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The Government's investigations of the trusts, especially the packing trust, are assuming new vigor since the election.

The so-called Campbell system of cultivation for the conservation of moisture has been put to a practical test in Western Kansas for several years. Mr. J. H. Pomeroy, a wealthy citizen of Colorado Springs, Col., has been the promoter of the work. Reports say he is so well pleased with

the results that he is organizing a company with a view of applying this system to 50,000,000 acres of the semi-arid West.

From the reports of sales of purebred Shorthorns and Poland-Chinas made in various parts of Kansas last week, it is gratifying to note the fact that the demand is improving generally and that fair prices are obtained, and what is particularly gratifying is that Western Kansans are the leading purchasers.

Turkeys are turkeys this year. Reports have not been received of many of the sales made, but one farmer that we know of sold ten turkeys just before Thanksgiving, receiving \$21.43 for them. There ought to be a good deal of poetry in this kind of poultry business. If some of our kind friends will give practical directions for raising turkeys in large numbers and saving them from the many vicissitudes to which young turkeydom is subjected, so as to get them to the market around \$2 apiece, the information will be worth thousands of dollars to readers of the KANSAS FARMER.

A vital question in the natural gas regions of Kansas is how to prevent piping the gas out of the State. The entire State is interested in the question. If the gas shall be used in Kansas, manufacturing industries in great numbers and of great magnitude will be built adding to the wealth, population, and productive power and to the taxable property of the State. If this gas shall be piped into Kansas City, Mo., the chief development will be in that State instead of this. The association which has as its motto "Kansas gas for Kansas" ought to be able to find a way to protect the community wherein nature bestowed this valuable gift, in the enjoyment of its benefits.

SECRETARY WILSON'S REPORT.

Preliminary copies of the forthcoming annual report of Hon. James Wilson, Secretary of Agriculture, have been received. That the Department of Agriculture is presided over by a man of great executive ability becomes more manifest with each annual report. The success of the Secretary in gathering to his Department able and energetic specialists and his good sense in promoting and making effectual the capabilities of these specialists in lines of inquiry important to the agricultural development of the country has been uninterrupted.

In this notice only a few of the important works of the Department of Agriculture can be mentioned. Among these we notice that the Secretary devotes considerable space to reporting on the successful conflict waged against cattle scab and mange by the Bureau of Animal Industry with the cooperation of the State authorities. During the first nine months of the year, in 34 States and Territories, nearly 4,000,000 head were inspected, and 168,203 were found affected by the disease, while 300,000 were found to have been exposed to it. The total number of cattle dipped during this pe-

riod exceeded 420,000. This work very considerably increased the expenses of the Bureau.

Considerable advances have been made in the forage-crop work. More attention has been given to alfalfa in the eastern half of the United States in the past two years than to any other crop. The Department has demonstrated that this valuable crop can be grown in almost every State in the Union. A large amount of information has been gathered the past year as to the carrying capacity of the ranges in various parts of the West. Intelligent management will bring the ranges back to their primitive state of productiveness, but it is definitely demonstrated that there is no chance of improving range conditions except where stockmen are able to control the ranges upon which their stock feed. It has also been demonstrated that many new plants may be introduced upon the range successfully. Plants that may be grown upon alkali lands have been studied.

Investigations of standard grasses have been carried on, and it is hoped that within a few years it will be possible to offer farmers small quantities of seed of improved forms of all the standard grasses. A considerable number of native American grasses have shown themselves adapted to the regions where at present hay grasses are wanting. It is believed that hay grasses can be grown on the Western plains where the average annual rainfall does not exceed 15 inches.

Extensive practical tests were made the past season with nitrogen bacteria for use in connection with the leguminous crops. Results have been even more successful than was anticipated. The several strains of bacteria sent out from the Department have proved valuable even on soils containing the uncultivated organisms in abundance. The material for inoculating an acre of soil costs the Department about one cent and the farmers scarcely anything to apply it. The demand for the organisms is constantly increasing.

The Secretary calls attention to the investigations carried on by the plant physiologist with a view to finding methods of destroying noxious algae in water supplies, the method consisting in using extremely dilute solutions of copper sulfate. Numerous tests have been made in cooperation with boards of health and water engineers, and the method has been proved remarkably efficient. The fact that one part of copper sulfate to 100,000 parts of water will at ordinary temperature completely destroy the bacteria causing typhoid fever and Asiatic cholera suggests the great usefulness of copper in fighting these and other diseases.

The possibility of keeping injurious insects in check by the introduction of their natural insect enemies is exceedingly important to fruit-growers and farmers, and notable success has been achieved in this direction.

The Secretary places himself on record as indorsing the demands of the experiment stations for an extension of their work, which can only be met by increasing their funds, and he expresses the view that it is of the highest importance that in any future act

which Congress may pass for the benefit of the stations, the Federal funds shall be explicitly granted for purposes of agricultural research, and the powers and duties of this Department as related to the supervision of those funds shall be clearly defined.

SOME FEATURES OF THE TARIFF QUESTION.

It is possible to discuss questions of economic importance to farmers without getting into partisan politics. This shall be our aim while calling attention to some features of the tariff question. This question is as old as the Government, but it comes up with new aspects as the development of the country proceeds. Eminent thinkers honestly differ on the fundamentals and on the details of tariff taxation. There are those who, were they making a new fiscal system for the country, would like to leave trade entirely free, raising the necessary revenue by other methods. These hold the tariff to be an unfair and insidious method of taxation, liable to become excessive because its burden can not be discerned by the individual. Others hold that a wisely adjusted tariff is not a burden at all but is an essential agency in promoting the industries—especially the manufacturing industries of the country, and at the same time an efficient method of securing needed revenue.

On the latter theory is based the present tariff system of the United States.

The question now is raised as to the desirability of changes in the present tariff.

It may be observed that the party in power is the party which enacted the present tariff and that it has announced no change in its theory of the tariff. Changes, if made, will, therefore, probably affect details rather than the entire system. There will be difficulty in reducing the tariff on any considerable number of articles of the list in which a large number of active constituencies are interested, for any such reduction would be met by demands for reductions on other articles in which other constituencies are interested. The practical difficulties in the way of reductions have, in the recent past, been sufficient to make the schedule reasonably stable. It has been suggested several times in the KANSAS FARMER that an essential to the highest prosperity of the producing people of the United States is stability of conditions. Speculation thrives on fluctuations; industry on uniformity. The presumption is, therefore, against change. The presumption should prevail as to all cases except against potent reasons for a change.

There are in the tariff schedule few products of the farm. One of the most important of these, wheat, is likely to meet a demand for relegation to the free list. The import duty on wheat is 25 cents a bushel. This was enacted without active opposition at a time when it was currently believed that this country would for a long time remain a great exporter of wheat, making prices of this grain lower here

(Continued on page 1184.)

