. Independent of acidity leguminous crops, such as clover and alfalfa, require large amounts of calcium, and regions other than those in which limestone and gypsum are found may often require special investigation in respect to the calcium content of the soil.

#### MECHANICAL ANALYSES.

The limitations upon the extent to which chemical analysis can be used in forming a judgment upon soils has led to attempts to replace that mode of investigation by physical or mechanical analyses in which the size of the soil particles and in part the peculiarities of their mode of aggregation are studied. The relative dominance of certain sizes of particles in soils used largely for certain crops has been observed. However, the fact the same crops may be quite successfully produced on soils of distinctly different mechanical composition makes this method of little practical use, however interesting a field of laboratory study it may be. The influence of rainfall, temperature, altitude, exposure and other climatic factors exceed physical constitution in their dominating position to a far greater degree than they do chemical composition. A suitable physical state may accompany an almost sterile condition. The sizes of the rock particles of a soil that has been exhausted by cropping are not materially different from what they were when the same soil was in its virgin state of fertility. At best the results of a physical examination of a soil are useless unless they are accompanied by the results of a searching chemical examination.

No kind of laboratory investigation of the physical properties of a soil possesses more than a small fraction of the value of observations upon the soil in place, with no more complicated equipment than one's eyes and hands and an augur. The lay of the land, the depth and texture of the soil and the depth and character of the subsoil are points that immeasurably exceed in importance any other physical characteristics.

#### OBSERVATIONS OF NATURAL GROWTH OF PLANTS ARE NECESSARY.

Both chemical and physical investigation of soils in a laboratory way being limited in the usefulness of their results, these must be supplemented or in many cases replaced by observations upon the natural growth of trees, shrubs, grasses or weeds upon the soil, and by experiments in the production of plants or crops upon it. Let organic nature answer the question, What is this soil good for?

Observations concerning the natural plant growth upon a soil have always been used by practical men in judging of its value. The rich lands supporting a forest growth of oak, hickory, and other hard woods, are in

marked contrast with the poor, and even otherwise nearly barren, areas occupied by pines. The grasses of the rich prairies are very different in species and luxuriance from those of thin, alkaline, saline, or otherwise unproductive regions. Even weeds seem to exercise a preference and sand-bur land is very different from that best adopted to "pusley." This means of gaining an insight into soil values is one that, while used from time immemorial, is worthy of more extended study and application.

#### POT TESTS.

Attempts to test soils as to their productiveness or their specific needs in the way of fertilizers have been made by means of experiments conducted in pots. The sizes of the pots used have varied from that of a capacity of a few ounces to one of several hundred pounds. Very valuable results have been obtained by this method, into the details of which space does not at present permit us to enter. It can readily be seen, however, that with climatic factors largely eliminated, and with a soil no longer in its natural state of aggregation or relation to subsoil, some of the important features controlling crop yield are left out.

#### FIELD-LOT TESTS.

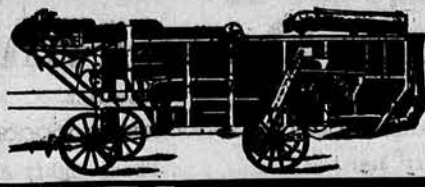
By far the best method yet devised for testing soils is by means of crops grown in the open field. Such experiments, in order to eliminate variations from season to season in rainfall and other climatic influences, should extend over a series of years to yield the best results attainable, but in a single year, if the season is not too abnormal, positive indications may be obtained. It is obvious that a soil may be deficient in but one or two of the essential chemical elements, and that in that case it would be a waste to purchase and apply fertilizers supplying elements not needed. Further, one may be disposed to apply to the soil an incomplete fertilizer, or an amendment that happens to be cheap or readily available, when in fact the soil is in need of something quite different. As a matter of economy, it is highly important that the farmer ascertain what is lacking in his soil before deciding upon the purchase of commercial fertilizers, or the kind to buy. The chemist can not tell him with certainty what the soil needs, and no method has yet been devised that is equal to that of testing the land by means of crops that have been fractionally fertilized.

A test of this kind consists in laying off a series of plats on the soil in question, selecting an area as nearly uniform as possible, and applying different fertilizers to the several plats, leaving one or more unfertilized for comparison. The number of plats required depends upon the detail with which the test is to be made. Not less than four will suffice, and if this number is to be selected one plat will be left with no fertilizer, to one a potassium salt, to another a nitrogenous fertilizer, and to the other a phosphate must be applied. On comparing the crops obtained on the three fertilized plats with that given by the unfertilized one, the effect of potassium, nitrogen and phosphorus compounds separately applied will be ascertained. If it be found then that the nitrogen has increased the yield while the potassium and phosphorus have had but little if any effect, the conclusion must be that the soil is in need of nitrogen and not of the other two. If the plat receiving potassium shows an increased yield, a deficiency of that constituent of the soil will be indicated.

#### EXTENSION OF FIELD PLAT.

More comprehensive results are obtained by increasing the number of plats and including, in addition to those previously named, others to which nitrogen and potassium, nitrogen and phosphorus, phosphorus and potassium, and nitrogen, potassium, and phosphorus compounds respectively, are applied. In this case, too, it is well to add another plat, to be left

(Continued on page 664.)



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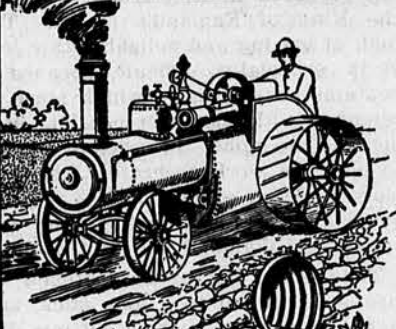
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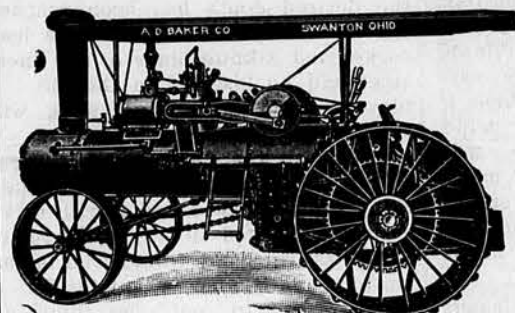
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## Home Departments

CONDUCTED BY RUTH COWGILL.

### WHAT'S THE USE?

Won't some feller rise and tell me what  
on earth a feller does,  
In the night time after supper with  
the day's work put away,  
When he sits out on the gal'ry and  
hears the cicadas buzz,  
If he hasn't got no babies for to romp  
around an' play;  
If he ain't no little feller fer to run to  
him for hugs,  
If he ain't no little lassie fer to give  
him no caress,  
If he ain't no little baby fer to chase  
the candle bugs,  
What on earth is there to glad him  
or to soothe his lonesomeness?

If, when he's downstairs o' mornings  
with the mornin' paper, he  
Hasn't got no gold-haired lassie fer  
to sneak down th' stair  
In her nighty an' come rompin' with a  
giggle to his knee,  
With her bare pink toes a-twinkl'n  
an' her golden, yeller hair  
Just a-flyin' with the gladness of the  
dewy mornin' time,  
With the light o' joy a-twinkl'n in  
her eyes o' bonny blue—  
Oh, without no little babies for to  
dance to him an' climb  
Up into his lap o' mornin's what does  
any feller do?

Without any little babies lyin' in a cud-  
dled heap,  
In a little snow white chamber in a  
little snow white bed,  
With the covers kicked all crooked  
where they're lyin' fast asleep,  
With a little fist a-restin' underneath  
a yellow head,  
What's the use o' bein' livin', what's  
the use of goin' down  
To the day's work of a mornin' an' o'  
comin' home o' nights,  
What's the beauty of the country or  
the pleasures of the town,  
With no baby lips a-waitin' for your  
daddy-kiss o' nights?  
—Judd Mortimer Lewis in Houston  
Post.

### The Difference.

As I was looking over some ex-  
changes I came across the two arti-  
cles below, one right after the other,  
and was led to think of the difference  
between the subjects considered and  
their mission on the earth. Ten dol-  
lars for an ear of corn does seem like  
a big price. But it was a very per-  
fect ear and each grain is capable of  
making a stalk with a similar ear.  
Thus the whole ear will produce a  
crop of excellent corn which, aside  
from the commercial element, will  
furnish food for the children of men;  
but not only that; it raises the stand-  
ard of corn. It is the result of  
thought and labor and means much  
on that account.

The diamond is a wonderfully beau-  
tiful thing, but is not the ear of corn  
at ten dollars an ear of more value  
than the diamond at five million dol-  
lars? Is it not infinitely more valu-  
able and useful? To perfect the dia-  
mond will require three hundred and  
sixty-five long days. And what is its  
mission? To adorn the crown of one  
poor mortal who has more than he  
needs.

"Ten dollars seems a pretty big  
price to pay for just one ear of corn,  
but out in Iowa they raise corn which  
brings even more than that. It is not  
uncommon for a man out there to  
raise corn which he can not afford to  
own.

"Improbable as this sounds, it is  
true, and the explanation is that prize  
ears of seed corn become the property  
of the agricultural courses where they  
are exhibited. They are then sold at  
auction, and the man who raised them  
does not always feel that he can af-  
ford to bid them in.

"That was precisely what happened  
to an Iowa farmer named McCulloch  
not long ago. He entered a good  
many ears in the competition held at  
Marshalltown under the management  
of the Iowa State Agricultural Col-  
lege. Over three thousand ears were  
entered, and one of McCulloch's won  
first prize.

"The prize was a one-hundred-and-  
fifty-dollar water-supply system, so the  
farmer probably felt that he could af-  
ford to bid in the prize ear for eleven  
dollars and fifty cents. But when it  
came to buying back eighty other ears  
which he had entered he had to let  
them go to others,

"Those eighty ears brought two hun-  
dred and four dollars and fifty cents,  
so that, provided he could have sold  
the eighty-one ears of corn for what  
they actually brought, two hundred  
and sixteen dollars, he could have  
bought this water-supply system and  
had sixty-six dollars left.

"G. F. Howard won one hundred  
dollars with a single ear of corn in  
the same competition, and paid ten  
dollars for the ear to get it back. For  
ten other ears which he entered he  
had to bid up to forty-one dollars and  
seventy-five cents for the lot to get  
them.

"Thirteen bushels of the corn that  
was entered brought an average of  
thirty-nine dollars and fifty cents a  
bushel. Iowa farmers have awakened  
to the importance of improving their  
crops by improving their seed. The  
consequence is that Iowa raises the  
finest corn in the country, and is con-  
stantly improving it in quality and  
quantity to the acre."

"The Cullinan diamond, which  
weighs a pound and a half, is now be-  
ing prepared in Amsterdam to adorn  
the King of England's crown. The  
task of cutting and polishing this jew-  
el is especially difficult, because it  
contains several flaws which must be  
removed with the least possible deri-  
ment to the stone. In order to be able  
to plan the work accurately, the jew-  
elers made an exact model of the dia-  
mond and treated it in the same way  
as the real diamond will be treated.

"The jewel is to be fastened by  
means of cement to a long stick, and  
is to be cut by a sharp-cutting dia-  
mond also embedded in a cemented  
stick. Each incision will be about  
three-fourths of an inch, and when  
the desired depth has been reached  
the diamond will be placed in a lead  
socket and a knife blade of the finest  
steel will be inserted in the slit. A  
blow with a heavy steel stick will  
then cut off the flaw.

"After all the flaws have been re-  
moved, the diamond will be handed  
to an expert polisher, who, with three  
assistants locked in a special room,  
will work every day from seven in the  
morning until nine at night for a  
whole year to put the finishing  
touches on this jewel, which is worth  
about five million dollars.

"Remarkable precautions to prevent  
theft are taken by the jewelers who  
have the work in charge. Every night  
the stone is conveyed by the manager,  
accompanied by ten fully armed  
men, to a strong room built of iron  
and cement walls three-fourths of an  
inch thick, inside of which are several  
secret sliding panels. Behind one of  
these, with its nine locks completely  
hidden from view, lies a tiny safe, in  
which the diamond is placed."

### Ways with Parsnips.

To insure best results in cooking  
parsnips, they should be fresh and  
crisp; the parsnip is welcomed by the  
cook, coming as it does when one is  
cloyed with the "every-day" vegeta-  
bles. For breakfast they may be  
baked and served with butter, same  
as sweet potatoes.

Stewed.—Wash and scrape the pars-  
nips; if of large size, halve or quarter  
them. Place two or three slices of  
fat salt pork in the bottom of a stew  
kettle. When these have become  
browned on one side, place the pars-  
nips on top, season to taste with salt  
and pepper, then add half a pint of  
water. Cover closely so as to confine  
all steam possible. If fresh parsnips  
are used, they should be done in twen-  
ty minutes. Send to table as hot as  
possible.

Fried.—Cut the prepared parsnips  
into thin slices lengthwise, roll in  
beaten egg, then in meal and fry  
brown in butter.

Escalloped.—Take boiled and  
mashed parsnips. Put a layer in a

buttered pudding dish, then a layer of  
bread crumbs. Alternate these layers  
until the dish is full, crumbs being the  
top layer. Place a few lumps of but-  
ter on top; add half a pint of cream  
or rich milk, and bake half an hour.

Parsnip Fritters.—To half a dozen  
boiled and mashed parsnips add two  
eggs, two tablespoonfuls of flour, and  
season to taste. Form into small, flat  
cakes and brown in butter.

Steamed.—Place the prepared pars-  
nips in a steamer, halving them if  
large; cover closely and steam until  
tender and done; remove carefully to  
a baking dish and brown in a hot  
oven; season to taste and pour melted  
butter over; send to table hot.

Creamed.—Boil six medium-sized  
parsnips until soft; drain and cut each  
through the middle lengthwise; in a  
saucepan heat two tablespoonfuls of  
milk and one of cream; add seasoning  
to taste, also a small lump of butter  
and sugar; wet a teaspoonful of  
corn starch in a tablespoonful of milk,  
thicken the mixture with this and  
pour it over the parsnips while hot.

With Dumplings.—Half a pound of  
salt pork, two potatoes of good size,  
three large parsnips, three quarts of  
water, one tablespoonful of flour  
mixed with half a cupful of water;  
season to taste. Cut the pork into  
thin strips, scrape and slice the pars-  
nips; boil the pork and parsnips gen-  
tly in the water one hour; add the  
thickening and salt and pepper and  
the potatoes sliced. Boil half an hour,  
then add dumplings and boil ten min-  
utes longer.—New York Observer.

## The Young Folks

### DOING ONE'S BEST.

I may not reach the heights I seek;  
My untried strength may fail me;  
Or, half-way up the mountain peak,  
Piercing tempests may assail me.  
But though that place I never gain,  
Herein lies comfort for my pain—  
I will be worthy of it.

I may not triumph in success,  
Despite my earnest labor,  
I may not grasp results that bless  
The efforts of my neighbor.  
But though that goal I never see,  
This thought shall always dwell with  
me—  
I will be worthy of it.

The golden glory of love's light  
May never fall upon my way,  
My path may lead through shadowed  
night,  
Like some deserted way.  
But though life's dearest joy I miss,  
There lies a nameless strength in this—  
I will be worthy of it.  
—Ella Wheeler Wilcox.

### Politeness.

Florence Jackson Stoddard, in Pic-  
torial Review, in her "Side Talks to  
Girls," writes interestingly upon the  
subject of true politeness. The same  
things have been said many times,  
and the young folks have read them  
over and over again, but it is well to  
refresh our minds with them for we  
sometimes forget. It is as follows:

Perhaps you girls who read this  
were too young at the time of the  
Spanish War to take much interest  
in events. Let me remind you then of  
an occurrence that is significant. At  
the very beginning of the Cuban and  
United States affair, one of our men  
made one of the grandest speeches  
ever uttered. It was Captain Sigs-  
bee, of the United States cruiser  
Maine, who, when his vessel was  
blown up in Havana harbor, cabled to  
Washington, "Suspend judgment."  
That was to say, "Don't judge any one  
in this matter until it has been exam-  
ined into." Could anything be fairer,  
nobler than that entreaty, and uttered,  
too, when horror and distress were  
fresh? It is St. Paul's definition of  
charity as he gave it to the Corin-  
thians, "Not easily provoked, thinking  
no evil." Let us apply this spirit to  
associations of life. Let us not make  
judgment hastily, especially when we  
would judge against any one. On the  
other hand, girls, be not too rash in  
throwing all your soul into a friend-  
ship that has not a solid foundation.  
Avoid, I beg of you, gushing. It is  
not only "bad form," it is insincere,  
for a sudden and violent attachment

can not possibly be altogether real. It  
may grow into the real thing; but in  
the beginning it is only a fancy and  
so apt to change that it can not,  
should not be counted on.

The social obligation to strangers,  
though the third to be considered  
here, is great also. It is more selfish  
than the others, for there is some re-  
turn, that is, even if unconsciously  
looked for. If you are sincere, though,  
this will not be unpardonable, and will  
not make your being thoughtful to of-  
fer strangers hospitality a selfish  
thing. Your wish to be kind will be  
that "Instinct of the lady," which some  
snobbish person has said requires  
three generations of culture to pro-  
duce. Not so, it requires only thought  
and care.

### BEING GENTLEWOMEN.

Culture and good feeling are the  
only things that can make a gentle-  
man or a gentlewoman.

"Politeness is to do and say  
The kindest thing in the kindest way."

is an old saw in rhyme, but it is the  
truest definition of the characteristics  
of "gentle blood." Numbers of grand  
ancestors can not make a person "gen-  
tle" who has an unkind of haughty  
spirit, and the men and women who  
have toiled as day laborers may be of  
"gentle blood" if they are kindly and  
courteous. The little forms of doing  
things change, but that is of little mat-  
ter; it is the thing done that will pro-  
claim the fine or the plebeian nature.  
For instance, it used to be proper and  
an obligation of politeness to add "sir"  
and "ma'am" to an address or reply,  
as "Yes, sir," "No, ma'am," whether  
grown people were speaking to each  
other or children to grown people.  
Now it is thought inelegant to add the  
"sir" or "ma'am," even for children;  
but the tone of the voice can carry the  
polite note just as well in a simple  
yes or no.

