

KANSAS FARMER

WITH WHICH IS COMBINED FARMERS ADVOCATE

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TOPEKA, KANSAS, JUNE 19, 1909.

Established 1863. \$1 a Year

A Good Farm Sewage Disposal Plant.

A Necessary Accompaniment of Modern Conveniences in the Farm Home.

The system of sewage disposal par excellence is the septic tank. Of these, the forms, designs and arrangements amount to a score or more, the most of which are designed with the intent and purpose mainly of selling to the prospective user somebody's patent siphon, trap or other mechanical appliance at a price for each piece in excess of the cost of a practical tank such as may be built by the farmer with the materials at hand on the average farm.

In constructing a septic tank, one of the main considerations is to build one that, once in operation, will never have to be opened for cleaning, or stopped and emptied for the purpose of repairing or adjusting some delicate mechanism that forms a part of some of the mechanical arrangements. This last can be avoided by not using any mechanism. The way to obviate the necessity for disturbing the tank after starting is to build a severely simple plan of tank of indestructible material in a workmanlike manner, one that will go on doing its work for generations without further care or attention.

SIMPLICITY AND PERFECTION OF OPERATION ARE DESIRABLE.

The plan of septic tank shown in the accompanying illustration is at once simple and perfect in operation, automatic and positive in accomplishing the desired end.

In addition to its simplicity, it is the least expensive of any plan or arrangement yet devised or, probably ever will be. Any farmer can construct a tank after the plan of drawing shown without having to employ skilled labor or purchase expensive material or mechanical devices.

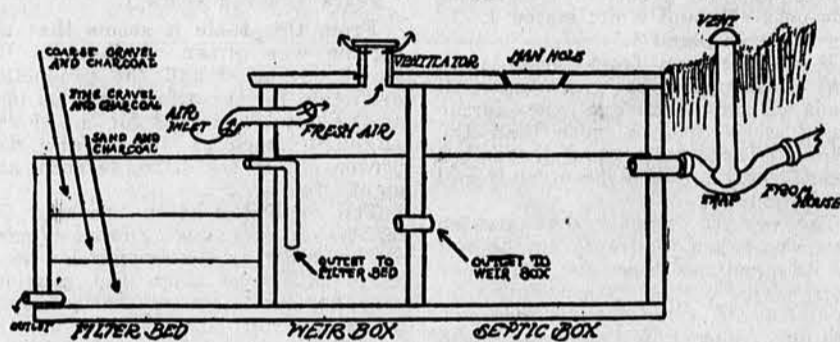
Where the cost is not so much a consideration as the question of durability and permanence, the materials used are brick or stone or concrete, with a liberal use of cement to line the boxes inside and out. However, if available and enough cheaper to make their use desirable, heavy plank and timbers may be used, first treating all the lumber with some one of the wood preservatives to insure against decay.

When using wood construction the interior of the box should be sealed with a coat of cement. Perfect adhesion to the surface of the boards can be secured by nailing on ordinary plastering-lath, first perpendicularly, then horizontally, and laying on first a coat of cement with sand just moist enough to work freely, then after that had thoroughly set, a thin coat of pure Portland cement rather wet.

The writer knows of a tank built in this way that has been in use for a number of years that is as perfect now as when put up, and that has not required any attention.

ESSENTIALS OF THE SEPTIC-TANK SYSTEM.

Before building the tank, the main essentials should be understood. They are: That the septic box, the first in the plan of the series of three, shall be absolutely air-tight and light-proof, and that it shall be large enough to hold the maximum of closet sewage and kitchen slops produced for a period of from thirty-six to forty-eight hours; that the weir box be at least half as large as the septic box, and the inlet and outlet be so adjusted that the contents shall not be disturbed by agitation, and that the filter-bed be large enough to take care of



Plan of a Septic Tank

the flow from the weir box without overflowing.

The weir box may be supplied with

fresh air by an inlet over the filter-bed and the ventilator in the top, for the purpose of freely releasing any

Too Far from the Crick

Written for Kansas Farmer

By ED. BLAIR

(Illustrated by Albert T. Reid.)

I reckon some fellows will differ from me—
I can't help it though if they do;
I've tried to live here in the city 'n' be
Contented—but I'm in a stew.
The streets are all paved 'nd the parks are
kept clean,
On these I'm not making a kick;
I'm eating enough, but I'm long, thin and
lean—
I'm too far away from the crick.

I hear all the noise 'nd the battle 'nd jar,
And maybe it's music to some—
The factory whistle, the rumbling street car,
'Nd the Salvation Army's big drum;
But while they are rattlin' and bangin'
away
I get sorter lonesome 'n' sick
'N my mind wanders back to the sweet yes-
terday
When I sat on the bank o' the crick.

Yes, the dear windin' creek, it has captured
my heart,
I'm sighin' to be there today;
I guess I will get on my fixins 'n' start
(I wish for a permanent stay);
So bring my old hat 'n' my fit easy cloze,
I'm off where the bull-heads are thick—
Tomorrow I'll sit where the still water flows
With my pole, on the banks o' the crick.



chance odors; but as some tanks have been in operation a long time satisfactorily without this, it is not found to be absolutely necessary.

The drain or waste pipe should be provided, just outside the septic tank, as shown, with a trap and vent, to prevent odors or sewer-gas from returning to the house or other source of inlet.

The carrying or sewer pipe should be six or eight inch tile, to prevent clogging. This pipe should be of the sewer-tile type, having the collar-joints sealed with cement.

The outlet tile between boxes may be either four or six inch, set into the partitions on a level about twelve inches apart, at about the relative height shown in the illustration.

SIZE OF PLANT REQUIRED.

A septic tank four by six by seven or eight feet will be large enough, ordinarily, to handle all the sewage produced by an average family. If the waste from the dairy house is emptied into the tank, also, provision should be made for the increased flow.

To provide against some unusual condition that might some time render it necessary to enter the septic tank to repair or clean it out, a manhole should be built in the top.

The cover of the septic tank and weir box may be of plank, tightly sealed. If desired to cover with earth, to hide from view, cross timbers should be laid on heavy enough to sustain the added weight.

The filter-bed may be as large as the septic tank, with a row of outlets at the bottom, as shown. The filtering material should be, first, a layer one third the depth of the box, of fine sand and crushed charcoal, next a layer of coarse sand, fine gravel and medium-fine charcoal, and last a layer of coarse gravel and partly-broken charcoal.

LOCATION OF THE TANK.

This tank may be located at any distance from the buildings, providing, of course, that there is sufficient "fall" in the drain to carry the sewage without clogging. It will be a rare exception where a house is so situated that ample "fall" may not be found for drainage. To secure greater fall, in some cases the sanitary closet may be placed on the second floor, as in most city houses. The supply-water tank on most farms is high enough to furnish water for the "flush tank" to the sanitary closet trap-bowl.

The drain from the filter-bed is arranged in accordance with the manner of disposal of the liquid issuing from the tank. The usual outlet is into a stream through tile or an open ditch. Were the topography of the land will permit, the waste may be used for irrigation in a small way. It is perfectly safe, however, to allow it to run into the farm brook or other water supply from which the cattle drink, for when the liquid issues from the tank it is ninety-eight per cent pure. Immediately it comes in contact with the air, however, the remaining two per cent of impurities is removed, and it becomes as clean and pure as spring-water, fit for use in watering stock or for drinking purposes.

The process that accomplishes this seemingly inconceivable feat of transforming the foul mass of sewage and effete matter into crystal pure water is septic destruction, and is very simple. In fact, it is so simple and effective that it does the work without

(Continued on page 6.)

LEGUMINOUS CROPS

Their Effects on the Soil and on the Crops Following.

By J. G. LILL,

Sedgwick County, Kansas.

In making this study I secured lists of the members of the farmers' institutes over the state and sent printed lists of questions to a few members of each institute, with the request that they answer from their own experience.

The questions asked were as follows:

1. What legume was grown?
2. What is the location of the land?
3. What kind of soil?
4. What is the usual method of preparing the land for crops?
5. What crops were grown on the field before the legume was sown?
6. What method was used in preparing the field for the legume?
7. What was the condition of the field before seeding?
8. What was the condition of the soil when seeded?
9. What was the method used in sowing the legume?
10. When was the legume sown?
11. What amount and quality of seed was used?
12. What was the stand secured?
13. How many years was the legume grown?
14. When was the land broken?
15. What was the condition of the soil after breaking?
16. What was the method used?
17. What crops were grown after the legume? Name the order grown.
18. Compare crops grown after the legume with the same crop on a field where legumes had not been grown: preferably a field that had received about the same cropping and cultivation with the exception of the crop of legumes. Give separate comparisons of the first, second, third and fourth year's crops.
19. Give a comparison of the soil in the two fields after each crop.

Out of 1,018 letters mailed, 17 were returned and 56 answered, one-half of which gave good data.

Of the answers received, 20 reported on alfalfa, seven on clover, three on cow-peas and one on soy-beans. Several of the men reported on two legumes.

The answers received as follows from the different counties: Sumner 1, Labette 1, Woodson 2, Allen 1, Butler 2, Harvey 1, Edwards 1, Pawnee 1, Barton 1, Marion 1, Franklin 1, Osage 1, Douglass 1, Jefferson 1, Leavenworth 2, Dickinson 1, Clay 2, Jewell 2, Mitchell 1, Lincoln 1.

The reports from the southern part of the state seemed to follow the valley of the Arkansas to some extent, those from the northern and eastern part of the state had a general distribution over that territory.

The following is a table of the kinds and the location of the soils where the

legumes were grown as given in the answers:

KIND OF SOIL WHERE GROWN.

Alfalfa—Loam 2, black loam 7, sandy loam 7, clay loam 1, clay 1, gumbo 2, sand 1.
Clover—Loam 2, black loam 4, clay loam 1, gumbo 1.
Cow-peas—Loam 2, black loam 1.
Soy-beans—Clay 1.

LOCATION WHERE GROWN.

Alfalfa—Upland 8, bottom 6, terrace 2, not stated 3.
Clover—Upland 3, bottom 1, terrace 3.
Cow-peas—Upland 2, not stated 1.
Soy-beans—Upland 1.

It will be seen from these tables that the legumes were grown upon all kinds of soils although the fertile loams were favored more than the others. These soils were distributed about evenly between the uplands and the bottoms.

The reports indicate that greater care was taken in preparing the soil for the legumes than for the other crops. This greater care usually took the form of extra harrowings and diskings. The difference, over the state, in the methods used was not noticeable.

PREPARATION OF SOIL FOR ORDINARY CROPS.

The following is a table of the methods used in preparing the soil for the legumes and for ordinary crops:
Alfalfa—Plowed, disked and harrowed 5, plowed and harrowed 12, disked and harrowed 2.
Clover—Plowed and harrowed 2, Campbell system 1, disked and harrowed 2, harrowed in wheat or stalks 2.
General crops—Plowed, disked and harrowed 3, plowed and harrowed 17, Campbell system 1, disked and harrowed 3.

The legumes usually followed corn or wheat although some of the legumes followed other crops. The following is a table of the number of legumes following the different crops:
Alfalfa—Corn 8, wheat 6, oats 3, millet 1, flax 1, pasture 1, none 1.
Clover—Corn 3, wheat 2.

It seems that the prevalence of wheat and corn preceding the leguminous crop is largely due to the greater acreage of these crops grown.

As shown in the reports, the seed used was usually of the best and the amount of seed used was usually 20 pounds per acre for the alfalfa and between 10 and 15 for the clover.

The methods that were used in sow-

ing the legumes were broadcasting and drilling, four drilling and 20 broadcasting.

The length of time that the legumes were grown varied from one to 20 years as shown by the following table:
Alfalfa—4 years 1, five years 1, six years 2, seven years 2, eight years 3, nine years 1, ten years 2, twelve years 1, thirteen years 1, fifteen years 1, sixteen years 2, twenty years 1.
Clover—1 year 1, two years 3, five years 1, seven years 1.

From this table it seems that the legume was grown as long as the stand was good and the production profitable for the alfalfa and as long as the stand was good for the clover, although much of the alfalfa was broken out in the sixth, seventh, and eighth years.

The method used in breaking the legume sod was plowing in every case.

The subsequent cropping shows a great difference from the previous cropping due to the adaptation of the different crops to the soil as the leguminous crop left it. The following table shows the subsequent cropping as reported for the first four years.

First year—Wheat 2, corn 19, oats 1, Kafir corn 1.
Second year—Wheat 3, corn 12.
Third year—Wheat 2, corn 10, oats 1.
Fourth year—Wheat 3, corn 6, spelt 1.

This table shows that corn is more favored than any other crop to grow after a leguminous crop. This seems to be due to the fact that corn is a ranker grower than either wheat or oats and therefore able to stand the greater fertility without being injured. Corn followed the leguminous crops in 19 cases, as compared with eight cases where it preceded them. To contrast with this is the fact that wheat followed the legumes in two cases as compared with six where it preceded them.

Besides being a stronger feeder and thus well adapted to follow the leguminous crop, it appears that corn is often used because it is convenient to plant corn after the legume, as in the case where the legume sod is broken out in the fall and let lie over winter, corn would be most apt to be the crop that would be planted as the preparation would be exactly what the corn requires.

While those reporting did not give an extended description of the soil or crops, they made in their answers

comparisons with other fields, as requested in the eighteenth and the nineteenth questions. Judging from these answers, it is evident that the farmers observed the condition of the soil tilth and the difference in the growth and yields of the various crops planted after the legumes.

The effect of the leguminous crop on the soil and on the crops following the legume cannot be divided into two distinct parts but must be treated in their relation to each other as the effect on the crop is evidently caused largely by the effect on the soil.

ALFALFA ANSWERS.

Alfalfa Land—"The alfalfa field was very hard when plowed."

"Didn't run together or bake, open and porous."

"The soil in the legume field was finer in texture and in better condition every way."

"Ground in the legume field always looser and finer."

"More humus in the soil after the alfalfa."

"The field on which the alfalfa was grown was bottom land. The soil was loose and uniform in color and apparently rich in humus. The other field was bottom land near the legume field. The soil seemed to have settled in layers or streaks and seemed lifeless in spots. This land is more level and should be the better producer today but it is not."

"The alfalfa left the land in a greatly improved condition for several years."

"The ground seemed to be looser than the other and harder to pack. After a rain the crust was not as thick as the crust on the other field and was easier to pulverize."

"The soil is lighter on the legume field and is easier to work."

CLOVER, SOY-BEANS AND COW-PEAS.
Clover Land—"The clover land was loose and open, and the other hard and compact. The clover land gradually became hard and compact."

"The clover land handled much nicer."

"The physical condition of the soil after the soy-beans was excellent."

Cow-pea Land—"Cow-peas seem to improve the soil in proportion to the yield of the cow-pea crop."

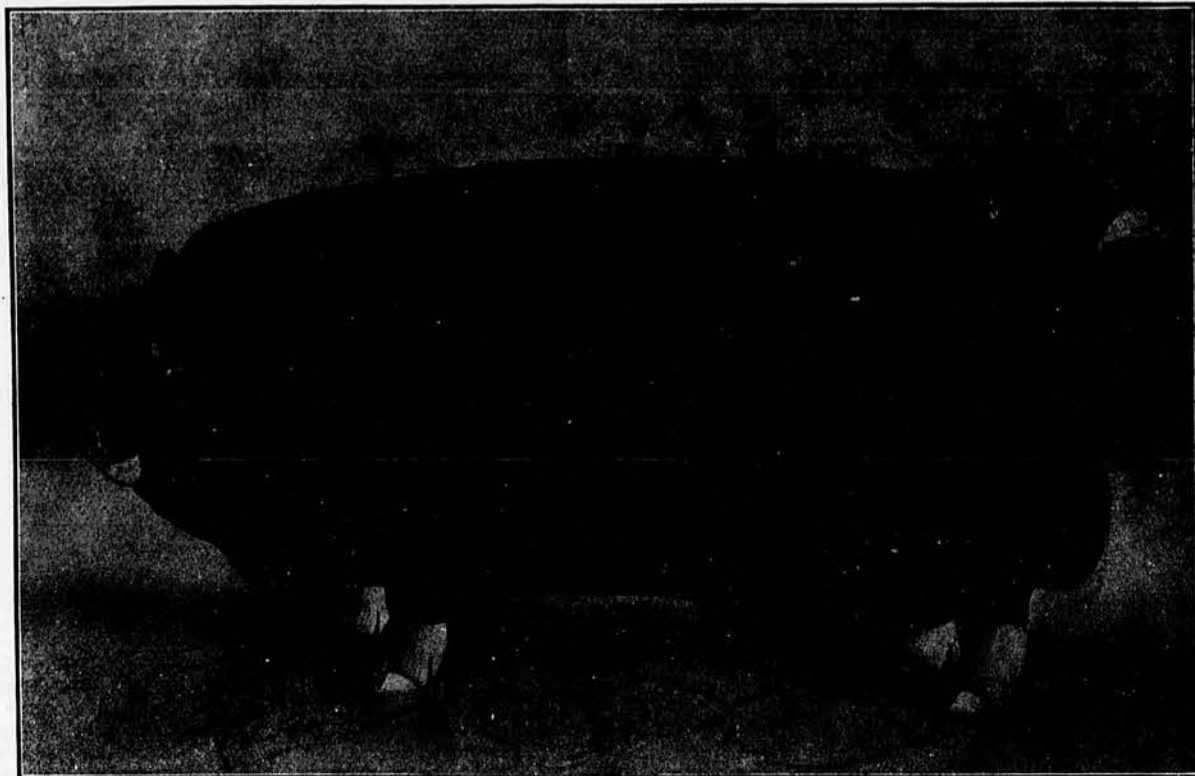
Only one man answered that the legume soil was not as good as the soil with which it was compared. Five answered that it was the same and 15 that it was improved.

When a legume was grown on a field according to the majority of the reports, the soil was improved in tilth. Most of the conditions named in the answers were different phases of the effects of humus and rest on the soil, the soils being described as being more porous, as working easier, as being looser, as being in finer tilth generally and as going back gradually to the original condition. These were the only effects visible from the condition of the soil. The other effects or the ones that were not visible were indicated by the condition of the crop grown on the soil after the legume.

[This article will be concluded in next week's KANSAS FARMER.]

A farmer reports to the California Cultivator that he has found one of the best poisons for ground squirrels to be the strychnine and wheat combination. To mix, he dissolves 1/2 ounce strychnine in 1/2 pint vinegar. This is sufficient for eight pounds wheat. Before being placed on the wheat, sugar is added to the dissolved strychnine mixture until it will take up no more, after which the wheat is stirred into the mass, and it is spread on trays or plates to dry, being shoveled or stirred over several times to insure thorough mixing of the poison. He controls rabbits and other pests that destroy his melon vines by using the same mixture. One or two drops on leaves which rabbits nibble is sufficient.

New subscriptions to KANSAS FARMER may be taken at the special rate of only fifty cents for the balance of 1909. Orders will be started the same week they are received and will continue until January 1, 1910. Order at once. The sooner your order is received the more you get for your money. Send stamps if you prefer.



GEM'S SPELL, No. 146467, sired by Spellbinder; his dam was Inside Pocket by On and On and a litter mate to the Illinois champion On the Dot. Gem's Spell is the chief herd boar in A. W. Shriver's herd at Cleveland, Kan.

VACCINE

The April 10 issue of KANSAS FARMER contained an interesting article dealing with the "Treatment of Hog Cholera," the treatment being of a preventive character by immunization or vaccination. The writer of that article was interested in what is known as the "American Method" of vaccination. The following letter has been received from Harold Sorby, a scientist of Chicago, who is an advocate of "Foreign vaccine." Mr. Sorby says:

"The American method consists of the employment of the antitoxic serum of hog cholera at the same time as the virus of hog cholera or the blood of a hog that is infected with that disease. This method was used in a limited and experimental way but was brought out again by the Department of Agriculture in January, 1908, under the name of "Serum-Simultaneous Vaccination."

"As a commercial proposition it certainly would not pay as only a very limited number of hog-raisers would stand for the cost of the serum required in the treatment, while nearly all of them would be afraid of the virus part of the treatment. What is more, it has been pointed out by the Government and state officials that Serum-simultaneous Vaccination should be practised only by experts, as it might be positively dangerous in the hands of anyone else. The Government has declined to go into the business because, as the Secretary of Agriculture has publicly stated, "it was not their business to do so," but some of the states seem to have the idea of embarking in the undertaking. If the different states will vote and provide the necessary funds for the Serum-Simultaneous Vaccination of hogs at an average cost of about \$1 per head the hog-raisers would certainly be glad to avail themselves of free vaccine and would take all other chances; but if the states only provide the necessary capital for the setting up of a hog cholera vaccine business it remains to be seen whether the hog-raisers would be disposed to take chances and buy the vaccine (serum-and-virus) at an average of \$1 per head.

"I believe that I know as well as anyone that the American or 'Serum-Simultaneous' method of vaccination for hog cholera is quite satisfactory from a scientific and expert point of view, and if the necessary high-priced scientists were engaged to prepare and apply the material it would give as satisfactory results in practice as it has done experimentally—that is to say, prove successful in about 95 per cent of the cases. However, I never have and never would invest any money in it as I know that it would not be a paying business, as the method is faulty from an economical standpoint. If it had been a good proposition there are several concerns in America which would have been making the Serum during the last 10 years.

"The 'Foreign Vaccine' that I introduced into America a year ago and first came out in 1897, has undergone certain modifications and improvements even during this year. It has made perhaps slow but steady progress and its employment has gradually extended from one country to another. Some of the official and private reports made in Europe were published in KANSAS FARMER nearly a year ago and these reports showed that about 94 per cent of the vaccinated hogs became sufficiently immunized against hog cholera and that 6 per cent of the hogs would not and did not become sufficiently immunized. This was a very fair showing for such a virulent and fatal disease as hog cholera. These results were confirmed by actual practical experience upon something like 100,000 hogs that were treated with this Vaccine in the United States in the summer and fall of 1908. It is true that some wretched mistakes were made by some parties who disregarded the directions for use and thought they knew better than the makers of the vaccine, these mistakes being in the way of reducing the dose and improper application.

"An important feature of the 'Foreign Vaccine' is that it costs very little to make and therefore can be sold at quite a low price and it is abso-

lutely harmless. The article in your issue of April 10 makes the suggestion that the use of this 'Foreign Vaccine' might introduce a new disease. I thought that this ghost had been laid low some time ago. This 'Foreign Vaccine' is a unique preparation, but it has been shown that it will not set up hog cholera, or swine erysipelas, or any other disease in the animal into which it is introduced.

"All other things have met with opposition when new, and all the antitoxins and vaccines that have been discovered during the last 25 years have met with their full share of criticism and antagonism. Diphtheria Antitoxin, for instance, is almost a specific cure for diphtheria. However, when this life-saver, discovered by foreigners, was being imported and in-

or method they like, as they are the men who will settle the question for themselves; but whatever they use they must see to it that it is properly applied, must be sure that hog cholera is the cause of the trouble, and they must not expect the hogs to be protected against every other disease which hog-flesh is heir to."

Analysis of Corn.

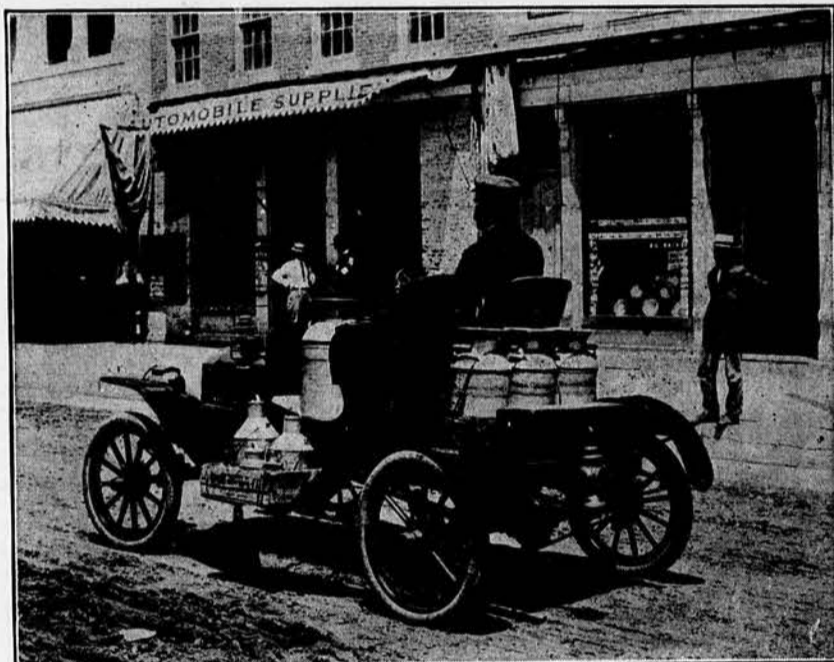
I would like to see an analysis of a grain of corn. Is a flinty, hard-coated grain more valuable as a fat-producer than a softer kind?—Orval Jeffers, Fredonia, Kan.

The New Jersey Experiment Station made some analyses of the different parts of the corn kernel with the following results, in per cents:

From this table you can see the relative proportion that the skin, germ, and starchy parts are of the entire kernel, respectively, as well as the composition of the original corn, and each of these parts. The average composition of dent corn as shown by a compilation made some years ago, calculated to the water-free substance is:

The Wheat Industry.

The rise in the price of wheat is a matter of great importance, apart from the seriousness of the loaf at 7d to the mass of the community. It is of this importance because there are grounds for the belief that whilst the price of wheat is not likely to remain at 50 shillings per quarter, assuming it gets there, or even at its present price of 45s, the normal price will before long be over 40s per quarter. The late Mr. Clare Sewell Read, than whom there was no higher authority on wheat growing, told a Royal Commission some thirty years ago that it did not properly pay the English farmer to grow wheat for less than 42s per quarter, and this opinion was never traversed by competent authority. But we must go back to 1883 to find wheat at over 40s per quarter, and then it was only 41s 9d. The consequence has been continuous shrinkage in the acreage under wheat. In 1875 the wheat acreage was 3,514,088; in 1885 it had fallen to 2,553,092; and in 1895, when the price had dropped to 23s 1d per imperial quarter, the acreage was only 1,339,806. With some recovery in price the acreage rose again in 1905 to 1,704,281 acres, but the improvement was not maintained, and in 1908 the acreage had again shrunk to 1,548,732 acres, the total production of wheat in the United Kingdom in that year being only 6,566,892 quarters, of an estimated value of £10,370,000, which means the country has to import some 27,000,000 quarters to meet its requirements for the season ended July next. If instead of the low and unremunerative price of wheat ruling in recent years, the average stood again at over 40s, with likelihood of permanency at the higher rate, we should soon see an immense expansion of wheat cultivation in the United Kingdom, to the great benefit of the country. It is true that the loaf would be a little dearer than it has been during the last twenty years, but the disappearance of excessive cheapness would be much more than balanced by the check that would be given to migration to the towns. Competent opinion favors the view that we are not likely to see a return of the low prices of the nineties, and that it is not at all unlikely that the normal price of wheat will soon reach the figures given above, namely 40s per quarter or over, for the supply of wheat is not likely to increase so rapidly as the demand for it. There is still a good deal of virgin soil available and suitable for wheat growing, but the wheat eating population of the world is very much larger than it was. To go no further abroad than Germany, a generation ago the Germans were a rye bread people, but now over 30 per cent of the grain consumed is wheat. And whilst improvement in the material condition of people is leading to larger consumption of wheat, the United States, which hitherto have been the great exporters of wheat, will soon have little or none to export owing to the rapidly growing requirements of their home markets.—Journal of the Royal Society of Arts [England].