Agriculture

Coming Events.

Will secretaries and those having the management of coming events, oblige the Kansas Farmer by sending dates?

December 30 and 31, 1904, Kansas Auctioneers' Association annual meeting.

December 8-9, Farmers' Institute, Hackney, Cowley County. Mrs. Ella Beach. Prof. E. A. Popenoe and Asst. G. C. Wheeler.

January 11-14, 1905, Farmers' Institute, Hiawatha, Brown County. E. A. Chase. January 12, Women's Day, Miss Flora Rose; January 13, Assistant V. M. Shoemsmith.

December 7-8, Caldwell, Sumner County, C. M. Johnston, Caldwell. Prof. E. A. Popenoe and Asst. G. C. Wheeler.

December 14-15, Oak Grange, Shawnee County, Mrs. L. E. Tice, R. F. D. No. 7, Topeka, Kans. Profs. Henrietta W. Calvin and E. A. Popenoe.

December 18-19, Berryton, Shawnee County, W. H. Waters, R. F. D. No. 20, Berryton, Kans. Profs. E. A. Popenoe and J. D. Walters.

December 19-20, Stockton, Rooks County, J. C. Foster, Stockton. Profs. A. M. TenEyck and Henrietta W. Calvin.

February 2-3, 1905, Summerfield, Marshall County, S. Baringer, Beattie. Profs. E. A. Popenoe and Henrietta W. Calvin. The Summerfield Institute is a joint farmers' institute of the farmers of Marshall County, Kans., and Pawnee County, Nebr.

Emmer.

As I am a reader, please inform me through your valuable paper what you can about emmer, when to sow and how much to the acre.

J. L. ALDERSON.

Davidson County, Tenn.

Emmer commonly goes by the name of "speltz," although the latter name is wrongly used, the speltz botanically being a grain somewhat different from emmer. The grain which we have in this country is botanically known as *Triticum dicoccum*. Although emmer was grown to some extent many years ago in the Eastern States and Canada, it has only recently come to notice as being a crop profitable to grow in this country, since it was introduced into the Northwestern States by German Russian settlers. The United States Department of Agriculture has also imported and distributed a large amount of the best seed of this grain.

The crop has been grown more extensively in North and South Dakota than in other States, and judging from the reports of the experiment stations of these States and the general report of

the farmers, the grain has proved to be hardy and a better producer than oats or barley. Such trials as have been made of the grain in Kansas have shown that it is hardy and well adapted for growing through the Central and Western portions of the State. Emmer is adapted for growing in a dry climate but is hardy and produces well in wet seasons, as shown by the crops grown at this station during the last two seasons. In the following table is shown the yields of emmer, oats and barley in the trials which were made at this station during the past two seasons:

	Yield per acre	
Crops.	1903	1904
Emmer.....	1,712	1,466
Oats.....	1,668	812
Barley.....	1,583	1,361

It will thus be seen that the emmer gave larger yields than the other grains. In 1904, however, the oats were a very poor stand which accounts for the comparatively low yield.

Emmer is really a species of wheat but in appearance the growing grain resembles two-rowed barley, the heads being bearded and having two rows of grain. The thrashed grain also resembles barley, the hulls being usually retained when the grain is thrashed. If the hull is removed, two hard, flinty kernels are found, which very much resemble rye or macaroni wheat.

The chemical analysis of the hulled grain shows a composition much like that of wheat. The analysis of the unhulled grain which is its natural condition when thrashed, makes the grain more like barley in the relative amount of feed constituents which it contains. There is little feeding-value in the hulls, which constitute about 20 per cent in weight of the total unhulled grain, but they serve to dilute the rich grain and add coarseness to the feed.

Experiments at the South Dakota Experiment Station have shown that emmer is not usually relished by stock when fed whole, and the grain is not equal to barley, oats or corn, as a flesh-former when fed alone. Emmer is best when ground and fed in combination with other grains. The grain will hardly take the place of barley or oats as a feed, but the crop may be grown along with other grains, especially in those parts of the State where barley, oats, or corn may fail to produce profitable crops on ac-

count of drouth or hot winds, and in some parts of the State it may be grown instead of barley or oats, taking the place of those grains to a greater or less extent.

Emmer is a spring grain and should be sown early in the spring and given much the same culture as barley or oats. At this station we sow from a bushel and a half to two bushels of seed to the acre, setting the drill to sow $2\frac{1}{2}$ to 3 bushels of barley per acre in order to sow the right amount of emmer, which is a larger grain than barley. In a trial made at this station this season, however, nearly as large a yield was produced by sowing a bushel of emmer per acre as by sowing more seed. The largest yield in this trial was 33.4 bushels per acre, which was secured from seeding seven pecks of grain per acre, which was the amount sown when the drill was set to sow $2\frac{1}{2}$ bushels of barley. The land should be prepared in the same manner as for oats, and the crop should be given much the same culture as is required by spring wheat, oats, or barley. A. M. TENEYCK.

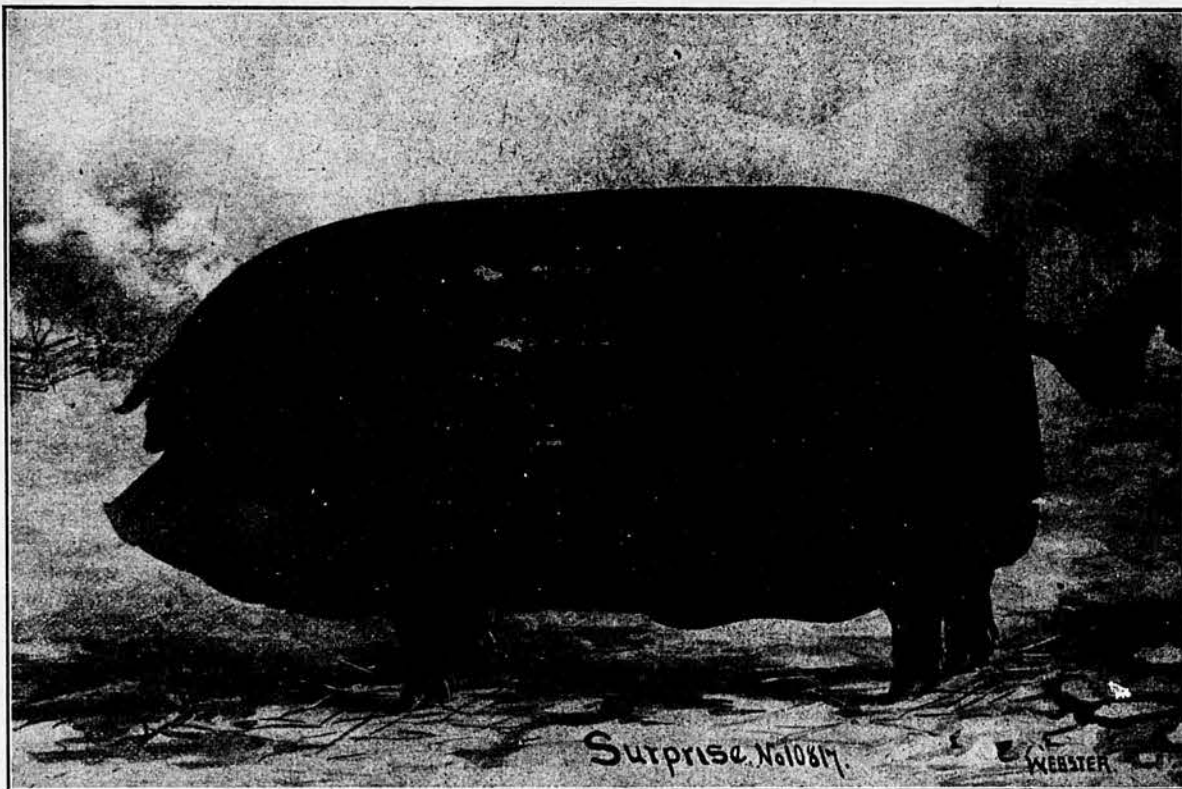
Rolling Young Alfalfa.