Kind manners make good breeding,  
not the mere accident of birth. I  
don't mean to under-estimate good  
birth; but remember, dear girls, that  
in the beginning of the world there  
was no higher and no lower class; all  
people were equally ignorant, wild,  
and savage. The emperor of that Rus-  
sia which is so unhappy to-day, be-  
cause the people have been held as  
born to serve, has really no better  
blood in his veins than has some hon-  
est backwoodsman who doesn't know  
who his grandfather was. Long gen-  
erations of education will help to  
make good manners, but unless a kind  
nature is cultivated even the manners  
can not make a gentleman or gentle-  
woman. And it is in the power of  
every one to cultivate kindness, gen-  
tleness, and therefore, to become gen-  
tlefolk.

### A Fairy Land.

The interesting thing about Chicago  
is that you can see things, which you  
have always heard about, but always  
thought of as being away off in Fairy-  
land or some place equally remote.  
My work takes me into several of the  
factories, such as Kirk's soap factory  
and Richie's box factory. These are  
very interesting but can not compare  
with Sears, Roebuck & Company.  
First the guide took us up to the tow-  
er where we could look over four and  
a half miles of city to the east, four  
and a half to the west, sixteen miles  
to the south, and nine to the north.  
Their own grounds cover forty acres.  
In this tower there is a club room  
where the employees can have meet-  
ings. Next we went down into the  
cutting room. Here we saw men cut-  
ting suits to special measure. They  
cut from nine to ten a day. In the  
next room we saw a man cutting forty  
at a time. He averaged four or five  
hundred suits a day. He had a little  
electric knife which did just what his  
hand directed. The finished suits are  
put in baskets and sent whirling down  
a chute. I was tempted to see how  
they felt when they went down but  
Miss Mathews thought it would be un-  
dignified.

The mailing and shipping rooms  
were about as interesting as any part.  
They have a postoffice and distribute  
the mail from here. In the next room



men were wrapping bundles for expressage and in the next room things were being packed for freight. This was on the second floor and there were forty-four freight cars here under a glass roof being packed. This room, where the cars were, is steam heated and the men work here on the coldest days in their shirt sleeves. We saw rooms of crated bicycles and one could not see where they could be sold when they seem so little used. There were also enough little wagons so that it seemed that every little boy could have one.

The most of the things sold by this firm are made at the factories in other places and sent out directly from those places. At their stove manufactory in Ohio they have a capacity for making 40,000 stoves a day. But all the orders are received here in Chicago and in one room were five hundred girls copying orders as fast as they could. In another room letters were being dictated, some to girls and others to graphophones.

We saw them making their immense catalogues, too. One machine printed a forty-six inch sheet on both sides, cut it into thirty-two pages and folded it. Another large machine sorted and put together these thirty-two pages in the right order to make a catalogue. I wish I could explain this machine to you—it was so wonderful. You see a great many thirty-two pages just alike coming from the press. These were laid on a long table in the right order. That is, a pile of the first thirty-two pages were first, then a pile of pages thirty-two to sixty-four, and so forth clear through the catalogue. The machine would take off the first thirty-two pages pile, and it would be taken along a little way and the next thirty-two pages put on top of it, and so on; so that there was a regular train of pages going along the line, having one more section added at each station, so that when it came to the last it was a complete catalogue. It was then put into a machine which bound it and after that it was trimmed. If we have often thought of this place being in Fairyland we find when we visit it that it is almost a Fairyland itself.

They have a wonderful fire protection. On the top floor there were three tanks, each holding one hundred and sixty thousand gallons of water. These are connected with pipes running all through the buildings which have many terminals in every room. These are fitted with soft lead valves so that, as soon as they get heated, they melt and let the water out. They also have a fire brigade on each floor which is as well drilled as any city fire department. Some of the statistics which the guide gave us were as follows: They employ from eight to nine thousand men and women, the greater number of whom are women. They send out every day orders to every State in the Union, but not outside of the United States, not even to Canada. They use from five to six thousand dollars worth of stamps a day. They have six thousand electric lights and make their own electricity, having four immense dynamos.

The rooms are all light and airy and they do some fine things for their employees. They have a fine restaurant where they sell food at cost and buy in such large quantities that the cost is less than usual. They have nice grounds with parks and fine lawns.

It is easy to see how they can sell their goods so much cheaper than the regular retail stores when they do everything on such immense scale and of course they do not have any retail clerks because it is a strictly mail order business. It is certainly one of the sights of Chicago and I would not have missed it for a good deal.

E. L. C.

#### LITTLE HELPS BY THE WAY.—OPTIMISM.

Get all the good there is to-day; Don't fret about to-morrow. There's trouble 'round us all the time. What need is there to borrow? The wise man gets what joy he can, And leaves the fool his folly. He knows too much to waste his life In gloom and melancholy.

## The Little Ones

### THE STORY OF THE GINGER JAR.

There was a little girl, one day, when every one had gone away, Who climbed upon a wooden chair to see how many pieces there were left in the blue ginger-jar.

There was a heap. And so she took 'bout two, I think, down to the brook. Where there was nobody at all to hear or see or tell or call. (Except a little waterfall that talked, and talked, and talked, and talked. It never could be "seen, not heard") and then there came a robin-bird That put its head upon one side, and whistled every time she tried to eat one little tiny piece.

Things were so very impolite she couldn't get a weeny bite. And then—O my! she stopped to look down at the minnows in the brook, and two big eyes there stared at her!

Of course she ran! One has to go when things are interfering so. (Though nurse did say that eyes which look from out a frisky little brook are just one's own inside one's head.)

That little girl just made a track and ran and put that ginger back. At night, with arms round mamma's neck, she told about it. And I 'spec' it's better to tell mamma things Than to eat all the scraps that are in every single ginger-jar in all the world.

—Virginia Woodward Cloud.

### Bennie and the Lightning.

There was once a small boy named Bennie who lived far away in a land where the flowers bloom all the year round, where one never sees snow except on the mountain-tops, and where it lightens and thunders only once in a long, long time. Bennie was a stout little boy with fat, rosy cheeks and merry brown eyes, and boys who look like that are not often afraid of many things. Bennie was pretty brave about most things, too, but one day for the first time in his life he saw what looked like a flash of fire away off in the cloudy sky, and then, just a second after, he heard a queer, low, rumbling noise that seemed to come from that same distant dark sky. And what did Bennie do but cast one frightened look around and then run as fast as his short legs would carry him to his mother. She was sitting by a window sewing, and she was surprised to see her brave boy with pale cheeks and tearful eyes. For she knew well about thunder and lightning and did not see why any one should be afraid of it.

"Mother, mother," cried Bennie, "there is a fire in the clouds, and I'm afraid it will burn us up!" Just then there was another flash, and brave Bennie hid his eyes in his mother's lap and trembled.

"Why, Bennie, sweetheart," said his mother (who was the sweetest mother in the world, he always thought); "why, Bennie, that is only the lightning. It will not hurt you."

"But, mother, hear the noise! Are the clouds falling to pieces?"

"No, no, my dear little boy, that is just distant thunder."

"But what is thunder, and what is lightning?" asked Bennie.

"Well, dear, I will tell you a long story about lightning, and then perhaps you will not be afraid of it," said Bennie's sweet mother. "In the first place, Bennie, the lightning is in God's hand, just as the wind is in His hand, and the rain, and the sun, and just as my little boy is, and so we need not be afraid. And Bennie, do you know what makes the street cars run?"

"Yes," said Bennie, "electricity."

"Well," said Bennie's mother, "that is the very same thing that you saw in the clouds, electricity. And when we talk to our neighbors over the telephone, it is electricity that sends our voices along so far over the long wire."

"Oh—h!" said Bennie. "I didn't know it was electricity."

"Yes, Well," continued Bennie's mother, "once there was a man who had the very same name as you, Benjamin—Benjamin Franklin. He was a very wise and thoughtful man, so one day he was watching the light-

ning in the clouds, just as we are to-day, and he began to think about it. In those days people did not have electric cars and telephones. They did not know as much about electricity as you do; my little boy. But Benjamin Franklin thought it would be splendid if he could use some of the electricity that he saw flashing so beautifully up there in the clouds."

"Oh!" said Bennie, almost out of breath to think of such a thing.

"And so," his mother continued, "he made him a kite—"

"A kite!" cried Bennie.

"Yes, a kite, with a long string. And he took it out and flew it high up in the stormy clouds. And now this is the most wonderful part of the story—the lightning ran down the wet string, and into a key which he had tied to the other end."

"Could he see it?" asked Bennie, with great interest.

"No, he could not see it, any more than we can see it in the telephone wire."

"Well, how did he know it was there?"

"Because when the cloud passed over the kite the key had so much electricity that a spark flew from it and struck his knuckle, just like a little flash of lightning. The wise men had learned how to produce electricity with little machines but they did not know that it was the same as the lightning until Franklin showed them by catching the electricity from the clouds and bringing it down his kite string."

When Bennie's mother had ended her story, Bennie sat for as much as a minute, thinking, with his eyes turned toward the clouds where the distant lightning still flashed. Then he said, "That is a pretty good story, mother. I guess I'll go out and play now."

And I really think he never was afraid of the lightning again.

R. C.

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### For Yourself?

Or, do you open your mouth like a young bird and gulp down whatever food or medicine may be offered you?

There is an intelligent thinking woman, in need of relief from weakness, nervousness, pain and suffering, then it means much to her that there is one tried and true honest medicine or known composition, sold by druggists for the cure of woman's ills.

The makers of Dr. Pierce's Favorite Prescription, for the cure of weak, nervous, run-down, over-worked, debilitated, pain-racked women, knowing this medicine to be made up of ingredients, every one of which has the strongest possible indorsement of the leading and standard authorities of the several schools of practice, are perfectly willing, and in fact, are only too glad to print, as they do, the formula, or list of ingredients, of which it is composed, in plain English, on every bottle-wrapper.

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No other medicine for woman's ills has any such professional endorsement as Dr. Pierce's Favorite Prescription has received, in the unqualified recommendation of each of its several ingredients by scores of leading medical men of all the schools of practice. Is such an endorsement not worthy of your consideration?

A booklet of ingredients, with numerous authoritative professional endorsements by the leading medical authorities of this country, will be mailed free to any one sending name and address with request for same. Address Dr. R. V. Pierce, Buffalo, N. Y.

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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.

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Now in new building, with new furniture and latest office appliances. 27 years of successful work. Board and room cheaper than any other place in the United States. No solicitors. Loafers not wanted. Courses by mail in shorthand, penmanship, and bookkeeping. Address,

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

Under the brown of the stems are buds; Over all is the heart of God. —George Kilgus.



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Women's Club (1902).....Logan, Phillips Co.  
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Star Valley Women's Club (1902).....Iola, Allen Co.  
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(All communications for the Club Department should be directed to the Club Department, Kansas Farmer, Topeka, Kans.)

### Challito Club Is Entertained at Rossville.

On Wednesday, May 27, the Challito Club, of Highland Park, was entertained at Rossville by the Ladies' Literary and Music Club of that place, and it was my privilege to be a guest of the two clubs. It was a day full of pleasant things and one memorable to me, at least, in that one or two new ideas found lodgment in my brain. If you have ever thought about it, you have realized that ideas are not overly numerous in this world of ours, and that, therefore, when you do really meet one and make it your own, that is a time worthy to be remembered.

We took the Union Pacific train at Topeka at half past ten, in a pouring rain, and arrived at Rossville half an hour later to find the sun shining softly through drifting clouds. Rossville is a pretty town carpeted with the freshest, greenest of grass and shaded by splendid trees and surrounded by the typical Eastern Kansas landscape, rolling green fields, little green hills, and a crooked green line of trees bordering the winding river—a smiling and prosperous country, dear to the heart of its sons and daughters, and more pleasant than many a more pretentious scene.

We were met at the train by two representatives of the club and taken to the pretty home of one of the members. Here we laid aside our hats and now unnecessary umbrellas, and proceeded to get acquainted. It was a little difficult at first to fit the right name to the right person, for there were fourteen guests and probably twenty-five hostesses, but it was not long before we all felt that we were simply a gathering of congenial friends. We had a most delicious luncheon served in the large dining room. The tables, with their white linen and pretty dishes, looked very inviting, but how very pleasant a sight it was to see them filled with sociable, chattering women!

After dinner came the club meeting proper. The roll of both the clubs was called, to which the responses were quotations from favorite authors, and some of these responses were very beautiful. Then came what Mrs. Michener, the president of the Rossville Club, called "an experience meeting." Every one was expected to rise and tell what benefit she felt she had gained from club life. I wish I could remember all of them and there were three or four that I should be glad to quote in exactly the simple, graceful words in which they were spoken. It was here that I got my new ideas, not altogether from the

words spoken, but from the manner of their speaking and the faces of the speakers. For a genuine, sincere woman whose face shows gentleness, refinement and intelligence can suggest by her very earnestness and goodness thoughts that make one better. There were several such women in this gathering, and it is for this that I feel grateful to those who gave me the privilege of meeting with them. May there be many more such gatherings all over the State!

### The Uses and Limitations of Soil Analysis.

(Continued from page 651.)

without any fertilizer, making nine altogether. This arrangement will show the results of each of the three fertilizing constituents and of possible combinations of them.

There is one serious drawback to an experiment of this kind. Plat experiments which are designed to be exact duplicates have frequently been found to give considerably diverse results. For example, if in the field to be tested a series of nine plats were to be laid off and no fertilizer applied to any of them, the yields obtained from the several plats would not be the same, in all probability. This source of error can be avoided in two ways. The first is by testing the land for a few years without fertilizers, ascertaining the relative yields of the plats in their natural state. This is probably the best method as preliminary to a thorough investigation, but does not yield immediate results. The other method is to multiply the series of plats as many times as practicable and take the average result of the corresponding plats. Thus, if the series were repeated three times, we would have the arrangement indicated by the accompanying diagram.

The average yield without fertilizers of the twenty-five plats will be shown by the average of plats 1, 9, 17, and 25, to which no fertilizer is applied, and the result will obviously be more reliable than if we should depend upon any one of these alone. Even if the total amount of land devoted to the experiment be no greater, these four plats represent the total area more truly than any four side by side do. So, too, the effect of a nitrogenous fertilizer alone will be shown with

### A Plat for Experimental Fertilizing.

1. Nothing.
2. Nitrogen.
3. Potassium.
4. Phosphorus.
5. Nitrogen and potassium.
6. Nitrogen and phosphorus.
7. Potassium and phosphorus.
8. Nitrogen, potassium, and phosphorus.
9. Nothing.
10. Nitrogen.
11. Potassium.
12. Phosphorus.
13. Nitrogen and potassium.
14. Nitrogen and phosphorus.
15. Potassium and phosphorus.
16. Nitrogen, potassium, and phosphorus.
17. Nothing.
18. Nitrogen.
19. Potassium.
20. Phosphorus.
21. Nitrogen and potassium.
22. Nitrogen and phosphorus.
23. Potassium and phosphorus.
24. Nitrogen, potassium, and phosphorus.
25. Nothing.

greater accuracy by taking the average yield of plats 2, 10, and 18, than would be the case by applying nitrogen to a single plat three times as large. The same considerations, of course, apply to all of the others, and the greater the number of repetitions of these series the more reliable the conclusions drawn from the results.

### INTERPRETATION OF RESULTS.

The interpretation of results obtained from such a series of plats is easy. Representing the entire series by the numbers of the first ones, it is obvious that if no material differences are noticed in the yields of the several plats, no fertilizers would be advantageous. If Nos. 2, 5, 6, and 8 showed increased yields not exhibited by any other plats, the necessary conclusion would be that the soil is in need of nitrogen, but not of anything else. If plats 2, 3, 6, and 7 showed increased yields, while plats 5 and 8 showed still greater increases, the conclusion

## How Harsh Physic Wrecks the Bowels

Irritate the skin in any spot frequently and that spot will grow calloused. That is Nature's means of protection. So with the bowels. When you irritate the lining with salts or "pills," the lining grows hard.

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

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

You have the "physic habit."

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

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

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

They act exactly the same as right living would do.

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

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

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

**Cascarets**  
THEY WORK WHILE YOU SLEEP

The vest-pocket box is 10 cents.  
The month-treatment box 50 cents.  
12,000,000 boxes sold annually.



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would be that the soil is in need of both nitrogen and potassium, either of these alone producing a beneficial effect, but fertilizers containing both producing a still better result. If at the same time the plat receiving phosphorus only showed little or no effect, and phosphorus with nitrogen, or with potassium, or with nitrogen and potassium, showed but little or no advantage over the plats receiving nitrogen alone, potassium alone, or nitrogen and potassium, respectively, it must be decided that phosphorus is not required by the soil. By similar lines of reasoning, any possible results may be interpreted, but for the greatest accuracy in such experiments it is necessary to perform the preliminary experiments referred to, in which the relative yields of the several plats are ascertained through a series of years without the application of any fertilizers, and giving the plats strictly uniform treatment.

While these precautions are necessary for the most concordant and satisfactory conclusions, results of value may be obtained by the four-plat test first described, and no farmer can afford to spend much money for commercial fertilizers without having ascertained, by one or another of the plans above described, the actual needs of the soil. In carrying out a fertilizer test of this kind the plats should be long and narrow, rather than square, and one-tenth of an acre and upward in area.

The practical fertilizing test may, of course, be extended to include other points such as would require applications of calcium (lime) compounds or organic matter. In many cases of soils that have become unproductive or gotten out of condition, the deterioration may be traced to the diminution of the humus or organic matter in them. Before deciding that commercial fertilizers are necessary, the effect of green manuring should be ascertained. It should also never be forgotten in this connection that barnyard manure, because of its content of organic matter in a state of decay, is superior to chemical fertilizers containing equal amounts of potassium, phosphorus and nitrogen compounds.

### SUMMARY.

The preceding considerations may be summarized briefly. A thorough chemical analysis of a soil is indispensable to any comprehensive study of its condition and probable durability.