A KANSAS FARMER AT WORK.
The accompanying cut shows Mr. E. S. Hudson of Manhattan, Kan., delivering milk to the creamery in his Maxwell-Briscoe automobile. Mr. Hudson has been a successful farmer for years and a patron of the State Agricultural College. Lately he turned his attention to dairy farming and the new car is evidence of prosperity as it was paid for entirely out of the proceeds from his milk farm. The Maxwell-Briscoe car was advertised in the columns of Kansas Farmer of which Mr. Hudson has long been a reader. It is a great time-saver.

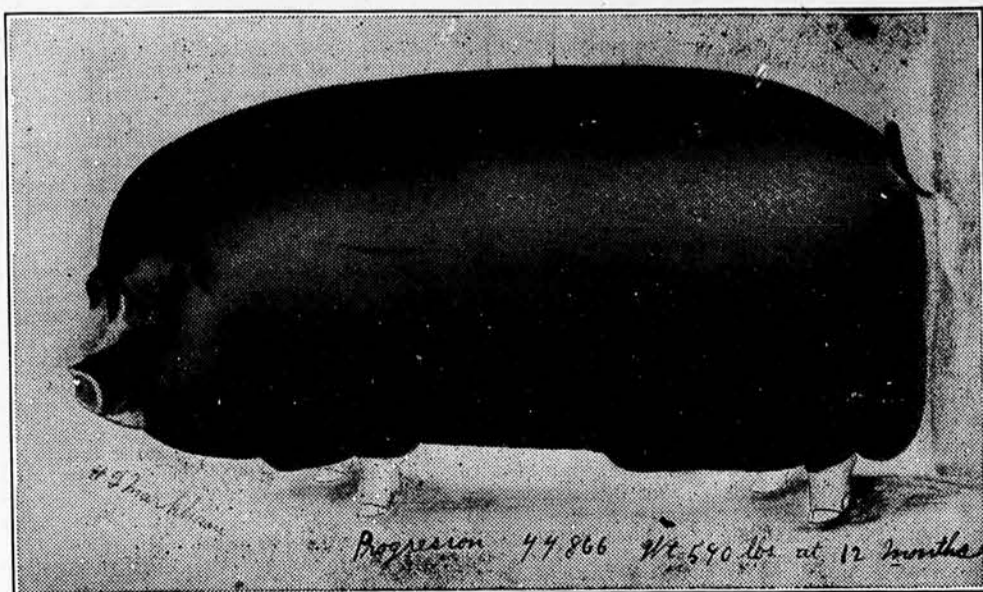
roduced by myself and another firm from France and Germany in 1895 the medical journals were full of articles trying to upset the theory and discourage its employment in practice. Another instance is that of black leg vaccine; even the Government officials were running down the 'Commercial Concerns' that were introducing and selling black leg vaccine, but today there are about 4,000,000 calves vaccinated against black leg every year in the United States, of which about 25 per cent is supplied by the Government and 75 per cent is sold by the 'Commercial Concerns' that were some ten years ago so much despised by the Government officials in Washington.

"In conclusion, I would say, by all means let the hog-raisers vaccinate their hogs and use whatever vaccine Ash, 1.7 per cent; protein, 11.5 per

cent; fiber, 2.6 per cent; nitrogen, free

| Corn and its part | In 100 parts corn | Nutrients in the water-free material. | | | | |
|-------------------|-------------------|---------------------------------------|---------|-----------------------|-------------|---------------|
| | | Water | Protein | Nitrogen-free extract | Crude fiber | Ether extract |
| Original corn | 100.0 | 24.7 | 12.6 | 79.3 | 2.0 | 4.3 |
| Skin | 5.6 | 15.3 | 6.6 | 74.1 | 16.5 | 1.6 |
| Germ | 10.2 | 29.6 | 21.7 | 34.7 | 2.9 | 29.6 |
| Starchy part | 84.3 | 24.7 | 12.2 | 84.9 | 0.7 | 1.5 |

extract, 78.6 per cent; and fat, 5.6 per cent. In the case of partial analysis of corn chop made in Kansas, we have obtained as the average of 350 samples: Protein, 9.10 per cent and fat, 4.07 per cent. These figures are on samples which probably contained 10 per cent of moisture and hence in a



Progression is now used at the head of J. D. Spangler's herd of big Poland Chinas at Sharon, Kan. Progression is a hog of great size, weighing now in breeding condition about 830 pounds. If there is a hog in Kansas that would weigh 1,000 pounds in show shape Progression would be at the head of the list. He is the most massive two-year-old hog the writer ever saw. His get should have great feeding quality along with size. To the farmer and breeder who have not enough size in their herd, send for a boar or gilt sired by Progression and grow them out, then you will have the proof of their value. Write J. D. Spangler at Sharon, Kan., for prices on his 200 head of spring pigs. Kindly mention Kansas Farmer when you write.



KANSAS FARMER

EDITORIAL



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CONTRIBUTIONS.—Correspondence invited on all farm topics, live stock, soil cultivation, grains, grasses, vegetables, household matters, recipes, new and practical farm ideas, farm news. Good photographs of farm scenes, buildings, live stock, etc., are especially invited. Always sign your name, not for publication, unless you desire it, but as an evidence of good faith. Address all communications to KANSAS FARMER COMPANY, Topeka, Kansas.

from a correspondent who complained of lack of success with the cage trap, as follows:

"Rats are not fools and men are not always wise enough to circumvent them. We have had this trap lying in the open and not a rat would touch it, but taken up and a little refuse fish put into it and an old mat over it, we got some lovely specimens next morning. A successful trapper says that even when he gets a rat in this trap he does not disturb it, but feeds it, and sometimes he has 8 or 9 other rats come in to keep it company.

An easily arranged trap is described thus:

"About sixty years ago a writer in the Cornhill Magazine gave details of a trap by means of which it was claimed that 3,000 rats were caught in a warehouse in a single night. The plan involved tolling the rats to the place and feeding them for several days on the tops of barrels covered with coarse brown paper. Afterwards a cross was cut in the paper, so that the rats fell into the barrel. Many variations of the plan, but few improvements upon it, have been suggested by agricultural writers since that time. Reports are frequently made of large catches of rats by means of a barrel fitted with a light cover of wood, hinged on a rod so as to turn with the weight of a rat."

On the subject of baits the bulletin says:

"The best bait to use in trapping is usually food of a kind that the rats do not get in the vicinity. In a meat market vegetables or grain should be used; in a feed store, meat. As far as possible, food other than the bait should be inaccessible while trapping is in progress. The bait should be kept fresh and attractive, and the kind changed when necessary. Baits and traps should be handled as little as possible. Ordinarily, traps should be frequently cleaned or smoked. The use of artificial scents, as oil of anise or rhodium, on the bait is advocated by many, but no doubt their importance has been exaggerated. The experience of the writer is not favorable to their use, but they may do some good by concealing the human odor on the trap."

Several poisons are considered, among which are strychnine, arsenic, and phosphorus. One of the most useful poisons is barium carbonate of which the bulletin says:

"This mineral has the advantage of being without taste or smell. It has a corrosive action on the mucous lining of the stomach and is dangerous to larger animals if taken in sufficient quantity. In the small doses fed to rats and mice it would be harmless to domestic animals. Its action upon rats is slow, and if exit is possible, they usually leave the premises in search of water. For this reason the poison may frequently, though not always, be used in houses without disagreeable consequences.

"Barium carbonate may be fed in the form of dough composed of four parts of meal or flour and one part of the mineral. A more convenient bait is ordinary oatmeal with about one-eighth of its bulk of the mineral mixed with water into a stiff dough. A third plan is to spread the barium carbonate upon fish, toasted bread (moistened), or ordinary bread and butter. The prepared bait should be placed in rat runs, a small quantity—as a teaspoonful—at a place. If a single application of the poison fails to kill or drive away all rats from the premises, it should be repeated with a change of bait."

Accurate estimates of losses on account of rats have not been made in this country. Professor Lantz gives the estimates of some European countries as follows:

"In Denmark they have been reported as amounting to 15,000,000 francs (\$3,000,000) yearly. In France in 1904 the total losses from rats and mice were estimated at 200,000,000 francs (nearly \$40,000,000). The German Ministry of Agriculture, in a circular addressed to various subordinate chambers of agriculture, states that the people of Germany suffer an annual loss through the agency of the rat of at least 200,000,000 marks (\$50,000,000). Sir James Crichton-Browne, of the English Incorporated Society for the Destruction of Vermin, says that the damage done by the rat in Great Britain and Ireland 'in its rural activities, to say nothing of what it does in towns and in connection with shipping, is £15,000,000 (about \$73,000,000) per annum.'"

An enemy capable of doing such damage is surely worthy of persistent and effectual warfare.

USE OF THE ENGLISH LANGUAGE.

In a well considered paper published in the Industrialist, Miss Ada Rice, instructor in English at the Kansas State Agricultural College, enters, for college graduates, a plea of guilty to the charge that they reflect little credit upon the English work in institutions of higher education. Miss Rice is so frank as to admit that there is room for general criticism of the "graduates of our own institution." The plea of guilty which Miss Rice enters for Kansas Agricultural College graduates may well be made general enough to include graduates of nearly all institutions that confer degrees. Further, if KANSAS FARMER or any other publication should print without correction manuscripts as they come from the hands of three-fourths of the professors and other instructors in the higher institutions of learning it would be unsafe for the editor without a bodyguard to visit the institutions in which these persons teach.

A good many years ago a graduate of the Kansas Agricultural College arranged to furnish a series of articles for KANSAS FARMER. His most earnest stipulation was that the editor

should "correct his copy severely," before printing. This was done. In very few weeks the crudities in the graduate's use of language had disappeared. The rugged strength remained and to it accuracy of thought and correctness of expression were added. His manuscripts were put in type precisely as written, even to capitalization and punctuation. A critic reader in a distant state inquired of this — was who contributed such excellent original matter to KANSAS FARMER.

A later graduate of the K. S. A. made a request for similar treatment of his manuscripts. He has since then written much, and his writing may well be taken as models of correct English.

KANSAS FARMER has long thought that the schools ought to turn out graduates who need not be ashamed of their English. The Agricultural College can scarcely require full mastery of English as an entrance qualification. But a reasonable amount of instruction and drill by an enthusiastic teacher should qualify any young Kansan to write the language correctly.

A story is told of an Irishman who after listening to an expert violinist wanted to "play that thing." Asked if he had ever learned the violin he replied in the negative, but he knew he could play it because it looked easy. None should expect to write English correctly without learning to practise. Men, and women, too, but especially men, acquire efficiency by doing and by the elimination of error. This is as true of writing English as of performing on the piano.

All high schools, colleges and universities can turn out experts in the use of the English language and they should make the habit and the ability to use good English a condition of graduation.

THE CHAUTAUQUA SUMMER OUTINGS.

The Chautauqua season is one of continually increasing interest. It comes at a busy season on the farm yet greater numbers of farm folks attend than formerly. Realization of the advantages of an outing and of the uplift that one receives from contact with master minds of the age and from listening to able addresses that are not all political, persons in every walk of life plan for the Chautauqua.

The Topeka Chautauqua has the advantage of location in a grove of the suburbs of the capital city, all of the institutions of which may be reached by electric cars at nominal cost. Among these are Washburn College with its fine grounds and buildings, including the astronomical observatory, the State House; a fine specimen of architecture in which are housed the various departments of the state government, the State Board of Agriculture with its noted secretary, the Grand Army of the Republic the State Board of Health, the State Historical Society with its libraries and collections of material for the use of present and future historians. It is worth while to examine all these and to go in and shake hands with the Governor and the other state officials, to look into the State Treasurer's office with its provisions for protection of the state money, and to climb to the top of the dome and look out over the broad and beautiful landscape with its fields, forests and streams.

Topeka is a charming city that seems at this season to nestle among trees and to abound in parks.

The program of the Chautauqua is sufficient to provide a strenuous ten days' work for those who desire to make it a season of study.

The only regret is that the thousands who benefit by the summer outing season with its intellectual and social features can not be reinforced by the other thousands who can not be spared from their avocations.

FRAUDS IN FOODS.

One of the beneficent enactments of recent years is the national pure food law which forbids the use of preservatives which are harmful when taken into the human system. The enforcement of this law has driven from the markets not only food stuffs con-

aining deleterious substances, but so inferior or partly decayed articles whose true condition was obscured by preservatives. A great upsurge was raised because the law was enforced against the use of benzoate of soda. This resulted in the appointment of a "referee board" to review the findings of the chemical division of the Department of Agriculture. The referee board claims to have found that benzoate of soda taken in small quantities is not harmful. Powerful interests are said to be back of the attempt to discredit the excellent and conscientious work of Dr. H. W. Wiley, chief chemist of the Department of Agriculture, the purpose being to regain the market for chemical preservatives. It is to be hoped that the Secretary of Agriculture and the President will stand firmly for the rigid administration of the law which has made so good a start in protecting the public against harmful food preparations and frauds.

Many a pasture yields less than it ought on account of overstocking. Grass or clover will afford much feed only if it has a chance to grow. But kept continually cropped close to the ground those essential organs of growth, the leaves, are not allowed to develop sufficiently to be capable of performing their functions. A partition fence through the pasture is a profitable investment. This makes it possible to change the stock from one part to another, allowing a healthy growth in the unused field, to be eaten later while the other half rests.

Salt is a remedy for the clover hayworm, according to Prof. J. V. Falson of the Illinois Experiment Station. This worm, which is a stage in the life history of a moth, attacks the bottom of the stack to a height of two feet or more. It may also attack the lower layers of hay in a barn. The hay is interwoven with white silken threads intermixed with black pellets of excrement. The hay is often reduced to chaff and is unfit for feed. Alfalfa hay is similarly attacked. The salt remedy is easy to apply and is inexpensive.

A Brazilian scheme for maintaining remunerative prices for coffee by government purchases, was put into operation several years ago. An inconvenient surplus beyond the demands of the coffee market whereby prices are depressed in spite of the government purchases has now led to the suggestion of burning a part that higher prices may prevail. A similar scheme in another part of the world many years ago was characterized by Adam Smith, a great English economic writer, as "savage policy." The wisdom of man has rarely, if ever, been able to improve upon the natural determination of prices as the expression of the relation of supply and demand. The artificial enhancement of prices by a stimulation of production of coffee caused a diversion of industry which might better have been applied to the production of other commodities of which the world has too little.

The Crop Reporting Board of the United States Department of Agriculture estimates, from the reports of the correspondents and agents of the Bureau, that the area planted to cotton this year (1909) in the United States, including that already planted and expected to be planted, is about 55.6 per cent of the area planted to cotton last year, equivalent to about 31,918,000 acres, as compared with 33,370,000 acres indicated by the Bureau's revised estimate of last year's planted area, a decrease of about 1,452,000 acres, or 4.4 per cent. The condition of the growing crop on May 25 was 81.1 per cent of a normal condition, as compared with 79.7 per cent at the corresponding date in 1908, and 81.4 per cent, the average condition for the past ten years on May 25.

Prof. Wendell Paddock of the Colorado Experiment Station says that in several sections of the state of Colorado the land was planted continuously to wheat in the early day and the soil became exhausted and in some instances the farmers faced bankruptcy. This same land is now producing immense crops of wheat, oats, sugar-beets, potatoes and alfalfa. Alfalfa was introduced about the year 1863. It was adapted to Colorado conditions and soon large areas of this land were growing luxuriant crops of this unexcelled forage crop. It was found that alfalfa sod could be successfully broken and much to the sur-

prise of all, when planted to wheat the yield per acre was far greater than when the land was first subdued.

Investigations of men of science have shown that the chances for the next season's wheat crop are greatly promoted by disking the soil as soon as possible after harvest, by plowing soon after disking and by harrowing immediately after plowing and soon after every rain until seeding time. If all stubble and weeds are turned under so deep that the insect enemies are permanently buried, and all volunteer wheat is promptly destroyed as it appears, and if the seeding is deferred until October 1 to 5 there will be little cause for uneasiness about Hessian flies—and there is likely to be enough moisture in the soil to give the wheat a good start.

The thirtieth annual picnic of the Temperance and Sunday School Union of Shawnee and Osage counties will be held at Stahl's grove, four miles from Auburn on Thursday, June 24. This event is always noteworthy and attended by vast throngs of people. This year's program includes addresses by Senator J. K. Coddington of Topeka and Rev. J. M. Dunlavy of Kansas City. The liberality of the management has provided that each boy and girl under twelve years of age shall receive a ticket good for a plate of ice cream. Always a great gathering, nothing but stormy weather can prevent a record-breaking crowd at the 1909 picnic.

Figures issued by the U. S. Department of Agriculture on June 9 show the conditions as follows: Winter wheat 80.7, spring wheat 95.2, oats 88.7, hay (all) 87.6, alfalfa 89.3, apples 61.4, peaches 54.1. Representing last year's acreages by 100, the preliminary estimates of acreage planted this year are: Winter wheat 91.8 per cent; spring wheat 106.9; oats 100.2; sugar cane 106.9; cotton 95.6 per cent. The general average condition of crop growth on June 1, 1909, based upon crops reported, was approximately 4 per cent below conditions on June 1, 1908, but about 8 per cent better than on June 1, 1907.

Buyers are reported to be contracting Kansas wheat for July delivery at local stations at prices ranging from \$1 to \$1.10. Kansas millers are competitors in the contest for the best Kansas grain. Some farmers are said to be unwilling to sell at these prices. Predictions of \$1.50 are indulged. Millers say that it is impossible at present to sell flour for July delivery at prices that justify over \$1 for wheat. The more conservative millers are occupying a waiting position pending developments. Likewise many farmers prefer to take chances on the market when they shall be ready to sell.

The new dog law of Ohio which seeks to make the dog tax a charge against the land upon which a dog is harbored or kept has been passed upon by the Supreme Court of that State. That tribunal has held that such a law was inequitable, arbitrary and unreasonable, and necessarily an infringement upon the natural and inalienable rights of citizens and therefore void. The cases on which the decision was rendered were those of land owners' whose tenants without their knowledge and contrary to their stipulations have kept dogs upon the leased properties.

The Manhattan Commercial Club is one of the most active and progressive bodies of its kind in the state. For several years it has offered annual prizes for the best dirt roads maintained in the vicinity of that city by use of the King drag. This year their work has resulted in 45 miles of good roads. We note that A. F. Huse, the Shorthorn breeder, had time to drag his road and win a prize.

A car of No. 2 hard winter wheat was sold at Wichita, June 9 for \$1.35 a bushel. Just fifteen years earlier five cars of the same sort of wheat sold by the same firm for 35 cents a bushel.

Potato growers of Greeley, Col., plow up alfalfa and produce two crops of potatoes, only, before again seeding the land to alfalfa. This is how they raise such fine potatoes and make money.

Rolling Winter Wheat.

E. G. MONTGOMERY, NEBRASKA EXPERIMENT STATION, IN PRESS BULLETIN NO. 30.

In the autumn of 1900 several winter wheat plats were laid out for cultivation experiments. They were all sown to Turkish Red winter wheat, some being sown broadcast and others put in with a press drill. It was planned to harrow the wheat after it was up. Some of the plats were to be harrowed in both fall and spring, others to be harrowed only in the spring, while a third set were to be rolled. The following table gives a summary of the yields secured for four years.

A summary of four years' experiments, showing the effect of harrowing and rolling on winter wheat, when sown broadcast and drilled.

| Method of planting | Treatment | 1902 | 1903 | 1905 | 1906 | Av. | Method giving larger yield |
|--------------------|------------------------------------|------|------|------|------|------|----------------------------------|
| | | Bu. | Bu. | Bu. | Bu. | Bu. | |
| Drilled.... | Harrowed in spring..... | 28.8 | 28.0 | 36.9 | 61.0 | 37.3 | No cultivation, 9 bushels more |
| Drilled.... | Not cultivated..... | 30.3 | 28.8 | 34.3 | 59.6 | 33.2 | No cultivation, 2.9 bushels more |
| Broadcast.... | Harrowed in spring..... | 21.0 | 26.5 | 40.2 | 53.8 | 35.3 | No cultivation, 2.9 bushels more |
| Broadcast.... | Not cultivated..... | 27.1 | 29.0 | 39.4 | 57.4 | 38.2 | No cultivation, 2.9 bushels more |
| Drilled.... | Harrowed, fall and spring..... | 30.6 | 27.5 | 33.3 | 59.9 | 37.8 | Difference less than one bushel |
| Drilled.... | Harrowed in spring..... | 28.8 | 28.0 | 36.9 | 61.0 | 37.3 | Rolling, 5.1 bushels more |
| Drilled.... | Not harrowed..... | 30.3 | 28.8 | 34.3 | 59.6 | 33.2 | Rolling, 1.8 bushels more |
| Drilled.... | Rolled in spring..... | 37.9 | 35.3 | 38.8 | 63.3 | 43.3 | Rolling, 1.8 bushels more |
| Drilled.... | Not harrowed..... | 30.3 | 28.8 | 34.3 | 59.6 | 33.2 | Rolling, 1.8 bushels more |
| Drilled.... | Rolled and harrowed in spring..... | 32.8 | 28.1 | 36.6 | 62.4 | 40.0 | Rolling, 1.8 bushels more |
| Drilled.... | Not harrowed..... | 30.3 | 28.8 | 34.3 | 59.6 | 33.2 | Rolling, 1.8 bushels more |

It is apparent from the above data that during the past five years no increased yield could be secured from harrowing winter wheat. Harrowing broadcasted wheat resulted in an average loss of almost three bushels per acre, while harrowing drilled wheat resulted in a loss of nine-tenths of a bushel per acre.

It should not be assumed from the above data that the cultivation of wheat would not be of value in drier regions. Cultivation is for the purpose of conserving moisture, but in the years in which the above data were taken on wheat there was no lack of moisture. In fact in the two seasons

Advantages of Silage.

Of the various feeds which are the most palatable, corn silage is without doubt the cheapest and most effective to add to the ration. It is a valuable feed for dairy and beef cattle and also for horses, calves and sheep. Many of the leading Wisconsin farmers find that silage can be handled as cheap, if not cheaper, than the corn crop can be handled in the usual manner. Silage furnishes a succulent feed with very little waste, and is always ready for use.

In combination with alfalfa or clover with a mixture of corn or barley for grain, silage furnishes an especially good ration, all grown on the farm and cheaper than mill feeds. The importance of palatability cannot be overestimated, as it increases the amount of feed eaten and, when properly assimilated, the more the animal eats the larger product it will return.

A ton of mixed hay occupies 400 cubic feet of space, and eight tons of corn silage can be put in the same amount of room. The ton of mixed hay contains about 960 pounds of digestible dry matter, while eight tons of silage contains 2,560 pounds of dry matter. This one point of the economic storage of the corn crop, when put in the form of silage, is worthy of attention where a large number of animals are fed.

The cost of handling the corn crop in the form of silage is less than when any other method is used. A leading Wisconsin farmer reports that it cost him 50 to 60 cents per ton or \$7 per acre to put his corn crop in the silo. The same area of corn would yield about 150 baskets, which would cost him \$8 for husking, while the cost of cutting, stacking, shredding and grinding would be about double what it costs to put the same crop into the silo.

The advantages of summer feeding of silage, particularly during periods of drouth, is fully appreciated by those who have tried it. During the latter part of the past summer Wisconsin suffered a severe drouth, and corn silage was fed to the university dairy herd. The flow of milk was never kept up so well during the summer as it was by the use of this silage. The summer silo is sure to become a more important factor in successful dairy-ing.

The use of silage for fattening beef cattle has been tested at a number of experiment stations and by stockmen with excellent results. In experiments conducted by the writer in 1904, it was found that silage-fed steers sold at \$4.95 per 100 pounds, while those fed no silage brought only \$4.70 per 100 pounds, a gain of 25 cents in favor

when spring rainfall was below normal, 1905 and 1906, there was some increase from cultivation.

EFFECT OF ROLLING ON WINTER WHEAT.

Rolling winter wheat has not failed in any of the four years to give an increased yield, the average increase being 5.1 bushels per acre. The rolling was given in the early spring, soon after frost was out, and about the time growth started. Harrowing after rolling was not as good as rolling alone, probably due to loosening up the plants again after the roller had pressed them firmly into the soil.

Early spring rolling of winter grain, pressing the earth as it does firmly

about the plant roots, produces good results. When frost comes out in the spring it is very apt to leave the soil filled with small cracks or checks, especially around the plants. If these checks are examined closely, it will be seen that a large number of roots are thus exposed, and if the weather continues dry they are killed or at least injured. We have taken up plants in the spring where half of the roots were injured in this manner.

If the soil is not wet at the time of rolling, and it should never be rolled when wet, rolling aids in no small degree to form a surface mulch. It does this rather than compact the surface.

of the silage-fed animals. It was found that for every 100 pounds of gain, 471 pounds of silage fed saved 18 pounds of grain and 156 pounds of alfalfa.

In these tests silage was fed in connection with alfalfa hay, corn chop, Kafir corn chop and cottonseed-meal. The average soil, in unusual seasons, will produce 12 to 15 tons of green corn per acre. Even with a yield of 10 tons per acre, there is an income, according to this experiment, of about \$33 per acre.

The financial statement of this experiment showed that the silage-fed steers made a profit of \$4.10 per head while the same grade of steers fed on the same feed except silage, lost \$1.47 per head. More silos should be built for summer use and this is the time to plan for the crop.—D. H. Otis, Wisconsin Agricultural College.

The Australian Salt Bush.

The Australian Salt Bush has been strongly recommended for sections having very little rainfall and for alkali land. Dr. Wm. P. Headen of the Colorado Experiment Station, has grown it at Fort Collins for eight years without irrigation. In one year he found that a good yield was secured from a planting made in late June. Doctor Headen has fed the Salt Bush to sheep and horses. His conclusions are as follows:

First, when once established, it will endure drouth and even make a good crop, with less than five inches of rainfall. Second, that stock will eat it or readily learn to eat it either green or as hay. Third, that it will produce very heavily under favorable conditions. Fourth, that it will, when fed alone, maintain the animals, and even better results are claimed for it. Fifth, that the hay is rich in protein, as rich or even richer than alfalfa. Sixth, that its co-efficients of digestion are excellent, except for the fat or ether extract and crude fiber. Seventh, that it has no injurious effects on the animals, even when they have no other fodder with it.

The following facts, however remain; that it has not become popular, and that when fed alone it does not produce the results that its composition and co-efficients of digestion would seem to warrant us in expecting. There is no reason for questioning the advisability of feeding something relatively richer in carbohydrates along with it, if they are at hand; but if they are not, stock will live on this fodder alone.

The Argentina wheat crop turns out to be 30,000,000 short of that of last year and 50,000,000 short of the estimates published last October.

Readers Market Place

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WANTED—A SOLICITOR WITH HORSE and buggy to drive through the country and solicit subscriptions. Address Circulation Manager, Kansas Farmer, Topeka, Kan.

WANTED—LOCAL MEN TO TAKE ORDERS for high grade western grown nursery stock. Experience unnecessary. Outfit free. Cash weekly. National Nurseries, Lawrence, Kan.

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WANTED—TO SELL OR TRADE STOCK of men's and boys' clothing. For particulars inquire at Kansas Farmer office.

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FOR SALE—ONE POLAND CHINA brood sow sired by Mischief Maker; the boar pig just weaned sired by Voter, champion at Illinois, 1907, out of the above sow; two weanling pigs by Meddler 2d 111111, best son. Their dam by Perfection E. L.; one show boar sired by Perfection 2d, dam by Perfection E. L., whose dam is Crucella, litter sister of Impudence by Keep On; also 3 show gilts out of same litter farrowed Sept. 18, 1908. They are very growthy and healthy, will price cheap for such stock. J. W. Ferguson, Route 1, Topeka, Kan.

BERKSHIRE BOARS FOR SALE—FROM 125 lbs. to 250 lbs. of Masterpiece and Lord Premier breeding. G. D. Willems, Inman, Kan.