Last spring a strong wind blew out of the ground about seventeen acres of alfalfa, sown in September, 1903. It was sown rather late in the month and I presume the soil was too loose. This year I have sown again. The ground has been in millet and was disked, cross-disked, and harrowed before the alfalfa was sown. Would you advise rolling? The sowing was done on September 5 and the stand is good, but the alfalfa is not, owing to dry weather, so high as it should be.

JOHN MACDONALD.

Shawnee County.

I would not recommend rolling the field of alfalfa at this time. It might perhaps have been well to have rolled the ground before seeding, but with the alfalfa up and at the present date I do not see that any special good will come from rolling, although I do not know that rolling would do any injury to it. I do not like to have the surface of the ground hard and smooth, as a roller leaves it. I prefer to have the seed-bed firm below the seed rather than above it, and from your description of the millet ground I should judge that you had this kind of a seed-bed. Your method of disking and har-



Kansas people are interested in good hogs. Many of them are interested in good Duroc-Jersey hogs, and as they always depend on the Kansas Farmer to direct them where to get good hogs, we take pleasure this week in calling attention to the Walnut Oak Herd of Duroc-Jerseys, Smithton, Mo., advertised on page 1194. This herd is headed by Surprise 10817, who was champion at the American Royal in 1902. Associated with him is Josie F., the sow that stood first in the Missouri State Fair money, a World's Fair prize-winner and the dam of Longfellow, also a World's Fair prize-winner, as well as a winner at the Missouri State Fair. In this herd also may be found May F., a sow that never produced anything but a show pig in her life. Longfellow is now for sale, as are also a number of choice boars sired by Surprise and out of daughters of Mode, who stood first and sweepstakes in seven State fairs in 1901. There is also for sale from this herd the four gilts that were shown by Powell & Rudy this fall, as get of boar and produce of sow. They won second in the Missouri money this year. They will be bred to a son of the \$100 Bishop's Choice sired by Bell's Chief and out of Nebraska Belle. Our readers will see that it would be difficult to get more show blood together in one bunch than in this group. Powell & Rudy, the owners of Walnut Oak Herd, are well known, both for their reliability as men and for their skill as breeders. And, while visitors are invited to inspect their herd, they can feel perfectly safe in sending the mail orders that does not meet with their own approval. We take pleasure in reproducing the picture of Surprise this week, in order that our readers may see the quality of hogs now bred in Walnut Oak Herd. Mention the Kansas Farmer and write to Powell & Rudy, Smithton, Mo., and you will be pleased with what they have.

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rowing the millet ground in preparing the seed-bed for alfalfa is preferable to plowing, and with a seed-bed prepared as described, I do not think you will have any trouble with the alfalfa blowing out next spring. Doubtless the alfalfa which blew out last spring was sown on plowed land which was not thoroughly cultivated and packed before seeding, hence it remained loose and becoming dry, was easily cut away by the winds.

An ideal seed-bed for alfalfa should be fine and mellow at the surface a little deeper than the seed is sown, but firm (not hard) below the seed. This condition can be secured by disking and harrowing millet-stubble or corn-stubble, or it can be fairly secured by plowing grain-stubble soon after harvest and by working and compacting the ground, which, together with the rains, cause it to become pulverized and settled to a good seed-bed by seeding time.

A. M. TENBYCK.

Wheat Pasture Experiments.

PRESS BULLETIN NO. 114, OKLAHOMA AGRICULTURAL EXPERIMENT STATION.

Wheat pasture on the farms of Oklahoma is an important item and more especially in those sections where stock-raising is becoming the principal branch of the farm program. This is a new country and the farmer who is interested in the stock industry has not had time nor spare cash to build a silo in which to store a supply of palatable food for winter feeding, but he has broad acres of wheat land which will furnish, in a measure at least, a supply of succulent food during a period when the amount of such material is necessarily limited. The plan of feeding a liberal supply of silage or roots to young growing stock or dairy cows is highly recommended. Since the practice of growing roots in any quantity for feeding purposes has not been adopted, and since no provision has been made for the ensilage of corn, the stockman is forced to look elsewhere for a supply of succulent material to use in connection with roughage, as corn- and Kafir-stover, or prairie hay, of which there is generally an abundant store. During favorable seasons the wheat-fields furnish a liberal amount of fresh green pasture. The weather is generally mild and the young stock or even the dairy cows can be allowed to run upon the fields at will.

Taken in the aggregate, the value received from wheat pasture by the farmers of the territory amounts to quite a large sum of money. In the year 1903 the wheat crop comprised some 1,643,130 acres, the major portion of which was pastured during the fall and winter months. This at \$3 per acre, a very moderate estimate, would mean a net return of \$4,929,390 for the Territory. This leads up to the question which has probably come to the man who studies and plans as he endeavors to reap a profit in his business, namely: To what extent is it advisable to pasture the wheat throughout the fall or winter months? What effect will very close grazing or keeping stock upon the fields late in the spring have upon the yield of grain which is to be harvested the coming season? These and other questions suggest themselves when the subject of pasturing wheat is considered. In order to answer some of these questions the Oklahoma Experiment Station in 1902 started and carried through some work, pasturing wheat under ordinary field conditions. This work was continued under almost the same plan during the past season. The results for the two seasons, the one extremely wet and the other extremely dry, point very emphatically toward definite conclusions.