Such chemical analysis may not be sufficient alone to give positive indications concerning the present productivity of the soil, or its needs in respect to fertilizers. Chemical investigation directed toward certain specific points may be of great value in respect to a given soil. Laboratory tests of a purely physical character afford little if any information that can not be obtained better by examination of the soil in its natural condition and position. The immediate fertilizer requirements of a soil are best ascertained by means of systematic fractional fertilization of different crops.

### Statistics Show Prosperity in Western Kansas.

Returns of the agricultural and population statistics of Kansas counties for the year ending March 1, 1908, have begun coming to Secretary C. Burn of the State Board of Agriculture, and so far as received they disclose some suggestive and interesting facts. The ten counties heard from are Cheyenne, Sherman, Wallace, and Greeley (these four on the Colorado border), Sheridan, Logan, Scott, Finney, Haskell, and Hodgeman—all in the western third of the State.

The returns indicate clearly the growing esteem for hard winter wheat in that portion of the State for which macaroni or durum wheat has been so strenuously advocated by the Washington officials. In the ten counties the sowing of winter wheat has been increased by nearly 14 per cent, while macaroni wheat shows a decrease of over 32 per cent. Six of these counties have heretofore been among the foremost spring wheat producers, Cheyenne and Sherman leading.

The acreage of corn has increased 24 per cent, but oats, not an important crop to the western part of the State, shows a decrease of 27 per cent, and barley 13 per cent. Each of the ten counties reports an acreage devoted to emmer and spelt. Statistics of this crop have never before been gathered in Kansas, and for the first time it will this year be officially recognized in the printed reports of the Department. The ten counties have 3,049 acres.

Finney, most important of the sugar-beet-growing counties, and in which a beet-sugar factory is located (at Garden City), this year reports



7,247 acres devoted to beets, which is an increase of 15 per cent over the 1907 acreage.

Irish potato and broomcorn acreage show a falling off, but sorghum for forage or grain shows an increase of 39 per cent, millet and Hungarian an increase of 17, Kafir-corn 33, and alfalfa 13 per cent.

Figures of prairie under fence compared with those of ten or even five years ago tell the story of the passing of the open range and the gradual fencing of what a few years ago was a vast open grazing domain. The clerks report for the ten counties 1,230,292 acres of land under fence for meadow or pasture, an increase of 124 per cent over five years ago, and 1,209 per cent over ten years ago.

The value of milk and cream sold to factories and the number of pounds of butter made in families each show considerable gains above last year. Horses, mules, asses, and milch cows show increases over 1907, but other cattle, sheep, and swine are returned in less numbers.

Secretary Coburn has always contended that Kansas is preeminently adapted to successful sheep-raising, and that not less than fifty sheep should be maintained on every farm in the State, but the returns from the ten counties show that the number of sheep has decreased more than 36 per cent in the past year, while there was a large increase of dogs. There were 71 per cent more sheep killed by dogs and wolves in the year, and these facts are far from encouraging to the would-be sheep-raiser. There should be fewer worthless dogs and many more sheep in every county in Kansas.

The population of the ten counties shows a slight increase. Four counties show decreases. The largest per cent of increase is in Haskell, or 24 per cent. Finney gained nearly 6 per cent, Cheyenne 3 and Hodgeman about 2 per cent. Sherman County had the largest decrease, or nearly 8 per cent, which the county clerk says is due to the fact that at Goodland, the county seat and a division point on the C. R. I. & P. Railway, that road laid off a large number of employees who have sought work elsewhere.

The returns suggest that on the whole the western part of Kansas is possessed of a substantial prosperity greater than ever before, and in no wise allied to "booms."

## Horticulture

### Insects Damaging Plum Trees.

EDITOR KANSAS FARMER:—I send you a box of bugs which I find are working badly on plum trees in this part of the State. Can you tell the name of the bugs and a remedy to rid the trees of them?

T. F. MORROW.

Montgomery County.

Owing to the condition of the package when it arrived, we are unable to give you an exact identification of the insect troubling you. It is, however, a plant louse belonging to the genus Aphis. It is probable that you can largely rid your trees of these lice by spraying them thoroughly with kerosene emulsion, diluted 10 to 11 times with water, or with whale-oil soap used at the rate of 1 pound to 6 or 7 gallons of water. Whale-oil soap may, perhaps, be obtained from your local dealer, or, failing there, from any other first-class dealer or manufacturer of insecticides. Kerosene emulsion may be made according to the following formula: Dissolve  $\frac{1}{2}$  pound of hard or soft soap in 1 gallon of boiling water. Removing this mixture from the fire some distance, pour into it 2 gallons of kerosene and stir it violently either with a paddle—and this is a long process—or by using a force pump, pumping the mixture out and back into itself again until the whole mass assumes a creamy color and consistency. Be sure that every bit of the oil is united with the soap, for the presence of free oil will kill green foliage. Whether you use kero-

sene emulsion, whale-oil soap, or any other insecticide for the sucking insects, every insect must be hit with the substance if the work is to be thoroughly successful.

If you have any difficulty in killing these lice with the substances suggested, kindly let us know by writing full particulars, and we will see what can be done. If you will send us by mail specimens of this louse in question, enclosed in a tight tin can or box so that they will reach us in good condition, we will determine the exact species.

T. J. HEADLEE.

### Preserving Fruits for Exhibition.

B. O. LONGYEAR, ASSOCIATE PROFESSOR OF BOTANY, COLORADO AGRICULTURAL COLLEGE, FORT COLLINS.

A great many experiments have been made in the attempt to find some fluids or solutions in which the more perishable fruits could be kept for exhibition at fairs and expositions. Some of these have proved very satisfactory for certain fruits, but it is doubtful if any process will ever be discovered by which the softer kinds, such as strawberries and raspberries, can be kept for any considerable length of time without much change in color.

The specimens to be preserved should be the most perfect obtainable, free from all blemishes and imperfections. In most cases fruit of a fair degree of ripeness is better than partly green specimens.

Exhibition jars should be of clear white glass and preferably with ground glass stoppers. The tall, cylindrical form is desirable, especially for the smaller fruits.

The sorted fruit is first carefully placed in the jar which is then filled with clear water. After standing a short time the water should be poured off so as to remove all particles of dirt from the jar and contents. The jar may then be filled with the preserving fluid and kept in a dark, cool place until the time for exhibition. Frequent examination should be made to determine how well the fruit is keeping. If the liquid becomes colored from the fruit, it should be poured off and replaced by fresh fluid.

The following formulas have been successfully used at the Colorado Agricultural College, especially with plums, grapes, cherries, currants, and gooseberries:

Formalin, 5 parts; saturated solution of common table salt, 10 parts; water (boiled and cooled) enough to make 100 parts.

This may be made up by measures as follows: Formalin, 1 pint; salt solution, 2 pints; water, 17 pints.

When made up, the solution will keep indefinitely. Another solution weaker in formalin has also been used here satisfactorily. The proportions are: Formalin, 3 parts; salt solution, 10 parts; water enough to make 100 parts.

For raspberries, the following mixture is recommended: Formalin, 1 part; glycerine, 10 parts; water, 89 parts.

Strawberries may be preserved fairly well in a saturated solution of common salt, and better still in a fluid composed of formalin, 1 ounce; alum, 1 dram; glycerine, 5 ounces; water, 3 pints.

Red currants keep best in a solution of corrosive sublimate, 1 part; glycerine, 10 parts; water, 89 parts.

The corrosive sublimate must be dissolved in hot water and the solution and fruit preserved in it should be labeled poison, as it is very deadly if swallowed.

The glass stoppers of bottles and jars may be made perfectly tight by smearing the ground surface with a small amount of light colored vaseline. This will also prevent, in great measure, the sticking of the stoppers when it is desired to remove them.

### Rules for Peach Growing.

J. G. Hale has given the following ten rules for success in peach growing:

1. High, dry, sandy or sandy-loam soil.

## Complaints About Poor Paint

The time to complain to your painter about the paint he uses is *before he puts it on the house.*

The man who pays the bill should not shirk the responsibility of choosing the paint. True, the painter ought to know paint better than the banker, the professional man or the merchant, and if he is a genuine, trained painter, he does know. The trouble is, the houseowner often deliberately bars the competent, honest painter from the job by accepting a bid which he ought to know would make an honest job impossible.

Inform yourself on paint, secure your bids on the basis of Pure White Lead and Pure Linseed Oil, and then (quite important) *see that you get them.*

The purity of White Lead can be definitely determined even by the novice, in two minutes. A blowpipe is needed, but we will supply that instrument free to anyone interested in painting, together with instructions for its use; also a simple and direct treatise on the general subject of painting, written especially for the layman.

Ask for "Test Equipment 23"

## NATIONAL LEAD COMPANY

in whichever of the following cities is nearest you:

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2. Careful selection of varieties most hardy in fruit bud.

3. Vigorous, healthy seedling stock, budded from bearing trees of undoubted purity and health.

4. Trees given the entire possession of the land from the start.

5. Thorough culture from the beginning of spring until the new growth is well along.

6. Liberal annual manuring, broadcast, with commercial manures rich in potash and phosphoric acid and lacking in nitrogen.

7. Low heading and close annual pruning for the first five years.

8. Keep out most borers with some suitable wash, and dig out all others.

9. Search for traces of the yellows every week of the growing season, and at first sight pull up and burn every infected tree.

10. Thin the fruit so that there shall never be what is termed a full crop.

### CURES ECZEMA.

Evidences of the wonderful Eczema cure effected by Tarsen continue to pour into the International Laboratories from all over the country. This distressing malady seems to have met its master in Tarsen, the lately introduced specific which is applied on the parts thus effected.

It is the greatest cure that has ever been perfected for facial troubles, blackheads, pimples, and for itching and running eczema. The International Remedy Co., 1123 Broadway, New York City, will send a free trial treatment to all requesting same.

### Farmers' Fairs in 1908.

The list of county fairs to be held in Kansas in 1908 is announced by Secretary F. D. Coburn as follows:

Allen County Agricultural Society—Frank E. Smith, secretary, Iola; August 25-28.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Leavenworth County Fair Association—



**\$3**

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**Bentley & Olmsted Co., Des Moines, Ia.**

tion—Stance Meyers, secretary, Leavenworth; September 15-19.

Linn County Fair Association—O. E. Haley, secretary, Mound City; first week in September.

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

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

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

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

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

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

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

Ness County Agricultural Association—Thomas Rineley, secretary; Ness City.

Ness County, Utica Agricultural and Fair Association—R. C. Webster, Jr., secretary, Utica.

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

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

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

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

Rice County Agricultural and Live Stock Association—C. Hawkins, secretary, Sterling.

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

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

Saline County Agricultural Horticultural and Mechanical Association—B. B. Stimmel, Jr., secretary, Salina.

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

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

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

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

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



## Dairy Interests

### Two Enemies of Dairymen.

DR. I. E. NEWSOM, READ BEFORE COLORADO STATE DAIRYMAN'S ASSOCIATION.

Having spent some twenty years of my life on the farm and the most of the time in close contact with "old bossie cow," in her varying capacities of giving milk for butter, for city trade, for the creamery, and skimming stations, not as owner or manager, but as general roustabout, and also having spent some time as dairy inspector, I feel especially competent to point out some of the enemies of the dairymen. In fact, I have on some occasions almost concluded that he had nothing but enemies. My personal experience has led me to believe that when we consider the long hours of labor, the strict attention to duty and the health of the public along with the lives of the infants which are placed at his disposal, that there is no class of men as poorly paid, either in honor or in money, as the dairymen.

It seems to me, therefore, that this step which you are about to take today, that of forming an association for mutual discussion and alleviation of the many enemies which beset you on every hand, has been delayed already too long. While I believe that it is my good fortune to be acquainted with the difficulties of the dairymen from your own standpoint as well as from the standpoint of the sanitarian and bacteriologist, these matters have been ably discussed by others more qualified than myself to speak.

It then becomes a pleasure for me to take up a discussion of two of your minor enemies in the field of disease and if the results obtained by contact with these two diseases as a dairymen and later by a scientific study I may alleviate in any way your difficulties, I shall feel amply repaid for the time spent.

### MILK FEVER.

First in regard to milk fever, otherwise known as paralysis of parturition, parturient eclampsia, calf fever, etc. This disease is not the enemy of the worst dairymen, or those who keep poor cows and are negligent feeders and who are generally lax in their methods. For such we have little sympathy, and such a man would be least likely to follow out any advice that might be given in this paper. In fact, such a man would not be present here today, for he would take no interest in the advancement of the dairy industry at large. Treaties of this disease are necessary for the man who takes a pride in keeping only the best milkers, who constantly has in mind a herd of six- to eight-gallon cows, and feeds and breeds accordingly. He is the man who must be familiar with the prevention and treatment of milk fever.

Show me a man who has milk fever in his herd and I will show you a man who has some of the best milkers. Never was a scrub cow known to have the disease. It would at first seem to be an injustice on the part of nature that he who constantly labors to build up the best possible milkers should be defeated by this dreaded disease while his shiftless neighbor should be entirely free from it.

You are all probably more or less familiar with the symptoms such as finding the cow down within a few hours or days after giving birth to the calf, entirely unable to rise, unconscious; if on her sternum, the head will be thrown to one side, nose in the flank; if on her side, probably considerably bloated, moaning and gurgling. If you touch the eye ball with the finger no movement of the lid is seen. She is completely unconscious, and without treatment would probably die within twelve to thirty-six hours.

A number of theories have been advanced to explain the condition, three of which merit our consideration. First, that a bacterial infection elaborates poisonous principles in the udder and these being absorbed by the

blood so derange the nerve centers as to produce the consequent paralysis. Second, that the elaboration of the poisonous principles is not a result of bacteria, but is caused by the unusual activity of the gland cells themselves in forming the new milk. The fact that the first milk is very different from normal milk and has purgative action of the young would tend to strengthen this view. Third, that there is a lack of blood in the brain due to the enormous quantity taken not only to fill the vacant space in the abdomen, as a result of the absence of the young, but the equally large amount necessary to fill the large udder and manufacture the quantity of milk needed.

If the first theory is true, then we should use antiseptic to kill the germs in the udder, and I might add that these used in large quantities have proven effective. If the second is true, then treatment would of necessity be confined to some remedy which would either lessen the cellular activity in the udder or counteract the poisonous principles formed. If the third theory is true then anything which will tend to take the place of the blood in the udder and return to the general circulation should be valuable.

### TREATMENT.

In searching for a treatment the veterinary profession had in mind the first theory and accordingly Schmidt tried the injection of a solution of potassium iodide in the udder with remarkable results. With this treatment he was able to save some seventy or eighty per cent of the cases as against a saving of twenty-five or thirty by shot gun methods. Other veterinarians tried solutions of other antiseptics such as creolin, carbolic acid, boric acid, etc., with equally good results. Later pure oxygen was used with a saving of nearly one hundred per cent. Still more recently ordinary air has taken place of all other treatments with the result that only very rarely is a milk fever patient lost. This I consider has been the most remarkable discovery made by the veterinary profession in recent years, and is certainly a great boon to the dairymen. Had the profession kept this discovery a secret, it would have brought much small honor to its individual members as well as give their pockets a silver lining, for it then—and is yet the case among the ignorant—ranked as one of the miracles that a cow apparently near death can in an hour be up eating as though nothing had happened, by the mere application of a bicycle pump or some other crude instrument. But knowledge so easily applied and so capable of relieving suffering, should be as widely distributed as possible.

However, in the hands of the unexperienced even this treatment will prove very unsatisfactory, as the cow will arise and begin to eat only to become effected with inflammation of the udder due to foreign germs injected by using dirty instruments, dusty air, or falling in any way to observe proper antiseptic precautions. An instance of this happened at a Toronto dairy show several years ago in which a number of cows' udders were pumped full of air to deceive the judges, and later nearly every one lost one or more quarters of the udder due to infection with maminitis following.

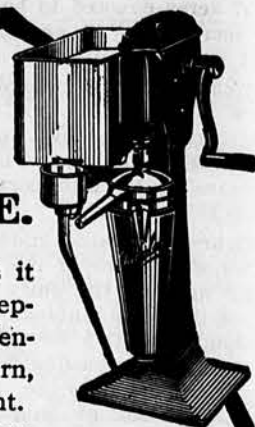
### ABORTION.

The other enemy of the dairymen of which I shall speak is contagious abortion. By this I do not mean the occasional abortion that all dairymen have to deal with due to falls, kicks, horn thrusts, and the like, but the persistent abortion of a number of animals in the herd with no apparent cause.

While we know that this is due to a germ transmitted from one animal to another and a number have been charged with producing it by different investigators no specific one has been agreed upon.

The cows may abort at any time during the period of gestation from three months up to such a time as the

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calf will live after being expelled, one feature of the disease being that at each succeeding time an affected cow aborts she carries the calf a longer period before finally, after two to five abortions, carries the calf the full time again and ever thereafter.

In other words, if a cow aborted the first time at three months, she would probably carry it five next time, and seven the next and the full period thereafter. Such a cow still carries the germ, however, and is still capable of transmitting it to healthy cattle, and is always a source of danger in a herd even though she does not abort herself.

The disease is transmitted from one animal to another very largely by the bull. He therefore should receive special care in any effort to prevent or cure it. Care should be taken in buying a bull or a new cow that one is not obtained from a herd where the disease is known to exist. Letting the herd bull serve outside cows is a bad practise, as he may become infected. If it is suspected he has served an affected cow or the disease is known to exist in the herd, the sheath should be thoroughly washed out with a one or two per cent solution of creolin.

This can be done best in a chute, with the bottom board removed and one leg tied back to prevent injury to the operator. A rubber tube and funnel, or better still, a gravity syringe, can then be used to advantage. This procedure should be carried out each time the bull serves an affected cow.

While cows have been known to stand beside those affected for long periods of time and not themselves become affected when served by a separate bull, still a wiser and safer course is to thoroughly clean up after each abortion and disinfect the stable with a five per cent solution of carbolic acid or creolin. The afterbirth, which it is usually necessary to remove by hand, should be burned as well as the dead calf. The uterus and vagina should be washed out daily with one per cent solution of creolin for a week, and the cow not be bred for at least two, and better, three months.