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FINE COLLIE PUPS \$5 EACH, BROOD bitches, \$10. John W. Treadway, Kincaid, Kan.

FOR SALE—COLLIES OF ALL AGES. Natural born cattle drivers. Pedigreed stock. Write for circular. Harry Wells, Belleville, Kan.

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, Kan. W. H. Richard.

COLLIES OF ALL AGES FOR SALE—They are stock drivers, pets and home protectors. 260 head sold last year. Write for illustrated circular and prices. Would like to buy a few ferrets. Address Harvey's Dog Farm, Clay Center, Neb.

POULTRY.

BUFF ROCK HENS \$1 to \$2; EGGS, 15, 75c; 45, \$2. W. A. Hilands, Culver, Kan.

FOR EGGS OF THE FAMOUS WHITE Wyandottes write J. H. Brown, Boyero, Col.

HOUDANS—AMERICAN AND ENGLISH strains. Eggs for sale. No more stock till fall. O. E. Henning, Wahoo, Neb.

BUFF COCHIN EGGS, BEST PEN, HIGH scoring birds, 15, \$1.50. Good hatch guaranteed. H. T. Touse, Jewell, Kan.

BARRED ROCKS—EXTRA FINE SPRING cockerels and breeding pens at half price. Circulars. A. H. Duff, Larned, Kan.

BLACK LANGSHAN EGGS—\$1 PER SETTING, \$6 per 100. Baby chicks 10c each. Mrs. Geo. W. King, Solomon, Kan.

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WHITE PLYMOUTH ROCKS EXCLUSIVELY, large birds, good layers, farm range. Eggs \$4 per 100, \$2.50 per 50. Etta L. Willet, R. D. 1, Lawrence, Kan.

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FOR SALE—A NEW MANURE SPREADER, never used, none better made. It is for sale for a special reason at considerably less than the list price. If you have been thinking of buying a manure spreader, and every progressive farmer is thinking about buying one, here is your opportunity to get an absolutely new one at a special price. Write quick. Address A. Turner, care Kansas Farmer, Topeka, Kan.

CATTLE.

"SEE LESLIE OF ALYSDALE BY PRINCE Consort, out of Lord Mayor dam, calved May 8, 1908. Best individual of our last bull crop. I want to show him to you. Also offer some cows and heifers at fair prices. Come and see them. C. W. Merriam, Columbian Bldg., Topeka, Kan.

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FARM LOANS MADE IN ANY AMOUNT from \$500 up, at lowest rates and on most favorable terms. Betzer Realty & Loan Co., Columbian Bldg., Topeka, Kan.

150 QUARTERS, \$6 TO \$20 PER ACRE; smooth and rich; Meade, Seward and Haskell counties. McConnell, Plains, Meade county, Kan.

TO TRADE FOR WESTERN LAND—Eight room house in good condition, fine shade, in Salina. Wright & Dodge, Salina, Kan.

WELL IMPROVED RANCH OF 1,000 acres, near station, an abundance of water and good feed lots. Send for full and complete description. Price \$30 per acre. Hurley & Jennings, Emporia, Kan.

FOR SALE—476 ACRES GOOD LEVEL land, 370 acres under cultivation, balance in pasture, all fenced, good 8 room house, granary and small barn, good water, close to school, 3 1/2 miles from county seat. For further information address Box 391, Kinsley, Kan.

DO YOU WANT A HOME?—WE HAVE 100 of the best farms in southeastern Kansas on the easiest terms of any land sold in the state. Send for copy of the Southeastern Kansas Homeseeker, the best monthly land paper published—it is free. Address, The Allen County Investment Co., Longton, Kan.

FREE HOMES FOR EVERYBODY UNDER the homestead and desert acts. Sulphur Springs Valley, Arizona, is fast settling. Water obtained at a depth as shallow as four and one-half feet. As fine alfalfa land as there is in the world. For further information address the McCall Realty Company, Cochise, Ariz.

WE CAN SELL YOUR PROPERTY, SEND description. Northwestern Business Agency, Minneapolis, Minn.

FOR CHEAP HOMES IN A MILD CLIMATE, among sociable white people, write Chaney & Doss, Beebe, Arkansas.

BIGGEST FARM SNAP IN McPHERSON county—160 acres 6 miles from Lindsborg, all good tillable soil, wheat, corn and alfalfa land; part rolling but not rough; 110 acres cultivated, balance pasture and meadow; good well, small house, stable for 8 horses; owner's share of rent with sale if sold by July 1st. Price \$5,500. Write Joseph A. Brandt, Lindsborg, Kan.

FINE NEW MODERN HOME, 7 ROOMS, oak, maple and birch finish, double floors, furnace, fine location, Topeka, for Kansas land. G. L. Garlinghouse, General Delivery, Denver, Colo.

IMMEDIATE POSSESSION—80 ACRES, 15 bottom, 65 cultivated, 15 pasture, new 5-room house, outbuildings, good water, 50 acres of wheat, half goes. Price \$3,000. All kinds and sizes. Write for lists. Garrison & Studebaker, Salina, Kan.

MISCELLANEOUS.

CONKEY'S ROUP CURE—POULTRY SUPPLIES of all kinds for sale. G. H. Harries, 210 W. 6th, Topeka, Kan.

FOR SALE—EVERYTHING IN BEE supplies at lowest prices. Try my comb foundation. A. A. Keene, Topeka, Kan.

FOR SALE—BLICKENSCHER TYPE—writer good as new with leather traveling case; cost \$60; price \$30 if sold at once. Jesse Johnson, Clay Center, Kan.

WANTED—TO RENT A DAIRY FARM, everything furnished, by an experienced farmer with family. Can give best of references. 317 East 9th, Hutchinson, Kan.

WANTED—FARMERS TO TRY OUR Binder Tongue Supports which takes off the weight from the horses' necks. Price \$3.75 each. Wenzelmann Mfg. Co., Galesburg, Ill.

PORK MAKER WORM EXPELLER FOR hogs. Farmer agents wanted to handle our remedy. Liberal commission. Write for particulars. Supplies furnished free. Miracle Remedy Co., Hebron, Neb.

I WILL PREPARE YOU FOR HOLDING a position at from \$50 to \$250 per month. Positions guaranteed. Descriptive catalog free. Address: "Denton," Mgr., Official Training School, M. K. & T. Ry., Sedalia, Mo.

GENUINE BARGAINS IN HIGH-GRADE upright pianos. Slightly used instruments; 12 Steinways from \$350 up; 6 Webers from \$250 up; 9 Krakauers from \$250 up; 7 Knabes from \$250 up; 3 Chickering from \$250 up; also ordinary second-hand uprights \$75 up; also 10 very fine parlor grand pianos at about half. Write for full particulars. Cash or easy monthly payments. Lyon & Healy, 62 Adams St., Chicago. We ship everywhere on approval.

PATENTS.

PATENTS PROCURED AND SOLD; BIG money in patents; book free. H. Sanders, 115 Dearborn St., Chicago, Ill.

LAWYERS.

A. A. GRAHAM, ATTORNEY AT LAW, Topeka, Kan.

FARM SEWAGE DISPOSAL PLANT.

(Continued from page 1.)

any assistance, chemical or mechanical. Its self-generated chemical action stands in the same relation to chemistry that perpetual motion would to power.

The process might be likened to the battle of the Kilkeny cats that fought among themselves until they were all dead. The bacteria developed in the light-proof, air-tight septic tank destroy one another almost as rapidly as developed, until there are no traces of solids left.

When the sewage from the closet enters the septic tank it rises to the surface, being lighter than water. Being closely confined, and with the fresh air and light, that would tend to purify and dissolve the germs, wholly excluded, the growth of bacteria is exceeding rapid and multitudinous.

As the sewage is converted under these conditions into bacteria, they prey upon each other, and so accomplish their own destruction within twenty-four hours. Being condensed under the atmospheric conditions obtained, these solids are converted into liquid, which, as it becomes less and less foul, gradually settles toward the bottom of the tank, eventually passing through the openings into the weir box.

The purpose of the weir box is mostly to arrest any active current and to prevent any possible agitation of the water on its way to the filter. When the water reaches the weir box it is practically pure, especially if ventilation is provided as shown in the drawing.

Many of these tanks have been built in the West on a large scale and are now successfully handling the entire sewage of towns and public and private institutions. There is only one such plant known to the writer which has not disposed of the sewage perfectly, and that is used by a large paper-mill where much of the waste is rags, and this tank requires cleaning out once or twice a year.—R. M. Winans, in Farm and Fireside.

Some of the Reasons for High Prices.

A Yarmouth, Iowa, correspondent of the Egg Reporter gives his idea of the reasons for high priced eggs as follows:

Regarding production, will say that our receipts are ahead of last year but it is because we are doing a larger business rather than actual increase in production. There seems, however, to be general shortage over the country. It seems to us that for the last three or four years the tendency among prosperous farmers has been to stop raising chickens to a certain extent. Farmers have been getting high prices for all their products and as a rule have plenty of money. During the previous years when they were not so prosperous the chickens paid the grocery bill, but now, since the farmer is on easy street and the price of feed is high, it is considerable of a task to take care of chickens properly and the farmer's wife is developing more toward a life of ease and comfort, if not luxury, they have not paid the attention to the chicken end of the farm that they used to do, consequently they don't get the eggs or the chickens either. They have money to meet their bills with instead of having to rely on eggs and chickens and are paying more attention to the larger things, such as cattle, hogs, horses and grain raising. Furthermore, the farmers doing this are now off to college and haven't time or inclination to monkey with chickens and the farmer's wife is out in an automobile with a friend most

of the time, and "chickens are such a nuisance, anyway, always in the flower beds or on the cement walks or the porches and you have to keep running after them all the time." Does this theory account for any shortage in the egg or chicken crop?

TOO LATE TO CLASSIFY.

DEEP CREEK DUROCS.

Choice spring pigs sired by a good son of Kant Be Beat, the 6,000 boar, \$10 each. C. O. ANDERSON, Manhattan, Kan.

T. E. DEEM,

Live Stock Auctioneer. Best of references. See me early for desirable dates. Cameron, Missouri.

A GOOD CORN FARM.

160 acres, 40 acres pasture, 6 acres more land, 6 acres alfalfa, 108 acres in corn; the soil is dark loam bottom land that does not overflow; located 10 miles from Wichita and 3 and 4 miles from 2 other good towns. Improved with 8 room house, fair barn, chicken house and other outbuildings, has good small orchard and plenty shade and timber, watered by 2 wells and windmill. Price \$90 per acre and a bargain.

THE NELSON REAL ESTATE & IMG. CO., 137 N. Main St., Wichita, Kan.

960 ACRES of good farm land in Chase county, Kan., close to market, well improved, 80 acres alfalfa, 200 acres in cultivation, balance meadow and pasture. Price \$25 per acre.

HALE & ENGLISH,

Dodge City, Kansas.

ONLY \$1,500 TO HANDLE THIS.

160 acres, three miles from this city, one-half mile from school and church, fine neighborhood, good 5 room residence, good barn for 16 horses and 10 tons hay, good black soil, 300 acres under plow, balance good pasture, well watered. This farm belongs to a widow lady who is unable to look after it and it is offered for \$5,000, \$1,500 first payment, balance on time to suit purchaser at 6 per cent. This is a money maker for somebody. Don't wait to write, come and see it.

DONAHUE & WALLINGFORD, Mound Valley, Labette County, Kansas.

SOLOMON VALLEY LAND.

FOR QUICK SALE—200 acres, all bottom, 3 1/2 miles from Minneapolis, 80 acres wheat, 25 acres alfalfa, 65 acres corn; fair improvements; good timber. \$90 per acre and all crops go for a short time. If you want a good farm and immediate possession, see this.

A. E. ROBINSON LAND CO., Minneapolis, Kansas.

MISSOURI FARM CHEAP.—190 acres 40 miles from K. C., 4 miles from good town, all but 7 acres under plow, 7 acres timber, 100 acres hog tight, 7 room house, 2 large barns, mow for 60 tons hay; first and second bottom; \$75 per acre. ADAMS BROS. & HAMM, Atchison, Kan.

POLAND CHINAS, SHORTHORNS AND B. P. Rocks—Yearling boars, sows and gilts, open or bred, also fall pigs. B. P. Rock eggs \$3 per 100. A. M. Jordan, Alma, Kan.

Write

G. K. Jackson Land Co.
Eureka, Kan.,

for list of lands and maps of Greenwood county. You can deal with the owners.

THE STRAY LIST

JUNE 5.

W. H. Shaffer, County Clerk. Taken up on the 3d day of May, A. D. 1909, by J. G. Johnson, Garden Twp., Cherokee County, P. O. Galena, 1 mule, about 12 hands high, mouse color, branded C. C. on breast; scar on right foreleg above knee; valued at \$35.

JUNE 5.

Edward Iverson, County Clerk. Taken up by Henry Nieman, April 23, 1909, in Walnut Twp., Atchison Co., a red cow, weight about 800 lbs.; valued at \$30.

JUNE 19.

Geo. Throckmorton, Co. Clk. Taken up on the 5th day of May, 1909, by D. F. Vanness, Burlington, Kan., in Hampton tp., Coffey Co., 1 red steer, branded with the letter S; some white on head and belly; very thin in flesh. Appraised at \$20.



Blacklegoids
Simplest, Safest, Surest Vaccination
for the prevention of
BLACKLEG IN CATTLE
NO DOSE TO MEASURE. NO LIQUID TO SPILL. NO STRING TO ROT.
Just a little pill to be placed under the skin of the animal by a single thrust of the instrument. You cannot afford to let your cattle die of blackleg when a few dollars spent on Blacklegoids will save them. Write for circular.
PARKE, DAVIS & COMPANY
HOME OFFICES AND LABORATORIES, DETROIT, MICH.
NOTICE—For a limited time we will give to any stockman an injector free with his first purchase of 100 vaccinations.

KANSAS FARM & ADVERTISERS GET RESULTS

Bargains in Farms, Ranches, and City Property

SPECIAL BARGAINS—80 acres 3 miles from Clyde, second bottom, \$50 per acre, 150 acres near Green in Clay Co., 90 under plow, well improved, \$50 per acre. 160 acres pasture near town, \$3,500. Write for fine large list. **WALTER NELSON**, Clyde, Kan.

COMPLETE DESCRIPTION
Texas Panhandle, covers 25 years, 32 pp., complete birdseye view and wall map Amarillo, 15,000 population, in heart of Panhandle, sent prepaid for 35c; clubs of four, \$1. Order today—edition limited. Mirror Publishing Co., Amarillo, Texas.

320 ACRES of extra good land, house of 14 rooms, a fine barn, and other good improvements, 2 1/2 miles to town. One of Brown county's best. Enquire of **R. A. HENRY**, The Real Estate Man, Hiawatha, Kansas.

160 ACRE farm bargain, 7 miles northeast of Ness City. Small frame house 2 rooms, frame barn for 4 horses, hen house, small granary, good well and windmill, 75 acres in cultivation, 35 acres in wheat, one-fourth in place, 12 acres alfalfa. Land can be plowed, nearly level, 1 mile to school. Price \$3,500. \$2,000 must be cash. **J. C. LOHNES & SON**, Ness City, Kan.

LYON COUNTY LANDS.
Choice half section, well improved, school, mail, town, 8 miles Emporia \$60. Photos sent. A choice 80, \$5,000. 160 near town \$50. Send for list. **H. B. GILES**, Emporia, Kansas.

FARMS FOR SALE in South Missouri. I have several good farms for sale on easy payments from \$5.00 to \$10.00 an acre. Please write me for full particulars. **WILLIAM BOWEN**, Houston, Missouri.

THE BEST TOWN TO LIVE IN.
If you would like to live in the most beautiful city in the West, with unsurpassed educational, business and religious advantages, in a city clean, progressive, where real estate values are low, but steadily advancing, where living expenses are reasonable, a city with natural gas at lowest prices, address the Secretary of the Commercial Club, Topeka, Kan.

A SNAP FOR SOME ONE.
640 acres of fine land 6 miles from Dodge City, Kan., 280 acres in wheat, one-fourth goes with land if sold by June 1. This is all nice level land except about 40 acres and will come in in good shape for pasture; no other improvements. Price \$17.50 per acre. Terms can be arranged on part, at 7 per cent. **C. L. WELLS**, Great Bend, Kansas.

LARGE TRACT OF LAND—If you are looking for a snap in a big proposition it will pay you to come to Great Bend and talk to me in regard to the best of land in Ford county at the price. Consists of 8,000 acres. Practically all farm land, 2,000 acres in cultivation, 800 in wheat, all goes with land, 500 to corn, one-fourth goes, 200 acres now in alfalfa, 1,000 acres of alfalfa land, 20 miles of three wire fence, soil black loam, six room house, barn for 15 head of stock, 4,000 bu. granary, only 8 miles from good market. Price \$21 per acre, terms on \$65,000. Perfect title. **C. L. WELLS**, Great Bend, Kan.

ARKANSAS—"Don't you wish you had bought when you were here before?" That is what they all say; and then, buy before it doubles up again. What have you got that half equals it? You can't find it in America. Think of the money bags being hauled in by a single farmer. Thrashing and hauling \$1,000 a day and more—getting the cash the same day. We have other propositions that will beat your best; besides, the best climate, best roads, best water and fine people, and anything else you want. I own the cheapest land on Grand Prairie and can make you terms—won't price you out. Also, fine timber lands. **F. W. HOUSTIN**, Stuttgart, Ark.

LOOK AT THIS.
No. 503.—Here is a ranch of 2,960 acres, that we can recommend as good a cattle ranch as there is in the country; all under fence, plenty of water, 600 acres fine bottom land, suitable to grow alfalfa; the improvements, stone house, barn 50x35, stone shed 100 feet long, and all other necessary improvements that are required on a ranch of this kind. The survey of the new railroad running from Garden City to Stockton runs near or through this place. Rural telephone and post office on the place. Price \$12.50 per acre, part time will be given. **TEED & ORBISON**, Jetmore, Kansas.

EXCHANGE COLUMN.

If You Want

a quick deal, list your trading property with us. We trade while the other fellow sleeps. We have exchanges for land, merchandise, live stock, or anything of value. Try us.

NEFF REALTY CO., Olathe, Kansas.

Trades Wanted

direct from owners of farms, ranches, income property, merchandise and hardware stocks, hotels, livery stocks. List your property with us giving complete description. We can get what you want. No sale, no pay. Buyers wanted for good farms.

BERSIE REAL ESTATE AGENCY. Eldorado, Kansas.

500 TRADES.

We have the largest list of farms, ranches, income property, merchandise, hardware, hotels, livery etc., of any firm in the West. We print description of your property on our list, and will get you a good honest trade of just what you want.

GRAHAM BROTHERS. Eldorado, Kansas.

WASHINGTON COUNTY LAND FOR SALE—Two hundred acres 4 miles from good town. 70 acres wheat, 5 room frame house, new barn 30x50, granaries, cribs, etc. All under fence. Price \$45 per acre. Very easy terms. **W. J. GORDON**, Washington, Kan.

CHEAP LAND.
If you are looking for an investment in land that is sure to increase in value 25 per cent in the next six months you can get it by seeing or writing **HALE & ENGLISH**, Dodge City, Kansas.

HODGEMAN COUNTY LANDS.
Map, booklet, new list and general information sent promptly on request. Cheapest farms, quality considered in the state. **WINN REALTY CO.**, Jetmore, Kansas.

490 ACRES meadow land nicely located, well fenced with 4 wires, all lies in a body, and can be used for pasture. Within 40 rods of switch on Mo. Pac. R. R. Could be divided into a nice farm and is a bargain at \$30 per acre. **C. R. CANTRALL**, Fredonia, Kan.

90 ACRES OF CREEK BOTTOM and upland, 75 acres in cultivation, balance meadow, no other improvements, 3 miles from town. Price \$3,800. A snap, as 40 acres of it is fine alfalfa ground. **J. S. BOYLE**, Bennington, Kansas.

McPHERSON COUNTY.
80 acres 3 1/2 miles Salina, all in cultivation, \$4,500.
240 acres in Saline county, 80 in cultivation, all fenced, fair improvements, 1/2 mile school and church. \$25 per acre. **WM. KINDT**, Marquette, Kan.

RENO COUNTY FARMS.
160 acres improved bottom land, 40 acres in wheat, 70 in corn, balance in pasture; one-third crop goes with place. Price \$9,000.
160 acres 2 miles from town, well improved, 50 acres in wheat, 60 in corn, some alfalfa, balance pasture. Price \$12,500.
80 acres, all in cultivation, all in wheat; one-third goes with place. Price \$5,000. **CHARLES PETERSON**, Hutchinson, Kansas.

J. W. BRADSHAW.
The Land Man, of Herington, Kansas, is offering a section of land with two sets of improvements, six miles from Herington, for \$45 per acre. 200 acres under cultivation. A snap well worth \$50 per acre.

A SPECIAL BARGAIN.
From owner, square section wheat land in Logan county, Kan., 6 1/2 miles from station, 1/4 mile from school house. Can about all be cultivated. Will sell right and give terms. Address **R. H. NUNN**, Ness City, Kansas.

GOOD FARM CHEAP—160 acres, 130 in cultivation, all fenced, 3 room house, barn, cow shed, poultry house and well and windmill, only 4 miles to R. R. where an elevator will be built this summer. Will take a small cash payment and give 5 years on balance. Price \$2,500. **KIRBERG & MILLER**, Ness City, Ness Co., Kan.

MARSHALL COUNTY BARGAINS.
Large list of improved farms for sale at \$40 to \$100 per acre. 200 trading propositions. Can match you on anything. Write for complete list. **TROSPER & BLACKNEY**, Frankfort, Kansas.

A NESS COUNTY BARGAIN.—320 acres 12 miles from Ness City, 3 room house, frame barn, well and windmill. Some very good alfalfa land. Price \$15 per acre. Call or address, **LOHNES & CASON**, Ness City, Kansas.

IRRIGATED FARMS FOR SALE.
In the famous Arkansas Valley of Colorado and the Pecos Valley of Texas, reasonable prices; good terms. If you want a money making investment or an ideal home write for further information. **J. F. CURRY**, Lamar, Colo.

WABAUNSEE COUNTY LAND.
160 acres ten miles from town, 80 acres under plow, 5 room frame house, barn for 7 horses, 6 acres alfalfa, half acre orchard, good well and running water, cellar, cistern, cribs, hen house, etc. Price \$30 per acre. **F. L. MCCOY**, Eskridge, Kan.

LOOK HERE.
One 160 a. improved, some wheat, Ness Co. Price \$1,250. 80 acres Rice county well improved, \$3,500. 720 acres improved, Marion county, \$20 per acre. Write for our big list of 200 bargains for sale or trade. **SOUTHWESTERN LAND CO.**, Geneseo, Rice Co., Kansas.

SCHUTTE & SHINEY, the Rush county, Kan., real estate hustlers; 30 years in the same old place. Good farmers raised from 26 to 47 1/2 bushels of wheat per acre here last season. We can sell this land at from \$20 to \$35 per acre. Good improved ranch land, 1/2 good farm land, at \$15 per acre. Good bottom land not over 5 miles from market at \$25 to \$35 per acre. Well improved and running water, plenty of timber. See us, or write us at La Crosse, Kan.

FOR SALE—320 acres of good wheat land in the famous wheat belt of Logan Co., Kan. 4 miles from Monument, and 3 miles from Page. 40 acres in cultivation. Price \$12.50 per acre. Purchaser to assume R. R. contract for about \$1,700. This is a snap. **W. H. LINVILLE**, Beloit, Kansas.

ARE YOU LOOKING FOR A HOME?
No farmer should think of buying a home before seeing a copy of THE FARM AND REAL ESTATE JOURNAL. It contains the largest list of farm lands, city property and stocks of goods of any paper published east of Chicago. It reaches 50,000 readers each issue, 85 per cent of whom are farmers. Every one who has any property they wish to advertise will find this journal one of the best advertising mediums published. Advertising rates, 2c per word each insertion. Send 75c and we will mail you the Journal for one year, or for 10c in silver or stamps we will send it for two months on trial and stop it at the end of the two months unless you renew your subscription. **FARM AND REAL ESTATE JOURNAL**, TRAEK, IOWA.

For Quick Sale.

160 acres in Trego county, 80 acres wheat. All goes \$1,600. Be quick. **STEVENS & RUBY**, Stockton, Kan.

Missouri Farms For Sale.

Everman has a farm for every man. Write for description and price list. **JOHN W. EVERMAN**, Gallatin, Mo.

Ford County, Kan. Lands.

For sale. Write for price list and crop reports. Cooperation solicited. **BROWN & VERNON**, Dodge City, Kansas.

HELLO FARMERS!

Have you read my list of GREENWOOD CO. FARMS? The best corn, alfalfa, clover, cattle and hog country in the west. Fine blue stem pastures. Write for list and prices to **P. D. STOUGHTON**, Madison, Kan.

Hodgeman County Lands.

Choice wheat and ranch lands. Write for price list and county map. **F. M. PETERSON**, Jetmore, Kansas.

Ozark Fruit Farm For Sale.

120 acres, 60 acres in cultivation, balance fine timber. Good 3 room house, 3 fine springs, fine apple orchard, large thrifty trees, other fruits. 1 mile from town. Good reason for selling. Price \$1,000. Write me for full particulars. **JOHN D. BAKER**, Ava, Douglas County, Missouri.

FIRST-CLASS CORN, ALFALFA AND HOG FARM.

Eighty acres 55 acres in cultivation, 15 acres in pasture, has 5 room house, new barn for 12 horses with large hay mow and other outbuildings, small orchard, 2 wells of good water, is fenced and cross fenced. Located 3 miles from the packing houses; this is all bottom land that does not overflow. Price \$8,500. **THE NELSON REAL ESTATE & IMG. CO.**, 137 N. Main St., Wichita, Kan.

Zimmerman Irrigated Lands

The cream of the Pecos Valley. Now open. All river-front sections. The best alfalfa and fruit lands in America. Sold in 40-acre tracts, which will provide a permanent annual income of \$1,500 or more annually. Price \$40 per acre on 5 years' time, without interest or taxes, including perpetual water-right, 50 cents per acre as first payment. Address **THE HEATH COMPANY**, 109 West Seventh St., Topeka, Kan.

Buy Western Kansas Land.

Should you want to buy any western Kansas land for speculation or for a home, don't fail to write me. I am selling land throughout all counties in western Kansas. I am myself farming extensively on the kind of land I offer for sale. I can sell you land that will make you money. Write me at once for prices. Address **EUGENE WILLIAMS**, Minneola, Kansas.

ONE OF THE BEST LAND BARGAINS EVER OFFERED IN EASTERN KANSAS.

This is a square section of land situated near the county line of Bourbon and Allen counties and 4 miles from the fine town of Bronson and 7 miles from Moran. One quarter section of this ranch is under plow and is used for growing corn and the small grains and the bal. of this tract is in pasture—bluegrass and white clover—and there is no better pasture lands in any section of any state than this. While this pasture tract is somewhat rolling there is no lands that grows more grass per acre than does this and in addition to the fine bluegrass and white clover there is a never failing supply of good clear water by a small creek which is fed by springs and along this creek there is enough young timber for shade for the stock. The fencing on this farm is of wire and is good. There is a 6 room two story residence and a very good barn with the other necessary out-buildings. A small bearing orchard. The drive from this ranch to Bronson is as fine as can be found in Eastern Kansas. This fine ranch which is the property of an estate is priced for the next ninety days for the very low sum of \$30 per acre. For additional description of this and special description of other lands in this section write **SMITH & WILSON**, Agents at Moran, Kansas.

\$100 REWARD for every farm you can find where we have sold above the owner's price. Call on us or send for new list of land. \$5 an acre up. **G. N. DAVIS & CO.**, Cimarron, Gray County, Kansas.