The season of 1903-04 was not very favorable so far as the wheat crop was concerned. The rainfall during the summer months was distributed quite uniformly, there being an average monthly precipitation of 3.16 inches for the four months July to October inclusive. Ground that was plowed early, from July 15 to August 1, and cultivated thoroughly at frequent intervals contained a fair supply of moisture at time of seeding. The field in which this experiment

was conducted was in fair condition when seeded. There was sufficient moisture in the soil to insure a perfect germination, hence the plants made a fair growth in the course of two months and stock was turned into the fields the latter part of November. Exceedingly dry weather prevailed during the winter months. The total precipitation for the six months commencing with November and ending with April was 3.08 inches. Soil samples taken from unpastured and pastured plats on February 29 indicated that the soil, to a depth of 12 inches, contained about 15 per cent of moisture. Early in March the lower leaves of the wheat plants commenced to dry up and fall. The growth throughout the winter months was very meager on all plats, thus the amount of pasture furnished was somewhat limited as compared with the amount obtained under normal conditions.

The field and plats during the entire season were perfectly firm, thus the soil was not tramped and put into a poor physical condition as it was the previous season. When the ground is very wet and cattle are allowed to pasture upon the wheat, the texture of the soil is not only impaired but a large number of the wheat plants are destroyed. It will require more work the succeeding season to prepare the same land for wheat than would be required if the necessary precautions had been taken and stock had not been allowed to run when the soil was very wet. Such conditions are not met every year but the precaution noted above should be observed during exceptionally moist periods. In 1903 a half-acre plat that was given moderate treatment during wet periods gave a yield of 2.2 bushels per acre more than a plat of the same area upon which the cattle were permitted to run while the soil was very soft. The latter plat was also very rough for the binder at the harvest season.

Nine half-acre plats were used in the work during the season of 1903-04. These plats were located in a wheat-field about one mile west of Stillwater, and they were surveyed and fenced the first week in December with the exception of the three plats included under general field treatment. The cattle had been on the wheat only a short time when the plats were fenced. The soil in this field would be classed as medium upland clay loam (which is considered a good wheat soil). The different plats were divided in the following manner:

Plats 1 and 2. The wheat was not pastured after December 5, and prior to this date the cattle had been pasturing upon the plats only a few days, so that these may be considered as control plats—those receiving no treatment.

Plats 3 and 5. The stock was allowed free access to these up to February 29, at which time the gates were closed.

Plats 7, 8, and 9. The wheat on these plats was given general field treatment, that is, the lots were not fenced but the cattle were permitted to run upon these plats just as they passed over the regular field.

Plats 4 and 6. These plats were given the same treatment as 7, 8, and 9 and in addition they were pastured severely April 15 and 16, the cattle being confined to the lots until the wheat was pastured quite close.

The wheat at this date was needing rain very much. The plants on the unpastured plats were much in advance of the wheat on the plats which were pastured to February 29 while the plants on the latter plats made a much better showing than the plants in the regular field. Dry weather prevailed up to May 4, at which time the wheat commenced to head. The outlook was certainly not very promising but subsequent rains aided the wheat very materially in filling up. The crop was harvested June 16 and 17. The grain on the late-pastured plats was still slightly green.

Treatment	Grain bu. per acre.	Test.
Unpastured.....	12.35	55.5
Pastured to Feb. 29.....	9.79	54.5
Pastured to Mar. 31.....	8.06	53.0
Pastured Apr. 15 and 16.....	5.55	51.0

The wheat on the plats giving the best returns fell quite a little below the standard but this was true in connection with all the wheat grown in this part of the territory. On consulting the above table it will be seen that the unpastured plats gave a return of 2.56 bushels per acre more than the plats which were pastured to February 29, 4.29 bushels per acre more than the plats which were pastured to March 31, and 6.80 bushels per acre more than the plats which were pastured late.

The yield of straw on the unpastured plats was somewhat in advance of the yields obtained in the case of the other treatments. Pasturing wheat, which has made but a normal growth, even to a moderate degree has a tendency to lower the yield of grain and straw but the value received in pasture would in most cases more than cover the difference which exists.

The stock should be taken out of the wheat-field by March 1, or March 15 at the latest if reasonable returns are to be expected.

Close, late pasturing after April 1 lowered the yield to almost one-half as compared with moderate pasturing.

The quality of the grain deteriorates perceptibly with late pasturing.

Pasturing wheat when the ground is very wet will have a tendency to lower the yield of grain and at the same time injure the texture of the soil.

Where the wheat makes a very heavy top it is advisable to pasture.

The following table gives the yields per acre on the same field in the wet season of 1902-03:

	Grain bu. per acre.	Straw bu. per acre.
Field pastured.....	20.5	1.17
Heavy winter pastured.....	18.8	1.06
Light winter pastured.....	20.9	1.36
Light winter and late spring pastured.....	10.7	.83
Late spring pastured.....	14.0	.94
Not pastured.....	23.2	1.49

Sugar from Corn-Stalks.

Those who remember the rise and fall of the enthusiasm for the production of sugar from sorghum will be in position to make due allowance for the same quality of enthusiasm appearing in the following account of the proposition to make sugar from corn-stalks:

Perhaps the greatest new source of wealth that for the first time has been publicly demonstrated at the St. Louis Exposition, is the discovery of Prof. F. L. Stewart, of Murrysville, Pa., that sugar of equal quality and quantity may be secured from suitable corn-stalks as from the sugar-cane of the South. The jurors of the exposition, recognizing the immense value of Professor Stewart's revelation, have awarded him a gold medal, one of the highest awards possible.

The manufacture of sugar from the corn-stalk is practicable in all that great territory between the sugar-belt of the South and the short-season territory of the North. A company is now being incorporated and the capital is secured, to erect large factories for developing the Stewart process. One factory will be erected soon near Fort Worth, Texas, and another in Maryland, and others will, no doubt, follow in many districts in the suitable latitudes.

Professor Stewart has discovered and fully demonstrated in the past few years that if the ear of the maize (of suitable variety) is removed at a certain time (near the roasting-ear condition), the nature of the plant in further growth will be changed, and its sugar-making properties will be raised from say 6.70 to 13.80 per cent, as in one series of tests, i. e., 12 to 15 per cent of sugar may be obtained from the juice of stalks so operated upon. Maize plants have long been known to contain sugar in the juice of the green stems, and many times efforts have been made to utilize it; but this has hitherto been commercially unprofitable—the juice containing too little sugar at any of its natural stages, and that obtained was associated with relatively large proportions of impurities.