If any large part of the herd becomes affected it will then become necessary to use more radical measures in addition to the above. For instance, in addition to the general clean-up, whitewashing the stables with a one to one thousand solution of bichloride of mercury in the white-wash and treatment of the bull and affected cows. It will be necessary to take a week off and once a day give every cow in the barn a vaginal irrigation of a warm two per cent creolin solution and a thorough washing of the animal's tail and all back parts. This, followed by proper judgment in the use of the bull and isolation of recently aborted animals, should entirely clean up a herd.

#### Food Value of Milk.

The food value of milk is brought out forcibly in a recent pamphlet written by Prof. J. B. Lindsey of the Massachusetts College of Agriculture, and published by the State Board of Agriculture.

Milk of average quality at market prices furnishes more food for the money than do more expensive kinds of meat, such as beef, mutton, and pork, and is much cheaper than such special foods as eggs or oysters, or most vegetables and fruits. Only breakfast foods, etc., are cheaper sources of energy than milk. A glance at Professor Lindsey's table shows that milk at six cents a quart furnishes the same amount of protein as round beef at sixteen cents or roast pork at twelve cents. That is to say, a dollar's worth of either of these foods contains an equal amount of protein. Even where milk is sold as high as ten cents per quart, a dollar will buy as much protein when spent for milk as if spent for lamb chops at twenty-five cents per pound, sirloin beef at thirty cents, or eggs at thirty-six cents per dozen.

MILK AN IMPORTANT FACTOR IN DIET.  
Professor Lindsey thinks milk

should occupy a larger place in daily diet than is ordinarily given. In experiments at the Maine State College it was found that when the students were allowed free use of milk the extra milk consumed replaced the other animal food to a nearly corresponding extent, and the milk diet was not only less costly than the meat, but was fully as satisfactory. When skim-milk is used the food value is obtained at even less cost since the value as a food does not depend very much on the cream, and at the price at which it is valued in most country districts, about one-half cent a quart, it is one of the very cheapest foods, and can be used to advantage in place of water in cooking, adding greatly to the value of the foods with which it is mixed. Hardly any food returns so much of its food value because there is no loss in cooking and no waste. It is palatable, easily digested, and according to Professor Lindsey is entitled to be classed among the most economical human foods.

#### Sunflowers for Ensilage.

Kansas sunflowers may prove to be valuable. The experiences related in the following paper refer to the Russian sunflower and may not be entirely true of the native Kansas variety. But the writer has seen fields of sunflowers in Kansas in which cattle were feeding on the sunflower foliage with apparent relish and profit. The farmer who finds it impossible to prevent the growth of sunflowers in his corn during a season like the present may find it worth while to experiment a little to determine the feeding value of this persistent weed. His consolation will be great if it shall be demonstrated that sunflowers ought to be planted, cultivated, and harvested with corn as suggested below, by E. J. Brownell, of Delaware County, New York, in the Ohio Farmer:

#### CORN AND SUNFLOWERS FOR ENSILAGE.

Replying to inquiries as to methods of culture and handling the crop of corn and sunflowers grown for ensilage, I have taken pains to secure the following information from some of our leading farmers growing this combination crop, and their estimate of its value from actual experience. In the fall and winter of 1902-3, Mr. Frank A. Converse, of Erie County, New York, then a member of New York State Farmers' Institute force of lecturers, in the series of institutes held in this section, in his talks on dairy feeds and feeding, recommended the planting of sunflower seed with corn for the silo with a view to increasing both the yield and the value of the ensilage. The sunflowers being, as he argued, much richer in protein than the corn alone. From personal experience with ensilage from corn and sunflowers thus grown together, he was convinced that it made an excellent feed and believed it possible for our Delaware County farmers to effect a considerable saving in their feed bills by adopting this practise.

Quite a number of our dairymen did give the plan a trial the following year, some of them being highly pleased with the results; so well pleased, in fact, that they have continued the practise since that time. Others discarded it after one or two seasons' trial, on account of the added labor of harvesting and handling the crop. I have talked with many different farmers who have thus grown the crop, and they almost universally agree that the quality of such ensilage is first-class, and readily eaten by their stock. The extra work in handling is the only real objection brought against its continued use by those who have given up the sunflowers. But while all who have grown the combined crop are ready to concede that the sunflowers, when fully grown, are heavy and cumbersome to handle, those who are disposed to continue their use agree that a full corn crop, too, is heavy to handle, and they consider the value of the combined crop as sufficiently enhanced to com-



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#### INCREASE IN PROTEIN.

Among our leading Delaware County farmers, who gave this plan a trial in the summer of 1903, was Mr. Chas. Potter, for several years president of the Delaware County Dairymen's Association, and later a well-known Guernsey breeder. About four acres of corn and sunflowers were grown by Mr. Potter on his farm that summer (1903), a season which, as may be remembered by many, was one of the most unfavorable in many years for the growth and development of the corn crop throughout the whole of New York State. This was particularly so in Delaware County, hardly a field of well-matured corn being grown that year. Yet their combined crop of corn and sunflowers was up to a full average ensilage crop in yield, giving at the rate of fifteen tons per acre and estimated as being fully equal at least to that of ensilage from well-matured corn. He has been so well pleased with the practical results of his experience with this ensilage as a dairy feed that he has continued its use from year to year, believing that he secures from it a feed rich in protein and saving quite largely on the amount of grain purchased for his dairy.

#### GROWTH OF CORN NOT RETARDED.

Mr. Andrew Nicoll, president of Delaware County Agricultural Society and a well-known farmer and milk producer, is another of our farmers who, after several years' trial, continues to annually grow good crops of corn and sunflowers, as he believes with good profit for storing in the silo. In a good corn season, the corn securing an early and rapid start, he finds it keeps well ahead of the sunflowers, so that its growth is not seriously retarded thereby, while in a season that is less favorable to corn growth, the sunflowers come on later in the season and help largely in bringing the full crop up to a much better average, taking a series of years in succession, than would otherwise be secured. The following are the methods used.

#### METHODS.

The preparation of the soil and cultivation of the combined crop is exactly the same as for a corn crop

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grown separately. For while the sunflower plant is a rank feeder, this is true also of the corn plant as well, and the field of either is, in a favorable season, and with proper cultivation, largely proportionate to the fertility of the soil on which it is grown. Plant the corn in drills with a corn planter that drops one kernel of seed about every six inches in the row. Try to have as nearly as possible a plant of corn to every foot of space in rows. With the corn required to plant an acre, mix in the planter about 1 to 1½ quarts of sunflower seed of the Russian Mammoth variety. It will be found necessary to use care in occasionally stirring up the seed in the hopper while planting to secure a uniform mixture over the whole field, as the sunflower seed, being smaller than the corn, has a tendency to settle to the bottom.

The Russian Mammoth sunflower seems to give best results for this purpose, and when not raised at home, can be obtained from any good, reliable seed house. Harvest when the corn is beginning to glaze, at which



stage the seeds in sunflowers are fully developed, and before the stalks begin to get hollow. The sunflower stalks, when cut, are frequently as large as 2½ inches in diameter, being as large as a good sized handspike, and the outside of stalk is quite hard when cut, they usually soften up in the silo so as to be readily and cleanly eaten up. It is very seldom that a particle of sunflower stalk is left in the manger, though this is not an uncommon occurrence with the butts of the larger stalks of corn. The crop can be cut with a corn harvester. When fed through the ensilage cutter, using a 16-inch cutter, heads first, the sunflowers feed through much better than when fed butts ahead.

Mr. Nicoll says: "My grain ration is of gluten and cotton seed, with some brand of molasses feed or wheat feed, and when the corn and sunflower ensilage is well matured, I find some saving in amount of cotton seed and gluten required. I have now grown this combined crop for six consecutive seasons and as good an argument as I can give in its favor is that I shall continue to do so."

#### Concrete Floors in Corn Crib.

EDITOR KANSAS FARMER:—In your issue of May 14, 1908, Chas. T. Thuma of Brown County, asks for information in regard to concrete floors in corn crib. I volunteer my experience in that line as follows: In the fall of 1907 I built a crib and granary with driveway between and concreted the floors of both crib and granary. They have been used for storing two crops and if I were to build a dozen cribs and granaries I would use no other floor for several reasons, viz.: It is rat proof, fully as cheap or cheaper than lumber, economical of space, as no joists are necessary, and everlasting if properly constructed.

My building is on a rock foundation put well into the ground, and laid in cement mortar, the sills being bedded in cement mortar. Below the space intended for the floor proper I tamped in fully a foot of cinders, bringing these up to the bottom surface of the floor; over this I tamped firmly the floor from 3½ to 4 inches thick, composed of one part Portland cement, three parts coarse sand, and five parts broken rock. If there is a better grain floor in Lyon County I do not know who owns it. I have a room floored in the same way for our cream separator, also one in our hen house. They are all right, and no mistake about it.

If my letter is not already too long, I will submit my plan for concrete floors, as a point of importance is to anchor the sills so firmly that they can not be sprung away from the concrete by the weight of grain against the sides of the building. My plan was as follows: To rod the sills together with say ½-inch round iron rods, the concrete to surround the rods.

Perhaps the following illustrations will serve to show what I mean:

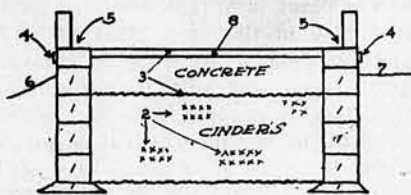


Fig. 1.—Vertical cross section of one crib, the other to be built in the same manner. 1. Rock wall. 2. Cinders. 3. Concrete floor. 4. Anchor rod nut. 5. "L" sill. 6. Grade line outside. 7. Grade line of driveway. 8. Anchor rod.

By "L" sills I mean a 2x4 or 2x6 laid flat in cement on wall and one of same dimension placed on edge of the flat piece. Of course the sill must be frame and well spiked before being placed on the wall. The studding may be framed and when placed on the sill it appears as in figure 2; 1 being the foot of stud, 2 the vertical portion, and 3 the flat portion of sill. The anchor-rod should pass through 3 and the floor surface be flush with 3.

Lyon County. Geo. S. FISHER.

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#### Improvement in Commercial and Financial Conditions.

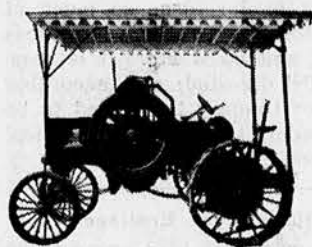
The cloud of uncertainty which has been hanging over the business element of the United States is, in the opinion of the British commercial agent in this country, passing away. In a recent report to Parliament on this subject, Mr. Seymour Bell, the British commercial agent in the United States, says:

"The year 1907 was one of sharp contrasts in the United States. It was a year of great activity and deep depression. During the earlier months all industries were exceedingly busy and mills were working at their utmost capacity. Many unfilled orders had been carried over from the previous year and buyers were experiencing great difficulty in getting delivery of their goods. The railway lines were congested, wages were at their highest, and the high price of commodities raised the price of living to an extreme point. It was recognized by all those in a position to form an independent opinion that this tremendous industrial industry could not last; that it was merely a question of time before a reaction would set in. It became quite evident that the country was living beyond its means. Money was becoming scarce and the railways and other corporations were encountering great difficulties in obtaining the capital necessary to carry on the improvements and extensions which were in process of being carried out. Speculation in mining and real estate had been rife and personal extravagance was at its height. This all tended to place additional burdens on the money supplies which were hardly adequate to carry on the industries of the country. The railways were among the earliest and greatest sufferers from the financial stringency. They found it almost impossible to dispose of securities at a reasonable price and were forced to issue short-time notes to continue their developments. As wages were high, owing to the scarcity of labor, and high prices were being paid for materials, the net earnings of the railways were considerably reduced, although the gross earnings showed an increase. This brought about lower quotations for railway shares and the industries followed the downward path.

"The situation was peculiar. On the one hand there were the manufacturers with more orders than they could fill and busy enlarging their plants, merchants selling large quantities of goods at satisfactory prices, labor in such demand that even with the addition of the 1,200,000 immigrants it was necessary to employ inefficient workers at good wages. On the other hand, there was dear money, owing to scarcity.

"When, owing to a failure in New York, light was thrown on the management of some of the large financial concerns in the city, public confidence, which had previously been undetermined by certain investigations, gave away completely, resulting in an acute money panic. Careful students of the situation had foreseen a collapse before the end of the year, but did not anticipate that it would come with such suddenness.

"The panic was entirely financial. It has, it is true, brought about a widespread suspension of trade and industry throughout the country, but



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So many ailments are purely nervous affections, that you can hardly miss it if you try Dr. Miles' Nervine. It restores nervous energy—and through its invigorating influence upon the nervous system, the organs are strengthened. The heart action is better; digestion improved, the sluggish condition overcome, and healthy activity re-established.

"Dr. Miles' Nervine is worth its weight in gold to me. I did not know what ailed me. I had a good physician but got no relief. I could not eat, sleep, work, sit or stand. I was nearly crazy. One day I picked up a paper and the first thing that met my eyes was an advertisement of Dr. Miles' Nervine. I concluded to try it and let the doctor go, and I did so. After taking two bottles I could dress myself. Then I began taking Dr. Miles' Heart Cure and now I can work and go out, and have told many the benefit I have received from these remedies and several of them have been cured by it since. I am fifty-nine years old and pretty good yet."

ANNA R. PALMER, Lewistown, Pa.  
Dr. Miles' Nervine is sold by your druggist, who will guarantee that the first bottle will benefit. If it fails, he will refund your money.

Miles Medical Co., Smallwood, Ind.

When writing our advertisers please mention this paper.

there has been no throwing on the market of merchandise at ruinous prices, the usual accompaniment of industrial panics. The manufacturers, on the contrary, faced the inevitable, and without delay proceeded to curtail the supply and thus reduce such chances as there might have been of glutting the market with unsalable articles. Fortunately for the country, warning of the trouble was given early, and it was possible to take steps in time to prepare for it.

"As to the length of time the present depression will last, it is difficult to form an opinion. It must not be forgotten that the farmers, who form the backbone of American prosperity, have not been affected by the financial situation. Though the crops in 1907 fell short in quantity as compared with 1906, higher prices were obtained and the farmers received considerably more money for their crops than in the previous year. A country that produces crops valued at nearly \$1,500,000,000 is unlikely to suffer long from industrial stagnation. It represents too large an amount to be held long uninvested. Farmers have had nine years of almost uninterrupted prosperity, their buying power is high, and the towns dependent upon them will remain prosperous.

"The farmers who a few years ago owed money now own money and have an assured outlet for their products, as there is no oversupply.

"The cloud of uncertainty, which has been hanging over the country for so long and gradually growing more threatening, is now passing away, and it may be said that the worst of the storm has now passed. There will in all probability be mercantile disturbances for some months to come, but readjustment and recuperation are well under way, and unless labor troubles should retard the improvement, or monopolies of capital interfere to keep up prices at too high a level, it is expected that before many months have passed business will be on a safer and more normal basis."

A father, whose looks are not such as to warrant the breaking up of all existing statues of Apollo, tells this on himself:

"My little girl was sitting on my lap facing a mirror. After gazing intently at her reflection for some minutes she said: 'Papa, did God make you?'"

"'Certainly, my dear,' I told her.

"'And did He make me, too?'—taking another look in the mirror.

"'Certainly, dear. What makes you ask?'"

"'Oh, I don't know. Seems to me He's doin' better work lately.'—Canadian Thrasherman and Farmer.

The cost of pensions jumped from 138 million dollars last year to 163 millions appropriated at the present session of Congress. The largest amount paid previously was 158 millions in 1893. Last year there were 681,000 old soldiers on the pension list



## Weather Bulletin

Following is the weekly weather bulletin for the Kansas Weather Service for the week ending June 2, 1907, prepared by T. B. Jennings, Station Director.

Topeka, Kans., June 2, 1908.  
DATA FOR THE WEEK.

	Temperature.		Precipitation.		
	Maximum.	Minimum.	Mean.	Departure from normal.	Total.
<b>WESTERN DIVISION.</b>					
Ashland.	97	51	70	0.56	79
Blackman.	95	45	68	0.96	64
Cimarron.	91	42	64	0.13	79
Colby.	94	42	65	0.52	79
Coolidge.	93	48	70	0.14	82
Dodge City.	92	43	68	0.52	67
Dresden.	96	45	68	0.49	67
Farnsworth.	92	54	70	0.44	72
Gove.	92	40	66	0.70	74
Hoxie.	93	47	66	0.57	66
Norton.	93	44	64	0.95	72
Scott.	92	43	66	0.25	72
Ulysses.	94	45	67	0.36	71
Wakeney.	92	40	64	0.56	71
Wallace.	97	40	66	0.56	71
Division.	97	40	66	0.56	71

<b>MIDDLE DIVISION.</b>					
Anthony.	89	53	72	0.28	71
Chapman.	88	50	70	0.50	71
Clay Center.	89	49	69	0.72	75
Coldwater.	94	51	70	0.60	78
Concordia.	87	51	67	0.04	78
Cunningham.	92	49	70	0.32	57
Eldorado.	85	51	70	0.54	64
Ellinwood.	95	46	70	0.60	71
Ellsworth.	97	42	66	3.16	80
Hanover.	89	50	68	0.59	78
Hays.	95	42	67	0.13	72
Kingman.	91	50	72	1.85	57
Lebanon.	95	46	66	0.51	57
Macksville.	90	47	66	1.37	61
McPherson.	88	52	71	0.34	77
Norwich.	87	53	71	0.79	61
Phillipsburg.	95	49	66	0.93	77
Plainville.	81	44	63	1.30	73
Pratt.	96	50	76	0.74	70
Rome.	87	53	70	0.92	73
Salina.	91	47	69	0.70	73
Wichita.	86	53	72	0.29	70
Winfield.	87	53	69	3.50	70
Division.	97	42	69	0.97	70

<b>EASTERN DIVISION.</b>					
Atchison.	83	54	69	2.72	44
Baker.	82	50	66	3.37	79
Burlington.	86	56	72	1.89	41
Columbus.	84	56	72	1.19	49
Cottonwood Falls.	87	48	70	0.30	49
Emporia.	85	53	70	1.25	71
Esksridge.	85	54	68	3.98	59
Fall River.	86	52	72	1.35	66
Frankfort.	86	52	72	1.88	66
Frankfort.	80	49	72	1.62	19
Frederick.	83	58	72	1.37	64
Garnett.	84	53	69	0.65	51
Grenola.	85	52	71	0.45	57
Iola.	84	55	70	1.49	69
Kansas City.	84	55	70	4.30	57
Lebo.	86	50	68	1.48	42
Madison.	86	50	68	1.52	42
Manhattan.	90	50	70	4.78	42
Olathe.	88	51	69	1.91	50
Osage City.	86	52	69	3.63	50
Oswego.	85	55	71	0.93	50
Ottawa.	88	55	71	3.34	56
Paola.	87	52	70	1.81	71
Pleasanton.	83	51	70	1.58	66
Sedan.	83	55	70	2.75	66
Topeka.	86	54	69	1.82	66
Toronto.	87	53	68	2.25	54
Valley Falls.	85	55	68	3.39	57
Division.	90	48	70	2.08	57
State.	97	40	69	1.33	64

## DATA FOR STATE BY WEEKS.

April 13.	89	19	55	0.91	54
April 20.	92	30	60	0.79	53
April 27.	92	37	65	0.46	60
May 4.	78	15	49	0.08	62
May 11.	88	29	52	1.32	47
May 18.	95	37	67	1.12	67
May 25.	102	33	68	1.74	68
May 30.	97	40	69	1.33	64

## GENERAL SUMMARY.

The week was mild, the temperature averaging 3° above normal in the southern portion of the State and about normal in the northern portion. The greatest range in temperature occurred in the western division and the highest mean temperature in the eastern division. Tuesday was the warmest day, with Friday the coolest in the western division and Saturday in the eastern division.