DODGE CITY AND FORD COUNTY to the front. For sale, 640 acres of land, smooth, rich, productive wheat land, 6 miles from Dodge City, 20 acres in cultivation. Price \$16.50, one-third of wheat to the purchaser. Have for sale 3,000 acres of improved and unimproved land near new Catholic church at Wright station, 6 miles east from Dodge City. This is good land, ranging in price from \$20 to \$30 per acre. Cooperation solicited. Price list furnished upon application. **G. L. PAINTER & CO.**, Dodge City, Kansas.

When writing advertisers please mention this paper.

ROOKS COUNTY LAND

One Hundred Farms for Sale. Write for Lists. **C. H. DEWEY**, Stockton, Kan.

SMITH COUNTY, KANSAS.
160 acres 6 miles of county seat, 100 acres in cultivation, 90 acres in wheat, one-third goes with place, 5 room house, good water, all fenced; a bargain. Price \$36 per acre. 80 acres 3 miles of town, all but about 5 acres can be plowed, all fenced, no other improvements. Price \$37.50. These are dandies. Other bargains. **CARL G. ANDERSON**, Athol, Kansas.

GOOD BARGAINS.
320 acres 3 miles from town, all cultivatable, 250 acres now under cultivation or in tame grass, 70 acres pasture, abundance of water, 2 story 9 room house, barn and other outbuildings, orchard and other small fruits. Price \$10,000.

160 acres, 2 1/2 miles from town, 100 acres in cultivation, 30 acres clover and timothy, 70 acres corn, 60 acres pasture, abundance of water, good 6 room house, new 2 story barn 36x36, other outbuildings, good orchard. Crop and all goes for \$4,800.00. Come at once or write for particulars. **DONOHUE & WALLINGFORD**, Mound Valley, Kansas.

No. 28. 160 acres 6 1/2 miles from Ransom, Kansas, 120 acres fine farm land, and under cultivation; 30 acres of fine alfalfa 1 and, balance in pasture, good 14x22x10 stone house, good barn and hay mow land. Cow sheds, 200 walnut trees bearing fruit. Apple trees, cherry trees, plum trees, and p each trees, good well 17 feet deep cannot be pumped dry. Price of this fine farm is \$2,500. This is a snap.

No. 32. 640 acres 11 miles south of Ness City, all raw, but is all fenced and cross fenced with stone posts, and three wires. This is a snap bargain at the small sum of \$13.50 per acre, a cash bargain and worth the money. Will take \$5,000 cash and balance can run for five years at 7 per cent interest, payable semi-annually.

No. 34. 320 acres fine improved land one mile of Pendennis, Kansas. Small sum of \$20 per acre. I can't say anything more. This land is there to look and talk for itself. It is a snap bargain and don't you forget it.

No. 23. 160 acres one mile from Pendennis, Lane county. Some broken out. Good alfalfa land. Every foot is tillable land. Price \$2,100. This is a snap bargain.

No. 24. 160 acres of raw land 6 1/2 miles from Ransom, Ness county, Kansas, in the Dutch Flats. Price \$1,650. This is a bargain. You ought to see this.

No. 68. One good quarter of land lying seven miles northwest of Ransom, all raw land, no improvements. This quarter can be bought for \$1,400 with terms. Terms \$500 cash, will carry the balance for five years at 7 per cent interest. Interest payable semi-annually.

No. 47. 320 acres three miles and a half from Arnold, all under cultivation, except about 10 acres which is in honey locust trees. One quarter of a mile from school house, 1/4 of wheat crop goes to purchaser. This is one of the greatest bargains you ought to see it. Price \$20 per acre.

No. 50. 80 acres of land 6 1/2 miles of Ransom, all raw land, 50 acres of good tillable land, balance mow land and pasture 1 and. Price \$900, terms. \$360 can run for 16 years at 6 per cent interest, balance cash. Any one wanting a bargain and a small tract of land this is it. **LACY HARPER**, Ransom, Kansas.

Can You See Ahead?

320 a. wheat and alfalfa land, 100 a. in cult., 88 a. wheat, 65 a. alfalfa land, bal. pasture and hay. House, granary, blacksmith shop, barn, sheds, lots, etc. Nice orchard, fenced, \$20. Free list.

STINSON & WEYAND, Spearville, Kansas.

21 Famous FREE American Songs

Would you like this album of Famous American Songs? The album contains the words and music, standard music size, of the following famous songs: America; The Battle Cry of Freedom; Battle Hymn of the Republic; Columbia, the Gem of the Ocean; Dixie Land; The Girl I Left Behind Me; Hail Columbia; Glory Hallelujah; How Can I Bear to Leave Thee; I Wish I Was in Dixie; Just Before the Battle; Maryland, My Maryland; My Country, 'Tis of Thee; Marching Through Georgia; Rally Round the Flag, Boys; The Red, White and Blue; Soldiers Farewell; Star Spangled Banner; Tramp, Tramp, Tramp; Tenting on the Old Camp Ground; Yankee Doodle.

The regular price of this album is 50 cents, but we will mail you one at bare cost for a slight service. We want to get in touch with half a million people who are fond of music and we therefore make you the following offer:

Renew your subscription or send us the names and addresses of five friends who are musical and 35c in stamps or coin to pay postage and mailing and we will send you free and postpaid our 50 cent album of Famous American Songs. Address **KANSAS FARMER**, 625 Jackson St., Topeka, Kan.

The United States according to recent figures, has a population of 87,000,000 and a wealth aggregating \$120,000,000,000 or more than double that of the combined wealth of any two other nations on earth. The basis of all this vast wealth is agriculture and the foundation of agriculture is live stock. The products of the farms of this country in 1908 were \$7,778,000,000 much of which is represented by live stock and its products. It is certain that without live stock no such gains in wealth could have been possible and the fertility of the soil would soon be exhausted.

LIVE STOCK



Secretary J. C. Simpson of the Iowa State Board of Agriculture who is ex-officio secretary of the State Fair, now issues a neat little publication under the title "Greater Iowa." Its purpose is to properly advertise the Iowa state fair and to make the citizens of that state better acquainted with that great institution and its immense value to them. In addition to the million dollars already invested in her state fair plant Iowa is now spending \$100,000 (the amount Kansas asked of her legislators for the establishment of her entire fair) to merely enlarge the size of her grand stand. Secretary Simpson says: "The modern fair promotes industry by giving to all who attend a larger view of the possibilities of life. Ours is an industrial era, and if we as a people keep pace with the times we must know what is being done in all the avenues of trade and commerce and manufacture. This is the special province of the modern fair."

The Iowa Swine Breeders Meet.

On June 15-16 the Iowa State Swine Breeders' Association will hold its annual meeting in connection with the meeting of the National Association of Expert Swine Judges at the Savery Hotel, Des Moines. Dr. John R. Mohler, chief of the pathological division of the Bureau of Animal Industry, will speak on "Swine Tuberculosis and How To Get Rid of It." Other speeches will be made by men prominent in the swine breeding industry both in Iowa and other states.

Some Pig Rations.

The United States department of agriculture suggests the following rations for growing pigs:

Twenty to sixty-pound pigs—Three ounces of cornmeal to each quart of milk.

Sixty to one hundred-pound pigs—Six ounces of cornmeal to each quart of milk.

One hundred to 180-pound pigs—Eight ounces of cornmeal to each quart of milk.

On most farms the supply of milk will be limited especially when calves are fed, and in these cases they recommend the following rations:

Twenty to sixty-pound pigs—Milk at disposal, plus mixture of one-third cornmeal, one-third wheat bran and one-third gluten meal to satisfy appetites.

Sixty to 100-pound pigs—Milk at disposal, plus mixture of one-half cornmeal, one-fourth wheat bran and one-fourth gluten meal to satisfy appetites.

One hundred to 180-pound pigs—Milk at disposal, plus mixture of two-thirds cornmeal, one-sixth wheat bran and one-sixth gluten meal to satisfy appetites.

Sixty to 100-pound pigs—Milk at disposal and mixture of one-half cornmeal and one-half gluten feed to satisfy appetites.

One hundred to 180-pound pigs—Milk at disposal and mixture of two-thirds cornmeal and one-third gluten feed to satisfy appetites.

Why has a feeding value about half that of milk. It should be fed

carefully as it frequently causes stiffening of the joints and lameness.

Dairy by-products obtained from the creamery, cheese factory or skimming station should be pasteurized before feeding.

Mexico As a Market for Pure Bred Cattle.

Every year sees a reduction in the size of that indefinite territory known as the range. As a consequence, every year sees a reduction in the demand for pure bred bulls for use on the range. This year the demand for range bulls has been even less than the decrease in the range area would warrant because of the late season in the northern and protracted drouth in the southern parts of its territory. Breeders who advertise pure bred bulls for sale in KANSAS FARMER report a strong demand and first class animals are bringing good prices from farmers and other breeders, but there has been a restricted demand for range bulls.

These facts seem to indicate that the time is not far distant when the demand for range bulls will become very small if some new territory is not opened up. This would become a serious matter as it would cut off a good market for many bulls.

Foreseeing this possibility the American Shorthorn Breeders' Association sent Assistant Secretary B. O. Cowan on a missionary trip to Mexico. Mr. Cowan reports that, owing to the protracted drouth over a large area of territory there is little present demand for pure bred cattle but that, with changed weather conditions, there will be some. He also reports, according to the daily press, that this demand will grow with the increasing appreciation of the value of such cattle. Kansas breeders have had orders for pure bred cattle cancelled this spring because of the drouth in Mexico which is said to cover a region nearly 700 miles long and to have lasted, in some parts, for nearly 2 years.

This, however, is incidental. The possibilities in Mexico are great and the market for pure bred cattle only needs to be developed. When this time comes Kansas breeders should be "next" and in order to be next they must push for an opening of this new market.

The Cause of Our Poor Lands.

If we will just get into our mind the fact that agriculture deserves no more favors in the way of a vacation than any other businesses that are conducted twelve months in the year, writes A. L. French in Live Stock Journal, live stock feeding will be robbed of half its terrors. The farmer will then come to see the profit of working six months of the year to produce his crop and then have the other six months in which to sell and deliver them to his animals, with abundance of time between feeds to haul and spread the manure the animals leave on the farm.

We must, my friends, come to a different understanding with our soils.

With four-fifths of the farmers of our territory the care of the soil is given no thought at all, if we can believe what we see, the only idea being to plant, reap and sell. This practise will ruin the best soil in the world, if indulged in long enough. It has practically ruined millions of acres in the South in less than one hundred years, and what is to become of our country at the end of the next hundred if this practise continues? It must not continue, as we who have the keeping of our soils in charge have no right to rob and make them desolate.

I have stated time and again that well-bred, well-fed animals, if good judgment is used in their purchase and sale, will return to the farmer as good pay for his work in dollars as will any other sort of farming, during a period of ten years or more, and by the use of good live stock properly cared for, the productive capacity of the farm can be doubled every ten years. This means one hundred per cent profit in soil improvement every ten years. This is no theory, my farmer friends: I can "show you," as can a hundred other men in the South that I can name. And not alone in the South can the statement be proven, but in every section of the United States. Go into any community in America and ask who have the most productive farms? The answer will be the stockman. On the other hand, go into any section where crops are grown and sold as raw product and what do you see? I leave you who have traveled and seen our country to answer.

The New Missouri Dog Law.

Following is the full text of the Major Bill as amended and finally enacted:

An Act to repeal Chapter 100 of the Revised Statutes of Missouri, of 1899, entitled "dogs," and to enact a new Chapter in lieu thereof.

Be it enacted by the General Assembly of the state of Missouri as follows:

Section 1, Chapter 100 of the Revised Statutes of Missouri, 1899, is hereby repealed, and a new chapter is hereby enacted in lieu thereof as follows:

Section 6975. In every case where sheep, goats, hogs, cattle, poultry or other domestic animals or fowls are killed, wounded, maimed, chased or otherwise damaged by dogs on premises other than that of the owner or keeper of such dogs, the owner of the property so killed or damaged may recover against the owner or keeper of such dog or dogs double the amount of such damage sustained thereby, to be recovered by civil action in any court of competent jurisdiction within this state.

Section 6976. If any person shall discover any dog or dogs in the act of killing, wounding, or chasing sheep, goats, hogs, cattle, poultry or other domestic animals or fowls, in any part of the state on premises other than that of the owner or keeper of such dog or dogs, such person is hereby authorized to immediately pursue and kill such dog or dogs, without being liable in damages to the owner or keeper thereof, provided that nothing herein contained shall prevent any person from chasing his own stock or domestic animals or fowls with dogs, whenever he sees proper, or driving from his premises domestic animals or poultry, such as above enumerated, belonging to other parties.

Sec. 6977. If any person shall discover any dog or dogs under such circumstances as to satisfactorily show that such dog or dogs has or have been recently engaged in killing of sheep, goats, hogs, cattle, poultry or other domestic animals or fowls on premises other than that of the owner or keeper of such dog or dogs, such person is authorized to immediately pursue and kill such dog or dogs, provided they can be found and killed off of the premises of their owner or keeper.

Sec. 6977a. If the owner or keeper of any dog or dogs shall fail to kill or have killed the same after they have killed, wounded, maimed or damaged any sheep, goats, hogs, cattle, poultry or other domestic animals or fowls belonging to another and on the premises of the owner thereof, or on the premises where they have a legal right to be, and such owner or keeper has had notice thereof in writing, he, she or they shall be adjudged guilty of a misdemeanor and upon conviction thereof, fined not less than five nor more than one hundred dollars.

Sec. 6977b. The word "dog," as used in this act, shall be held and con-

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strued to mean all animals of the canine species, both male and female.

Sec. 6077c. All acts and parts of acts inconsistent with this act, are hereby repealed.

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Strawberry Culture.

A. WAUGH, PROFESSOR OF HORTICULTURE, MASSACHUSETTS COLLEGE OF AGRICULTURE.

The strawberry plant is not extremely fastidious in the matter of soil. Any land which will produce good garden crops, especially good potatoes, will answer for strawberries. A rich, friable, warm loam is best; but even heavy clay or sandy soil will grow strawberries if sufficient care is taken.

The soil should be in a reasonably good state of cultivation before the plants are set out. It is considered best practice to plant on newly broken sod land. If strawberries can follow corn, celery, tomatoes or other well-cultivated garden crops good results may be expected. If the plants are to be put out in spring, as is the usual practice, the land should be deeply plowed in fall and left to weather through the winter.

SETTING OUT PLANTS.

Spring setting of strawberry plants is the regular practice. On light, well-drained soils which do not heave fall setting may be practised, it being always necessary to mulch the beds well in autumn. However, fall setting, aside from the use of potted plants, as described above, is not to be generally recommended. On the other hand, it is good practice to set the plants as early as possible in the spring. In some localities and with some growers there is a prejudice in favor of late spring setting, but this does not apply to most parts of Massachusetts.

Where large areas are to be set with strawberry plants, a businesslike organization of the work is essential. The ground should be thoroughly prepared, well harrowed and in prime condition. The rows should be carefully marked out where they are to go. Usually these will be three feet apart. Some growers prefer 3½ feet, but a larger number prefer less—some two feet, some 2½ feet. The plants will be set at varying distances in the rows, depending upon the system of culture to be followed; about 16 inches apart is the distance usually prescribed. The plants should be set with a dibble. The man who does the setting takes this in his right hand while he takes up the plant with his left. The dibble is thrust into the loose soil at the point where the plant is to stand, is pushed forward and the plant is inserted with the left hand into the opening thus made. The dibble is then raised out of the ground and the soil firmed heavily about the roots with both hands. This firming is important. The man then moves forward on his knees to the position for the next plant.

It is highly important to observe in setting plants that they be not placed too deeply in the soil, nor yet too shallow. If they are placed so deeply that

the crown is covered with soil, the plant will not grow. If they are placed so high that the crown is well above the soil, they will dry out and die. The correct position is to have the bud or crown exactly at the surface. Planters require constant watching on this point.

GENERAL CULTURE.

After planting, the strawberry beds require the best sort of tillage. This is a crop which can never be profitably neglected. The cultivator should be kept going between the rows, especially in dry weather. Such cultivations should follow one another every week or 10 days, some soils, of course, requiring more tillage than others. On large plantations a double two-horse cultivator can be used to advantage; on ordinary plantations the single one-horse cultivator will usually be employed. The light frame with harrow teeth will be most useful in soil which is in the right condition.

MANAGEMENT.

The matted-row system is the one most commonly practised. According to this method the plants are set in double rows. There will be two rows of plants about eight inches or a foot apart, then a space of three feet for cultivation, then two more rows, then a space, etc.

The hedge-row system is an improvement on the matted-row system now considerably practised by advanced growers. Any one who wishes to grow a specially fine grade of berries for home use, or for a fancy market, can well afford to adopt this improved plan. According to this system rows are placed about 2½ feet apart, with plants 14 inches apart in the row. A very limited number of new plants are allowed to set from the runners, these being kept quite closely in the line of the original row. Each plant, therefore, receives the benefit of much more thorough cultivation than it does in the matted-row system. It also has the benefit of a larger proportion of fertilizer, it has more space to develop, and it is otherwise more favorably situated. Larger fruit of somewhat better grade can be grown than by the matted-row method.

FERTILIZERS.

Liberal feeding is desirable for strawberry beds. This liberality must begin as soon as the plants are set out, or even before, for the soil should be in first class condition before planting. Prof. Voorhees suggests 500 to 800 pounds of fertilizer, made up as follows: raw ground bone, one part; acid phosphate, one part; muriate of potash, one part; to be applied before setting out the plants. Plants should have an application of some kind of nitrogenous fertilizer, preferably sulphate of soda, as soon as they start to grow. This would mean 50 to 60 pounds of nitrate of soda, or 50 to 60 pounds sulphate of ammonia, or 100 pounds of dried blood. The necessary point is to give the plants a vigorous growth from the very first. The second spring, when a crop of fruit is expected, an additional dressing of nitrogenous fertilizer should be given. This would consist of 100 pounds of nitrate of soda or 150 pounds of dried blood per acre.

Prof. William P. Brooks, fertilizer expert of the Massachusetts Experiment Station, makes the following recommendations regarding the fertilization of strawberry plantations: Tankage or Peruvian guano, 600 pounds; fine ground bone, 1,000 pounds; low grade sulphate of potash, 600 pounds; nitrate of soda, 100 pounds. All of these materials may be mixed, applied after plowing and before setting the plants, and thoroughly incorporated into the soil by harrowing.

Dried blood, 200 pounds; tankage or Peruvian guano, 800 pounds; low grade sulphate of potash, 600 pounds; basic slag meal, 1,000 pounds; nitrate of soda, 100 pounds. The slag in this selection of materials must not be mixed with the blood, tankage or guano, as it will cause a loss of ammonia. It will be better, therefore, to apply the slag by itself, but all the other materials may be mixed before application.

VARIETIES.

There are hundreds of varieties of strawberries on the market. Every nurseryman has his favorites, and every year sees a number of novelties exploited. An unusually large proportion of these varieties are meritorious. In fact, almost any variety will show good results if well cultivated. It would be impossible within the limits of this paper to give a long list of

varieties, with descriptions or notes; it may suffice to say that Glen Mary, Clyde, Dunlap, Bubach, Warfield and Marshall are the kinds most commonly and successfully grown.

Core Rot Of The Jonathan Apple.

A year ago specimens of Idaho-grown Jonathan apples were received at the Colorado Agricultural College for inspection. To all outward appearances these apples were sound, but when cut in two there were varying amounts of discolored tissue, form slight discolorations to those specimens where nearly the entire apple was involved. To all appearances the specimens had been slightly frozen. This year we have received complaints of a similar nature from various sources in regard to this variety.

It seems that this trouble has been noted in Idaho for several years, and in Bulletin No. 54, of the Idaho Experiment Station, by Professor Judson issued in 1906, we find the following:

"Much of the complaint recently lodged against the Jonathan because of rotting at the core is doubtless attributed to late picking. Unless this trouble is corrected the sale of this valuable variety is sure to be hurt. The purchaser is completely deceived by the perfect appearance of the fruit, not a sign of decay being visible until it is cut open, when the flesh for some distance about the core is discovered to be brown, radiating in narrow rays toward the skin, which, however, it seldom reaches. It is worse than a worm hole, for that can be cut out. A box containing even a few of this sort of apples makes the consumer distrustful of the variety, while half or more sickens even the most enthusiastic friend of 'Brother Jonathan.'

"To get an idea of the effect of early and late picking upon this trouble, I requested Mr. C. C. Eiffe, of Payette, the fall of 1904, to pick a box a week for several weeks, beginning as soon as the seeds turned, and keep notes on the appearances of the core rot in storage. This he kindly consented to do, though he did not find it convenient to carry out the experiment with the detail I intended. His results, however, are confirmed by the experience of several growers in that valley, and are not open to serious question. One box was picked September 11th, a second a week later, and a third one morning in October after a heavy frost. In January the September boxes were found to be keeping equally well, the ratio of sound apples to decayed being six to one; whereas the October box showed a precisely reverse ratio, six rotten to one sound. In May, long after the late-gathered apples were gone, a considerable number of the early-gathered still remained juicy and in good condition. There is probably no other winter apple for which prompt picking is so important as the Jonathan."

The season of 1908 was peculiar, and various causes were responsible for the apples being under size. Because of the small size of the fruit the growers naturally deferred picking as long as possible with the hope of increasing their output of the fancy grade; the apples were eating ripe before they were gathered, ripe before they were gathered. Judging from the Idaho experience, it is probable that the trouble with

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the Colorado Jonathan this year is due to this course. If the apples are picked promptly as soon as in condition, it is likely that this trouble will entirely disappear. At any rate, we are certain that there is no fungus involved and that the condition is one which the growers may readily control. The Jonathan apple is too good a variety and has too good a reputation for us to allow anything to happen to it. We believe that it lies with the growers to correct this fault, and when once their attention has been called to it, there will probably be little complaint of a similar nature in the future. W. Paddock, Horticulturist, Colorado Agricultural College, Fort Collins.

PORK 7c Versus CORN 72c.

Stock raisers one and all are vitally interested in the above: "Price of Pork: Cost of Production."

You cannot increase the price of pork at present but you can decrease cost of production. How? By getting your hogs in a healthy state, so they will put on the fat they should when you begin feeding grain.

Hogs at all times are more or less susceptible to worms, fever and congestion, from which the largest per cent of the losses of swine are caused, and what does it further signify? Increased cost of fat. Common sense tells us that those worms must live and receive nourishment. Where do they get it? From the high priced corn or other nutriment you are feeding.

You might say, "My hogs are on alfalfa and therefore free from worms," but this is where you are mistaken. Dissections by the score have been made of hogs which have been on grass and alfalfa and the examinations have shown a congestion of parasites, which later develop into worms, or the trouble already exists and the intestines have been found full of worms.

Protect your own best interests by protecting your stock from diseases. Increase your profits, by decreasing cost of production.

Begin at once to use a medicine to eliminate the worms from your hogs so that when you begin to fatten you will not have to use 60 and 70 cent corn to feed a hog which is full of worms craving nourishment.

A good medicine will save you from 10 to 20 per cent in feed and protect you against death losses.

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DAIRY



The conclusion of test at the Wisconsin Experiment Station indicate that the large cow gave more milk and butter and though she ate a trifle more feed, she paid well for it and produced her butter-fat at less cost than the small cow.

The dairy herd of the Ontario Agricultural College in 1908 comprised 26 cows. The average days of milking were 299.8. The average milk yield was 7,725 pounds; per cent of fat, 3.7; pounds of fat, 285.61; value of fat 25 cents per pound, \$71.40; cost of feed, \$39.57, an average profit over cost of feed, \$31.83. These figures do not include value of calf or skim-milk.

"Bread and milk make the most nourishing food at much less than half what the same amount of nourishment in meat would cost. In every 50 quarts of milk there are 12 pounds of solid food. The cost of one pound of solid milk food in Chicago is about 80 cents. A pound of nourishment in a sirloin steak, retailing at 25 cents, would cost about 75 cents." These figures are by George M. Whittaker of United States Department of Agriculture who recently addressed a meeting of Shawnee county, Kansas, farmers.

Professor Kendall, of Dairy department of Kansas Agricultural College has recently purchased a Jersey cow and a Holstein bull from the Missouri Agricultural College. The dam of the cow is one of the best milk animals of the fine Jersey herd of that institution. The dam of the bull is expected to produce 19,000 pounds of milk this year. His sire is one of the most noted of the breed.

A deal of good sense is this by Aaron Schrewe: When the farmer thinks of buying a bull to improve the quality of his future cows, he should look to the quality of the bull, not to the cheapness of the price. The character and reliability of the breeder go a great way in such a transaction. He should try to buy a "future" of good quality that will run on for generations, and that will help increase the good effects of every future sire that may be used.

Protein Content of Feeds.

The lack of protein in the dairy cow's ration is the weak point in this section. Protein is amply supplied in good alfalfa hay but when alfalfa hay is not grown protein must be sought in other feeds. In a ton of bran are 244 pounds of protein, at prevailing prices costing a trifle over

eight cents a pound, and have 838 pounds of carbohydrates and fat thrown in. In a ton of old process oilmeal 586 pounds of digestible protein, costing 4.4 cents per pound, and have 794 pounds of carbohydrates and fat thrown in. In a ton of cottonseed meal are 744 pounds of digestible protein, costing 3.6 cents per pound, and have 29.1 pounds of carbohydrates and fat thrown in.

Success Demands Business Attention.

In the dairy herd of the Nebraska Experiment Station are three young Holstein cows that gave in the months of February and March, last year, 9,391 pounds of milk, an average of 1,565 pounds for each cow per month. These cows are certainly money-makers. Silage was their principal feed, and there is no reason why any man in the dairy business cannot have cows that will do as well, and perhaps better. Of course, they had the best of care and were always milked at the same time, Sundays included. But, what man has a business worth looking after which does not require the most careful and intelligent attention year in and year out, Sunday and Monday, as does dairying?

Food Required By Cows.

The farmer who does not receive the monthly list of bulletins published by the United States Department of Agriculture is missing an opportunity to get for the asking an abundance of the best literature published on agricultural topics. Farmers' bulletin No. 22 says: The cow requires not only materials for maintenance, but must also have protein, fat, and carbohydrates to make milk from. The milk contains water, fat, protein (casein, or curd), sugar, and ash, and these are all made from the constituents of the food. If insufficient protein, fat, and carbohydrates are contained in the food given her, the cow supplies this deficiency for a time by drawing on her own body, and gradually begins to shrink in quantity and quality of milk, or both. The stingy feeder cheats himself as well as the cow. She may suffer from hunger, although her belly is full of swale hay, but she also becomes poor and does not yield the milk and butter she should. Her milk glands are a wonderful machine, but they cannot make milk casein (curd) out of the constituents in coarse, unappetizing, indigestible swale hay or sawdust any more than the farmer himself can make butter from skim-milk. She must not only have a generous supply of good food, but it must contain sufficient amounts of the nutrients needed for making milk. Until this fact is understood

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and appreciated, successful, profitable dairying is out of the question.

Do Pure Bred Cattle Pay?

It is difficult to obtain figures pointing to the answer of the query. This report by B. A. Corbit, a New Hampshire farmer, in the American Agriculturist, would have been equally true if he had chosen Guernseys or Jerseys instead of Holsteins. It shows how rapidly a beginning with pure bred animals results in a nice little herd of their kind, and while nothing is said about the increased value of the grades reared, it will not be disputed that the value of so good a bull was shown and realized in his cross on common cows.

Nine years ago I purchased a pure bred Holstein bull and began grading up my herd. The bull cost me about \$125 and paid for himself the first year I had him out of the increased value of the first crop of calves. Notwithstanding this, so much money in a bull was considered the height of folly by my neighbors.