On account of the great value of the other products to be secured through

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Scale shipped complete except planks for flooring. Complete Scale above ground; only 9 in. high.
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the Stewart process, the sugar might be considered as a by-product, or its actual cost figured as low as one cent per pound for the highest grade (96 per cent) of unrefined sugar. Unlike unrefined beet-sugar, but like that of cane-sugar, the maize cane-sugar has naturally a fine flavor, adapting it for common use as well as for refining. The products of the plant under the new process will be—first, the ear, suitable for food-products or the silo; second, sugar-products, including white crystal, yellow and second-grade sugars, table-syrup, molasses and levulose, and molasses stock-feed; third, the cellulose products, including paper-pulps, five grades of cellulose, and viscous pyroxylin, amyloid and fine charcoal. These products of the cellulose structure of the stalk are used in the manufacture of many commodities demanded in the arts—for making celluloid, colodion, sizing, varnishes, transparent films, incandescent lamp filaments, artificial silk, gun-cotton, smokeless powder, and many other purposes. The clean fiber and the cellular-matter products result directly from the previous operations required to extract the sugar, so that the process is profitable at every stage.

To test thoroughly the practicability of this process, several varieties of corn have been grown in widely different localities between the 30th parallel and the southern limit of the beet-sugar region, about latitude 40°, and analytical and manufacturing tests have realized all the early promise of Professor Stewart's experiments. In 1898, at Murrysburg, Pa., 12.64 to 13.68 per cent of sucrose was found in the juice of the process stalks; in 1899, process stalk and juice samples from Elkhorn Valley, Neb., yielded 12.61 to 13.6 per cent of sucrose in the juice (16 tons of trimmed stalks to the acre); in 1900, in Ventura County, Cal., 13.1 per cent of sucrose and 1.1 per cent of invert sugar were found in the juice, with process-stalk tonnage of 17½ tons per acre, irrigated; in 1900, similar results were found in South Carolina, Georgia, and Pennsylvania tests. Upon the basis of 12 per cent of sugar in the juice, the estimate was made by a noted sugar expert, Mr. Edw. Wolfbauer, of New York, that the yield of sugar per ton of the corn-cane and its cost and value, at about present rates, would be:

PRODUCT PER TON OF STALKS.	
First sugar, 162.7 lbs.	\$8.89
Second sugar, 26.3 lbs.	.91
Molasses (very low av.)	.16
	\$7.95
Less brokerage and freight	.15
	\$7.80
Stalks—cost per ton	\$2.00
Stalks—transportation	.30
Stalks—manufacturing	2.50
	4.80
Profits per ton stalks	\$3.00

Or, 38.5 per cent, without including any consideration of the exhausted chips for paper pulp, or for the other products we have mentioned. The quality of the pulp from the exhausted matter is superior to that from straw or wood. One variety of maize tested yielded at the rate of one ton of sugar to the acre, and 4,000 pounds of dry pulp and 2,500 pounds of food product, the latter being equivalent in value to 50 bushels of ripened corn. It is intended to manufacture sugar, cellulose and other products at the same works.

Petroleum Production in 1903.

According to the U. S. Geological Survey, the total production of crude petroleum in the United States in 1903 was 100,461,339 barrels, a gain of 11,694,421 barrels, or 13.17 per cent over the production of 1902. The great increase was mainly due to the remarkable output in California, which is now larger than that of any other State. California produced 24.27 per cent, or nearly one-fourth of the entire production.

Next to California the largest gain in production was in Indiana, which was 1,705,515 barrels, an amount that represents a gain of 22.80 per cent over the State's production in 1902. Kansas showed a remarkable gain in production—600,465 barrels, or 181 per cent; Kentucky and Louisiana

showed gains of about 369,000 barrels each; Indian Territory gained 101,811 barrels, or 274.4 per cent; and New York gained 43,248 barrels, or 3.86 per cent.

On the other hand there was a slight decrease of production, 128,086 barrels, or 0.708 per cent, in Texas; and Ohio, Pennsylvania, and West Virginia all showed decreased production, amounting to a total of 1,856,619 barrels, or 3.98 per cent, in 1903 as compared with 1902. The largest decrease in production in 1903 was in Pennsylvania, and amounted to 708,724 barrels.

During the last six years there has been a very remarkable change in the percentage of the local production. The Appalachian and the Lima-Indiana fields, which for many years produced all but a very small percentage of the whole, produced in the year 1903 only 55.38 per cent of the total, whereas in 1898 these fields produced 93.99 per cent of the total. California and Texas have been the most important factors in bringing about the readjustment of the percentages of production.

The increased production in the States of Texas, Louisiana, and California of large quantities of an inferior grade of petroleum made necessary new markets and new conditions of transportation that were unknown to the older fields. Demand was also made for a large amount of capital to be invested in tanks, pipe lines, tank cars, and tank vessels. The markets and transportation for this new product have been secured to a very large extent. During the year 1903 the consumption of petroleum as fuel and as an enricher of manufactured gas has been very largely increased.

A considerable quantity of Texas petroleum has been refined with satisfactory results, but the percentage of the yield is much smaller than from the Eastern petroleum. When the value of the petroleum produced in the Appalachian and the Lima-Indiana fields is considered in comparison with that of all the remaining fields, it is found that 82 per cent of the total value comes from the 55.38 per cent of the total production furnished by those fields, the remaining 44.62 per cent of the total production receiving 18 per cent of the total value. This means that 3.8 barrels of the Southern and Western petroleum is required to equal the value of 1 barrel of that produced in the Appalachian and the Lima-Indiana fields.

Oil Cure for Cancer.

Dr. Bye has discovered a combination of oils that readily cures cancer, catarrh, tumors and malignant skin diseases. He has cured thousands of persons within the last six years, over one hundred of whom were physicians. Readers having friends afflicted should cut this out and send it to them. Illustrated book sent free, giving full particulars of treatment. Address Dr. Bye, 901-B Broadway, Kansas City, Mo.

To California

Via Union Pacific. Millions have been spent in the improvement of this line, and all human ingenuity has been adapted to protect its patrons against accident. The line is renowned for its fast trains and the general superiority of its service and equipment. Fastest time, shortest line, smoothest track. Tourist sleepers a specialty. Inquire of J. C. Fulton, Depot Agent; F. A. Lewis, City Ticket Agent, 525 Kansas Avenue, Topeka.

Dawson, Ohio, June 12, 1904.

R. F. D. No. 1.
Dr. B. J. Kendall Co., Enosburg Falls, Vt.
Gentlemen:—Please send me your "Treatise on the Horse and His Diseases." I have been using your Kendall's Spavin Cure on my horses. I had a horse with a callous on her shoulder, which everybody said would have to be cut out. I commenced using your Spavin Cure on it and it two weeks it was removed. I think it can not be beat for the ailments of horses. Very truly yours,
J. C. SHORT.

Our readers are doubtless familiar with the Bowsher Combination Feed-Mills, which have been advertised in the Kansas Farmer and which are manufactured by N. P. Bowsher & Co., South Bend, Ind. It is a matter of pride to them and of satisfaction to their customers to know that they have been awarded the gold medal at the Louisiana Purchase Exposition on their display of feed-mills. This means that they manufacture the best.