The amount of sunshine, while slightly less than the two preceding weeks, was still somewhat above normal.

The precipitation was above normal in the northern counties and, excepting Cowley and Chautauqua Counties, was below in the southern. Sunday and Thursday were the days with general showers. There was some hail on the 28th in northern counties, and also in some central eastern counties, and on the 30th in Trego County.

## EASTERN DIVISION.

Allen.—Temperatures ranged from 55° to 84° and averaged 3° above normal. There were three rainy days, and the precipitation amounted to 0.45 of an inch. The amount of sunshine was rather deficient.

Anderson.—Showers on the 24th, 25th, 27th, and 29th amounted to 1.37 inches, and the temperatures

were seasonable. The weather was generally partly cloudy.

Atchison.—Rain fell on five days, making a total of 2.72 inches. Temperatures ranged from 54° to 87°.

Bourbon.—The week was quite favorable, the sunshine being deficient.

Brown.—Rain fell on every day of the week, and the total amount, 3.37 inches, was much in excess of what was needed.

Chase.—The weather was very favorable. The rainfall, 0.30 of an inch, was sufficient for all needs, and the temperature rose above 80° on all but two days.

Chautauqua.—Heavy rains fell the fore part and a moderate rain on the 29th, but five of the days were clear, and temperatures were above normal.

Cherokee.—The weather was warm and very wet. Rain fell on four days and but one day was clear.

Coffey.—Heavy rains fell on the 24th and 28th, making a weekly total of 4.30 inches at Lebo and 1.89 inches at Burlington. A severe hail storm occurred at the former place on the 28th. Four days were clear.

Elk.—The rainfall was light, but, owing to the moisture from the rains of the previous week, was more than was needed.

Franklin.—There was a very heavy rain and some hail on the afternoon of the 28th. The days were warm.

Greenwood.—The week was wet and generally cloudy. At Fall River on the 27th there was quite a destructive gale.

Jefferson.—Rain fell on the 24th, 25th, 27th, and 28th, being heavy on each of the last two dates, and making this a very wet week. Temperatures were favorable and the 26th, 29th, and 30th were clear, sunny days.

Johnson.—Rains fell on the 24th, 25th, 27th, and 28th, making a weekly total of 1.91 inches.

Labette.—The rains were much lighter than on the preceding week, but there was not nearly so much

week. Temperature extremes were 87° and 53°.

Dickinson.—Rains fell on but two days and the last five days were clear and very favorable.

Ellis.—The fore part was cold and stormy, after which the weather warmed up, with less wind and more sunshine. The rainfall was 0.59 of an inch.

Ellsworth.—Weather conditions continue favorable, with 0.80 of an inch of rain, and the temperature above 80° on all but two days.

Harper.—The week was dry and breezy, with light showers on four nights. Temperatures were very uniform and averaged somewhat above normal.

Kingman.—There was plenty of rain at Norwich and Cunningham, but only 0.13 of an inch fell at Kingman. Several high winds occurred.

McPherson.—Weather conditions were favorable. Copious rains fell on the 24th, 25th, and 28th, and the days were warm and sunny, with the exception of the 24th, 25th, and 30th.

Phillips.—Welcome rains fell on the 23d, 24th, 25th, and 28th, the total amount being 0.93 of an inch. The middle of the week was quite warm, with a maximum of 95° on the 28th. Light hail occurred on the 28th.

Pratt.—Fine rains, amounting to 0.74 of an inch, fell on the 24th and 25th. Temperatures of 90° or above occurred on each of the three following days.

Rooks.—Much benefit was derived from rains on the 24th, 25th, and 27th, which amounted to 1.30 inches.

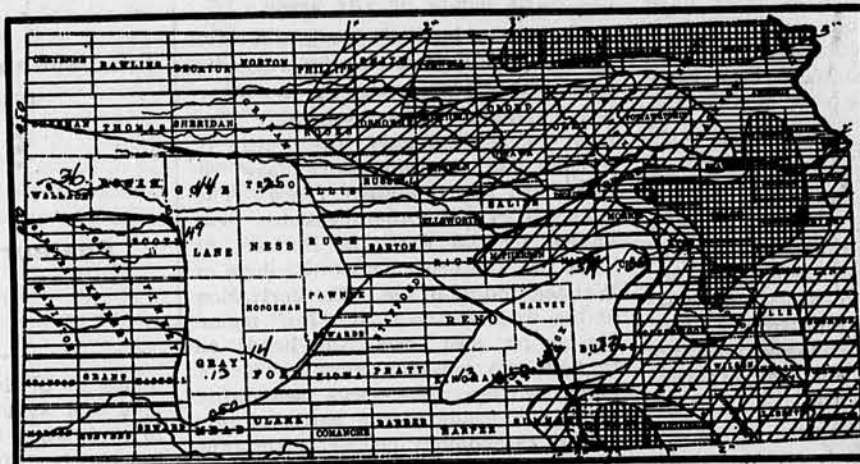
Saline.—The rainfall was seasonable, being evenly divided in showers occurring on the 24th, 25th, and 28th.

Sedgwick.—Excepting the first day, the week was practically rainless, with somewhat higher temperatures than the preceding week, and an increase in the amount of sunshine.

Smith.—A rain of 1.17 inches on the 28th was the hardest of the season, and was accompanied by some hail. The week was generally clear and temperatures were seasonable.

Stafford.—The total rainfall, 0.51 of an inch, was

## RAINFALL FOR WEEK ENDING MAY 30, 1908.



SCALE IN INCHES.

Less than .50.

.50 to 1.

1 to 2.

2 to 3.

Over 3.

T, trace.

sunshine. Temperatures ranged from 55° to 85°, and the average was above the normal.

Linn.—On the 24th, 28th, and 29th moderately heavy rains fell, making a weekly total of 1.53 inches.

Lyon.—The rainfall, tho not more than the seasonable amount, was more than was needed. The week began and ended with cool days, but the middle portion was much warmer.

Marshall.—At Oketo very heavy rains, with considerable hail, fell on the 27th and 28th, the weekly total being 4.78 inches. The rainfall at Frankfort was considerably less, with the usual amount of sunshine, and temperatures above normal.

Miami.—This was a warm, cloudy and wet week.

Osage.—Heavy rain fell on the 24th and 25th, and light showers on the 26th and 29th. The temperature was above 80° on but two days, the 25th and 28th.

Riley.—There were five rainy days this week. The latter half was hot, tho the nights were cool.

Shawnee.—The week was very favorable, tho more sunshine would have been beneficial. Temperatures were very uniform, the average being slightly above normal. The rainfall was slightly above the seasonable amount. High winds occurred on the first five days and thunderstorms on the 26th and 28th.

Wabunsee.—There was a severe local storm in the northern part of the county on the 25th, and quite a hail storm at Eskridge on the same date.

Wilson.—The week was warm, cloudy, and very wet.

Woodson.—Cool weather, with heavy rains, characterized the fore part, warmer and drier weather the latter part.

Wyandotte.—Warm weather prevailed, with plenty of rain. On the night of the 27-28th a gale of 52 miles an hour occurred.

## MIDDLE DIVISION.

Barton.—Welcome rains fell on the 24th and 25th, the total amount being 0.64 of an inch. There was a dust storm on the 26th and a high wind on the 27th. The last three days were clear and cool, but temperatures of 90° or above occurred on the 25th and 27th.

Butler.—The week was very favorable. The moisture from the previous week, with a shower of 0.32 of an inch on the 24th, was abundant, temperatures were seasonable and three days were clear and sunny.

Cloud.—The week began and ended cool, but the middle part averaged somewhat above normal, and was generally clear. Heavy rains fell on the 27th and 28th.

Comanche.—Favorable weather prevailed, with sufficient moisture.

Cowley.—On the 24th an excessively heavy rain of 3.10 inches fell which made this week a very wet

all that was needed, and temperatures were favorable, exceeding 90° on the 27th and 28th.

Sumner.—Only 0.92 of an inch of rain fell, but the ground is exceedingly wet from the rainfall of the previous weeks.

Washington.—Light rain fell on the 24th and 27th, and a very heavy rain on the 28th. The last three days were clear and favorable.

## WESTERN DIVISION.

Clark.—Light rains on the 23d, 24th, 25th, and 27th amounted to 0.56 of an inch, but a good soaking rain is much needed. On the 27th a maximum temperature of 97° was recorded.

Decatur.—Slightly over a half an inch of rain was received in showers on the 24th, 25th, and 28th.

Ford.—Very light showers fell on the 24th, 25th, and 28th. The rest of the week was unseasonably warm and dry, with more than the average amount of sunshine.

Gray.—Only 0.13 of an inch of rain fell and the ground has become very dry as no good rain has fallen for over a month. A maximum temperature of 95° occurred on the 26th and 27th.

Gove.—Temperature extremes were 92° and 54° and 0.44 of an inch of rain fell.

Grant.—A good rain of 0.95 of an inch fell on the 24th, but, as the ground has become very dry, it was not sufficient. The last three days of the week were clear and hot.

Hamilton.—A splendid rain of 0.90 of an inch fell on the 23d. The week began cloudy and cool, but after the 24th the days were clear and warm.

Lane.—Good rains, amounting to 0.49 of an inch, fell on the 24th and 25th, but were followed by hot, windy weather which soon evaporated the moisture.

Norton.—Favorable weather conditions continued this week. Showers on the 24th, 25th, 27th, and 28th amounted to 0.91 of an inch, and there was plenty of sunshine and warm weather.

Rawlins.—The fore part was cool and cloudy, but the week ended clear and warmer. Rain fell on the 24th, 25th, 27th, and 28th, the weekly total being 0.96 of an inch.

Scott.—Cool, rainy weather the first two days was followed by clear weather the rest of the week, and a maximum temperature of 93° on the 27th.

Sheridan.—Rain fell on three days, aggregating 0.70 of an inch. The middle of the week was quite warm, but the last two nights were cool.

Trego.—A thunderstorm, with a quarter of an inch of rain and light hail, occurred on the 30th.

Thomas.—The week began cool and rainy and ended warmer, with strong easterly winds.

Wallace.—The week was favorable. A rain of 0.36 of an inch fell on the 24th. Temperature extremes were 92° and 40°.

and 286,000 widows and others—a total of 976,000. The number had slightly diminished from the record of slightly under one million in 1902.

## How About that Manure Spreader?

It seems incredible, but there are still a number of farmers who continue to spread manure by the old fork method or are letting it rot in the barnyard—which means less farm profits.

The manure spreader has come to be a farm necessity. The farm can only be made to pay by keeping the soil in the highest state of fertility. That means making the most of the manure, the best of all fertilizers and the only one that is produced on the farm.

All agree that manure can be made to go farther and produce better results by spreading with a machine than when spread by hand. The popular estimate is that the spreader doubles the value of the manure. If this is true, or approximately true, it will be easy to arrive at the conclusions that a spreader will pay for itself in increased crops and soil benefits in one or two years.

The old way of handling manure was wasteful in the extreme. First, it was allowed to wash away and ferment in the barnyard. Then, at a convenient season, it was hauled out and thrown in piles in the field, and the same wasting process was continued. Finally, it was spread by throwing it in forkfuls and in hard lumps over the ground, leaving it in a condition in which the ground could not get the benefit of even the fertilizing contents still remaining.

With a view to preventing this great waste, the International Harvester Company of America is offering to the farmers of the country through their local dealers everywhere, three most excellent machines. These are: The Corn King, The Cloverleaf, and the Kemp 20th Century Spreaders.

The manure is pulverized and spread evenly, so that it is immediately available for plant life. The first shower that comes along after the spreading washes the whole into the soil. There is no waste. And with such a machine always at hand, the farmer is induced to spread the manure at the right time, while it is fresh, thus getting all the value for his land.

Write direct to the International

Harvester Company of America for catalogues, booklets and complete information.

Lawrence Business College, Lawrence, Kansas.

New students are enrolling every week for work in the summer school.

Miss Bertha How, of Milo, has accepted a position as bookkeeper for the A. D. Weaver Mercantile Co., Lawrence.

Miss Pryor has a position as stenographer in the office of U. S. Plank.

Ralph Davis has accepted a position with the Barton County Milling Co., Great Bend, Kans.

Mr. Denny, of Burlingame, has been cashier of the College National bank for the past few weeks, but is now succeeded by Mr. Carter of Kendall.

Final examinations in several subjects have been given recently and the students have done excellent work in all the subjects given.

The Pen-Art department has been kept busy the past few weeks engraving High-School diplomas. The College received orders for engraving hundreds of diplomas from the best High schools in the State, and beautiful work is turned out.

Diplomas have recently been issued

to Misses Williams and Bussing, and Messrs. Lotholtz, Liggett, Supple, and Stainbrook.

A special class in methods of algebra has just been organized.

## Reliable Jewelry.

Loftis Bros. & Co., 92-98 State St., Chicago, were established as manufacturing jewelers and diamond merchants in 1858, and they have been extending their business. In this half century they have grown to be the largest diamond credit house in the world. They occupy the second floor of the building and their store is crowded with all sorts of tempting displays of gold, silver, and art metal work; diamonds and other precious stones, jewelry, watches, combs, and everything to satisfy the aesthetic. The peculiarity which makes this great business house unique lies in their system by which any person may buy diamonds, watches, or jewelry on credit. By making a small payment with your order and sending a small remittance each month you can wear your diamond or watch while paying for it. Loftis Bros. & Co. are reliable, and what you buy from them will be exactly as represented. Ask for their catalogue. It is free.



## Stock Interests

### The Origin of the Aberdeen-Angus.

Much diversity of opinion exists regarding the origin of the Aberdeen-Angus cattle. By some, it has been seriously argued that they are an original and distinct species, while others maintain that they are a distinct departure from the original cattle of ancient Caledonia. Certain it is that they have had a separate existence for a long period of time, and if the latter theory of variation is correct, how and when these departures may have been effected must be left in a large measure to conjecture.

The idea which finds most favor is the probability that the peculiarity, such as being hornless, may have appeared suddenly, owing to spontaneous variation, and that these results have come to possess a powerful hereditary tendency. These spontaneous variations or organic changes must have occurred since domestication took place, for while deviations from the original form of animals may arise spontaneously, some sort of selection in breeding is necessary in order to impart to those isolated deviations such fixity of character, or such strong hereditary power as would ensure their perpetuation. Among cattle completely wild, no artificial selection could take place, but with those under domestication the case is different, as isolating and breeding from no other but animals possessing a peculiarity would, in time, lead to perpetuation or hereditary fixity.

#### POLLED VARIETY.

Polled varieties of cattle, however, have been more widely spread than is generally supposed, but there is nothing to lead to the supposition that there is any near affinity between one another. Herodotus, writing of the Scythians, mentions that their chariots were drawn by oxen without horns; and Darwin states that a polled variety of cattle existed in Par-

tween them and the present Highlander,—minus the horns.

#### THE ORIGIN OF THE BREED.

There can be little doubt that the breed is indigenous to the very district which still forms its headquarters, namely, Aberdeenshire. But from earliest history, the cattle of Buchan, in Aberdeenshire, are referred to as a distinct breed. The lower part of Aberdeenshire was known by the name of Buchan, at least two centuries before the days of Wallace and of Bruce. The derivation of the word is the Gaelic "Bo," meaning an ox, and "cæn," the head; so that in the eleventh century, if not much earlier, there was something about the heads of the cattle of this part of the country distinctly different from those of other localities. Their history, beyond this period, is lost in the mist of antiquity, and the nearest that mortal man can approach to accuracy is that the breed has existed in Aberdeenshire from time immemorial.

The earliest records of their utility are furnished by the Williamsons, of St. John Wells, Fyvie, who, about the



Gold medal won by the Whitewater Falls Percherons owned and exhibited by J. W. & J. C. Robison, now J. C. Robison, Towanda, Kansas.

aguay, South America, at the close of the eighteenth century. In Sutherlandshire, Scotland, there was a polled variety in 1769, and, according to Boswell, another in the Isle of Skye about 1773, while similar characteristics appeared among the cattle of Iceland at a less remote period. And although the Scotch Galloway cattle of to-day may have a certain resemblance to the Aberdeen-Angus, there is certainly no nearer kinship between them than that the ancestors of each have sprung from one parent stock in the ancient cattle of Caledonia.