I kept this bull for a number of years. Next I bought a female, with a record of nearly 23 pounds of butter and 514½ pounds milk in seven days. This cow was a good individual, with fine shaped udder, and was in calf to DeKol 2d's Butter Boy 3d. She brought me a nice heifer calf, which is now three years old and has this winter made me a little over 14 pounds butter and 341½ pounds milk in seven days, and was in rather poor condition on account of the drouth, which made the pastures very poor last summer. I now have six females, the progeny of my first cow, she having brought me a heifer each year and a bull extra. In 1906 she had twins. Her first heifer had a heifer in 1907. Thus my females have increased remarkably fast.

Most of us who have made a study of the dairy cow would not hesitate to pay \$5 to \$25 more for a promising grade cow than we would for an ordinary nondescript animal, but there are a great many men who would quicker pay 50 cents for the services of any old scrub than they would \$2 to \$5 for the services of a pure bred prepotent pure bred. Much less would they pay \$100 or more for a good pure bred sire. How about the wisdom of this policy? One could keep a bull three or four years, during which time he would undoubtedly get 50 heifer calves, which would be worth from \$250 to \$1,000 more than ordinary scrubs if put on the general market with their second calf. If kept in the herd they would be equally valuable and would in a few years brighten up the old farm and those who live thereon.

Rearing Calves on Skim-Milk.

There is no better authority on rearing calves on skim-milk than Prof. C. H. Eckles, of the Missouri Experiment Station. KANSAS FARMER recently submitted to him a subscriber's inquiry regarding the feeding of skim-milk and Professor Eckles replied:

"The most common mistake made in raising calves by hand is over-feeding. It is exceedingly important that the

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calf be not allowed to gorge itself with milk. It is not necessary to feed more than one gallon at a feed twice a day for any calf no matter how large or how old. It is possible to feed a little more than this without injury to the largest calves after they are past three months old. A calf should always be kept hungry. The common mistake is

to feed more skim-milk than is fed of the whole milk under the mistaken impression that because it is skim-milk a larger amount should be fed. No more skim-milk should be fed than is fed of whole milk. Some arrangement must be made for making sure that each calf gets the amount of milk intended for it. Good results cannot be had by feeding a bunch of calves from a trough, as is often done, as this gives some animals a chance to gorge themselves, and others, that are slow drinkers, do not get a sufficient amount. Feeding should be done in such a way that each animal gets just what is intended for it and this amount should be measured or weighed out.

"It is of the greatest importance that the young calf be always fed milk in the same condition regarding temperature and sweetness. A single feed of stale or sour milk or cold milk will often cause a case of indigestion that may check the growth of the calf or even be fatal. Milk should be at least 90 degrees temperature when fed. During the warm weather, if separated immediately after milking, it will still be warm enough to feed without additional heating. When the weather is cool it is usually necessary to warm artificially in order to have it right. After the calf is two or three months old, it is possible to feed it milk that is cooler without causing sickness, if it is fed the same all the time. The calf will not thrive if fed sour milk one time and sweet milk the next time. In order to have milk in the right condition, it is almost necessary to have a farm separator. This allows the fresh sweet milk to be separated and fed before it becomes cold or stale, and with a little care the calf does as well as when receiving its mother's milk. Another point that must be observed is to keep the pails and utensils clean. It is an easy matter to cause indigestion by feeding from a pail that is not properly washed. A good rule is to have the pail used for feeding calves as clean as the milk pails. It is also very important that the stalls or pens in which the calves are kept be always in good condition. Calves should have the lightest, driest part of the barn. Since the cream has been removed from the milk it is necessary to feed something to take its place. The best feed for this purpose is ordinary cornmeal fed dry in a small pail or box. The calf raised on skim-milk will begin eating grain at about three weeks of age and from this time on should be given regular allowance. About the same time they will begin eating hay which should be supplied them in a convenient manger."

Prof. Eckles, of the Missouri Experiment Station says there was a time when the typical Missouri farmer laughed at the idea of raising calves in any other than the natural way. However, recently the high price of land has made it impossible for any profit to be made raising calves in the good old way. Farmers who have figured carefully on this proposition have concluded that when land gets above \$50 an acre it becomes impossible to keep a cow for the chance of a calf. Ten years ago there were but few farmers paying any attention to the sale of milk or cream. Now there are fully 30,000 in Missouri that are counting on this as a part of their income. These farmers are mostly selling cream for buttermaking purposes, and raising the calf by hand. There was a time when it was thought that a calf raised on skim-milk must necessarily be stunted in size, unthrifty in appearance and one that a respectable farmer would not wish to have on his place. It is well understood now by most farmers that are selling cream that such calves are entirely unnecessary and in fact are not caused by feeding skim-milk, but from carelessness and ignorance regarding proper methods of feeding.

The man who proposes to raise calves on skim-milk must, first of all, get the idea out of his mind that such calves are necessarily unthrifty. He must not be satisfied with his work until he is able to raise a calf in this manner that is good as one raised by its mother. The feeding of the calf by hand should begin at least within three days after its birth. Some prefer to take the calf away from its mother before it has nursed and begin feeding by hand at once. Others prefer to leave the calf with the cow from two to four days. They should not be allowed to run longer than that

on account of the fact that the older the calf is, the harder it is to teach it to drink from a bucket, and the more the mother is disturbed when it is removed. The calf should be placed out of the sight of the mother and allowed to pass over one feeding period before an attempt is made to teach it to drink.

It is practically useless to attempt to get a calf to drink unless it is hungry. No special difficulty is experienced in getting the calf to drink from a pail. The usual method is to allow the calf to suck the finger for a short time until it will keep its nose in the pail itself. The milk fed should be fresh milk from the mother fed before it has time to cool. The calf need not be fed more than twice a day, although it is somewhat better if convenient to feed it three times. The feeding of the mother's milk should be continued for about two weeks time, feeding not over three quarts at a feed or possibly a gallon each feed to a large calf. At the end of about two weeks the calf is ready to begin the feeding of skim-milk. It is best to make the change from the whole milk to skim-milk gradually, using several days for this purpose. At the end of three weeks the calf should be receiving nothing but skim-milk. It is very important that this skim-milk be fresh, sweet and warm. The young calf is a delicate animal for the first two or three months of its life and special attention must be given to keeping the conditions just right during this time. There is no difficulty in raising the calf with perfect satisfaction, if the necessary precautions are observed. It will not do to think that feeding sour milk or cold milk or over-feeding will not be injurious, if it is only done once. A single mistake of this kind may cause the death of the calf.

Profit in Hens.

Facts from the Industrialist concerning the laying of hens in the experimental pens at Kansas Experiment Station:

The pen of 20 S. C. W. Leghorns are still laying and have produced, in the 120 days of February, March, April and May, 1,423 eggs, or an average of 71.1 eggs per hen. The heaviest laying was done by one hen, which laid 84 eggs in four months.

With feed at two cents per pound and eggs at market price, a balance of \$16.35 over the cost of feed is credited to the pen. It has cost a fraction over 10 cents per month to feed each hen.

The White Plymouth Rocks produced 814 eggs in 120 days, or an average of 74 eggs per hen. One hen laid 48 eggs successively, and a total number of 96 in 120 days. Another laid 94 in the same time. From this pen the balance was \$9.71 over the cost of feed. One Barred Plymouth Rock yearling hen laid 31 eggs in May, and is still laying.

The college is attempting to breed up a strain of heavy egg-producers, and such facts as the above should be of interest to the farmers who are working in the same direction.

Methods of Poultry Management in Maine.

The work in poultry management at the Maine Experiment Station has been of great value to poultrymen, especially those located in the colder portions of the United States. Systematic work with Plymouth Rock hens was begun more than ten years ago with a view to an increase in the yield of eggs, and to developing the most satisfactory methods of hatching, rearing, feeding, etc.

An interesting feature of the work is the use of trap nests. A band with a number is placed on the leg of each hen. The nest boxes are constructed so that the hen as she goes in springs a trap which closes a door after her, and she remains a prisoner until released by an attendant. In this way an exact record of the egg laying of each hen is secured, and the experimenter is able to select the best for breeding purposes.

The U. S. Department of Agriculture has issued for free distribution a farmers' bulletin describing the methods of poultry management at the Maine Station. It describes in detail the construction of the buildings used, especially those known as "curtain-front" houses; the methods of feeding; the use of disinfectants, etc. It contains many ideas and suggestions that will prove helpful to the practical poultry raiser.

CREAM SEPARATOR "SPLIT-WING" FEEDING DEVICE

Last week we referred to the recklessly untrue statements as to separator "DISCS" by desperate would-be competitors struggling to retain any cream separator business.

We made the point that the DE LAVAL COMPANY owned the first "HOLLOW" bowl and the first "DISC" bowl and has originated all the improvements upon both, so that we are free to use the best and any combination of the best features, while would-be competitors are forced to get along with twenty to thirty year old types of construction upon which DE LAVAL patents have expired.

We made the point that anyone however unfamiliar with separators can readily understand that DE LAVAL "DISCS" are as necessary to the bowl of the cream separator as teeth to the human mouth.

Comparing the "DISC" with the "HOLLOW" bowl we made the point that a man can chew without teeth and that you can separate without discs, but in both cases at a great disadvantage.

We made the point that so far as imitating "DISC" separators are concerned they compare with the IMPROVED DE LAVAL about as artificial teeth do with a perfect set of natural ones.

Now we would make a most important addition to the illustrative comparison, or in other words, the "SPLIT-WING" SHAFT or FEEDING DEVICE used in conjunction with DE LAVAL "DISCS," which protecting patents prevent the use of in any other separator.

The "SPLIT-WING" FEEDING DEVICE distributes the incoming volume of full milk throughout the separating body of the bowl, between the "DISCS" and between the walls of cream and skim-milk, preventing all conflict of currents and any remixing of the cream and skim-milk in process of separation.

In a practical sense the "SPLIT-WING" FEEDING DEVICE is as necessary a part of the combination with "DISCS" in the cream separator bowl as the tongue with the teeth in the human mouth.

The "HOLLOW" bowl separator is like a mouth without teeth and imitating "DISC" separators are like mouths with artificial teeth but without tongues to facilitate mastication.

It requires IMPROVED DE LAVAL "DISCS" and the DE LAVAL "SPLIT-WING" FEEDING DEVICE to complete the PERFECT cream separator bowl, thereby doubling capacity, doubling efficiency and doubling durability.

In addition, the DE LAVAL supporting and driving mechanism, the result of thirty-one years of world-wide separator experience, is better quality, better designed, better made and superior in every way to that of the best of would-be competing separators.

That's the whole separator problem briefly stated. A DE LAVAL catalogue explaining it all in full detail is to be had for the asking, as well as an IMPROVED DE LAVAL MACHINE for practical demonstration of every claim made to any intending separator buyer.

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R. C. R. I. REDS exclusively, fine layers; eggs from selected pens \$1.50 for 16 eggs; from utility flock \$4.50 per 100. J. H. CAN-NON, Preston, Kan.

ROSE AND SINGLE COMB RHODE ISLAND REDS.

Eggs from any mating half price remainder of season. Mixed eggs Rose or Single Comb from several matings, \$1 per setting. Red pullets hatched in midsummer will make winter layers. Write for descriptive mating list. It is free.

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BUFF ORPINGTONS.

BUFF ORPINGTONS—Chicks, pens, baby chicks, eggs. More first prizes State Fairs and State Shows than all other breeders. My Poultry Book, containing information worth hundreds of dollars to farmers sent for 10 cents. W. H. MAXWELL, R. 95, Topeka, Kan.

Eggs For Hatching.

FROM FINE STOCK—NONE BETTER.
S. C. Buff Orpingtons, extra fine in shape and color, standard weight. Cook strain. 1st \$2 per 15, \$5 per 50, \$9 per 100; 2d pen, \$1 per 15, \$3 per 50, \$5 per 100.

S. S. White Orpingtons, the big white beauties. Eggs \$2 per 15, \$5 per 50. All second pen eggs sold.
White Rocks, Fishel strain, and Rose Comb Reds, extra fine. Eggs same price as Buff Orpingtons. Baby chicks 20c and 30c each from any of above.

Diamond Jubilee Orpingtons, a few settings at \$5 per 15 in setting lots only. These Diamond Jubilee were the S. E. Wisconsin winners including 1st and 2d hen. Baby chicks 50c each.

MRS. LIZZIE B. GRIFFITH,
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PURE S. C. B. LEGHORN EGGS \$2.75 per 100. CHAS. DORR, Osage City, Kan.

SINGLE COMB BROWN LEGHORN eggs 15 for \$1, 100 for \$4. H. N. HOLDEMAN, Meade, Kan.

S. C. BUFF LEGHORNS—No stock. Eggs from prize winners. Pen. No. 1, \$2 per 15; No. 2, \$1.50 per 15. Incubator lots, \$5 per 100. MIKE KLEIN, Clay Center, Kan.

ROSE COMB BROWN LEGHORNS EXCLUSIVELY. Farm raised. Eggs per setting of 15, \$1; per 50, \$2; per 100, \$3.50. P. K. MAHON, R. R. 3, Clyde, Cloud Co., Kan.

BUFF COCHINS.

BEST BUFF COCHINS IN KANSAS. This variety exclusively. Can furnish eggs from prize winning stock at \$1.50 and \$2 per setting. J. C. BAUGHMAN Topeka Kan.

LIGHT BRAHMAS.

LIGHT BRAHMA EGGS from birds scoring 93 to 94 by Judge Rhodes, \$1.50 per 15, large flock \$1 per 15, \$4 per 100. Baby chicks each month \$2 per dozen. MRS. A. P. WOOLVERTON, R. 8, Topeka, Kansas.

PLYMOUTH ROCKS.

FOR SALE.—Eggs from pure bred Barred Plymouth Rocks. 75c per 15, \$4 per 100. HILCREST POULTRY FARM, R. D. No. 4, Topeka, Kan.

BREEDERS.

Our White Rock breeders are for sale at right prices.

SMITH & KNOFF,

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BARRED ROCK BARGAINS.

After May 1 eggs from my high scoring pens only \$1.50 per 15. Four settings for \$5. Range eggs 75c per 15.

MRS. CHAS. OSBORN,
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PURE BRED POULTRY.

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EGGS FROM PURE BRED POULTRY.
S. C. W. Leghorn and B. P. Rocks. Birds scoring 95. Eggs \$1 per 15 or \$5 per 100 the rest of the season at the ELNORA Farm, Centralia, Kan., D. Williams, Prop.

SUNNY CREST.

Stock, fruit and poultry farm. Eggs to sell from M. B. turkeys, R. I. Reds and Leg-horns. Registered Jersey calves and Poland China hogs for sale. Write me. MRS. WM. Britte, Pierce City, Mo.

"Now Will You Be Good?"

Tornadoes are still doing damage in Kansas. Was there ever a state more afflicted with wind?—Des Moines Capital.

And the next day the wind tore down Des Moines telegraph and telephone wires; slapped Iowa's railroad traffic; unroofed houses; blew down barns and destroyed more property than Kansas has lost in a year by wind or flood. "Was ever a state more afflicted with wind than "poor old Iowa?"

And the Chicago "crop killers" have aroused the ire of Secretary Coburn by the assertion that there's a big crop shortage in the Kansas wheat crop. But Kansas can stand all their "cracks" and give them as good as they send.—Editor Carroll in the Ruralist.

POULTRY



"How I Feed My Chicks and Laying Hens."

At the Boston show, January 12-16, 1909, Dr. N. W. Sanborn gave a talk on practical poultry work, his subject being: "How I Feed My Chicks and Laying Hens."

He began by telling of the importance of having the breeding pens mated up in good season, and said that with im January and February were the months when the work was done. In those months there was leisure time which could be given to studying the birds, and there was need that they be intelligently studied if right matings are to be made; a great deal of the success of the season's hatches depended upon having the birds mated up right, hence the great importance of studying the individual birds closely and mating them for the desired results.

The first and most important consideration is constitutional vigor; if the breeding stock isn't well endowed with vigor we fall down in eggs, in show quality, in everything, and the inevitable is not far distant!

A most encouraging phase of the poultry business today is that the utility poultrymen are using thoroughbred stock; it used to be the rule that any kind of fowl was considered good enough for utility purposes, to produce eggs and meat for the table and market. But latterly a change has come about, and poultrykeepers are realizing that the thoroughbred is a better layer and makes better selling market poultry, and the thoroughbred is becoming the rule, not the exception.

I believe in small pens, in a few birds together, for the best results. The greatest number to be put with a male is twelve, and from that down to six or eight females to a male.

Never have the pens shut tight; always have some open spaces for fresh air. One window in each pen should have the upper sash removed, and a cloth curtain tacked on to a frame, fitting into the opening put in the place on cold nights and when it is stormy.

I believe in the dropping boards, which keep the pens cleaner and increase the floor space by so much. It is economy to clean off the droppings two or three times a week, and where there are several pens it takes no longer to clean off the droppings every day than having to put twice as much time into doing it every other day. The nest boxes are of common orange and grocers' boxes, set back to the light to make them secluded and dark.

Feed both the chicks and the laying stock by the dry-feeding method; it gives most excellent results and saves a lot of work. I was feeding a wet mash just for a little time, then, because moving to another farm at quite a distance, showing, etc., had thrown them back a bit and I wanted to bring them up again, I kept a dry mash mixture before them all the time; this is made up of four parts of good wheat bran, two parts cornmeal, one part good beef scraps. A good feed of whole grain was thrown in litter about two or three o'clock in the afternoon; in cold weather have deep litter. Wants the birds' crops to be full when they go to roost at night.

For green food relies more upon roots and cabbage than upon clover or cut hay. Feeds cabbage the first part of the winter because it keeps less well than roots; after the cabbage is gone feed mangels; these are split in halves and the birds pick out the insides. Green food is almost always by them.

Does not stimulate his birds for laying, as stimulants have a weakening effect, sooner or later. In cold weather collects the eggs frequently, so they shall not become chilled. Hatches with im average about 55 per cent of eggs set, for the whole season; if hatching only in April or May they run considerably higher than that. Likes incubators better than hens, and does about all of his hatching with incubators.

White diarrhea was almost always due to the chicks becoming chilled. Doesn't allow the chicks to fall down

into a cool chamber; keeps them up close to the source of warmth until well seasoned. Takes them out of the incubator when they have been out of shells about 48 hours, but does not feed until another 48 hours have passed, except that they have the brooder floor covered with hay chaff and sweepings from the hay mow to pick in. Keeps the temperature under the hover at 95 for the first week, then drops it about five degrees a week until 70 degrees is reached.

At first feed fine crocked wheat only; when they are a week old add a little fine beef scrap of the very best quality, and when they are two weeks old add fine cracked corn to the ration. Get the chicks out on to the grass just as soon as possible, by the time they are a week old at any rate.

When old enough to remove from the brooder the chicks go out into colony coops which are 3 by 6 feet in size, the front covered with one-inch mesh wire netting only; chicks want a lot of fresh air, and will not do well if shut up close at night. Separate the cockerels just as soon as they can be distinguished from the pullets, putting the promising looking ones off by themselves to grow for breeders, and selling the others to market, either as broilers or roasters, according to the market conditions.

In replying to questions from the audience Dr. Sanborn said: The best layers were smallish and active, were always at work. One quart of grain a day to a dozen birds was about right for quantity. Would feed Plymouth Rocks less cornmeal than he would feed Wyandottes; the Rocks have a strong tendency to put on fat, which needs to be guarded against in the feeding.

His houses are 24 feet long by 12 feet wide, with a shed roof sloping to the north, then all the drip is carried away from the front.

Bread and milk makes a good dish for chicks, if only so much is fed at a time as will be eaten at once; it must not be left to stand around and become sour.

The doctor's practical talk was listened to closely, and as of decided interest to those present.

Chicken Troubles.

Please give through your paper a remedy for white diarrhea in young

chicks. Also what is the cause of young chicks being bursted at the navel at hatching time? I have an incubator and was told keeping it too hot was the cause. Can that be the cause?—An Old Subscriber, Derby, Kan.

Ans. White diarrhea in chicks is a very serious disease and very difficult to cure. So important to the poultry industry had the prevalence of this disease become that at the last annual meeting of the American Poultry Association, two experts on poultry diseases, read papers on this subject. One was Prof. L. H. Baldwin, Ontario, Canada, and the other Dr. George B. Morse of the United States Department of Agriculture, Washington, D. C. Professor Morse claimed that the original cause is due to derangement of the bowels and can be produced through some mechanical design or operation of the incubator, either in regard to temperature, ventilation, moisture, turning or cooling, which hatches abnormal chicks; that is chicks lacking in vigorous development or improperly nourished and consequently they become an easy prey to various diseases and one general characteristic in common with such chicks is the chalky discharge or what is commonly known as white diarrhea. Dr. Morse claims that this disease is caused by lactena, called *coccidium tenellum*, which he states he has found in large numbers in the secca of diseased chicks. He says that the best remedy is, by the use of an ordinary medicine dropper, inject into the vent from one to three teaspoonful of a one or two per cent carbolic acid solution. Also a particularly good tablet is known as calomel, ipecac and soda compound and contains calomel one-fifth, ipecac one-tenth of a grain, and bicarbonate of soda, one grain. This not only purges but acts as an intestinal antiseptic. Excessive purging is the best remedy. Epsom salts is very good. In answer to your second question I will quote from Professor Baldwin; he says: "I have found from the dissection of many chicks that the unabsorbed yolk and atrophied or shriveled umbilical cord is a very common defect with chicks that have white diarrhea. Where this does occur it seems to me to arise more from a want of heat than anything else; especially a lack of heat at the earlier stages of incubation, and is not this naturally so? If the chick had been properly nourished, absorbing the yolk in a natural way during the process of incubation, the yolk sac would not remain so large and the umbilical actively fulfilling its mission would not become atrophied." So you see it was lack of heat and not too much that caused the trouble you speak of.

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To Subscribers of Kansas Farmer

tion kitchen set of useful kitchen articles.

This set given free. Show a copy of Kansas Farmer to two of your neighbors or friends; ask each of them to give you one dollar to pay for 52 issues of the "Old Reliable"; send the names and the \$2.00 to us and we will immediately send you the Kitchen Set described above Free and all charges prepaid. This opportunity to furnish your kitchen with a complete cutlery outfit is one you cannot afford to miss taking advantage of, so get busy at once among your friends. Your own new or renewal subscription may count as one in this club if you wish. Cut out this ad and mail it with the \$2.00 and names of two subscribers to

KANSAS FARMER, Topeka, Kan.

RICH MEN'S CHILDREN

By Geraldine Bonner

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(Continued from last week.)

He looked with sober questioning at Dom-
"So I hear, but I haven't seen it."
Buford raised his flexible brows with an
of stimulated, excusing memory.
"True, true," he replied, "I had forgotten.
Two nights after I had introduced the span-
one of the 'Granada' people saw me.
didn't know it at the time, but I am a
artist; whatever my audience, I give it
my best, and, in that instance, it was only
more case of bread cast upon the waters.
There'd been a vacancy here. Estradilla,
the Spanish Snake Dancer, was taken sud-
only sick, collapsed after her third per-
formance, tied her intestines up in a knot
with her act, they say, and the wonder was
he hadn't done it before. Anyhow, they had
substitute in a hurry, heard of my Klon-
and sent a man up to see if I'd do to
it. The next week I was here and—you
know the rest."

"They say every man has his chance. You
don't suppose the snowstorm that caught
you at Antelope was going to be the founda-
tion of yours?"

Buford raised his brows till they almost
touched his hair, and said with his most ma-
terial sonority of tone.
"No, no indeed. The ways of Fate—or let
me say Providence—are truly inscrutable.
I thought that look-up in the Sierras would
be my undoing, and I'm sure I never imag-
ined the two years I spent in that accursed
cave were going to return to roost as bless-
ings. I turned my face to the North in a
bitter hour, and it was in a bitter hour that
I adopted the stage."

Dominick was exceedingly surprised. He
had supposed Buford always to have been an
actor, to have been born to it. If he
had heard that the man had made his debut
as an infant prodigy or even in his mother's
arms in swaddling clothes, he would have
thought it was in keeping with Buford's charac-
ter, and just what he suggested. Now, in a
case expressing his surprise, the young man
replied.

"Then you went on the stage up there?
You've only been on a few years?"

"Nearly four," said the actor. He looked
down at his shoe for a moment as if consid-
ering, and repeated without looking up, "It
will be four next September. Trouble drove
me to those far distant lands and hard luck
drove me on the stage. I'd never had any-
thing to do with it till then; I hadn't a
single game about me. There'd even been a
time when I had a strong prejudice against
the theater and never went to one. But a
man must live and—"

He stopped, his attention arrested by a
loud sound on his sleeve. A youth of
exquisite countenance had issued from a door
behind him, and, touching his arm with a
glittering, unclean finger, began to speak in
a low tone. Buford turned to the boy. Dom-
nick backed away from them toward the
office window. As they conversed he
took a card out of his wallet, and hastily
read the address of the flat below his
room. He had it ready to offer Buford, when
the actor, his conference over, came toward
him.

"Duty calls," said Buford. "I am sorry,
but they want me inside. But this is not
going to be our only meeting. I'm booked
for two weeks longer here, and I'm hoping
to see something more of you."

Dominick gave him the card, with assur-
ances that he would be glad to see him, and
that his own home was a better meeting-
place than the bank. At this mark of
friendship, the actor was openly gratified.
He looked at the card with a smile and
said:

"Most certainly I'll avail myself of this
privilege. I hope later to be able to place a
card at your disposal. Madame, you say, is
a desirous of seeing me. Well, I'll see
that she does so under the most favor-
able conditions. Though I have never met
her, I think I may ask you to convey my
regards to her."

He bowed impressively, as though saluting
him in person, and then, with a last dis-
tinct farewell to Dominick, turned toward the
door which opened at his approach, discov-
ering the waiting Jew boy. As the actor drew
near, Dominick heard the boy break into
loud remonstrances, and then the door
closed upon Buford's sonorous and patroniz-
ing notes of reproof.

CHAPTER XIX.
Rose's Point of View.

The following Sunday at ten o'clock in
the morning, Dominick noiselessly descended
the stairs of the flat and let himself out
into the street. He had had a sleepless
night, and as he stood in the dazzling sun-
shine, debating which way he should go, his
eyes saw the hollows and lines left by
years of worried wakefulness.

His day—the holiday of his week of steady
work—was without engagement. The friend
with whom he usually walked over the
urban hills had moved to the country.
A day spent away from his home in the
open air. As he had eaten his breakfast he
planned his itinerary, carefully consid-
ering the best distribution of these twelve
valuable hours of liberty. He would spend
the morning walking, anywhere—the direc-
tion did not matter much—anywhere where
there was quiet and a view. He would take
his lunch at any little joint—country hotel,
city house—where he happened to pass, and
in the afternoon he would walk again, on for
the hills, probably over the Prisdio hills where
the people were beginning to gild their
unfrequented nooks in which a man could
stand and look at the water, and think. A
whole day away from Berny and the flat.
The healing balm of the sunshine and the
fresh, untroubled air, was the best way to
shake the fund of philosophy and patience
that of late he had felt was almost ex-
hausted.

The ferment of his wakeful night was
still in his blood as he walked across the
flat, alighting for the eminence of Telegraph
hill. He walked slowly without looking up.
His eyes on the fin of his cane as it struck
the pavement. It was a superb day, calm,
day when he had come to the park with the
cannon, and seen Rose Cannon. But the
morning of the morning did not divert his
mind from his heavy musings. With down-
cast head, watching the striking tip of
his cane as though in it there lay some
mystic solution of his difficulties, he walked
on a slow-moving figure, a man wrestling
with his own peculiar world-problem.
There had been times lately when he had

felt he could no longer endure the present
conditions of his life. As he had lain think-
ing in the darkness of the previous night, it
had come upon him, with the clearness of
conviction, that he could not stand it. The
future with Berny had loomed before him,
crushing, unbearable, and he had seen no
end to it, and repeated to himself that he
must be free of it. It had been awful as a
nightmare, and turning on his bed he had
wondered how he had endured the situation
so long.