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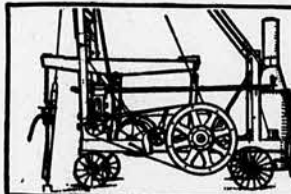
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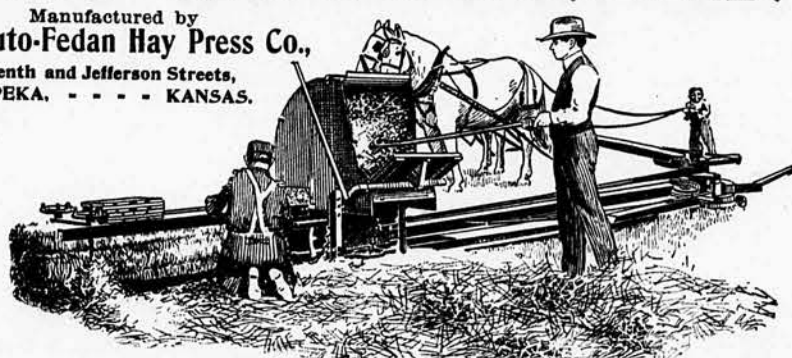
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The Stock Interest

THOROUGH-BRED STOCK SALES.

Dates claimed only for sales which are advertised or are to be advertised in this paper.

December 6 and 7, 1904—Chas. W. Armour, Kansas City, and Jas. A. Funkhouser, Plattsburg, Mo., Herefords at Kansas City.
 December 15, 1904—Combination sale of Percheron stallions and mares, Coach stallions, and Jacks and Jennets, at Ottawa, Kans., S. A. Spriggs, Westphalia, Kans., Manager.
 December 21, 1904—M. L. Ayres, Shenandoah, Ia., Percheron brood mares.
 December 30, 1904—Dietrich & Spaulding of Richmond, Kans. Poland-China bred sow sale at Ottawa, Kans.
 January 4, 1905—Herefords, James A. Carpenter, Carbondale, Kans.
 January 11, 12, 13, 1905—Breeder's Combination Sale, Bloomington Ill., Percherons, French Drafts, Clydesdales, Shires, and Coach horses; Aberdeen-Angus, Shorthorns, Galloways and Herefords. C. W. Hurt, Manager, Arrowsmith, Ill.
 January 20, 1905—Poland-Chinas at Girard, H. N. Holdeman.
 January 31, 1905—S. H. Lenhart, Hope, Kansas, Poland-China bred sow sale.
 January 25, 1905—G. A. Munson, Maxwell, Iowa, Duroc-Jerseys.
 January 30, 1905—Geo. Kerr, Sabetha, Kansas, Duroc-Jerseys.
 January 31, 1905—J. B. Davis, Fairview, Kansas, Duroc-Jerseys.
 February 1, 2, 3, 4, 1905—Percherons, Shorthorns, Poland-Chinas, Wichita, Kans.; J. C. Robison, Towanda, Kans., Manager.
 February 1, 1905—C. E. Pratt, Frankfort, Kansas, Duroc-Jerseys.
 February 2, 1905—Poland-China brood-sow sale, by F. A. Dawley, Waldo, Kans., at Osborne, Kans.
 February 2, 1905—J. O. Hunt, Marysville, Kansas, Duroc-Jerseys.
 February 3, 1905—Chester Thomas, Waterville, Kansas, Duroc-Jerseys.
 February 4, 1905—W. F. Garrett, Fortis, Kansas, Duroc-Jerseys.
 February 8, 1905—Schmitz Bros., Alma, Kans., Poland-Chinas.
 February 14, 1905—E. P. Sherman, Olathe, Kans., Poland-Chinas.
 February 16 and 17, 1905—Chas. M. Johnston, Manager, Caldwell, Kans., Combination sale of registered stock.
 February 21, 1905—John W. Jones & Co., Delphos, Kans., Duroc-Jersey bred-sow sale.
 February 22 and 23, 1905—Shorthorns and Poland-Chinas, N. F. Shaw, Manager, Plainville, Kans.
 March 7, 1905—Jacks, Jennets, and stallions, at Limestone Valley Farm, Smithton, Mo., L. M. Monsees & Sons, proprietors.

Feeding Questions.

The farmers are nearly all up against it this fall with a lot of hogs on hand and feed scarce. So, I refer the matter to you and ask a little advice. How can I make 200-pound hogs the quickest? Corn is 45 cents per bushel or 81 cents per hundredweight, oil-meal \$1.75, shorts \$1.10, Swift's tankage \$1.90. Now how would you go at it to feed fifty head of shoats that are nearly pure L. E. Berkshires, large-boned and will average 100 pounds? They are just right to feed if feed were plenty. I also have forty 30-pound pigs. With what can I rough them through until grass, the cheapest and best for the pigs?

Will sowed cane fed to milch cows dry up the milk? What kind of Kafir-corn would you advise raising for all purposes? My hogs have a four-acre range. Do you think they will do better if put in a smaller range? Do you recommend a supply of oil-meal? About how many pounds per day for fifty head?

C. G. NASH.

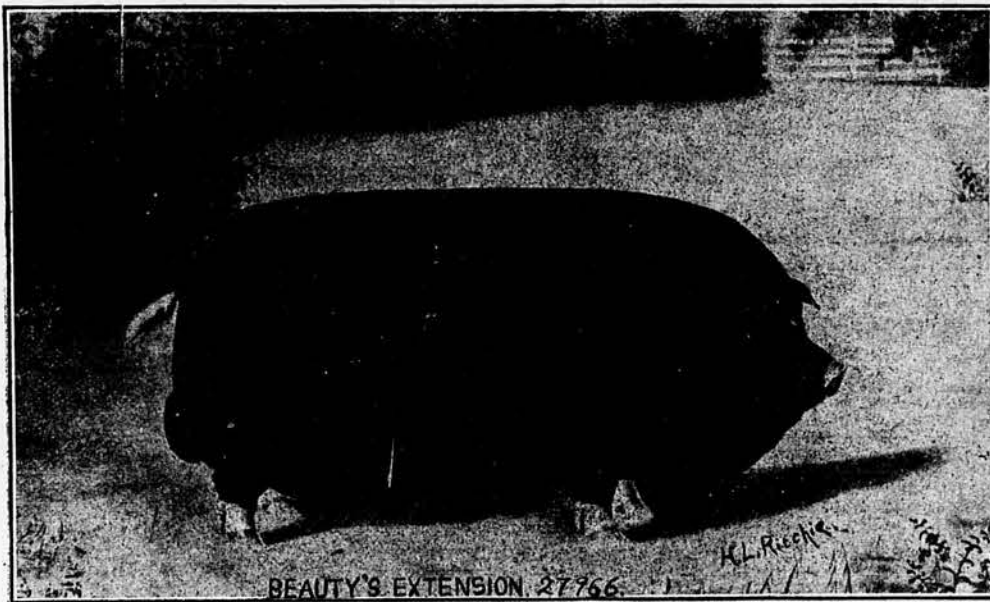
Wabaunsee County.