Previous to the close of the eighteenth century, nearly all the Galloways were horned, and, there is in fact a very close resemblance be-

year 1770, were the principal cattle dealers in Scotland. They stated that they preferred them to others, "as they were most easily maintained, more hardy in work, have flesh of the finest grain, and pay better in proportion to the goodness of their keep." So even at this day, the breed has such well defined features as to mark it out for such excellent properties that some of our most extensive cattle dealers regard it as superior to all other varieties.

#### THE FIRST PROMINENCE OF THE BREED.

The breed first came into promi-

## HOG CHOLERA VACCINE

(Bruschettini)

Tried and used upon 700,000 hogs and proved successful—and it is practical. Price, 15c per head. Syringe \$3.00.

### Sorby Vaccine Company,

Sole Agents for

Pasteur's, Cutter's Bruschettini's & Merck's Vaccines and Serums.

163 Randolph Street, CHICAGO.

nence in British history at the Highland and Agricultural Society's Show, in 1829, when High Watson triumphed for the best fat stock of any breed. One of his exhibits was afterwards shown at Smithfield, where she won the medal in the class for extra stock. Her breast was "not quite eight inches from the ground." Mr. McCombine, of Tillyfour, was the next to enter the field with them, and in 1847 he gained the championship at the National Show. From that date until his death he maintained a foremost place. At the Paris Exhibition in 1856, he was awarded the gold medal for Charlotte, the dam of Pride of Aberdeen. In 1862, at Paris, he secured similar honors for the best ox. But the greatest triumph of the breed was at the International competition at Paris, in 1878, where the Tillyfour group, by twenty-four votes out of thirty-one, won the grand championship of the Show.—Guy E. Mitchell, in Farmers' Home Journal.

#### Weaning Pigs.

PROF. H. M. COTTRELL, COLORADO AGRICULTURAL COLLEGE.

Pigs should not be weaned until they are at least eight weeks old, and if the sow is not to have a second litter, or if there is time enough in case she is, it is better to let the pigs suckle until they are ten to twelve weeks old.

Farmers often get in a hurry and wean pigs when six weeks old, but unless there is an abundant supply of milk and especially good care is given, the pigs are likely to get stunted, sometimes so severely that they never recover.

The cheapest way to put gains on young pigs is through the sow. She has a strong digestion and can turn coarse grains and pasture into easily digested milk. Careful experiments show that a pound of weight taken from the sow will make more than one pound of gain on the pigs, the flesh of the young animals containing more water.

The sow should be fed to produce a high yield of milk and their pigs should be kept with her until they get to eating a full feed of both grains and pasture.

#### CUT DOWN THE SOW'S RATION.

When the time comes to wean the

pigs, cut down the sow's ration to water and a little grain. Take away the stronger pigs first, leaving the weaker ones to suckle for a few days. This method will give the weak pigs an extra chance and will dry up the sow without injuring her udder. When she is giving a large supply of milk and all the pigs are taken away at once her udder is often ruined and she becomes unable to suckle another litter.

When first weaned, feed the pigs from three to five times a day. While with their mother they took their meals at least every two hours and too sudden a change is detrimental.

After they get to growing vigorously cut down to two meals a day, and when they weigh 75 pounds each and are on good pasture feed once a day and that at night.

#### FEED SOME SKIM-MILK.

When first weaned, feed the pigs some skim-milk if possible. It makes the change from mother's milk easier. While milk is good, but as butter-fat is worth \$400 to \$740 a ton, it is expensive pig feed. Tankage will take the place of milk, making it about one-fifth the total weight of the grain fed.

A variety of feeds will give larger and cheaper gains than will any single feed. Peas, barley, wheat, rye, milo maize, and corn are the grains to use in Colorado. Soak from 24 to 48 hours, each time feeding a mixture of at least two grains.

Do not sour the feed, and keep the troughs, pails, and barrels used in feeding, sweet and clean.

#### HALF THE WEIGHT DUE TO PASTURE.

Half the weight of a two hundred pound pig should be made from pasture. Alfalfa makes the best pasture, followed by rape, clover, and a mixture of wheat, oats, and barley sown thickly.

Keep the pasture short for young pigs, as fresh growth is the most easily digested, and tall pastures, when wet, often make the pigs have sore skins. Have two pastures and change from one to the other, so that the pigs will always have a clean feed.

#### FRESH, CLEAN WATER IMPORTANT.

They need fresh, clean water always before them. If a well is not convenient, the water can be supplied

## DON'T BUY GASOLINE ENGINES UNTIL YOU INVESTIGATE "THE MASTER WORKMAN."

alcohol engine, superior to any one-cylinder engine; revolutionizing power. Its weight and bulk are half that of single cylinder engines, with greater durability. Costs less to buy—less to run. Quickly, easily started. Vibration practically overcome. Cheaply mounted on any wagon. It is a combination portable, stationary or traction engine. SEND FOR CATALOGUE. THE TEMPLE FURN CO., Mfrs., Meagher and 16th Sts., Chicago. THIS IS OUR FIFTY-FIFTH YEAR.



cheaply in barrels to which are attached hog waterers.

They must have a warm, dry, clean shelter, free from draft every night in the year, and they need a shade from the mid-day sun.

If the pigs are lousy when weaned, dip them twice ten days apart. Put up short posts in the feed lot and pastures. Wrap these posts with old sacks and once a week saturate the sacks with crude oil or kerosene. The pigs will rub on these and the oil will kill the lice.

## 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 animal, 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, The Kansas Farmer, Topeka, Kansas.

**Cow Gives no Milk.**—I have a valuable cow that I bought last year which had a calf three weeks ago but she did not have a drop of milk for the calf. I worked a week with the cow but failed to get any milk from her. The bag was caked and hard. Her bag has gone down now and you can not tell but that her bag is all right. The man I got the cow of told me she lost her calf last year, but did not say that there was anything wrong with her bag at that time. I would like to know if there is anything I can do for this cow next year to bring her back to her milk if I breed her again. I do not like to give this cow up if I could bring her back to her milk. I would be pleased to hear from you in regard to this matter.

Clements, Kans.

O. D.

**Ans.**—If there is any milk secreted you can open the teats with a milk tube and use it until you can milk her. If there is no milk secreted there is nothing you can do.

**Mare Rubs Hair Off.**—I have a mare, 16 years old, which, about three years ago, had what some people call the Texas itch. She keeps her mane about all rubbed off, and when I turn her out she backs up against a post and rubs the hair off the root of her tail. Some places on her legs she has the hide rubbed off. When she first took to rubbing we put on carbolic acid and lard. I have been feeding condition powders but she does not seem to get any better.

D. R. W.

Foster, Mo.

**Ans.**—Apply crude oil, with a brush once a week, while on grass, for three times. Give a tablespoonful of Fowler's solution in feed twice a day for two weeks in two quarts of oats and one quart of bran.

**Mule Colt Kicked on Stifle.**—I have a mule colt that got kicked on the stifle when four days old and it is now fourteen days old. The stifle is badly swollen, and has been since shortly after it was kicked, and is very hard. When he runs he carries his leg. I have examined it and am sure the joint is not dislocated. The colt is growing nicely. I have only used some spirits of turpentine on it shortly after the colt was hurt.

Topeka, Kans.

A. B.

**Ans.**—Paint the enlargement twice a week with tincture of iodine.

**Lump jaw in Cattle.**—I have failed to notice anything in your veterinary column pertaining to lump-jaw in cattle, so am writing your for information in that line. Our registered Hereford bull has it and I have been doctoring him as best I could for nearly three months. I first isolated him from the herd by tying him in the machine shed. I lanced the lump deeply both ways and injected tincture of iodine daily for twenty-five days. I also gave him in a drench daily for the same length of time, one dram doses of iodide of potassium. Then I got a bottle of "Gombault's Caustic Balsam," and ap-

plied according to direction, having read of it in THE KANSAS FARMER, where it was recommended for lump-jaw. I am using the second bottle now but have failed to reduce the lump or thoroughly heal the place I lanced, although there has been no pus for eight weeks. He is two years old. What causes lump-jaw, and can it be cured? I turned him out with a few head of cattle over three weeks ago.

GUY E. ROSS.

Cheyenne Wells, Colo.

**Ans.**—Lump-jaw is a germ disease called actinomycosis. It is a mold germ, and will live on the grass. Where the disease is in the glands it is best to have a qualified veterinarian dissect the tumor and gland out entirely and it will heal up nicely. But where it is in the bones it is hard to treat and it would be best to give chloride of potassium 2 drams twice a day for 8 days and then wait about two weeks and repeat. This will cure it as a rule in the glands and reduce it when in the bones long enough to fatten and market the animal, which is the best way to do when the disease is in the bones. One animal left in a herd with a case in the bones running will give it to a great number in a herd in one season. It should be tied up or kept by itself.

**Colt Has Running Sores.**—I have a 3-year-old mule that has a breaking out on her front leg and some on her body. It seems to break out and then go away and break out on another place. When it breaks out first it is a watery fluid and then dries up and forms a scab. I had not noticed it until I began to work her. Have been feeding ground corn and prairie hay. Could you tell me what would cure her?

Saline County. Ed. G. MILLER.

**Ans.**—Chloride of potassium, 3 ounces, Fowler's solution, 10 ounces; add water to make a pint. Mix and give a tablespoonful in feed twice a day.

**Heifer With Cough.**—I have a black heifer, one-quarter Jersey, three-quarters Shorthorn. She was fresh in April, at 22 months of age. She ate very dusty clover hay all winter, and has been always hearty, has had a good appetite, moist muzzle, chews cud regularly, is playful, shedding off nicely, gives a good flow of milk, and is thriving on tame grass pasture. In fact she seems to be perfectly healthy except that early in the winter she began coughing. This became quite severe. Since turning her on grass, which was done a week or more before calving, the cough has been very much less frequent and very much less harsh, but does not entirely disappear. What is the matter with her, and what is the remedy?

A READER.

Osage County.

**Ans.**—We expect from the symptoms that the trouble is throat and bronchial, but to be sure of it we would have her tested for tuberculosis. Give her 2 tablespoonfuls of Glyco-Heroin twice a day for a week, if she does not improve revert to the tuberculin test.

## The Apiary

### Bee Starvation.

EDITOR KANSAS FARMER:—I got a swarm of bees from a neighbor. The weather has been very wet and cold since the bees swarmed. The time since swarming has been over two weeks, and there has been but few days that the bees could get out on account of the cold. Recently I turned the box over on the side and found the bees nearly all lying on the bottom board cold and stiff and a great many of them dead, and to my surprise I found not the least little bit of comb. Now the questions I want to ask are these: Does it require a certain amount of heat in order that the young bees can work the wax or comb secreted on their bodies? If so, how long will they retain the same? If they were old bees of course they could not make comb. I phoned to



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NO DOSE TO MEASURE. NO LIQUID TO SPILL. NO STRING TO ROT.

Just a little pill to be placed under the skin of the animal by a single thrust of the instrument. You cannot afford to let your cattle die of blackleg when a few dollars spent on Blacklegoids will save them. Write for circular.

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NOTICE.—For a limited time we will give to any stockman an injector free with his first purchase of 100 vaccinations.

the man from whom I got the bees and he says there are old bees in the hive from which this swarm came, and also stated that his young swarms were not in any better shape than mine. I have bought 8 pounds of honey and am trying to save them. Would be pleased to receive a prompt reply. The question that most concerns me is will they make any comb so long after swarming? The queen has no place to deposit her eggs unless they eat the honey from the 8 pounds I gave them. Does not the queen commence to lay soon after leaving the old hive?

J. R. WILSON.

Cowley County, R. F. D. No. 1.

The trouble with the colony of bees is a case of starvation. When a swarm leaves the parent colony, they fill their honey sacks with the stores of the hive. This supply will last until they can construct combs in their new home, in which to store honey and provide room for the queen to lay eggs, but if from such causes as the party making the inquiry names (wet, cold weather), the bees are confined to their new quarters for several days, the supply of honey they leave the mother colony with is all consumed and the colony perishes of starvation unless the bee-keeper is on the alert and feeds the bees all they can consume, until such time as the bees can leave the hive in search of food. And it must not be forgotten that unless such trees or plants are in bloom as yield nectar (honey) bees can not supply themselves with food. In the matter of constructing combs it has been estimated that a colony of bees will consume from 10 to 18 pounds of honey. Bees need not necessarily be very young to enable them to secrete wax.

I will suggest to the party in question that a standard work on bees be kept and be carefully read and studied. And that a bee journal be subscribed for and carefully read. If the person will send me a postage stamp I will give him the name and address of parties from whom both a work on bee-keeping and a bee journal can be had. I will also suggest that if success is desired a moveable comb hive be secured and that the bees be kept in nothing but a moveable comb style. The Langstroth is in common use among our most successful beekeepers.

G. BOHRER.

Rice County, Route No. 2.

### Bee Display at the Next Fair.

The bee factories seem to be very much encouraged as everything bids fair for a good honey season, and Kansas is fast becoming a great bee State. There is a great deal of alfalfa being sown which is one of the greatest honey producers we know of now. Then many of the fairs are offering good inducements to have good honey exhibits made. Last fall the Hutchinson fair had the finest display we ever saw, and this fall they will have a better one. The Kansas Bee Association met there the week of the fair and appointed several committees to work the different branches. They want a space in the State house to make their display. They have many specimens now such as all different kinds of bees nicely mounted and also foul-brood of all kinds. And then they very much need a law to have a bee inspector in every county where bees are kept to look after diseased bees.

So Topeka has decided to hold a grand fair this fall and the promoters

are anxious to have the bee people come forward and help them out by showing the people what they have. The Fair Association says they will do their part by giving good space and premiums. Our fair will come just the week before the Hutchinson fair, and there is a move on foot to make a good display in Topeka and then move it to Hutchinson. Mr. J. J. Measer, R. F. D. No. 3, Hutchinson, Kans., will be in charge there, and J. P. Lucas at Topeka, Kans. So if there are any persons wishing to do anything to help the good cause along they would be glad to hear from them. Really they want to hear from every bee fancier.

### HONEY COOKING RECIPES.

**Alkins Honey Cookies.**—1 teacupful extracted honey, 1 pint of sour milk, 1 scant teaspoonful soda. Flavoring if desired, flour to make a soft dough.

**Honey Jumbles.**—2 quarts of flour, 3 tablespoonfuls melted lard, 1 pint of honey, ¼ pint molasses, 1½ tablespoonfuls soda, 1 teaspoonful salt, ¼ pint of water, ½ teaspoonful of vanilla.

**Honey Layer cake.**—½ cup of butter, 1 cup of honey, 3 eggs beaten, ½ cup of milk. Cream the butter and honey together, then add the eggs and milk, then add 2 cups flour containing 1½ teaspoonfuls baking-powder, previously stirred in, then stir in flour to make a stiff batter. Bake in jelly tins. When the cakes are cold take finely-flavored candied honey and after creaming it spread between layers.

**Honey Ginger Snaps.**—1 pint honey, 1 teaspoonful of ginger, 1 teaspoonful soda, 2 eggs. Mix, then work in all the flour possible, roll very thin, and bake in a moderately hot oven. Use any flavoring extracts you wish.

**Honey Short-Cake.**—3 cups of flour, 2 teaspoonfuls baking-powder, 1 teaspoonful salt, ½ cup of shortening, 1½ cups sweet milk. Roll quickly and bake in a hot oven, when done split the cake and spread the lower half thinly with butter and the upper half with ½ pound of the best flavored honey. (Candied honey is preferred, if too hard to spread well it should be slightly warmed or creamed with a knife). Let it stand a few minutes and the honey will melt gradually, and the flavor will penetrate all through the cake. To be eaten with milk.

**Honey Nut-Cake.**—8 cups of sugar, 2 cups honey, 4 cups of milk or water, 1 pound of almonds, 1 pound of English walnuts, 3 cents worth each of candied lemon and orange peel. 5 cents worth of citron, (the last three cut fine), 2 large tablespoonfuls of ground cloves. Put milk, sugar and honey on stove to boil 15 minutes, skim off the scum and take from the stove, put in the nuts, spices, and candied fruit, stir in as much flour as can be done with a spoon, set away to cool, then mix in the soda (don't make dough too stiff), cover up and let it stand over night, then work in enough flour to

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make a stiff dough. Bake when you get ready; it is well to let it stand a few days as it will not stick so badly. Roll out a little thicker than common cooky. Cut in any shape you like. This recipe originated in Germany, and is old and tried, and the cake will keep a year or more. J. P. LUCAS.

## The Poultry Yard

CONDUCTED BY THOMAS OWEN.

### Poultry Notes.

The very wet weather we are having admonishes us to look after the young chicks and see that their quarters are kept as dry as possible, for sickness will soon attack them if exposed to the dampness too long. It is well to scatter some dry coal ashes in the houses and runs so as to help them keep as dry as they can.

The price of corn has been soaring away so high lately that it becomes a problem with many how to obtain chicken feed at a reasonable price. About the cheapest grain that can now be found is Kafir-corn, and chickens like it and thrive upon it. A cheap feed can also be procured by cutting up new alfalfa and mixing with it a little corn-meal.

After the hens have got through laying is a favorable time to get rid of them by selling them to the butcher. A good price is now offered for hens, nine or ten cents per pound, and it will be money in your pocket to dispose of every one that you do not really need for the next season, as soon as possible. To keep them through the summer till after they have molted is a loss of time and money.

There is a limit to the profit-earning of a chicken, and it must be sold when the limit is reached, or before. Unless a bird is growing into money or laying eggs or hatching chickens, it is a dead expense. Therefore, sell your hens after they have quit laying; sell your young cockerels while they are in the frying stage at about two pounds in weight; and sell all the breeding stock that you do not want for next season as soon as possible.