Now, as he walked through the sweet,
gay, morning he felt a renewal of courage
and reasoned with himself, using the old
arguments with which for two years he had
been subduing his rebellion and curbing the
passion and impatience of his youth. Be-
cause a man had married an uncongenial
woman, was that an excuse for him to
leave her, to put her away from him when
she had honestly tried to live up to her mar-
riage contract. Summing it all up in a sen-
tence—his wife had a bad temper and he
had ceased to care for her, was that a
reason for him to separate from her?

Last night he had used none of these
arguments. He had felt too strongly to
reason about the rightness of moral obli-
gation. Lying in the dark, listening to
the striking of the clock, he had said to
himself that he could not stand Berny any
longer—he could not live in the house with
her. He did not hate her, it was far from
that. He wished her well; to hear that she
was happy and prosperous somewhere where
he did not have to dine with her and sit in
the den with her every evening, would give
him the greatest satisfaction. He felt that
the sight of her was daily growing more
unbearable and unnaturally obnoxious to
him. Little personal traits of hers had a
strange, maddening power of exciting his
dislike. In the evening the rustling of the
sheets of the newspaper as she turned and
folded them filled him with a secret anger.
He would sit silent, pretending to read, wait-
ing for that regular insistent rustling, and
controlling himself with an effort. As they
sat opposite each other at breakfast, the
sound she made as she crunched the toast
seemed to contain something of her own
hard, aggressive personality in it, and he
hated to hear it. In the dead depression of
the night, he had felt that to listen to that
rustling of newspapers every night and that
crunching of toast every morning was a tor-
ment he could no longer bear.

In the clear light of the morning, patience
had come and the old standards of restraint
and forbearance reasserted themselves. The
familiar pains, to which he had thought
himself broken, had lost much of their mid-
night ghouliness. The old ideas of honor
and obligation, with which he had been
schooling himself for two years, came back
to his mind with the unerring directness of
homing pigeons. He went over the tale of
Berny's worthiness and his own responsi-
bility in the misfortunes of her life and
disposition. It was a circular process of
thought that always returned to the start-
ing place: what right had he to complain of
her? Had not most of the disappointments
that had soured and spoiled her come from
his doing, his fault, his people?

He breathed a heavy sigh and looked up.
To this question and its humbly acquiescing
answer these reflections always brought him.
But today it was hard to be acquiescent.
The rebellion of the night was not all sub-
dued. The splendor of the morning, the pure
arch of sky, the softness of the air, called
to him to rejoice in his strength, to be glad,
and young. He raised his head, breathing in
the sweet freshness, and took off his hat,
letting the sun pour its benediction on his
head. His spirit rose to meet this inspiring,
beneficent nature, not in exultation, but in
revolt. The thought of Rose gripped him,
and in the strength of his manhood he
longed for her.

He ascended the hill by one of the streets
on its southern slope, violently steep, the
upward leaps of its sidewalk here and there
bridged by flights of steps. Every little
house was disgorging its inmates, garbed in
the light Sunday attire of the Californian
on pleasure bent. The magnificent day was
calling them, not to prayer and the church,
but to festival. Families stood on the side-
walks, grouped around the Sunday or
worship, a picnic-basket. Lovers went by
in smiling pairs, arm linked in arm. A
pagan joy in life was calling from every
side, from the country crowned in its robe
of saffron popples, from the sky pledged to
twelve hours of undimmed blue, from the air
mellowed to a warmth that never burns,
from the laughter of light hearts, the smiles
of lovers, the eyes of children.

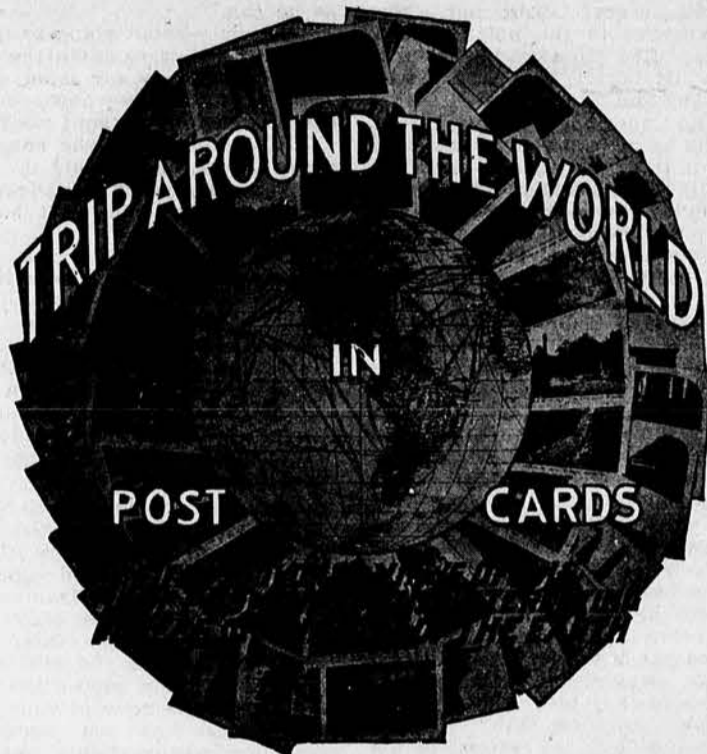
Dominick went up the hill in the clear,
golden sunlight, and in his revolt he pushed
Berny from his mind, and let Rose come in
her place. His thoughts, always held from
her, sprang at her, encircled her, seemed to
draw her toward him as once his arms had
done. She was a sacred thing, the Madonna
of his soul's worship, but today she seemed
to bend down from her niche with less of
the reverent saint than of the loving
woman in the face his fancy conjured up.

Standing on the summit of the hill, where
the wall of the quarry drops down to the
water front and the wharves, he relinquished
himself to his dream of her. The bay lay at
his feet, a blue floor, level between rusty,
rugged hills. There was an island in it,
red-brown, incrustured with buildings, that
seemed to clutch their rocky perch with
long strips and angles of wall. In the reach
of water just below there was little ship-
ping, only a schooner beating its way to
sea. The wind was stiffer down there than
on the sheltered side of the hill. The
schooner, with sails white as curds against
the blue, was tacking, a long, slantwise
flight across the ruffled water. She left a
thin, creamy line behind her which drifted
sidewise into eddying curves like a wind-
lashed ribbon. Dominick, his eyes absently
on her, wondered if she were bound for the
South Seas, those waters of enchantment
where islands, mirrored in motionless la-
goons, lie scattered over plains of blue.

A memory crossed his mind of a descrip-
tion of some of these islands given him by
a trader he had once met. They were
asylums, lotus-eating lanes or oblivion, for
law-breakers. Those who had strayed out-
side the pale who had dared defy the
world's standards, found in them a haven,
an elysian retreat. They rose before his
mental vision, palm-shaded, lagoon-encircled,
played upon by tropic breezes, with glassy
waves sliding up a golden beach. There man
lived as his heart dictated, a real life, a
true life, not a bitter tale of days in pro-
testing obedience to an immutable, heart-
breaking law. There he and Rose might
live, lost to the places they had once filled,
hidden from the world and its hard judg-
ments.

(To be continued.)

AROUND THE WORLD



We Will Make You a Present of This "Tour of the World" on Post Cards

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On this journey around the world we visit first such famous places in our country as Avalon, Santa Catalina, Calif.; Cascade Locks on the Columbia river; Totem Pole and Pioneer Square, Seattle, Wash.; Jupiter Terrace in Yellow Stone Park; Pike's Peak and Garden of the Gods; Santa Fe Mission depot at Albuquerque, N. Mex.; Fort Riley, Kan.; Old Water Tower, St. Louis, Mo.; the Milburn residence where President McKinley died September 14, 1901; Liberty Bell now hanging in Independence Hall, Philadelphia, Pa.; and a number of other places equally interesting.

Among the scenes in foreign lands we visit Balholm, Germany; Berlin; Ehrenfeld Castle on the Rhine; Munich; Bern, Switzerland; Church of Our Lady (Notre Dame), Paris; the Casino at Monte Carlo; Burns' Cottage, Ayr, Scotland; Scotland Yard and Whitehall Court; Muckross Abbey, Venice; Vesuvius, at Naples, Italy; Malaga, Spain; Malta, and many others that you have for years been wanting to see.

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COUPON.

KANSAS FARMER, Topeka, Kan.

Enclosed find three 2-cent stamps (6c) for which send me the 12 beautiful Pictorial Post Cards referred to above; also tell me how to get another 50 Tour of the World Cards absolutely free, not even postage required. Below I give my correct address:

Name.

Address.

HOME CIRCLE



The Question of Moving to Town.

RUTH COWGILL.

Mrs. Dick Brown's Madonna-like face wore an unusual expression of gloom and anxiety. She was tall and strong and brown and a gentlewoman and her friends said it was no wonder Dick was "crazy" about her. She loved everyone in the neighborhood, except old "Red" Henderson, who was cruel to his horses, and to his wife and his boy and him she hated with a great and uncomprehending hatred, hated him because she loved the meek and gentle things he abused. She was essentially a Madonna, the loving mother to all the world, and there was no one in the township but had known the gentleness of her care in illness, or the helpfulness of her sympathy in trouble. Out of her busy life, somehow, she found time to spare when any one needed her. And whether it was wild Bill Dickens, who rode his sweating horse up to her back door, or poor old Father Billings who sent word to her periodically that he was dying—whoever it was, she found her joy in ministering to them and easing their troubles.

But it was not Bill, nor was it Father Billings who worried her today. It was, in fact, that husband of hers, restless, hard-working, unlucky Dick. Dick, with his wizened little figure, and his bonny blue eye, and his sharp voice, and his love and his ambitions. Yes, that was it, his ambitions! Where would they lead him? Where would they lead them both? He was so eager to be rich, so restless at his slow success, that he was about to abandon the farm. Think of it! To abandon the farm, that place which they both loved, their first home together, where they had toiled and rejoiced and dreamed together, where the little child of their hopes had lived and left them. Ah! she could not leave it. And to go to town, into the grocery business! He would die in town, and she knew it, working himself to death as it was his nature to do, and getting no reward but failure—and so forth and so forth. You know how a woman talks when she is blue.

She was feeling very tragical, when she heard the sound of wheels. Looking out, she saw Tommy Henderson, old "Red's" imbecile son, in their rickety old buckboard, pulling in the poor beast that only waited for an excuse to stop.

Mrs. Brown went to the door.

"Hello, Tommy," she said. "Won't you come in?"

"No, I can't," he said. "Ma said I mustn't."

He lapsed into silence and sat looking at her vacantly.

"Did you want something, Tommy?" Mrs. Brown asked.

"Yes, ma sent you this," and he handed her a dingy slip of paper.

"Please come," she read. "I'm awful sick and nede you."

Without a word she tied on her sun-bonnet, stopped to write a note for Dick should he come first and find her away, then climbed up beside poor Tommy and rattled away with him to that place of wretchedness which he called home.

Dick found her there late that night, trying to make comfortable the poor woman's last hours, for she was dying.

"Her whole thought is of Tommy," Mrs. Brown whispered. "What will become of him, now?"

"The dying woman must have heard something of their whispering, for she looked at them pitfully.

"Tommy, poor Tommy! What will become of Tommy?" she murmured, her eyes restless and anxious and unspeakably sad.

Dick looked at his wife for just one fraction of a second. They understood each other very well, Dick and his wife. Then his true clear blue eyes looked back into those unspeakably sad and anxious ones, and he said, gently, "Don't worry about Tommy, Mrs. Henderson. We will take care of him."

And so the woman died in peace, and Dick had a poor feeble-minded boy on his hands.

As they drove home together in the

dark small hours of the morning, his wife said to Dick

"What will we do with Tommy?"

She knew, but she wanted to hear him say it.

"We'll just have to keep him with us, and let him help around the place as he can."

"Yes, but—about going to town?"

"Oh—when it came to the point, I couldn't make up my mind to it, today. And besides—how could this neighborhood do without you?"

"Oh, I'm so glad," she snuggled up close to him, as she said it. "Now I can keep my eye on Bill Dickson, and Father Billings and we'll both take care of Tommy."

It does not take a great deal to make a woman happy, sometimes.

Room At The Top.

There are more men working in the mines than there are managers above ground. There are more men competing for the jobs requiring hard labor than there are for the so-called snaps in the offices where the superintending is done.

Young man, if you want to be where competition is fierce and pay meager, if you expect to stay there, then just fool away your time and opportunity, don't study and take advantage of all the golden opportunities of school life, just associate with the loafer and the clock-watcher, and you will soon be graduated for just such a job through life. It may be none of your employer's business how you spend your spare time when off duty, but he will make it his business how you take hold of the work when on the job.

It is expected that every young fellow should begin at the bottom but it is not expected that he should always stay there if he has anything better in him. He should stay there long enough to become proficient to go up higher.

Room at the top? Yes, lots of it. Never has there been such a dearth of honest, efficient workmen in all callings of life as now. In spite of the fact that the technical schools are training and turning out a more practically educated manhood and womanhood than ever before the high places are not full. The cigarette and other evils are making for inefficiency as fast as the schools are equipping for service.

The man with high ideals is never contented with anything but the highest place he is capable of filling. Ambition spurs him on. Nothing can hold him back. It may be a long up-hill climb, but he will some day be seen at the summit waving the banner of victory.—From the Oglala Light.

Learning Home Science.

Miss Catherine Roberts was a pupil in the two weeks' school for housekeepers at the University of Illinois in January, and she made an unique and most instructive report of it to the Illinois Farmers' Institute, in part as follows:

One girl who had raised an acre of corn, and taken a prize for some of it over the heads of boys, and who knew how to make butter and to cook, having earned her expenses at Urbana by winning in a bread contest, liked the lectures best that suggested higher ideals of living and a broader outlook on life, rather than those that conveyed practical knowledge. It was new to her to learn that inventions could lighten house labor as they had farm labor. The experimental house told her this.

Another lady said, "It would be nice for our hired girls to take this course, wouldn't it?" She said it was "awful" hard to keep a cook on the farm, and that the ones secured don't know much about cooking. I asked, "What do you do when you have no cook? I suppose you know something about it." "Oh, dear no," came the answer quickly, "this is the first time I ever cooked anything, and we just get along some way until we get another." She was enjoying the course decidedly, and I think the practical end of housekeeping will be her part the next time she is without a cook.

Shorthand Department

Back lessons will be furnished by the Shorthand editor upon request.

UPWARD STROKES

K um N an T R Th ine Period D J Ch W oo Wh H s

DOWNWARD STROKES

Ex P P L Y S in en G M B I U o v a a o av o

Each sign has a certain shape, and a certain size in proportion to the other signs—just as longhand letters have. Note that up strokes slant more than similar down strokes; they are naturally so written—in longhand.

In reading the Shorthand exercises, note that each dot and hook and each stroke and circle of a different shape or of a different size stands for a different sound—always the same sound; and that only actual sounds are represented—no "silent letters."

Thus the Shorthand word *dog* is made up of two different signs; the hook is one and the down stroke another: *dog* (d-o-g). This is just the same except that it has one additional sign: *dog* (D), making "s-e-e-d". The first sign of *dog* is the same as the last sign of *dog* and is therefore D; the second is short "o"; and the third is o: / making the word "dog".

dog is *dog* (d-o-g), exactly the same as "dog" except the last sign. *dog* is *dog* (d-o-g), exactly the same as "dog" except the last sign. *dog* is *dog* (d-o-g), exactly the same as "dog" except the last sign.

dog is *dog* (d-o-g), exactly the same as "dog" except the last sign. *dog* is *dog* (d-o-g), exactly the same as "dog" except the last sign. *dog* is *dog* (d-o-g), exactly the same as "dog" except the last sign.

Most of these signs are also used, standing alone, for certain complete words. Read the sound "er" or "R" after a shaded sign. Thus, "B" shaded is "Ber" as in "Bert," "bird," "burn," "labor," "break."

Read "T" or "t" after a lengthened stroke, the "L" length being longer than the "T" length. Thus, "FT" is the same shape as "F," but longer; "FL" is also the same shape but still longer than "FT."

A dot under the end of a sign indicates "ing" or "thing."

Longhand methods of abbreviation are used also in shorthand.

LESSON X

Here are the first five sentences. How high is the cedar tree? Bert here now. The cur sat beside the curb. The bird chirps all day. Cora was here when we got there. Write out the others and send them in for correction and suggestions, in accordance with the arrangement indicated in the heading of the department.

We learned much about cooking, especially bread making, and had time to examine a little, the chemistry of cooking, with lectures on Care of the Sick, Home Management, Division of Income and Domestic Architecture, and it was especially instructive to receive pamphlets on all forms of household instruction.

Since my return from Urbana I have noticed every house, applying to it what I learned about domestic architecture. Every good piece of bread I taste has a new meaning. I have learned to cook enough kinds of simple food to live on the rest of my life. I learned where to obtain, and then bought one of the best account books I have ever seen. I learned something about removing varnish, and re-finishing wood; how to tell genuine linen, silk and wool, in buying cloth; the comparative cost of foods with their properties and the advantages and disadvantages of cooking by electricity, coal and gas.

A noticeable fact concerning the girls in attendance is that the higher educated they were the less they knew about the household. This was because they had been too busy studying other things to notice the domestic machinery of their homes.

A grave man of affairs, who has heavy business responsibility, said to me the other day, "Men have not enough to do now, with their stocks and bonds, banks and business. Men will have to take up the question of cooking soon." He said it as he passed into the ranks of ever-growing boarders, who flock eagerly and gratefully to meals, between the intervals of vanishing immigrant cooks. I wanted to tell him that women all over the country were busy with the subject, but could not truthfully say that I thought the average woman knew her business as thoroughly as he knew his.

A young married man in Chicago told me that he had no married friends, among all the young men whom he knew, who were not he over heels in debt. It was a startling statement from a man with a large acquaintance. The price of rent and food materials make it hard, but you cannot look into these homes individually without seeing a better explanation of it all. The girls have not been properly educated for their business. French, music, and Latin fail to be a young housekeeper, when she hopelessly at the mercy of an ignorant, ignorant, extravagant cook. Nothing in her past experience has taught her how to keep accounts. Hard wood floors are washed with water because she knows no better; it costs to have the finish restored. Good food materials are ruined by poor cooking. Greasy soups, lumpy gravy and poorly iron linen, frequently appear.

I dined with seven other guests the home of a bride not long ago. O duck appeared before the mortifying host which he tried in vain to call for ten people. A variety of cataprophes followed, which ended in the ready made dessert, not coming from the caterer. The young cook in the kitchen opened the only can of preserves in the house, which served for people respectably, the fifth saucer in two pieces in it, and the next one, the last two, juice. The assembled group could not longer keep back the suppressed mirth, and the young hostess, sitting so prettily in the midst of her trousseau, wedding dishes and presents, thanked us for our laughter. Such women know less about housekeeping than did Dora Copperfield whom Dickens wrote, yet live in age when every demand is laid upon them. Swamped in debt, with no food, and with no knowledge how to improve matters, is it any wonder the romance often loses its luster?

I was in a home of luxury not long ago. The inmates of that home were not selfish people, but ignorant

work, and of the conditions best suited to a worker. While the quarters where the family lived had every device known to the modern world to increase the convenience and welfare of the family, the cook worked in a dark kitchen, with inadequate equipment. The place was not built to save weary feet extra steps. Ten cooks came and went in that house last winter, to the discomfort of the entire household. Such homes as this are in the great minority. Most of us come into closer contact with actual work.

What We Need.

It is a splendid thing for this nation that we have some fine, strong men with ideals which they keep, even when they are in direct opposition to the general spirit of the times. And when some such man speaks his convictions, he is worth listening to, for one's own good. Such a man is James Willis Gleed, and in a recent address to some college young people he said what is good for all young people to hear. Mr. Gleed says:

We don't need smart men, we don't need brilliant men, we don't need successful men, we don't need famous men; what we do need is just brave, strong, wise, useful, good men!

The welfare of the people of this country depends, in the final analysis, upon the character of its individual citizens. We may have untold wealth of the material kind; wonderful buildings, factories, tools, processes, railroads, farms, mines, houses, business organizations and systems; great fortunes and little fortunes; material powers and comforts without end; and yet be, as a nation, close to ruin and decay and a long night darker than the middle ages. We may have a high degree of general intelligence, much knowledge, much skill, much culture, great school systems, enormous colleges richly endowed, many libraries, innumerable books and countless newspapers, vast talent and a great deal of genius; in a word we may have great and general intellectual activity and power, and still be a pitiable and even hateful spectacle in the eyes of after ages. Political forms, systems and institutions may be the best possible, written laws and constitutions may be the wisest ever put upon paper, written creeds of every sort may be the embodiment of truth, the church, even, may be rich in money and adherents and apparently stronger than ever, and yet the people may have no more reason for complaisance and self-congratulation than the people of Sodom just before the great catastrophe. Safety, salvation, does not lie in goods nor in knowledge, nor in talent, nor in genius, nor in the outward church, nor in correct abstract statements, nor in unassailable creeds, nor in wisely constructed institutions, nor in good laws, nor in any form of words, either religious or political, nor in the mere formal assent to these words, however general such assent may be. Safety or salvation lies precisely and solely in the character—in what we call a goodness—of the individual citizen. All these other things are of importance only as they bear upon that one vital thing.

The days of idolatry are not past. We are still chargeable, almost as much as ever, with the worship of false gods. We still mistake the symbol for the reality, the means for the end. We still deceive ourselves and are deceived by the imperfections of language. We still worship and deify something which may be a means to a desired end and lose sight almost entirely of the end itself. National wealth is not national weal; it may be an aid to it. Science and letters are not national weal; they are generally an aid to it. Good laws and constitutions are not national weal; neither are great churches or perfect statements of doctrine. National weal is national character.

The Honeysuckle Baby. A Story for Little People.

RUTH COWGILL.

Mary was out by the Honeysuckle vine making babies. Did you ever make babies from Honeysuckles? You just pull off one of the long red flowers, and when you have stripped its little round green head of its green hood, you have a Honeysuckle baby. And if you want the baby to have a very fancy dress, you add ruffles made from the lower part of others of the blossoms and slipped over the little green head. You can make hats and bonnets, too, from parts of the blossoms. I have made many, many Honeysuckle babies, so I know just how it is done.

As I was saying, Mary was making some of these tiny flower babies, when she heard the tiniest voice saying:

"I'd like one more ruffle, please."

"What?" said Mary, in great astonishment, dropping the flower she held in her hand in her surprise. She had thought she was all alone.

"I like five ruffles on my dress, and you have given me only four."

It was the Honeysuckle baby talking.

"Oh, you want another ruffle, do you," said Mary. "Well, you mustn't have it, that's all."

"Oh, very well, Miss Stingy," said the Honeysuckle baby, looking cross.

"Just wait till you're a flower child, and have to ask for everything you want. You wouldn't like it, you know you wouldn't."

"Oh, well, I suppose you might as well have it," said Mary, relenting.

"Here's one all made."

But when she tried to slip it over the little green head, it was too small. It would not begin to go over.

"Why, how you've grown!" she said.

"Why, dear me! You're twice as big as you were. Why, I can see you grow! Why, what a funny-looking little girl you are! Why, you are as big as my doll, now! Oh! do you suppose you will grow as tall as I?"

"I don't know," said the flower baby.

"Don't bother me now. I'm busy."

"Busy! Why, what are you doing?"

"Growing, child, growing. There, I'm through now, I think."

She was as big as Mary's biggest doll. Mary looked at her in astonishment. She surely was a queer-looking child, with her green head and red dress.

"If I only had arms, like you," she sighed.

"You poor dear!" said Mary, sympathetically. "How sad to not have arms! How will you comb your hair?"

"Haven't any to comb," said the flower child.

"How can you eat?" asked Mary.

"I am fed by the dew from Heaven," said the child. And now, when Mary looked at her she did not look so queer, but rather pretty.

"You are a dear," said Mary, putting her arms around her. "I am so glad you have come to play with me, for I am often very lonesome. I have no little sister, but now you shall be my sister. What is your name, little sister?"

"Honeysuckle. But you may call me Honey for short."

"All right, Honey," said Mary. "Mother calls me Honey sometimes when I am good."

"Now," Mary went on. "Sit down beside me, and we will talk it all over."

"I can't sit down," said Honey, "or I should spoil my dress. But do you hear that Robin singing? He is my friend, who sits on the top of that tree and sings every day. And here comes my Humming Bird. Dear little bird, he will hardly know me when I've grown so large."

"I hope he will not be afraid of us," said Mary, softly. "How fast his wings go!"

She fell to watching him, fascinated by the quivering of his tiny, dainty body. She felt strangely sleepy, and could barely see the Humming-bird and the Honeysuckle Baby through her half-shut eyes.

"But you are my little sister, Honey," she murmured, sleepily.

"What's that?" said a big man's voice. "What's that about a little sister?"

She opened her eyes wide, and there stood her father, looking down at her where she lay in the grass, under the Honeysuckle vine.

"But where is Honey?" she asked, anxiously.

Father looked puzzled.

"Have you been asleep?" he asked.

"Oh, no," said Mary. "But one of my Honeysuckle babies began to talk to me—and she grew and she grew and she grew."

"Oh," said father, smiling, "I see."

"And she was going to be my little sister," Mary went on. "But I can't find her. Did you see her, father?"

"No, dear, you've been asleep and dreaming," said father.

"But I wanted her for my little sister," said Mary, with tears in her eyes. "I am so lonesome for a little sister!"

"You have a little sister in the house," said father, smiling as if he were very happy. "You may come with me and see her if you will be very quiet."

"Really and truly, have I a little sister?" asked Mary.

"Really and truly," said father, "a very, very little sister."

Mary took his hand and very quietly

walked with him into the house.

And there she saw her baby sister, lying asleep, and all red in its funny little face, beside mother on her nice white bed.

She did not speak, because she had been told to be very quiet; but she smiled and smiled.

"Kiss her, Honey," said mother.

"She is better than the Honeysuckle baby," said Mary, as she kissed the tiny warm face.

Mother did not understand her, but father did.

Fishing.—A Story for Little People.

RUTH COWGILL.

It was a nice warm day and the children decided to go down to the creek to fish. First of all, of course, they asked mother if they might.

"Yes, you may, if Charles goes, too," said mother. Charles was the oldest. He was twelve.

"Oh, Charles wants to go," said Mildred, who was two. "And mightn't I fix up a little bread and butter lunch?" asked Maggie. "We get so hungry!"

Mother gave her consent, and they started off in about half an hour, very happily. There were six of them, and each one had a pole and line.

They tried to be very quiet when at last they came near the creek, but Baby Mildred would chatter, and Harold, next older, made more noise, trying to keep her quiet than she did.

But they all sat down on the bank and threw their hooks in the water. They were very, very quiet, so as not to frighten the fish away. For full five minutes there was not a sound but the birds twittering and the leaves softly nestling and water rippling, then Harold whispered, pretty loudly, "Let's eat, I'm hungry."

"Hungry!" said Maggie, laughing, "why, we just got here."

"I don't care. It's been half an hour, anyway," said he.

"Oh, well," said good Maggie. "If you are hungry—"

But just then Baby Mildred gave a little squeal and dropped her pole. Charles, who sat near her, reached over quietly and caught it just as it was slipping into the water.

"A bite!" he said, under his breath.

He gave a quick jerk to the line. It flew out of the water and caught overhead in a tree; but there, hanging to it, was a fish, wriggling and squirming at a great rate.

"Good for you, Mildred," he said, because she was the baby. "You caught the first fish."

He took it from the hook and put it on a forked stick, ready to take home. It was not a very big fish but it was big enough to eat.