The first question you propound is rather a difficult one to answer, but the condition is with us and must be met as best we can.

If it is possible to feed shoats of this class so as to get out on them at all, it ought to be done. The results of a large number of experiments have shown that it requires for hogs of this class or age, not far from 500 pounds of corn to produce 100 pounds of gain. With corn at 45 cents a bushel or 81 cents a hundred, this would cost \$4.05, which gives a pretty close margin to figure on at the present prices of pork. As yet the number of experiments with tankage fed with corn have been few in number but such as have been made indicate that a great saving in the amount of corn has resulted. Tankage is a very concentrated product and contains a large per cent of protein and so furnishes with corn a better balanced ration than corn alone. Shorts has also a very high value for feeding swine. A study of the feeding experiments would indicate that by feeding tankage at the rate of about one-seventh or one-eighth of the ration, the amount of corn per hundred pounds may be reduced to about 325 pounds. At this rate of feeding,

it would require about 50 pounds or \$1 worth of tankage, 105 pounds of shorts or \$1.15 worth, and 215 pounds of corn worth \$1.75. This would make our 100 pounds of gain cost \$3.90. This is very close figuring and any little circumstance in the feeding may turn the scale one way or the other and make the gain cost more or less. If you could grind your corn for 2 or 3 cents a bushel it would probably save money to grind the corn, as most of the experiments indicate a saving of 8 to 10 per cent by grinding. I think I should recommend the above ration, viz., the ration composed of about one-seventh or one-eighth tankage, one-fourth shorts, and the remainder corn. The proportion of shorts might be somewhat decreased as the feeding progresses. It would be necessary to feed the pigs all they will eat with a relish, being careful not to overfeed. The quicker they can be made to reach the desired weight the more certain you are of making a profit. In starting to feed the tankage it should be fed at the rate of about one-tenth or one-twelfth and gradually increase to the full ration. The hogs which you are fattening had better be confined in a rather small, well-drained pen or lot as the process of fattening will be retarded if the hogs have too much exercise. An abundance of fresh, pure water should also be supplied to them.

Your second proposition is more difficult than the first. Cattle can be roughed through on hay and fodder, but pigs, such as you have, will require some grain. If you had alfalfa hay or clover hay of high quality it would be possible to get along with a very small amount of grain. If you are compelled to feed grain I do not think I could suggest a better ration than one composed of bran and shorts equal parts at the prices mentioned. If it is your intention to merely keep them through the winter and then pasture and feed out next fall it will not be necessary to keep the pigs very fat. Give them just enough grain to keep them growing nicely; you will



The great herd boar, owned by Gus Aaron, Leavenworth, Kans., and now offered for sale. See advertisement on page 1194.

have to judge as to the amount as it will require observation from day to day to tell just how much to feed.

Your question as to feeding cane to milch cows is one that is frequently asked. It will not dry them up if proper concentrates are fed in connection with it. Cane-fodder is a highly carbonaceous feed, succulent in the fall and is greatly relished by the cattle. If a suitable ration of grain, which should contain bran and possibly a small amount of oil-meal, is fed, you will have a suitable milk-producing ration. By itself, cane is not a milk-producing ration.

At this station the black-hulled white Kafir-corn has yielded a little higher over a period of years, but the red Kafir-corn is a little earlier, so you will see there is very little difference between them. G. C. WHEELER, Kansas Experiment Station.

In the Youth's Companion for December 1, Priscilla Leonard tells of the discovery by which the bacteria that provide soil fertility may be introduced into arid and unproductive lands, practically without cost to the farmer.

Sheep-Raising in Kansas.

"Forty years with sheep, eighteen of which have been spent in Kansas, raising, first, grades, then pure Merinos and pure Shropshires, and feeding all classes of native and Western sheep for market, have taught me that there is no problem to be solved in the sheep industry in Kansas, but that any man of reasonable patience and industry can succeed in the business in any part of the State," says E. D. King, of Burlington. "Sheep love a dry soil, rolling land, and a sunny sky. These are the birthright of Kansas. Rich grasses for summer and generous grains for winter Kansas can give in as rich measure as any land on earth. The poorest acre in the State is as well adapted to sheep as the chalky downs of England, where her best breeds originated. The richest acre we have is not too high-priced for their profitable production. If alfalfa, sorghum and Kafir-corn can be provided for bad weather in winter, the western part of our State is an ideal breeding-ground for thousands of sheep, to be fattened on the surplus grains of our eastern counties, and on our eastern border is a market which never gets enough good mutton. Kansas cribs in the average year are groaning with a plethora of corn. When the market will not pay 50 cents for wheat, it is worth that to feed lambs. We are furnishing all the cat-tie, hogs, and horses the market wants, but the supply of good sheep is short, and we are not raising half the wool our mills consume. Let there be such a lack of wheat or corn as there is of sheep, and our farmers would strain every nerve to supply it, to the impoverishment of their farms, which would be yearly growing richer if they were pastured by sheep and the surplus grain fed to them. The sheep from our western counties and from the plains and mountains beyond find their most profitable feeding-ground here, where they can be stopped on their way to market on a "feed-in-transit" rate and finished, and go on



A Hess Fed Steer

It is easy to pick out a steer that has been well fed and conditioned on Dr. Hess Stock Food—one that has been taken care of in a proper manner from a weanling.

DR. HESS STOCK FOOD

is not a condimental food, but a scientific stock tonic and laxative, the famous prescription of Dr. Hess (M. D., D. V. S.), which aids in the development of bone, muscle and flesh by promoting sharper appetite and greater assimilation, and in keeping the animal immune from the commoner forms of disease or debility.

5¢ per lb in 100 lb sacks, 25 lb pail \$1.60. Smaller quantities a little higher. Small dose.

Sold on a Written Guarantee

DR. HESS & CLARK, Ashland, Ohio.

Also manufacturers of Dr. Hess Poultry Pan-a-c-e-a and Instant Louse Killer.

PROTECT YOUR STOCK

Car-Sul is a Non-Poisonous, Coal Tar, Disinfectant Dip of unusual strength and efficiency, simply mixed with water, 2 parts to 100 and used on Hogs, Cattle, Horses, Mules, Goats and Poultry with dip-tank, spray or sprinkler, will quickly kill Lice, Ticks, Germs and all Vermin; cure Mange, Scourvy and Measles.