### Hens Drooping and Inactive.

EDITOR KANSAS FARMER:—I would like information in regard to my hens. I have about sixty or seventy hens and about eight or ten roosters, just the common Plymouth Rocks. They do not lay good now. I only get from six to ten eggs a day and the hens do not want to set. I have had a few die this spring. These were drooping and stood around a few days and then died. Now that trouble is gone and the hens have red combs and look healthy but they will sit around in bunches and act like they are lazy. They do not go out and scratch and hunt bugs although there is a wheat and oats field close by and a spot of ground plowed up with nothing in it. We feed them only once a day. I have only about sixty little chicks but they are doing well. My greatest trouble is the hens do not go to sitting and now they do not lay or sit. I have gotten as high as three dozen eggs a day in the spring, but the hens did not keep it up long and I do not consider that many for the number of hens we have. Last year we were bothered badly with mites. We have been working against them, and have not found any so far this spring, so I do not think that is the trouble.

I would like information in regard to what would be the best breed for an all-around purpose hen. We have tried to breed our hens to pure Plymouth Rocks as near as we could just out of common stock with this result.

I have just commenced to feed my hens International Poultry Food. I put it in their drinking water as I have not got the proper food to give it in now. We feed cheat and wheat once a day. In the winter we fed a mixture of corn, wheat, and sometimes Kafir-corn and cane seed. Now,

if you can give me any information through your paper I will be very thankful. Mrs. L. R. H.

Answer.—It is a hard matter to answer your question definitely as to the cause of your hens not laying. There may be several causes. The hens may be too old; after they are 3 years old they will not lay so very well. It is well to get rid of them when 3 years old. The hens may be too fat, although you feed them but once a day. On a large farm there is so much feed that hens can pick up that it is hardly necessary to feed them at all. They may be troubled with lice or mites. There certainly is something wrong with them, when they stand around in bunches and fail to scratch for their living. We would shut them up for a few days, without anything to eat, and then on letting them out, see if they don't go to hunting something to eat.

As to the best breed for an all-around chicken, we know no better breed than the Plymouth Rocks or Wyandottes. A smaller and more active breed might suit your farm better than the larger ones. Any of the Leghorns are good. They are good layers and good rustlers. The R. I. Reds are very popular just now. They are larger than the Leghorns and very good layers. We would advise you to dispose of your present flock of fowls and try a more active variety.

### Chicks with Roup.

EDITOR KANSAS FARMER:—I thought I would write you and see if you could give me some information as to how to cure our young chickens. We have five hundred young chicks and they have some disease from which their eyes swell shut at night, their noses get stopped up, their feet swell, and blisters come on them. Then the blisters break and make the chicks' feet so sore they can hardly walk. They eat heartily. I do not know what it is unless it is the roup. Our old chickens had the roup last winter and of course the chicks might have it now. B. S. BURFORD.

Allen County. Answer.—The symptoms you describe are those of roup, and since you say your old hens had that disease, the probabilities are that it is cropping out in the progeny, superinduced by the wet weather. One of the best remedies we have for roup is Conkey's Roup Cure, given in the chickens' drinking water. Also it is essential that they be kept as dry as possible, especially in the coops or houses where they stay at night. A little turpentine in the drinking water is a good preventive.

### Lice and Mites.

Under the head of "Insect Pests," Farmers' Bulletin, 287, United States Department of Agriculture, entitled "Poultry Management," says:

Two classes of external parasites, popularly known as lice and mites, will be considered here. There are several varieties of lice which attack poultry. They subsist mainly on the feathers and perhaps on the epidermic scales. They are found largely on the head and neck, under the wings and about the vent, and when present in large numbers they cause the fowls much discomfort. Persian insect powder (pyrethrum), powdered sulfur, and some of the various preparations on the market, such as the louse powders, are good in combating these pests. The hens can be dusted with one of these powders after they have gone to roost. Have the powder in a box with a perforated cover, grasp the fowl by the legs, and shake the powder well among the feathers. Dust at least three times at intervals of about a week in order to catch the lice which hatch out after the first dusting.

The mites subsist on the blood of the fowls and are not usually found on the bodies of the bird except when at roost or on the nest. During the day they inhabit cracks and crevices of the walls, roosts, and nests. Sitting hens are often so annoyed that they are compelled to leave the nests in

### PLYMOUTH ROCKS.

DUFF'S BARRED ROCKS—Choice standard stock by standard mating. We breed them now exclusively, and have the very best. Eggs and stock in season. Write your wants. A. H. Duff, Larned, Kans.

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buys 15 eggs from Smith's laying strain of Barred Rocks the balance of the season. Eggs shipped as they come; choice. Choice breeders. Prices right. CHAS. E. SMITH, Route 2, Mayetta, Kans.

## White Plymouth Rocks EXCLUSIVELY.

For 16 years I have bred W. P. Rocks exclusively, and have them as good as can be found anywhere. I sell eggs from first-class, high-scoring stock at live and let-live prices. \$2 per 15, \$5 per 45, and I pay the expressage to any express office in the United States.

THOMAS OWEN, Sta. B., Topeka, Kans.

### RHODE ISLAND REDS.

NEOSHO POULTRY YARDS—Rose Comb R. I. Reds, this year's breeders for sale. This stock is in good condition for summer breeding. White Angora rabbits. J. W. Swartz, Americus, Kans.

## R. C. Rhode Island Reds

Eggs from first pen headed by 3d prize cockerel at Kansas State Show, 1908, \$2 for 15; 2d pen \$1.50; good range flock, \$1 for 15; incubator eggs, 50 or more, \$5 per 100. Mrs. Wm. Roderick, R. 1, Topeka, Kans.

### BRAHMAS.

## Light Brahma Chickens

Choice pure-bred cockerels for sale. Write or call on Chas. Foster & Son, Eldorado, Ks. Route 4

order to relieve themselves of these parasites. The free use of kerosene about the nests and perches is useful in fighting mites. The walls of the house may be sprayed with kerosene, the operation being repeated every three or four days for two weeks. Insect powders are of little avail.

The following method has proved excellent in ridding houses of mites and lice when the weather conditions are such as to permit the birds being kept outside the house for five or six hours. Close all the doors and windows and see that there are no cracks or any other openings to admit air. Get an iron vessel and set it on gravel or sand near the center of the house; place a handful of shavings on these, sprinkle sulfur at the rate of about one pound to every 90 or 100 square feet of floor space. Instead of using the shavings and kerosene the sulfur can be saturated with wood alcohol. When everything else is in readiness light the material and hastily leave the house. In case any anxiety is felt about fire, a glance through a window will show whether everything is all right. There is very little danger of fire when proper precautions have been taken to have plenty of soil beneath the vessel. Allow the house to remain closed for three or four hours, at the end of which time one can safely conclude that there are no living beings inside. Now throw all the doors and windows wide open so as to drive out the sulfur fumes thoroughly, and then the fowls may be allowed to enter. Let them in one by one, and as each enters catch it and dust it well with insect powder, which will destroy the lice on the birds. Tobacco dust is also good to use instead of insect powder. The birds and house have now been freed from vermin for the present, but the eggs of the insects have not been destroyed, and in a week another swarm will be hatched out. Therefore, it will be necessary to repeat the operation once or twice before the pests are exterminated. After this, care should be used to see that no strange fowl be admitted to the house or yard without having been thoroughly rid of lice, for one lousy hen will contaminate all the rest.

L. H. Hastings, breeder of fancy single comb Brown Leghorns, at Quincy, Kans., is one of those breeders who appreciates the value of advertising and who keeps continuously at it. He has made a success by living up to his motto of "fine birds and moderate prices," and in starting on the fourth quarter of his year of advertising in THE KAN-

### WYANDOTTES.

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WHITE WYANDOTTE EGGS for hatching \$1 per 15 or \$5 per 100. Mrs. E. F. Ney, Bonner Springs, Kans.

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S. C. B. LEGHORN EGGS—\$0 for \$1.100 for \$2. Mrs. P. E. Town, Route 3, Haven, Kans.

STANDARD-BRED S. C. Buff Leghorns founded by stock of prize-winners of Chicago and St. Louis World's Fairs, and have taken first wherever shown. Stock for sale; eggs in season from pens scoring 90 to 95. No. 1 pen, \$2.50 for 15; No. 2, \$1.30 for 15. S. Perkins, 801 E. First St., Newton, Kans.

Rose Comb Brown Leghorns Exclusively Farm raised. Eggs per sitting of 15, \$1; per 50, \$2; per 100, \$3.50. P. H. Mahon, R. R. 3, Clyde, Cloud Co., Kans.

## GALVA POULTRY YARDS

R. C. W. Leghorn and White Wyandotte stock for sale. Eggs in season. 1st pen Leghorns headed by 1st cockerel Madison Square Garden, N. Y. Write your wants. JOHN DITCH, Prop., Galva, Kans.

### BUFF ORPINGTONS.

LARGE BUFF ORPINGTONS—Eggs for sale. \$1.25 for 15. Mrs. Frank Henning, Route No. 1, Garnett, Kans.

S. C. BUFF ORPINGTONS—Prize winners, big shows. Best winter layers. Great money makers. Breeders, eggs, baby chicks. Catalog tells. W. H. Maxwell, 1904 McVicar Ave., Topeka, Kans.

CHOICE Buff Orpington and B. P. Rock cockerels. Coillie pups and bred bitches. Send for circular. W. B. Williams, Stella, Neb.

### BLACK LANGSHANS.

BLACK LANGSHANS and TOULOUSE GEESSE—Absolutely pure. Stock and eggs for sale. T. H. Hutley, Route 2, Maple Hill, Kans.

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BLACK SPANISH EXCLUSIVELY—For 12 years winners of all firsts at Kansas and Nebraska State shows, 1908. Eggs balance of season, \$1 per 15, \$5 per 100. H. W. Chestnut, Centralia, Kans.

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## Indian Runner Ducks.

First prize winners at World's Fair, New York and Chicago. White Wyandottes, white as snow. State show winners. Silver Cup winners. Score to 90. Eggs \$2 per 15, \$5 per 50. Catalogue free. Expert poultry judge. Write me for terms and dates.

R. L. Castleberry, Box 19, McCune, Kans.

### SCOTCH COLLIES.

SCOTCH COLLIES—Pups from trained parents, \$5 each. Will Killough, Ottawa, Kans.

SCOTCH COLLIES—Pups and young dogs from the best blood in Scotland and America now for sale. All of my brood bitches and stud dogs are registered, well trained and natural workers. Emporia Kennels, Emporia, Kans. W. H. Richards.

 SCOTCH COLLIES of the very best breeding, have the intelligence of a human. For particulars address, DEER LAKE PARK, SEVERY, KAN.

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Fifty-seven Collie puppies just old enough to ship. Place your orders early, so you can get one of the choice ones. Walnut Grove Farm, Emporia, Kans.

## Incubators and Brooders

If you want a good incubator in a hurry write to the undersigned. He keeps the Old Trusty Incubator (hot water) and the Compound (hot air), two of the best incubators made. Also the Zero brooder, no better made. It pays to buy a good brooder. No use hatching chicks without a good brooder to raise them. The Zero will raise every chick you put in it.

THOMAS OWEN, Sta. B., Topeka, Kans.

SAS FARMER he says that he feels sure that he has one of the best-equipped poultry plants in Kansas. He makes a specialty of S. C. B. Leghorns, and now has several hundred growing chicks that give promise of maintaining the reputation which Mr. Hastings has won for having one of the best flocks of this breed in the State. He seems quite pleased with his advertising in THE KANSAS FARMER, and says that his egg trade this spring has been very satisfactory. He also says that many of his former customers of the past two years are coming back for more eggs. This is conclusive evidence that Hastings' Leghorns give satisfaction. Notice the change he has made in his advertising card which offers some special bargains for the remainder of the season.

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"Wanted," "For Sale," "For Exchange," and small want or special advertisement for short time will be inserted in this column without display for 10 cents per line of seven words or less per week. Initials or a number counted as one word. No order accepted for less than \$1.00.

## SEEDS AND PLANTS.

FOR SALE—Seasonable Seeds and Plants: Millet, cane, buckwheat, cowpeas, turnip and all other seeds; sweet potato, cabbage, tomato, celery, egg-plant and pepper plants. Ask us for prices. The Barteldes Seed Co., Lawrence, Kans.

PLANTS—Cabbage and Sweet Potato plants, all varieties, 20c per 100, \$1.40 per 1000. Tomatoes, all varieties, 30c per 100, \$2.40 per 1000. Peppers 10c per dozen, 60c per 100. Special prices in large quantities. F. P. Rude & Son, North Topeka, Kans. Both phones.

PLANTS—Cabbage: Early Winningstadt, Henderson's Early Summer, All seasons, succession, St. Louis Late Market, Late Flat Dutch; 2c per 100, \$1.50 per 1000. Tomato: Early Dwarf Champion, Dwarf Stone, Early Kansas Standard, Matchless, Beauty, Stone; 30c per 100, \$2 per 1000. John McNoun, North Topeka, Kans. Ind. phone 5551.

## 200,000 Celery Plants.

200,000 large, healthy celery plants for sale. White Plume, Golden Self Blanching, and Silver Self Branching are the best varieties. 300 plants packed carefully and delivered at express office for \$1, or 1,000 for \$3. Plants ready to ship at any time from June 10th to July 15th. A leaflet telling how to grow crisp, tender celery mailed on receipt of 2 cent stamp to pay postage, or free with plants.

## 600,000 Sweet Potato Plants

600,000 Yellow Jersey and Yellow Nansamond sweet potato plants at \$1.50 per 1,000. Ready to ship now. No order accepted for less than \$1,000. We are large growers and guarantee our celery and potato plants to be the best you can get anywhere. Write for circular today. Henry S. Jeffries, Ottawa, Kans.

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Cabbage, sweet potatoes and tomatoes in any quantity. Shipping orders attended to the day received. Buy from the grower and save commission. Plants delivered free to any part of the city. M. W. Gilmore, 1800 Kansas ave., Topeka, Kans. Ind. phone 701.

SEED CORN—Early maturing Western Yellow Dent, Farmers Interest and Boone County Special. Each ear tested, sold on approval orated or shelled. DeWall Bros, Box "F", Proctor, Ill.

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REGISTERED ANGUS—Females selected. 11 cows, 8 heifers, 4 calves and my herd bull. Must sell; \$850 buys; one-half down. H. H. High, Faulkner, Kans.

FOR SALE—One extra good Double Standard Polled Durham bull, 2 years old; also two under 1 year old. C. M. Albright, R. 2, Overbrook, Kans.

FOR SALE—Pure-bred Shorthorn bulls 15 months old. Good individuals and a bargain if taken soon. Colthar & Stein, Smith Center, Kans.

FOR SALE—Three richly bred Shorthorn bulls from 8½ to 10½ months, and a number of good females. Owing to limited pasturage will sell these bulls so the buyer can grow them out and save some good money. C. W. Merriam, Topeka, Kans.

FOR SALE—One richly bred Shorthorn bull and a number of good females. Call on or address C. W. Merriam, Topeka, Kans.

ABERDEEN ANGUS—Yearling bulls, extra good. Sired by Blon Erica 78022, for sale at reasonable prices. T. R. Culver, Garnett, Kans.

REGISTERED Holstein-Friesian bull for sale; 8 years old. J. E. Huey, R. 6, Sta. A, Topeka, Kans.

## Stray List

Week Ending May 28.

Kearny County—F. L. Pierce, Clerk. STALLION—Taken up April 15, 1908, by J. A. Parker, in Hartland tp., one black stallion, branded X Y; valued at \$20.

Scott County—Jno. L. Whitson, Clerk. MULKS—Taken up, April 18, 1908, by J. W. Needles, in Scott tp., two male mules, 15 to 20 years old, described as follows: One sorrel, cross-eyed, right ear split, weight about 770 lbs.; one black, with one eye gone, weight about 780 lbs.; valued at \$15 each.

Week Ending June 4.

Saline County—J. P. Burns, Clerk. STEER—Taken up by W. H. Todd, in Smoky Hill tp., one red and white yearling steer; no marks or brands visible; valued at \$18.

Res. Tel. 775. Office Tel. 192.

L. M. PENWELL,

Funeral Director and Licensed Embalmer.

511 Quincy St. Topeka, Kansas

## The Blossom House

Kansas City, Mo.

Opposite Union Depot. Everything first-class. Cafe in connection. Cars for the Stock Yards, the up town business and residence parts of the city and for Kansas City, Kansas, pass the door. Solid comfort at moderate prices. A trial will please you.

FOR SALE—Good 7-room house, barn, well, 6 lots, fenced, near Washburn. Mrs. Theodore Saxon, 1267 Harrison St., Topeka, Kans.

FOR SALE—Well improved 7½-acre farm just outside city limits. Advantages, and within walking distance of city schools and State University. Easy terms. Jas. S. Williams, Route No. 2, Lawrence, Kans.

"Do You Want to Own Your Own Home?" If so write for catalogue to Hurley & Jennings, Emporia, Kans.

McPHERSON AND MARION COUNTY BARGAINS—160, improved; 130 cultivation \$5,750. 460 improved, 160 cultivation, \$10,500; 160, improved; 117 cultivation, \$4,800; 200 improved, 180 cultivation, \$7,500; 160 improved, 80 cultivation, \$3,400. Some good bargains in stock ranches. Write for descriptions and maps. Garrison & Studebaker, McPherson, Kans.

QUARTER SECTION of fine land in Sherman County, close to Goodland, to trade for part horses, cattle or mules. T. J. Kennedy, Osawatomie, Kans.

Eighty acres, Anderson County, three-fourths of a mile from Amlot. Four-room house, barn for ten head of stock, good soil, location and water. Price, \$3,500. B. F. Fridley, Amlot, Kans.

WRITE J. D. S. HANSON, HART, MICH., for best list of fruit, grain and stock farms.

## FOR QUICK SALE.

160 acres, well improved, near Geneseo, fine quality wheat and alfalfa land, 100 acres in wheat. Will bear closest investigation. Bargain at \$9100. \$3100 cash will handle. I. B. Krehbiel, Cashier Lorraine State Bank, Lorraine, Kans.

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quickly for cash; the only system of its kind in the world. You get results, not promises; no retaining fees; booklets free. Address, Real Estate Salesman Co., 488 Brace Block, Lincoln, Neb.