Mildred clapped her hands and kicked her little feet, and altogether was a very proud little girl. Charles baited her hook for her again, and they all settled down once more, eating forgotten, each one eager to be the next one to land a fish.

Charles caught the next one, and then Harold, and altogether they got enough to eat for supper for the whole family. They had really forgotten all about their lunch until they started home, and Harold said "Oh, my! I'm hungry!"

Without a word, Maggie handed him a sandwich. Then they all had to have one, and while they struggled along eating them, they came upon a patch of wild strawberries, and there were ever so many ripe berries hid-

"Buster" Linene 15c

This is a strong, serviceable cloth that defies hard wear and comes from the wash clear and fresh looking. Plain colors flaked with white—brown, tan, blue, green, pink, grey—27 in. wide. We sell it for boys' suits and dresses, women's outing and traveling suits.

Shall we send you samples?

Kansas Mail Order Service
The Mills Co., Topeka.

den away under the leaves, and oh! how good the little red fruit tasted! Maggie was always very thoughtful, and so she said, "Let's get enough for supper and take them to mother."

They all joined in with a good heart and saved all they could find, and there really were enough to give each member of the family a taste that night for supper.

They were very happy as they trooped into the kitchen and showed mother what they had. She kissed them, each one, and sent them all away, all except Maggie, who prepared the berries for supper, and Charles who cleaned the fish.

The whole family said it was an elegant supper, and voted to send the children fishing again some time.

American Berkshire Association Special Premiums, 1909

For the purpose of encouraging Berkshire breeders to exhibit their herds at the fairs, the American Berkshire Association will offer liberal cash and other prizes.

At each state fair where a separate classification is offered for Berkshires and where the State Berkshire Association will contribute \$15.00 for a second and third prize, the American Berkshire Association will offer a solid silver loving cup, to be known as the American Berkshire Association Trophy, (value, \$50.00), for the best boar and three sows under one year old, owned and exhibited by a resident of the state in which the fair is held.

American Royal Live Stock show, Kansas City, Mo., Oct. 11-18, 1909. The American Berkshire Association will offer \$200.00 and the American Royal Live Stock Show \$150.00, making \$350.00 offered for Berkshires in the breeding classes.

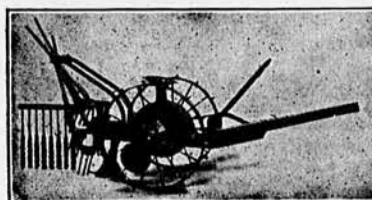
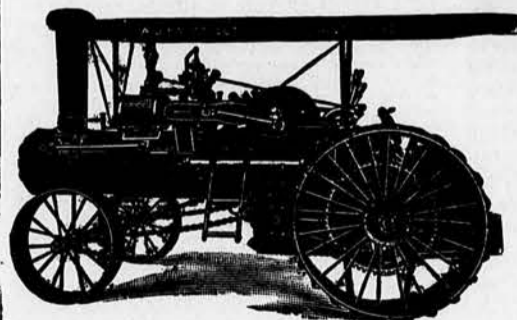
International Live Stock Exposition, Chicago, Ill., Nov. 27-Dec. 9, 1909. The American Berkshire Association will add \$200.00 to the regular classes for Barrows and, in addition, will pay \$50.00 to the exhibitor winning the Grand Champion Carload, if the hogs are Berkshires, or show a preponderance of Berkshire blood. For further particulars, address Frank S. Springer, Secretary American Berkshire Assn., Springfield, Ill.

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Famous Baker Plow and Thrasher Engines

also manufacturers of the PRAIRIE QUEEN SEPARATOR. We have a full line of engines and separators on hand for your inspection. Write for catalog.

THE PRAIRIE QUEEN MFG. CO.,
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A Real Potato Digger.

Light Draught Potato Harvester

A digger that digs where others fail. Guaranteed to work under all kinds of field conditions with only two horses. Better write for our circulars and field scene pictures.

STEVENS MFG. CO., Marine's Wis
Builders of High Grade Potato Machinery. Transfer and distributing points in every potato raising section.

PUBLISHERS' NEWS

The American Porpoise Lace Co., 267 Mt. Pleasant Ave., Newark, N. J., has an ad on page 8, offering Atlas Porpoise Shoe Laces, three pairs for 25 cents. Porpoise laces outwear all others, in fact they usually outwear a pair of shoes. Order direct from the ad.

The Ann Arbor Machine Co., Box 132 Ann Arbor, Mich., has a new ad in Kansas Farmer, offering the Ann Arbor Jr. hay press. The ad claims a capacity of 23 tons in five hours. The Ann Arbor Jr. is a splendid baler and no mistake. Get free catalog now by addressing as above. See illustrated ad on page 9.

Galls on horses this time of year are common. A reliable, well known cure for them is Bickmore's Gall Cure. et a sample of it and a valuable book on the horse by sending six cents in stamps to pay postage, addressing Bickmore's Gall Cure Co., Box 916, Old Town, Maine. See illustrated ad on page 8 of this issue.

If you are going to be in the market for land, improved or unimproved, this is a good time to begin securing information about it. A fine list of land bargains appears on page 7 of this issue on the real estate advertising page. Write some of these advertisers, telling them you saw their bargains listed in Kansas Farmer.

Red, Brown and Green Roofing.

Ruberoid, the well known prepared roofing is made in different colors, as stated in the ad on page 17, and the colors will not wear off nor fade. This roofing has stood the test for 17 years. It is sun proof, rain proof, snow proof, weather proof. It is nearly fire proof. Get the free Ruberoid (not Rubberoid) book. Address Department 583, The Standard Paint Company, 100 William St., New York.

More Grain Profits.

The Manson Campbell Company, Detroit, Mich., with branches at Kansas City and other points, has an ad on page 16 of this issue. The Chatham fanning mill is very widely used in all parts of this country and Canada, 250,000 of them having been sold already. You can buy a Chatham on 30 days free trial, freight prepaid. Write for prices and new catalog, mentioning this paper. Most Kansas Farmer readers should address The Manson Campbell Company, Kansas City, Mo.

An Alfalfa Mill for \$300.

W. F. Reschke, 908 Washington Ave., Wichita, Kan., is selling an alfalfa mill for only \$300, made by him in Wichita. This

Emporia Business College
Clean moral surroundings. Special course for farmer boys.
Drawer F. Emporia, Kan.

Highland Park College
Des Moines, Iowa.

Terms Open Sep. 7, Oct. 18, Nov. 30, '09 and Jan. 3, '10
A Standard College that comes just a little nearer meeting the demands of modern education than any other College in the country.
THE FOLLOWING REGULAR COURSES MAINTAINED:
1 College 11 Pharmacy
2 Preparatory 12 Music
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9 Machinists' Course 19 Summer School
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Instructions given in all branches by correspondence.
Board \$1.50, \$2.00 and \$2.50 per week. Tuition in College Normal and Commercial Courses, \$15.00 a quarter. All expenses three months \$49.40; six months \$93.11, nine months \$135.40. School all year. Enter any time. 3000 students annually. Catalog free. Mention course you are interested in and state whether you wish resident or correspondence work.
Highland Park College, Des Moines, Iowa.

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GOVERNMENT LAND
FREE IN ROUTT COUNTY
COLORADO

To secure good farmers, we tell you how to locate 160 acres of fine government land in Route County on Moffat Road Denver, Northwestern & Pacific Railway. Big crops, pure water, good soil, fine climate and markets. We have no land to sell, it absolutely free from the government. Law allows you to return home for 6 months after filing. Write for free book, maps and full information that tells how to get this land free. Address, W. F. JONES, General Traffic Manager, 710 Majestic Building, Denver, Colorado

DAISY FLY KILLER



placed anywhere, attracts and kills all flies. Neat, clean, ornamental, convenient, cheap. Lasts all season. Made of metal, cannot spill or tip over, will not soil or injure anything. Guaranteed effective. Of all dealers or sent prepaid for 20 cents.
HAROLD SOMERS
150 DeKalb Ave.
Brooklyn, N. Y.



GET BUSY
Sawing your summer's wood with the DIAMOND SAW FRAME AND SAW. The very best made. FULLY GUARANTEED. All styles of frames. All sizes of Saw Blades. Ask your nearest dealer, or write direct to the factory. Printed matter free.
NEW WINONA MFG. CO.
104 W. Fifth Street, WINONA, MINNESOTA

puts an alfalfa mill within the reach of nearly every farmer. If you grow 40 acres of alfalfa you can use one of these mills profitably. If you grow alfalfa on a smaller scale you can do work for your neighbors. It's a good time to get in line with one of these mills. Write Mr. Reschke about it, addressing as above, and saying you saw his ad in Kansas Farmer. See page 16.

B. and O. Buffalo Calf Shoes.

Bentley and Olmsted Shoes, sold for \$3 for the best, are popular wherever known, and that means all over the Central West. The new ad of this company on another page makes an offer and challenge. You get from your dealer a sample of the leather of which the shoes are made. If you can tear it with your fingers, you get a pair of B. and O. Buffalo Calf Shoes free. These shoes are great work shoes, none better. You ought to get acquainted with them. If your dealer doesn't handle these shoes, send his name to Bentley and Olmsted Shoe Co., Des Moines, Iowa. Mention Kansas Farmer.

Cream Today—Cash Tomorrow.

This is the modern method of buying cream, and is a mighty satisfactory method surely from the cream producer's point of view. It is the method of the great Blue Valley Creamery Company of St. Joseph, Mo., which buys cream direct from the farmer under the Individual Shippers' System. The Blue Valley Company pays highest prices always. When you get a right price, and the check starts to you the day the cream is received in St. Joseph, you are doing business surely on a satisfactory basis. Try it. "The Secrets of Successful Dairying" is a valuable booklet, sent free to all who ask for it. The Blue Valley price for butter for this week is 25 cents. Address Desk C, Blue Valley Creamery Company, St. Joseph, Mo.

Binder Twine.

We wish to call the attention of our readers to an advertisement on binder twine appearing in this issue. Messrs. A. J. Child & Sons, Box 91, St. Louis, Mo., have bought at trustee's sale 200 tons of new Standard binder twine and are offering it at considerably less than the regular price on twine. They advertise that they are making customers a saving of 2 to 4 cents a pound, or \$1 to \$2 per bale. This is well worth taking advantage of, and besides they pay the freight in Illinois, Indiana, Iowa, Missouri, Eastern Kansas, Eastern Nebraska, and Northern Arkansas; in other states they make an allowance for freight. This is a snap and well worth taking advantage of. Small samples by mail on request. It would pay you well to write them. See ad on another page.

Look Out for Lightning.

"Lightning never strikes twice in the same place." It doesn't need to. Once is enough. It is a wise man, then, who protects his buildings against this one stroke. If the house and barn are not protected against lightning this one stroke may cost you the savings of years of hard labor. Fire insurance will not save your buildings. Lightning rods may. A poor rod is worse than none. A good rod is a real protection. A good rod should be made of the best conducting material and have a large conducting surface. It must not have any bad joints. A rod made of good material but with bad joints is worse than one of bad material. A really first class rod has no joints. The very best rod that has yet been devised is one composed of a large number of copper strands, braided or woven into a continuous cable. This gives it the best conducting material and the largest possible amount of conducting surface. Write to the Wizard Lightning Rod Co. at Olathe, Kan., for a nicely illustrated booklet. It will do you good. Kindly mention Kansas Farmer.

The Hess Alfalfa Mill.

The Hess alfalfa mill recently placed on the market, is the result of the demand for a popular priced mill that would grind alfalfa and other forage plants as well, and thus be of a service to the user of small power. It is believed that these points have been secured in this mill. It has a small, compactly built frame, which with feeder and delivery covers only 14 feet of space. The frame of the mill inside is only two feet square. The lower portion or base being of Bessemer steel of bridge construction, thus combining the utmost rigidity with lack of cumbersome weight. The grinding or more properly speaking, the cutting of the hay or fodder is done by 76 highest grade crucible steel knives, solidly fastened to a hexagon shaft. There are 40 retarding knives on one side and 35 on the other. Various sizes of screen produce the feed in any time making the meal as dusty fine as do most of the grinding mills. The knives do not need grinding. The Hess mill with a six horse-power engine has a capacity of 1,000 pounds an hour of alfalfa, corn fodder, corn ear, or shelled, kafir corn, cottonseed, sheaf oats or any combination of these. The mill has been given severe and continued tests on all these products and has made a better record than claimed above, but this amount is guaranteed and is a profitable quantity for the mill user for whom the mill is designed. It weighs but 900 pounds, thus making it readily a superior portable proposition. The price is \$250 f. o. b. Wichita; with an eight horse-power engine on skids \$500; on trucks, complete as a portable milling plant \$600. These mills are also built in 30-inch size, having a capacity of 1,500 pounds per hour. Equipped with the Climax Self Feeder. This size is better adapted to those wishing a mill for grinding alfalfa for commercial use. The 24-inch mill is also equipped with the Climax Self Feeder for \$100 extra. The machine is so compact and has such a large capacity for its cost, is well really appeal to every farmer who uses power or who feeds any amount of stock. The saving of waste in feeding the ground alfalfa and fodder, the stock taking every portion of it, will alone pay for the mill in one season, besides enabling the farmer to dispose of surplus at a very greatly increased price. We ask our readers to look up the ad on another page and write Wm. T. Reschke, 908 N. Washington street, Wichita, Kan.

Profit in Spraying Potatoes.

The potato spraying experiments of the New York State Experiment Station, Geneva, for 1907 and 1908 are summarized in a single "popular bulletin," No. 307-311, which is now being distributed. These two years were dry



-and the highest price that is paid - -

We want your cream rich in butter fat—the kind that will enable us to maintain the superior quality of Blue Valley Butter—we will buy all you can produce, paying the very highest price—mailing you a check for full amount of each shipment the very day it is received by us.

This week we will pay for butter fat 25c

Write today for our free booklet, "The Secrets of Successful Dairying." It will tell you how to secure cream with the greatest amount of butter fats—how to get the most money out of your dairy herd—all about our "Individual Shipper's System" which appeals to every up-to-date dairyman farmer. It's money in your pocket to secure this valuable information at once. Address Desk C.

BLUE VALLEY CREAMERY CO., St. Joseph, Mo.

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Thorough and complete course. Great Demand for Graduates as Practitioners, Teachers, Investigators, Sanitary Officers, Army Veterinarians, U. S. Inspectors. Catalog and other information sent on application, DR. S. STEWART, Secretary, 1342 East 15th Street, Kansas City, Mo.

SYCAMORE MINERAL SPRINGS, Sabetha, KANSAS

The medicinal properties of these springs are well known. Located in a beautiful section of the state. Cured here. Hundreds of Kansas people visit here every year. Delightful health resort. Excellent hotel accommodations. Ideal and stomachic. For further particulars write to the most reliable source. SYCAMORE MINERAL SPRINGS HOTEL, Sabetha, Kan.

AN ALFALFA MILL FOR EVERY FARMER

PRICE \$300

F. O. B. WICHITA

THE HESS ALFALFA MILL
Every farmer growing as much as 40 acres of alfalfa can profitably operate one of these mills.
Manufactured and for sale by
W. F. RESCHKE, 908 Washington Ave., Wichita, Kan.

More Grain Profits

Pay me on time, or cash, my factory price, but be sure to try a Chatham, anyhow. Clean your grain—before you sell it—or before you sow it. \$1,000,000 lost by farmers in every state each season by selling dirty grain is a low estimate. You are "docked" on the price because of dirt in every bushel. Cleans wheat for market. Takes oats, cockle, garlic, mustard and chaff out of wheat. Cleans red clover—takes out buckhorn plantain. Cleans alsike clover and alfalfa. Cleans beans, oats, barley. Grades corn. Cleans timothy seed.
TAKE 30 DAYS' FREE TRIAL ON A CHATHAM Fanning Mill, Seed Grader and Cleaner
FREIGHT PAID TO YOU
250,000 sold already in U. S. and Canada. Experiment Stations endorse them, and Agricultural Papers recommend them to subscribers. Write for full particulars—Prices and New Catalog Free—Address me at nearest city to you—**MANSON CAMPBELL, President THE MANSON CAMPBELL COMPANY, Detroit, Mich.** St. Paul, Minn. Portland, Ore. Kansas City, Mo. 24 Branch Warehouses for prompt shipments.
Sent Freight Prepaid to Any Farm On 30 Days' Free Trial

FREE—Calf and Pair of Shoes

Get a little Buffalo Calf from your dealer. If you can tear it with your fingers, you'll get a pair of B. & O. Buffalo Calf Shoes free. The calf is made from the same leather as the shoes. We take it from well cared for, well housed and well fed animals before they are three years old. We use summer killed stock only in order to secure uniform and close texture.
B. & O. Buffalo Calf Shoes
Made to wear longer and feel better than any other work shoe on the market. Our Buffalo Calf Tanning process toughens the skins, shrinks them, retains their "life" and makes them soft and pliable. We use only highest grade, heaviest weight Hemlock Texas steer hides for our outsoles. All counters, insoles and alpacas are solid leather. Send us your dealer's name if he doesn't carry B. & O. Buffalo Calf Shoes and we'll send a Buffalo Calf, and a free pair of our best shoes if you can tear it.
BENTLEY & OLMSTED CO., DES MOINES, IOWA
\$3.00 For the Best

seasons, so that blight was almost wholly absent one year, and little in evidence the other; yet spraying was profitable both years, in the experiments at the station, in business experiments in which farmers cooperated with the station and in volunteer experiments reported by other potato growers. The station tests have now been continued seven years, with and average gain, at Geneva, of 110 bushels to the acre from spraying every two weeks and of 84 bushels from spraying three times during the season. On Long Island the gains

were 54 and 29½ bushels respectively. Six years of farmers' business experiments, covering almost a thousand acres, have given an average gain of 43.8 bushels to the acre, and average net profit of \$17.94 an acre. On 1,700 acres sprayed during five years by farmers who have reported their results to the station, the average gain has been 50½ bushels to the acre. Such results certainly prove spraying potatoes a most profitable practise. Those unfamiliar with the details of such work should send to Geneva for a free copy of the bulletin.

Snap Shots Among the Breeders---By Reid.



J. W. Tolman, Hope, Kan.



A. W. Shriver, Cleveland, Kan.

FIELD NOTES

FIELD MEN.

O. W. Devine.....Topeka, Kan.
Jesse R. Johnson.....Clay Center, Kan.
J. W. Johnson.....Beloit, Kan.

PURE BRED STOCK SALES.

Nov. 9—J. C. Robinson, Towanda, Kan.
Nov. 11—Percheron Breeders, Sale at Manhattan, Kan. Will H. Rhodes, Manager.

Jersey Cattle.

Sept. 30—Mrs. Wm. Britte, Pierce City, Mo.

Herefords.

Sept. 29—Miss Lou Goodwin, Blue Rapids, Kan., dispersion.

Poland Chinas.

Aug. 3—J. A. Jenkins and W. L. Clark, Conway Springs, Kan.
Aug. 26—A. W. Shriver, Cleveland, Kan.
Sept. 23—J. R. Sparks, Hunter, Okla.
Oct. 5—J. D. Spangler, Sharon, Kan.
Oct. 20—Roy Johnson, South Mound, Kan.
Oct. 21—Herman Groninger & Sons, Bendena, Kan.
27—Geo. W. Smith, Pawnee City, Neb.
27—G. M. Hull, Garnett, Kan.
29—J. H. Harter, Westmoreland, Kan.
Feb. 12—D. A. Woltersperger, Lindsey, Kan.
Feb. 16—J. H. Harter, Westmoreland, Kan.

Durocs.

Sept. 3—H. J. Coppins, Potwin, Kan.
Oct. 27—Pearl H. Pagett, Beloit, Kan.
Nov. 5—Miner & Cross, Guide Rock, Neb.
Nov. 8—C. L. Carter, Cabool, Mo.
Nov. 9—A. L. Aitkin and W. W. Weast, Parsons, Kan.
Nov. 12—S. W. Alfred & Son, Sharon, Kan.
Jan. 31—J. E. Jones, Clyde, Kan.
Feb. 1—Pearl H. Pagett, Beloit, Kan., and R. G. Sollenbarger, Woodston, Kan. Combination sale at Concordia, Kan.
Feb. 2—E. M. Myers, Burr Oak, Kan.
Feb. 3—Rinehart & Slagle, Smith Center, Kan.
Feb. 4—W. C. Whitney, Agra, Kan.
Feb. 7—Frank Elder, Green, Kan. Sale at Clay Center, Kan.
Feb. 8—Samuelson Bros., Manhattan, Kan.
Feb. 9—Samuelson Bros., Cleburne, Kan.
Feb. 10—Samuelson Bros., Blaine, Kan.
Feb. 17—Thompson Bros., Garrison, Kan.
Feb. 18—T. E. Goethe, Leonardville, Kan.
Feb. 21—W. T. Fitch, Minneapolis, Kan.
Feb. 22—Pearl H. Pagett, Beloit, Kan.
Feb. 23—F. G. McDowell, Corning, Kan.
Feb. 23—R. G. Sollenbarger, Woodston, Kan.

Herefords.

Sept. 29—Miss Lou Goodwin's dispersion at Blue Rapids. Chas. R. Thomas, manager, Williamson Building, Kansas City, Mo.

C. M. Garver & Son of Abilene, Kansas, who have been so long and so favorably known as breeders of Poland Chinas, paid the capital city a visit yesterday. The younger Mr. Garver is now building up a dairy herd and came to Topeka, the center of the dairy region, to purchase dairy bred cows. These he found in the Holstein herd of J. B. Zinn at Sommerhelm farm and they pleased him so well that he shipped home 10 head. Mr. Garver will run a modern dairy of about 50 cows.

Stanfield's Durocs.

H. C. Stanfield of Buffalo, Kan., is offering some fancy Duroc gilts for sale. They are choice individuals and are of the most popular breeding, such as Kant Be Beat, Ohio Chief and Improver 2d. Write Mr. Stanfield for prices. Kindly mention Kansas Farmer when writing.

Morgan Horses at the Topeka Fair.

A special provision for Morgan horses is made in the premium list of the State-Wide Fair to be held at Topeka, Sept. 13-18, in the classification for American Carriage horses suggested by the United States Department of Agriculture. R. T. Kreipe, secretary, will furnish premium lists and entry blanks.

Will Sell the Big Kind.

Mr. G. M. Hull of Garnett, Kan., will sell a useful lot of the large type Poland Chinas at Garnett October 27. Mr. Hull has at the head of his herd Hadley Boy, sired by Hull's Hadley. Hull's Hadley was one-half brother to Big Hadley. Mr. Hull will advertise this sale in Kansas Farmer. Watch for further mention and arrange to attend this sale on October 27.

Fancy Durocs.

S. W. Alfred & Son of Sharon, Kan., have some choice spring pigs sired by Top Commodore, he by Commodore 13381, the Duroc boar that was first and champion and first at herd of aged herd at Illinois, Kentucky and Tennessee State Fairs, 1906. Write Mr. Alfred for prices on young herd headers. Kindly mention Kansas Farmer when writing.

J. E. Bundy, Goodrich, Kan.

A fieldman for Kansas Farmer had a short visit with J. E. Bundy of Goodrich, Kan. Mr. Bundy has at the head of his herd the show boar Nobleman by Meddler 2d. Nobleman has proven a great breeder both of large litters and quality. Mr. Bundy is planning to hold a sale Oct. 29 and sell a useful lot of spring boars and gilts sired by Nobleman. Watch Kansas Farmer for further mention of this sale.

Berkshires at the Topeka Fair.

The American Berkshire Association offers a grand silver loving cup worth \$50 for the best herd of Berkshires shown at the State-Wide Fair at Topeka, Sept. 13-18, provided that there are at least three herds on exhibition and provided that the State-Wide Fair gives a second prize of \$10 and a third prize of \$5 in cash. This special premium offer together with the regular classification ought to bring out the Berkshires in strong numbers.

Missouri Farm Cheap.

In this issue will be found the advertisement of Adams Bros. & Hamm, real estate dealers of Atchison, Kan. They offer this week what they declare is a real snap in a Missouri farm, consisting of 190 acres of well improved farm land only 40 miles from Kansas City in the best part of the state, where crops never fail. By consulting the ad it will be seen that the price is quite low considering location, improvements, etc. Write them fully, mentioning Kansas Farmer.

Land in Allen County.

The writer called on the enterprising firm of Smith & Wilson at Moran, Allen county, Kan. They have a great many bargains and farms just added to their list. This firm is using space with Kansas Farmer and they are well pleased with results obtained. We can say that Messrs. Smith & Wilson are perfectly reliable and are selling farms at bargain prices. If you have not written them look up on another page and write for prices or go and see some of their valuable farms. Kindly mention Kansas Farmer.

Zimmerman Herd, the Home of Mischief Maker.

Frank Zimmerman at Centerville, Kan., is planning to hold a Poland China sale Oct. 20 at which time he will sell a useful lot of Poland Chinas. Mr. Zimmerman says he expects to stay in the hog business but will conduct his business on a little different plan than he has in the past. Frank Zimmerman is one of the breeders that is deserving of more recognition from the breeders than he receives. The writer has seen Frank Zimmerman help a great many sales by bidding and buying when without him the sale would have been a drag. Give credit where credit belongs and on Oct. 30 next arrange to attend Frank Zimmerman's sale at Centerville, Kan.

The Big Bone Kind.

Mr. F. S. Cowles of Lawrence, Kan., is starting a card ad with this issue of Kansas Farmer. Mr. Cowles has a valuable herd of the large type Poland Chinas. Mr. Cowles is not only a breeder but a feeder. One thing that attracted our attention was a large crib of old corn on hand at the Cowles farm. Mr. Cowles says he always plans to

Red, Brown, Green Roofing

We now make Ruberoid in attractive Red, Brown and Green—suitable for roofing the finest home.

The colors will not wear off or fade. They are part of the roofing. Impregnated into the body of the roofing by our patented, exclusive process.

But whether you buy Ruberoid in colors, or the uncolored Ruberoid, you are sure of getting the best there is in roofing.

There are now more than 300 substitutes for the genuine Ruberoid roofing.

But Ruberoid is the original. And Ruberoid, and Ruberoid alone, has withstood the test of seventeen continuous years of actual use.

The first roofs of Ruberoid, laid in 1892, look good for many more years of wear—still weather-tight.

RUBEROID

(REGISTERED IN U. S. PATENT OFFICE)

Ruberoid is sun proof, rain proof, snow proof, cold proof, weather proof. It resists acids, gases and fumes.

It is so nearly fireproof that if you drop live coals on a roof of Ruberoid, neither the Ruberoid or the timbers beneath will take fire.

The secret of these wonderful properties lies in the Ruberoid gum which is used. Ruberoid gum is our exclusive product. No other maker can use it. That is why, of 300 substitutes, no one of them can possibly be so durable, so good as Ruberoid.

Get This Free Book

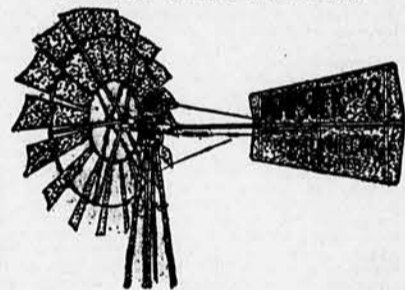
Before deciding on any roof for any purpose, get our free book which gives the results of our tests with all kinds of roofings—shingles, tar, tin, asphalt and ready roofings.

This book is a gold mine of practical roofing information, and will be sent free to all who address Department 59G The Standard Paint Company, 100 William Street, New York.

DEMPSTER WINDMILLS

Many Sizes and Styles.
Steel and Wood.
Vaneless and Solid Wheels.

The Dempster Steel No. 8.
MADE TO WORK AND LAST.



Noiseless, Long Lived Gears. Center Lift Crank. Three Bearings per Wheel Shaft. Reserve Oil Boxes. Many other good points. Address Dept. G.

DEMPSTER MILL MFG. CO.,
Factory, Beatrice, Neb.

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Omaha Sioux Falls Kansas City

\$10.00 Sweep Feed Grinder | **\$14.00 Galvanized Steel Wind Mill.**

We manufacture all sizes and styles. It will pay you to investigate. Write for catalog and price list.

CURRIE WIND MILL CO.,
Seventh St., Topeka, Kansas

GALVANIZED STEEL \$12.75 WINDMILL

Sold direct from factory to user at wholesale price. Strongest guarantee. Send for catalogue. Prices will surprise you.

THE OTTAWA MFG CO.
702 King St. Ottawa, Kansas

15 Cents a Rod

For a 22-inch Hog Fence; 16 for 20-inch; 19 for 24-inch; 23 for 28-inch; 27 for 32-inch; 31 for 36-inch; 35 for 40-inch; 39 for 44-inch; 43 for 48-inch; 47 for 52-inch; 51 for 56-inch; 55 for 60-inch; 59 for 64-inch; 63 for 68-inch; 67 for 72-inch; 71 for 76-inch; 75 for 80-inch; 79 for 84-inch; 83 for 88-inch; 87 for 92-inch; 91 for 96-inch; 95 for 100-inch.

Lowest prices ever made. Sold on 30 days trial. Catalog free. Write for it today.

KITSELMAN BROS.
Box 61 MUNCIE, IND.

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ONE OR TWO HORSE

Self-Feeder, Self-Threader and Knotter. All Steel, full circle. We guarantee 1 ton an hour with ONE MAN to operate it. 112 tons an hour two men. We sell on EASY trial. **TUTTLE HAY PRESS CO., 211 S. W. Blvd., Kansas City, Missouri.**

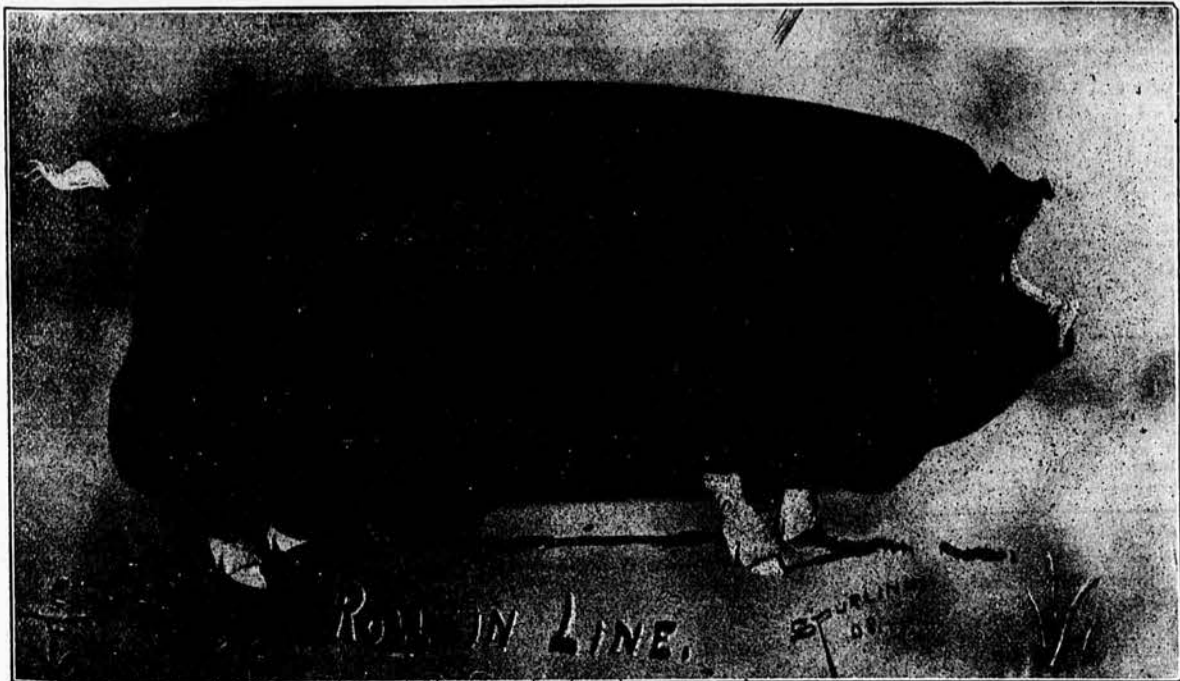
3-STROKE SELF-FEED HAY PRESS.

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All Steel and Iron. Two Men can run it. The Auto-Pedal Hay Press Co. 1584 W. 12th St. K. C. Mo. Ask for Catalogue No. 64

3 STROKE SELF-FEED HAY PRESS

All steel and iron. Two men a full crew. Satisfaction guaranteed. Send for catalog and Free Trial offer. **ADVANCE HAY PRESS CO. 211 Hall Bldg., Kansas City, Mo.**



ROLL IN LINE, PROPERTY OF J. I. ROY, PECK, KAN.

Kansas State Fair

HUTCHINSON, SEPTEMBER
11-12-13-14-15-16-17, '09

"I desire to announce to the stockmen that the live stock classification and premiums will be practically the same as last year, with the exception of about \$750 added to the premiums on Shorthorns mostly for state exhibitors which is to encourage the Shorthorn breeders of Kansas, and a better classification and more money will be given Polled Durhams. In the swine division a full classification will be given this year to Hampshire hogs, also Chester Whites."

\$35,000 in purses and premiums. Seventeen grand divisions. Unrivalled attractions. The fair for the people, by the people. For catalog or detail information address
A. L. SPONSLER,
Hutchinson, Kansas.

keep old corn on the place until the new crop is ready to feed. Mr. Cowles has some very fine March pigs. They are large and growthy. Some of them will weigh 65 to 75 pounds. The herd boar now used is Cowles' Tecumseh, sired by Jensens' Mogul, the sire of several show winners. Jensens' Mogul was out of the same sow as Mariah Logan, Pawnee Chief, and Logan B. He was also the sire of the reserve champion at Nebraska State Fair in 1907 and the St. Joe, Mo., champion in 1908. Cowles' Tecumseh's dam was Mollie B. 2d by Johnson's Chief; her dam was by Expansion. Johnson's Chief was a full brother to Columbia Chief that was owned by H. O. Sheldon at Wichita, Kan., and one of as good breeding hogs as Kansas ever owned. One of the best litters we saw was a litter by Cowles' Tecumseh out of a Big Hadley sow, Mabel Hadley. This sow is a very fine individual and has raised six as nice even pigs as you will see in several days' travel. Mr. Cowles is pricing early spring pigs very reasonable. If you order first you will get the choice of the herd which numbers about 50 head. Send in your order and kindly mention Kansas Farmer when you write.

Expansion Herd Boars for Sale.

In this issue of Kansas Farmer will be found the advertisement of Mr. W. R. Webb, proprietor of the Ridgeview Stock Farm, located at Bendena, Kan. Mr. Webb is interested in all kinds of pure bred stock, owning one of the best registered Percheron horses that the writer has looked at for some time, an extra fine jack and a small herd of Aberdeen-Angus cattle. But the great attraction on this farm is the excellent herd of large boned Poland China swine. Mr. Webb has been a breeder of Polanders for practically all his life and his father before him was a breeder. The present herd boar is Union Leader, grandson of Big Tecumseh. He is a very large, smooth and even hog and has demonstrated his splendid ability as a breeder of the type that most farmers are seeking. Mr. Webb has at this time in the neighborhood of 60 fine pigs, at least three-fourths of which are by Union Leader. Others are by Capt. Hutch, W. R.'s Quality, a splendid son of old First Quality, and a few by Meese's Mastiff. Most of the pigs are out of very large matured sows, representatives of the very best large families, among them D's Bessie 3d. Designer, he by Expansion. Queen Esther, also by Expansion. Queen Esther has an unusually good litter by the great Capt. Hutch. May Jane by Big Hutch, dam Graniter. She also has litter by Capt. Hutch. Orphan Lady by Orphan Boy, dam Lady Look by King Look. Hadley Girl, also by Orphan Boy, dam Big Tecumseh. Mollie's Best is a very fine sow and has a good litter by W. R.'s Quality. In the advertisement which appears elsewhere Mr. Webb calls attention to the three fall boars which he has for sale. They are by Expansion and out of a sow by the prize winning boar Grand Look. They are good individuals and at least two of them are herd headers. Write Mr. Webb, mentioning Kansas Farmer, and be assured of a correct description.

Cedar Heights Shorthorns.

With this issue of Kansas Farmer D. H. Forbes & Son are starting an ad for their valuable herd of Shorthorns. They are offering a few choice young bulls of serviceable age. These bulls have not been pampered but are in good thrifty condition. They are sired by the great Scotch herd bull Royal Knight 243374, he by Prime Minister 211526. Royal Knight's dam was Golden Violet, one of the best breeding cows in Mr. Andrew Pringle's herd. Royal Knight has proven himself a great sire. The calves are all uniform and have great feeding quality. Messrs. Forbes & Son are offering 20 cows and heifers. All have calves at foot or are bred. Most all the cows have nice, large, growthy spring calves and are bred and safe in calf. This would enable the purchaser to buy practically three head for the price asked for one. There is no question but what these cattle are of popular breeding. They are all sired by Scotch bulls and are out of cows carrying three to five Scotch top crosses and are an extra good lot of cattle. They are most all heavy milkers and are priced reasonable. We will make mention of only a few of the herd cows. Miriam, got by The Baron, her dam was Mildred, tracing to Imp. White Rose. Loraine, got by Sir Knight, bred by Col. W. A. Harris. Loraine's dam was Lillie 2d, tracing to Imp. Elizabeth. Flow McDonald 6th, got by Sir Knight; her dam was Flow McDonald, tracing to Imp. Pldget. Alma, got by Baron; her dam was Almira, tracing to Imp. Flora. Butterfly 11th, got by Vanquish; her dam was 6th Butterfly of Valley Grove, tracing to Imp. Butterfly 14th. Sweet Orange, got by Northern King; her dam was Bloss, tracing to Imp. Orange Blossom. Flora, got by The Baron; her dam was Floss, tracing to Imp. White Rose. One of the choice cows on the farm is Lunetta, got by Violet Victor, a \$500 bull. Lunetta is out of Lucille, tracing to Imp. Elizabeth. Lunetta is one of the best producing cows on the farm. Messrs. Forbes & Son are offering for sale 20 cows and heifers. All are priced reasonable. See ad in this issue and write them or come and see them. Cedar Heights Farm is only two miles west of Topeka. Kindly mention Kansas Farmer when writing.

Agricultural College Shorthorn Sale.

The sale of Shorthorn cattle held at the Kansas Agricultural College June 11 was only fairly well attended, owing no doubt to the very busy season of the year. The consignors were the college, T. K. Tomson & Sons of Dover and T. J. Wornall & Sons of Liberty, Mo. The offering was an unusually

good one but most of the stock was sold without a great deal of bidding. However, the crowd although small appreciated the good things fairly well and the general average of \$102.60, although low for an offering like this, was quite satisfactory to the consignors. D. Ballyantyne of Herington, Kan., bought the highest priced cow, paying \$200 for Miss Emma 2d by Master of the Grove, consigned by the college. Henry Ferguson topped the bull division, buying the fine young bull Gloster Conqueror 2d or Mr. Wornall's consignment at \$225. Following is a list of representative sales:

| | |
|---|--------|
| Grassland Emma, K. S. A. C., Manhattan, C. H. White, Burlington, 155.00 | 165.00 |
| Harmony 19th, H. W. Hill, La Fante, Neb. | 155.00 |
| Mary of Elder Lawn, St. Mary's College, St. Marys | 100.00 |
| College Mina, D. M. Lessman, Olpe, Neb. | 80.00 |
| The Lady, W. E. Gilliland, Hardy, Mo. | 67.50 |
| Rebecca, C. J. Woods, Chiles, Mo. | 105.00 |
| Miss Waterloo, J. F. Stodder, | 130.00 |
| Wisteria, H. F. Sondker, Winkler, | 57.50 |
| Miss Emma 2d, D. Ballyantyne, Herington, | 200.00 |
| Poppy's Pride, J. F. Stodder, | 115.00 |
| Lady Choice, W. E. Gilliland, | 75.00 |
| Clover Queen, T. J. Dawe, Troy, | 105.00 |
| Roan Gown, C. C. Hobson, Hardy, Neb. | 105.00 |
| Josie B., D. M. Lessman, | 100.00 |
| Kitty Stone, Matti Bros., Cottonwood Falls, | 70.00 |
| Victor's Baronesa, H. C. H. Borgmann, Smith Center, | 175.00 |
| Queen of Eureka Valley, T. E. Goethe, | 90.00 |
| College Dimple, Matti Bros., | 77.50 |
| Clear Creek Constance 4th, H. F. Sondker, | 90.00 |
| La Belle, Matti Bros., | 100.00 |
| Orange Lavender, H. F. Sondker, | 205.00 |
| Gloster Conqueror, Henry Ferguson, | 225.00 |
| Lord Mysie, A. F. Pawley, Milford, | 130.00 |
| Mystery, L. C. Jennings, Westmoreland, | 60.00 |
| Marvel, T. Dawe, | 185.00 |
| Honest Knight, John Lahr, Fostoria, | 100.00 |
| Major Regent, Matti Bros., | 135.00 |
| Director, D. Ballyantyne, | 177.50 |
| Domina, J. H. Abby, Junction City, | 75.00 |
| Trustworthy, Lessman, | 60.00 |

The Nevins Shorthorn Sale.

A good crowd of buyers from Kansas, Missouri and Oklahoma attended the Shorthorn sale of C. S. Nevins at Chiles, Kan., on June 10. Nearby farmers were out in great numbers and most of the cattle went to buyers from a distance, among whom were some of the best known breeders of the West. Forty head sold promptly and the bidding was strong throughout. Though the cattle were not in high flesh their strong breeding lines and useful condition made them satisfactory to buyers. Violet Prince 5th, a 14 months old son of Prince Pavia, brought the top of the sale while a daughter of Scotland's Charm topped the female sale at \$215. Prof. R. J. Kinzer secured some choice blood in Good Secret by New Goods for the Kansas Agricultural College. The list of sales follows:

| | |
|--|----------|
| 1-Violet Prince, U. S. Ison, Butler, Mo. | \$250.00 |
| 2-Sir Magnet, C. L. Carter, Cabool, Mo. | 155.00 |
| 3-Mary's Prince, J. M. Davis, Bronson, Kan. | 125.00 |
| 4-Graceful Prince, J. Ellis, Paola, Kan. | 90.00 |
| 5-Lavender Prince, H. O. Ellis, Paola, Kan. | 102.50 |
| 6-Artie's Lad, W. H. Allen, Pleasant Hill, Mo. | 150.00 |
| 7-Baption Violet, C. B. Manchester, Chiles, Kan. | 75.00 |
| 8-Armour Prince, N. Barkis, Paola, Kan. | 80.00 |
| 9-Prince Dictator, C. Grimes, Paola, Kan. | 75.00 |
| 10-Good Secret, Kansas Agricultural College, | 200.00 |
| 11-Marguerite, C. H. White, Burlington, Kan. | 200.00 |
| 12-Charming Violet, C. H. White, | 215.00 |
| 13-Glenwood Pavia, T. K. Tomson, Dover, Kan. | 200.00 |
| 14-Princess Violet, H. E. Hayes, Olathe, Kan. | 165.00 |
| 15-Lucille Gibson, J. S. Scott, Watonga, Okla. | 150.00 |
| 16-Kinnellar Lucy, F. B. Sylvester, Hennessey, Okla. | 160.00 |
| 17-Princess Josephine, C. G. Woods, Chiles, Kan. | 95.00 |
| 18-Morning Star, C. L. Carter, Cabool, Mo. | 125.00 |
| 19-Thistle Bright, J. F. Stodder, Burden, Kan. | 82.50 |
| 20-Graceful Princess, F. B. Sylvester, Hennessey, Okla. | 170.00 |
| 21-Blanche, J. D. Scott, Watonga, Okla. | 75.00 |
| 22-Primrose May, J. D. Scott, | 100.00 |
| 23-Royal's Vistoria, J. D. Scott, | 100.00 |
| 24-Captain's Victoria, S. B. Conner, Drexel, Mo. | 95.00 |
| 25-Miss Dale, Chester Smith, Waverly, Kan. | 132.00 |
| 26-Orange Blossom, B. B. Buchanan, Chiles, Kan. | 92.50 |
| 27-Victor Rose, B. B. Buchanan, | 87.50 |
| 28-Amelia, B. Cotter, Fulton, Kan. | 70.00 |
| 29-Princess Antonette, B. Cotter, | 92.50 |
| 30-Eve Ross, John Smith, Wellsville, Kan. | 80.00 |
| 31-Rosy Lee, F. B. Sylvester, Hennessey, Okla. | 85.00 |
| 32-Miss Josie B., A. Gingerich, Wellsville, Kan. | 77.50 |
| 33-Emma, C. B. Manchester, Chiles, Kan. | 60.00 |
| 34-Josie B., J. M. Davis, Paola, Kan. | 37.50 |
| 35-Glenwood Beauty, J. D. Scott, Watonga, Okla. | 70.00 |
| 36-Lou Ellen Princess, J. D. Smith, Wellsville, Kan. | 65.00 |
| 37-Lady Archer, A. Marklin, Mound City, Kan. | 80.00 |
| 38-Robinita, W. M. Fretz, Osawatomie, Kan. | 82.50 |
| 39-Janette Kirkpatrick, W. T. Noblett, Cabool, Mo. | 110.00 |
| 40-Knight's Janette, A. Gingerich, Wellsville, Kan. | 70.00 |
| 9 bulls sold for \$1,000.50; average \$121.89 | |
| 31 cows sold for \$3,422.50; average 110.40 | |
| 40 head made an average of..... | 112.87 |

MARKETS

Kansas City Stock Yards, June 14.—The advance on fed steers early last week was lost by the close of the week, and grass cattle declined 10 to 20 cents for the week. The supply was several thousand head less than previous week, but there was some hitch in the consumptive demand, and killers accordingly cut down their orders a little as the week progressed. A year ago at this time the Kansas City market was out of

commission on account of the Kaw river flood, but this year there is no danger of a flood. The Kaw river is 12 feet below the flood stage, and soil and weather conditions over the Kaw watershed make it practically impossible for sufficient water to develop in the river here to do any damage. The cattle run today is 10,000 head, market steady to strong on light steers and she stuff, weak on heavy steers, calves a quarter lower. Some 1,130 pound steers sold at \$7.00 today, the top, and fed Colorado steers sold at \$6.50. Beef steers in the native division ranged from \$5.00 to \$7.00, embracing all stages of finish, with buyers shying a little at cattle showing pronounced grass signs, cows at \$2.75 to \$5.50, heifers up to \$6.50, bulls \$3.00 to \$5.00, calves \$4.00 to \$7.00. Stockers and feeders lost 10 to 15 cents last week, and trade was dull, account of absence of country buyers, but demand is better today, stockers at \$3.75 to \$5.25, feeders scarce, at \$4.75 to \$5.50. Medium to fair stockers are available around \$4.40.

The hog market continued its upward tendency last week, except for a small decline on Saturday. The supply is running light at all the markets for June, and the run of 8,000 head here today is only about three-fourths as large as predicted by dealers Saturday. Prices are sharply higher today, 10 to 15 cents for bulk of sales, light hogs sometimes 20 cents higher. Heavy hogs are selling at \$7.00 to \$7.70, medium weights \$7.45 to \$7.70, light hogs \$7.20 to \$7.55, pigs \$6.00 to \$7.00. Packer buyers have surrendered to the bull side of the market, and are willing to predict still higher prices for hogs.

Mutton sheep declined 50 to 75 cents last week, but lambs held about steady. The run is moderate, 7,000 head today, but the market is barely steady on sheep, while lambs are being trimmed 15 to 25 cents, to put them in line with recent declines on sheep. Wethers are worth \$4.75 to \$5.50, ewes \$4.50 to \$5.25, spring lambs today up to \$8.50, goats \$3.25 to \$4.00. Predictions regarding future markets reveal a stronger pessimistic note than usual.

Cash Grain.

Kansas City, June 14.—Hard wheat—No. 2 hard, nominally \$1.32@1.41. No. 3 hard, fair to good turkey, nominally \$1.28@1.35; yellow and ordinary, 3 cars \$1.29, 5 cars \$1.28, 2 cars like sample \$1.25. No. 4 hard, nominally \$1.18@1.31, 1 car ordinary \$1.25. Live weevil hard, 1 car \$1.25. Soft wheat—No. 2 red, choice, nominally \$1.48@1.54; fair to good, 1 car like sample \$1.48. No. 3 red, choice, 1 car \$1.48; fair to good, nominally \$1.40@1.45. No. 4 red, nominally \$1.25@1.41. Mixed wheat, No. 4, 1 car bulkhead \$1.00. Durum wheat—No. 2 nominally \$1.12@1.13. White corn—No. 2 white, 6 cars 72½¢. No. 3 white, 1 car 72½¢. Mixed corn—No. 2 mixed, 15 cars 71½¢. 1 car bulkhead, 71½¢. No. 3 mixed, 5 cars 71½¢. No. 4 mixed, 1 car oats mixed, 69½¢. Yellow corn—No. 2 yellow, 1 car 72¢, 1 car 71½¢, 1 car 71½¢. No. 3 yellow, nominally 71½¢@71½¢. No. 4 yellow, 1 car 70½¢. White oats—No. 2 white, choice, 1 car 61¢, 4 cars 60¢; fair to good, nominally 59½¢@60¢. No. 3 white, choice, 1 car 59½¢, 3 cars 59¢; fair to good, 1 car 59¢, 1 car bulkhead 58½¢. No. 4 white, choice, 1 car 58¢. Red oats—No. 2 mixed, nominally 58¢@58½¢; red, 1 car bulkhead 57¢. No. 3 mixed, nominally 57½¢@58¢. Bran—Mixed feed, \$1.22@1.23 per cwt., sacked; straight bran, \$1.21@1.22 per cwt., sacked; shorts, \$1.22@1.30 per cwt. Cotton seed meal—All points in Kansas and Missouri, taking Kansas City rates, \$31.90 per ton in car lots. Broom corn—Choice green self-working, \$140@150; medium self-working, \$130@140; common self-working, \$110@120. Seeds—Timothy, \$3.00@3.25 per cwt.; millet, \$1.50@1.70; Kafir, \$1.28@1.30. Butter—Demand for packing stock at firm prices, but creamery was slow sale. Packing stock, 18c; grease butter, 4c; creamery extras, 25c; creamery firsts, 23c; creamery seconds, 21c.

HEREFORD CATTLE

SPRING CREEK HEREFORDS.
100 head in herd. Prairie Donald 3d by Beau Donald 7th in service. Females represent Anxiety 4th, Lord Wilton, Garfield and other families. Few good bulls 7 to 8 months old at easy prices. Write or come.
T. A. WALLACE, Barnes, Kan.

HEREFORD BULL FOR SALE.
17 months old, grandson of Imp. Lord Saxon, dam by Stonemason 18th, weighs 1,000 lbs., nicely marked, good top and under line, droop horn and a fine individual in every respect. Will price reasonable.
J. W. TOLMAN, Hope, Kansas.

HEREFORD BULLS FOR SALE.
12 head sired by Onward 18th and Majestic Baron by Imp. Majestic, ranging in age from 12 to 26 months. All good ones. At least four of them herd headers. Very low prices considering quality. Will also spare few females.
S. W. TILLEY,
Irving, Kansas.



Beau Brummel
10th 167719
Modern Herefords. Herd bulls
Beau Brummel
10th 167719
Beau Beauty
19235 and
Protocol 2d 117715.
Robert H. Hazlett, Hazford Place, Eldorado, Kansas.

SHORTHORN CATTLE

CEDAR BLUFF SHORTHORNS.
100 head headed by Double Standard Orange Cup X5565 (253226). SHAW BROS., Glade, Kan. (Rooks County).

A RARE BARGAIN.
My herd of Shorthorns is on the bargain counter. Five bulls \$50 each; 12 young cows with calves or coming fresh \$800; 10 heifers \$45; herd bull \$175. Entire herd \$1,550, a rare bargain.
J. E. WELLER, Faucett, Mo.

SHORTHORN CATTLE

N. S. LEUZLER,
Breeder of the best in Shorthorns.
Almena (Norton Co.) Kan.

Evergreen Home Farm.

Milking Shorthorn Cattle, bred Hereford, Berkshire Hogs, Oxford Down Sheep, Bourbon Red Turkeys.
LATHROP, MISSOURI.

GREENDALE STOCK FARM.

25 YOUNG BULLS by Imp. Ardathian Mystery and Best of All for sale at bed rock prices. Can also offer some good Berkshire swine and Shropshire rams. Correspondence solicited.
COL. ED GREEN, Prop.,
Florence, Kansas.

RENO HERD SHORT-HORN CATTLE

Bulls in service, Forest Knight 226084 and Victor Archer 264156. Breeding stock for sale.
Stewart & Downe, Hutchinson, Ka

FOR SALE.

10 choice young bulls from 8 to 13 months old, part straight Scotch. Choice yearling and short two-year-old heifers. Good colors, bred right, priced right.
C. W. TAYLOR, Pearl, Kan.
Address mail R. F. D. 2, Enterprise, Kan.

Prospect Farm Shorthorns

The oldest Shorthorn breeders in Kansas. The largest herd of Cruickshanks in Kansas. Headed by Violet Prince 145647 and Orange Commander 220590. Young stock of both sexes and some cows for sale. Quality and prices right.
H. W. McAFEE,
Bell Phone 59-2, Topeka, Kansas.

JEWEL SHORTHORNS

A young herd of up-to-date breeding. Also Percheron and Standard bred horses. In stud: the Percheron stallion Marquis De Wierre (Imp.). Also the Standard bred stallion, Red Seth 31185. Farm adjoins town. Come and see us.
W. T. LOWE,
Jewell, Kansas.

Spring Hill Shorthorns

300 Head Scotch and Bates Pedigrees
C. G. COCHRAN & SONS,
PLAINVILLE, KANSAS.

ELMWOOD SHORTHORNS

FOR SALE NOW.
Six choice bulls by Lord Marr 249949 and from some of my best cows. Send for a catalog giving breeding and prices.
F. M. GIFFORD,
Wakefield, Kansas.

20 Shorthorn Cows and Heifers

All are bred or have calf at side. 3 GOOD YOUNG BULLS that I am sure will suit. Everything nicely bred and in good condition. Moderate prices.
D. H. FORBES & SONS, Topeka, Kan.
R. F. D. No. 8. Bell Phone 31.

POLLED DURHAM CATTLE

POLLED DURHAMS.
Young bulls, cows and heifers for sale. Prices reasonable. Write for them.
Chiles, C. J. WOODS, Kansas.

BELVEDERE X2712--195058

son of the \$1,500 Grand Victor X 1685 150364 heads my herd of Double Standard Polled Durhams. A few extra good blocky, thick-fleshed young bulls for sale. Inspection invited. Farm joins town.
D. C. VAN NICE,
Richland, Kansas.

RED POLLED CATTLE

COBURN HERD OF RED POLLS.
Choice young stock of both sexes for sale; also a few cows.
GEO. GROENMILLER & SON,
Pomona, Kansas.

FOSTER'S RED POLLS.
15 choice young bulls, a few good females and our 2,400 pound herd bull Dandy S. 9147 for sale at bottom prices. CHAS. FOSTER & SON, Eldorado, Kan.

ALFALFA VALLEY RED POLLS.
8 young bulls 12 to 16 months old and a few heifers. Can ship over main lines Mo. Pacific and Union Pacific R. R. Priced low. Write or come.
OTTO YOUNG,
Utica, Ness County, Kansas.