## An Ideal Farm Home.

160 acres, all good alfalfa, corn and wheat land located 1 mile from good railroad town in Sedgwick County with two railroads; good 6-room house, pantry and closets, good large barn, granary, corn-crib; all fenced and cross-fenced, 10 acres fenced hog tight, good wells and windmill, pipes laid to carry water where needed; good orchard, 50 acres pasture, alfalfa meadow, balance corn and wheat; 1 mile to town and graded school. Price \$10,000.

THE NELSON REAL ESTATE & I.M.G. CO., 137 North Main, Wichita, Kansas

## MISSOURI FARMS FOR SALE

Everman has a farm for every man. Write for description and price list.

John W. Everman, . . . Gallatin, Mo.

## A Cheap Wheat Farm in Stanton Co., Kans.

160 acres level as a floor. Deep, black soil, ready for the plow. In German settlement south part of the county. Price only \$800.

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PANIC PRICES FOR POLAND-CHINA PIGS—Fall or spring farrow. Sired by Mischief Maker, Meddler 2d, Corrector 2d, Perfect Challenger, Grand Perfection and Ironclad. Sows bred for fall farrow. Express prepaid on first orders. L. D. Arnold, Enterprise, Kans.

DUROC JERSEYS—Glits either sired by or bred to Tip Top Perfection 34579, due to farrow in April and May. Cheap if taken soon. L. L. Vrooman, Topeka, Kans.

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FOR SALE—Bay stallion foaled 1906, registered, sound, handsome trotter; grandson of Onward and Norval, two of the best. Would trade for mare as well bred. John W. Yeoman, Lyndon, Kans.

FOR SALE—One black team, 6 and 7 years old, weight 2600 pounds. Mr. and Mrs. Henry Schrader, Wauneta, Kans.

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## DEER CREEK DUROCS

100 pigs of March and April farrow by sons of Ohio Chief, Tip Notcher and Kant Be Beat. Ready for shipment after July 1.

BERT FINCH, Prairie View, Kans.

## RALPH HARRIS FARM DUROC-JERSEY HERD

A STANTE 168066, second in class American Royal 1907, farrowed 12 pigs by Red Wonder, Grand Champion Iowa State Fair, 1907, on 22d of April. All are living. Average weight at 13 days old, 7 pounds, 13 ounces. Remember this litter when looking for a boar in a few months. Address, RALPH HARRIS, Prop., B. W. WHITE, Mgr., WILLIAMSTOWN, KANS., Farm station, Buck Creek, on the U. P., 45 miles west of Kansas City.

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HERD OF DUROCS is built along the most fashionable blood lines and is noted for the individuality of its makeup. Fifty fine pigs sired by the great Hanley, Lincoln Top, Buddy K. IV.

Elmer Lamb, Tecumseh, Neb.

Deep Creek Herd Duroc-Jerseys  
Choice spring boar pigs and glits for sale; also fall glits. C. O. Anderson, Manhattan, Kans.

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BROOD SOWS—Some fine brood sows bred to Major Roosevelt and Miller's Nebraska Wonder, he by Nebraska Wonder.

FRED J. MILLER, Wakefield, Kans.

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DUROCS are bred for usefulness. Choice young stock for sale by such great boars as Vick's Improver 47885, Red Top 32241, Fancy Chief 24925 and other noted sires. Correspondence invited. Visitors coming to Junction City and telephoning me will be called for. W. L. VICK, Junction City, Kans.

## HILLSIDE DUROCS and HEREFORDS

Choice boars ready for service. Bred glits and fall pigs, both sexes. Mc's Pride III, Oom Paul V, and Ormsion Knight 25779 in service. Six good Anxiety bred Hereford bull calves. Prices to correspond with the times.

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DUROC-JERSEY HOGS FOR SALE.

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Fifty fall pigs will be priced right, either sex. Bred glits will be priced right on mail orders. Boars in service, Lone Jack 30291, Paul Jumbo 42209.

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DUROCS. 100 early spring pigs, the best I ever raised. Improver, Top Notcher, Sensation and Gold Finch blood lines. Call or write.

J. U. HOWE, Wichita, Kans.

## SPECIAL!

I have a car of long yearling bulls, a car of bull calves, a car of yearling heifers and a car of heifer calves for sale. These cattle are all in good growing condition and are mostly reds. They were sired mostly by Baron Ury 2d 124970, Bold Knight 179054 and Headlight 2d 248806.

C. W. Taylor, R. 2, Enterprise, Kans.

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Have a few glits that I will sell at reasonable prices, bred for April farrow. Also a few fall boars of September, 1908, farrow. Write for prices and description.

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## FOUR-MILE HERD DUROCS

Choice fall boars by Orion Jr. 31497 and Ohio Chief 2d 41197. 50 spring boars, growthy, heavy bone, good feet, nice color; sired by the above named males, and E's Kant Be Beat 67568, Crimmon Chief 31263, Rose Top Notcher 54059, You Bet 31111, Tip Top Notcher 20729, and other noted sires. Sows of the best and leading families. Write or visit herd. Visitors met at trains.

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## Timber City Durocs

Three herds under one management. Breeding stock for sale. Let us book your order for a growthy spring boar of February and early March farrow. Write to either place.

## SAMUELSON BROS.,

Cleburne, Manhattan, Moodyville, Kans.

## ROSE LAWN Duroc-Jerseys

Glits bred to farrow in April and May, either sired by or bred to Tip Top Perfection 34579, by Tip Top Notcher, grand champion of the breed, also pigs in pairs or trios. And a few Hereford cattle and Lincoln sheep for immediate sale.

L. L. VROOMAN, Rose Lawn Place, Topeka, Kansas

## Orchard Hill Herd Duroc-Jerseys

A few good spring boars yet for sale.

R. F. NORTON, Clay Center, Kans.

## OAK GROVE HERD OF DUROCS

Herd headed by Choice Goods H. 36471 by Hunt's Model and Corrector's Model 34381. I have for sale a few choice males of spring and fall farrow that will be priced worth the money.

Sherman Reedy, Hanover, Kans.

## CEDAR LAWN DUROCS.

Special bargain for 30 days. My herd boar Parker 67633 and a choice lot of his get, both sexes. Glits sold open or bred to Long Wonder 21867. Prices right. Call or write.

F. M. BUCHHEIM,

R. R. 3, Lecompton, Kans.

## SPRING CREEK HERD OF DUROC-JERSEYS.

Choice spring glits of both sexes for sale. 1 fancy October boar pig by Raven's Pride 63145, dam Rosa V 145975 by S. S. Wonder 37489. Write your wants. Ola Nordstrom, Clay Center, Kans.

## Fairview Herds--Durocs, Red Polls

Some good young boars by Crimmon Challenger 43877 for sale. No females or Red Polled cattle for sale now.

J. B. DAVIS, Fairview, Brown Co., Kans.

GAYER'S DUROCS: 36 choice fall glits and 14 topsey fall boars by Golden Chieftain, a good son of Ohio Chief. These will be sold cheap to make room for my spring crop. Also 1 good yearling boar, \$25.

J. H. GAYER,

R. R. 1, Cottenwood Falls, Kans.

## POLAND-CHINAS

## Becker's

POLAND-CHINAS. Choice fall and spring pigs, either sex, by Dandy Rex 42706, first in class at Kansas and Colorado State Fairs, 1905-6. Prices reasonable.

J. H. Becker, R. 7, Newton, Kans.

## SUNNY SLOPE POLANDS

A number of spring pigs, either sex, the farmers' kind, at bottom prices. Glits will be sold bred or open. Also a litter of Scotch Collie pups, the great watch and cattle dog.

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## BOARS!

Choice spring males, at right prices, by Grand Chief, Masterpiece, Nonpareil, Choice Chief, R. L. 2d, and other noted sires. Call on or write.

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## Stalder's Poland-Chinas.

I have pigs for sale from the leading strains of the country. Prices reasonable. Write for full particulars.

O. W. STALDERS, Salem, Neb.

## Maple Valley Herd Poland-Chinas

Some fine glits bred for April farrow that were sired by On The Line 113401s and Col. Mills 43911, and are bred to Meddlers Dream 43921. Also some choice young boars; one fine Shorthorn bull calf; B. P. R. pigs \$1.50 per 15. Have 130 Poland-Chinas and can fill any kind of order. C. P. Brown, Whiting, Kans.

## SUNFLOWER HERD.

POLAND CHINAS—Herd boars, Meddler's Defender (119147) by Meddler (69999), dam Excitement (289686) by Corrector (63879). Allen's Corrector (128618) by Corrector (63879), dam Sweet Brier (351790) by Chief Perfection second (42559). Kansas Chief (125968) by Chief Perfection second (42559) dam Corrector's Gem (250720) by Corrector (63879). G. W. Allen, Tonganoxie, Kans. R. R. 4.

## 10 BOARS.

One by Mischief Maker, dam by Perfect I Know. One by Corrector, dam by Proud Perfection. One by Corrector 2d, dam by Impudence. Three by H's On and On, dam by Mischief Maker. Two by Mischief Maker I Know. Two by Grand Perfection 2d. Prices reasonable; call or write.

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Several first class boars that are herd-headers; from 6 to 12 months old. Prices reasonable.

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Formerly of VAN METER, Ia., and breeders of CHIEF TECUMSEH 2d.

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The State and World's Fair winning boars, Nemo L's Dude and The Piquet, in service. Bred sows and serviceable boars for sale.

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Headed by the \$1,000 Tom Lipton. We now have about twenty fine fall boars by this great sire and out of dams by Corrector, Chief Perfection 2d, Prince Darkness, and one extra good one out of the \$700 sow, Spring Tide by Meddler 2d. Prices right.

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## Highview Breeding Farm

Devoted to the Raising of

## Big Boned Spotted Poland-Chinas

The biggest of the big. The prolific kind. Big bones, big hams, big spots. Young stock for sale.

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Breeds the Big Type of Poland-Chinas

Choice stock for sale at all times at moderate prices. Large herd to select from. Show hogs and herd headers of the largest type and no hot air sales. I sell them worth the money and get the money.

Public sale, May 30, at Butler, Mo.

Public sale, October 10, at Harrisonville, Mo.

Public sale, November 10, at Butler, Mo.

Public sale, January 21, at Sedalia, Mo.

Public sale, February 25, at Butler, Mo.

Write me what you want. I will sell them worth the money and guarantee them to please you if you want the big kind with quality. Write for herd catalogue.

In writing The Kansas Farmer give your full name and postoffice address.



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**MAPLE HEIGHTS HERD BERKSHIRES**  
Kansas Longfellow, champion Nebraska State Fair, 1907, and Herron Boy in service. Have some choice sows and gilts bred for fall litters, for sale. Nice lot of spring pigs to choose from. Write me. J. M. Niswam, Marysville, Kans.

**60 Berkshires For Sale 60**

from weaning pigs up to matured animals, including herd boars and old herd sows of Lord Premier, Black Robins, Herron Duke, Masterpiece and Lord Bacon families.

**G. D. WILLEMS,** Inman, Kans.  
Thirteen years a breeder of Berkshires.

**Guthrie Rancho Berkshires**

The Guthrie Rancho Berkshire herd, headed by Berron Duke, assisted by Revelation, General Premier and Sir Ivanhoe (all three winners). Berkshires with size, bone and quality. Individuals of style and finish. You will find our satisfied customers in nearly every state in the Union.

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**Ridgeview Berkshires**

—FOR SALE—

One aged and one yearling boar, and spring pigs of both sexes

**MANWARING BROS.,** Lawrence, Kansas

**King's Berkshires**

Have weight, quality and constitution developed by rustling for the best pork producing food on earth, alfalfa and blue-grass, supplemented with a light ration of grain and millfeed. They are bred right, and best of all they are priced right. Write for anything in Berkshires to,

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**Knollwood Berkshires**

Headed by Pacific Duke 56491, dam Marjorie 37491 by Baron Duke 23d 50000, a son of Baron Lee 4th, the sire of Lord Premier and Dutchess 120th 22875, grand dam of Premier Longfellow. Stock of all ages for sale. All stock guaranteed as represented.

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For sale—Show pigs and herd headers, fall of 1907 farrow. Choice boars and gilts at moderate prices.

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Fancy individuals, 12 to 24 months old, of best type and quality, and guaranteed extra breeders. Also females bred to Champion It. Our prices are attractive. See us before you buy.

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**LAWRENCE - - - KANS.**

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FOR SALE.

A choice lot of young Double Standard Polled Durham bulls by Kansas Boy X2585, S-H19789, Senator X5940, 283008 and the grand bull, Belvedere X2712, 190503. Inspection invited.

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Fall boars and gilts, also spring pigs. They are bred right and will be priced right. Let me know your wants. **S. W. ARTZ,** Larned, Kans.

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Bred sows and gilts all sold. Have a fine bunch of spring pigs for which I am booking orders. Write your wants and get prices.

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Some choice young bulls and heifers, also a few good cows for sale. Prices reasonable.

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Best of breeding. Write or come and see.

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A few bargains in bull calves. Some choicely bred spring pigs and boars ready for service. **H. B. Cowles,** Topeka, Kans. Ind. Telephone 1086.

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New York Valley Herds Shorthorn Cattle and Berkshire Hogs.

A large number of my Shorthorns will be sold at private sale for lack of room, including 3 bulls from 15 to 24 months old; also 10 fall and winter bulls and heifers, and 20 head young females. Two September boars and 51 May pigs from prize winning stock. See them or write. **J. T. Bayer,** Yates Center, Kans.

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5 bulls, all tops, from 13 to 16 months old; and a few choice females, by the 2400-pound Dale Duplicate 2d, son of the great Columbus. Stock guaranteed. Prices reasonable. **A. Johnson,** Clearwater, Kans.

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FOR SALE—Two extra good 2-year-old stallions; and some good young mares bred to Casino.

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Herd headed by the Dutchess of Gloster bull, Glad-lator 261085 and Barney 375873, a Cruickshank Butterfly. Cows of Scotch and Scotch topped Bates breeding. 1 yearling Barmpton bull (a good one) for sale. Will make tempting prices on a few females. **R. S. Myers,** Chanute, Kans.

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Scotch and Scotch topped Shorthorns for sale. 8 young bulls from 8 to 24 months old, all reds and good quality. Sired by Baronet of Maine Valley 178376 and Secret Empress 233447. Prices reasonable. Inspection invited.

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The oldest Shorthorn breeders in Kansas. The largest herd of Cruickshanks in Kansas. Herd headed by Violet Prince 145647 and Orange Commander 220590. Young stock of both sexes and some cows for sale. Quality and prices right.

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**1 BULL**—SCOTCH TOPPED, of serviceable age, with plenty of bone and finish, also a few choice heifers. Chief herd bulls: Forest Knight by Gallant Knight and Victor Archer by Archer. Prices reasonable. Call or write.

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**25 YOUNG BULLS** by Imp. Ardathan Mystery and Best of All for sale at bed rock prices. Can also offer some good Berkshire swine and Shropshire rams. Correspondence solicited.

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**SHORTHORN BULLS.**

Good ones, from 10 months to 2 years old, out of heavy milking dams, from such families as White Rose, Rose of Sharon, Daisies, Rubies and Frantics. These will be sold cheap to move them. Also a few choice yearling Dutch gilts, bred to good sires for May farrow.

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**Pedigreed Shorthorn Cattle**

Would be pleased to quote you prices on any or all of the following cattle: One red 2-year-old bull, 15 well grown bulls ranging from 10 to 15 months, 30 head well grown 2-year-old heifers, and 40 head well grown yearling heifers. Most of this lot are sired by the Scotch or Scotch topped bulls, Headlight 2d 243305, Bold Knight 179064, Sunflower Boy 127337 and Baron Ury 2d 124970.

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Largest importer and breeder of Mammoth Jacks in the United States. Every stall in my barn has a big Mammoth Jack, 15 to 17 hands high, 1000 to 1300 lbs.; that I will sell on one and two years time to responsible parties. If my Jacks are not just as I represent them I will pay all railroad expenses.

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Horses—Cattle—Swine—Poultry.

Silkwood 12236, in stud, race record 2:07; Guideless, record 2:07 1/4; sire of two in 2:10 and of eleven with records better than 2:25. Fee, \$25 to insure. Pasture and feed reasonable. Registered Shorthorns and Jerseys. Large strains. Several Jersey bulls for sale. O. I. C. Swine. Choice boars and gilts for sale. R. I. Red chickens, both rose and single comb. Eggs \$1 per 14, \$5 per 100. Correspondence, inspection and patronage solicited.

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We Will Hold a Summer Term.

EACH succeeding term has shown an increased attendance, due to our efficient instructors and square dealings. Write for terms and illustrated catalog. Please mention this paper when writing.

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# 20 Scotch Shorthorns-20 Scotch Topped-10 Calves at foot

## At Auction, Thursday, June 11, at Olathe, Kans.

25 YOUNG THINGS BY LORD BANFF 2d, one of the greatest breeding sons of Imp. Lord Banff. A dozen of his heifers are bred to BARON MARR, by the International champion, Cumberland's Last and out of Imp. Lady Marr.

Among the attractions are the roan yearling bull, CUMBERLAND, an Orange Blossom by Cumberland's Last; COMMODORE, a roan Duchess of Gloster by Lord Banff 2d; SPARTAN CHAMPION, a red Village Blossom by Prince Imperial 2d; VICTORIA OF MEADOW FARM, by Baron Golddust 3d; NORWOOD JENNIE LIND, by Imp. Red Knight, sire of many winners; INGLE QUEEN, by Ingleside, son of Ingleside, that sired several St. Louis World's Fair winners; CHOICE VIOLET, a two-year-old Marsh Violet my Choice Goods Jr., son of Choice Goods; TWO YEARLING DAUGHTERS OF IMP. MUTINEER, out of the same dam as the champion Whitehall Marshal.

In addition to these there is a string of decidedly useful Scotch and Scotch-topped cattle, including several show calves that sell with their dams. Send for the catalogue, mentioning The Kansas Farmer. Address

**Bellows and Harriman,**  
Auctioneers.

**H. E. HAYES,** Olathe, Kans.

Olathe is 22 miles south of Kansas City on the Santa Fe and Frisco.