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IS GUARANTEED. Not to injure eyes, skin or hair. Is valuable in a hundred ways around house and barn; our free book tells all about it and gives price of dip tanks. Send for copy. For sale at dealers or direct, \$1.50 per gal., prepaid. Lower price in quantities. Ad. Moore Chemical & Mfg. Co. 1501-1503 Genesee St., Kansas City, Mo.

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Do yourself what horse doctors charge big prices for trying to do. Cure Fistula or Poll Evil in 15 to 30 days. Fleming's Fistula and Poll Evil Cure is a wonder—guaranteed to cure any case—money back if it fails. No cutting—no scar. Leaves the horse sound and smooth. Free Book tells all about it—a good book for any horse owner to have. Write for it. FLEMING BROS., Chemists, 312 Union Stock Yards, Chicago, Ill.

PINK EYE CURE FOR HORSES AND CATTLE.

Sure relief for Pink Eye, foreign irritating substances, clear the eyes of Horses and Cattle when quite milky. Sent to responsible stockmen on 30 days trial, or sent prepaid for the price, \$1.00. Address orders to W. O. THURSTON, Elmdale, Kansas.

LUMP JAW No Cure No Pay.

W. S. Sneed, Sedalia, Mo., cured four steers of lump jaw with one application to each steer; and J. A. Keeseman, Osborn, Mo., cured three cases with one application to each. Hundreds of similar testimonials on hand. Full particulars by mail. Write to CHARLES E. BARTLETT, Columbus, Kansas.

DEATH TO HAVES Guaranteed. NEWTON'S Haves, Cough, Dis-temper and Indigestion Cure. A veterinary specific for wind throat and stomach troubles. Strongly recommended. \$1.00 per can. Dealers, Mail or Ex. paid. The Newton Remedy Co., Toledo, Ohio.

Feed for Fattening Hogs.

How much feed is required to produce 250-pound hogs from pigs 6 weeks old? The pigs are full-blood Poland-China. What proportion of shorts to corn should I feed? The feed is shorts and corn.

Shawnee County. JNO. WISEMAN.

The inquiry which you make is a very interesting one, and one which

might well be studied by any producer of pork. It is generally considered that about twenty bushels of corn is required to produce a hog weighing 250 pounds. This can be reduced somewhat if some dairy by-products are available to feed the pigs while young.

The following table taken from Henry's Feeds and Feeding gives the results of about all of the experimental data obtainable bearing on this subject. In this table, six pounds of skim-milk have been calculated equivalent to one pound of grain where skim-milk has been fed, thus reducing all the figures to grain, or grain equivalent:

Weight of pigs in pounds.	Actual average weight, lbs.	No. of stations reported.	Total number of trials.	No. of animals fed.	Av. feed eaten per day, lbs.	Feed eaten daily per 100 lbs. live wt. lbs.	Av. gain per day, lbs.	Feed for 100 lbs. gain, lbs.
15 to 50.....	38	9	41	174	2.23	5.95	0.76	293
50 to 100.....	78	13	100	417	3.35	4.32	0.83	400
100 to 150.....	128	13	119	495	4.79	3.75	1.10	437
150 to 200.....	174	11	107	489	5.91	3.43	1.24	482
200 to 250.....	226	12	72	300	6.57	2.91	1.33	498
250 to 300.....	271	8	46	223	7.40	2.74	1.46	511
300 to 350.....	320	3	19	105	7.50	2.35	1.40	535

A careful study of this table will show many interesting things in pig-feeding, and as it is the average of a large number of experiments in which many animals have been used, the results may be considered as very accurate. In the seventh column of this table it will be noted that the young pigs consumed a much larger amount of grain daily per hundred pounds of live weight. In the last column of the table it will be noted that the young pigs make a hundred pounds gain from a much smaller quantity of grain consumed, there being a gradual increase in the grain required to produce one hundred pounds of gain as the hog grows older.

The economy of marketing pork at as early an age as possible may be readily seen from this fact.

If the only feeds you have available are shorts and corn, for the present you might feed as high as one-half to two-thirds shorts as the young pigs require much more growing material than is supplied by corn alone. If possible, the corn should be ground and the whole fed in a moistened condition. As the pigs grow older, the percentage of shorts may be decreased until the last week or so, when the feed may be almost pure corn. If impossible to grind the corn, it may be fed on the cob or shelled, and as the corn begins to dry and get hard it will probably be best to soak it over night. This is not necessary, however, unless the corn becomes too hard and flinty to be eaten readily. G. C. WHEELER, Assistant in Feeding Experiments, Kansas Experiment Station.

Pasture and Grain for Hogs.

Replying to Mr. R. O. Stewart's inquiry as to what is the cheapest way to raise hogs when one has an abundance of alfalfa and it is still necessary to feed them on a full grain feed from start to finish, I would say that the question asked by your correspondent is a very hard one to answer, as price of feed and the market price of fat hogs vary so much that it would be almost impossible to prescribe any one ration that would be the cheapest and most profitable hog feed. When one has an abundance of alfalfa pasture it is without a doubt one of the best and cheapest hog feeds that we have. If the price of hogs were high and grain comparatively cheap, it would perhaps pay to crowd them on grain as fast as possible, even although they had alfalfa pasture. On the other hand, if hogs were cheap and grain high, it would be best to allow them to make their growth on alfalfa and feed as little grain as possible. Grass is by far the cheapest flesh-producer that we have and it should be made use of whenever it is possible. The results of the last experiments here with hogs are shown in the following tables:

It will be noticed that the three lots are very nearly equal in the gains made. The no-pasture lot consumed 557 pounds (or 70 pounds for every 100 pounds of gain) more grain than the pasture lots. The lot receiving rape pasture required an area of one acre, those on alfalfa pasture, one-half acre. The lot without pasture required 371 pounds of grain to produce 100 pounds of gain. Assigning the same value to the grain fed the hogs on rape pasture gives 874 pounds of pork credited to the grain, and 202 pounds credited to the rape. At 6 cents per pound, the price at which hogs were selling at the close of the

experiment, this would bring us an income of \$12.12 per acre for rape. In like manner the alfalfa is credited with 204 pounds of pork, equal to \$12.24, and, as there was only one-half an acre of alfalfa, this makes a rate of \$24.48 per acre. This experiment emphasizes the value of Dwarf Essex rape, which can be seeded in the feed-lots that would otherwise go to waste or grow up to weeds, and be made to pay a handsome profit on the investment.

Lots.	No. hogs.	Days fed.	Grain consumed, lbs.	Gains, Total, lbs.	Daily per h'd, lbs.	Amt. grain per 100 lbs. gain, lbs.	Amt. rough-ness per 100 lbs. gain, lbs.
With alfalfa.....	12	56	3,780	812	1.20	465	102
Without alfalfa.....	12	56	4,227	799	1.18	529	...

We find that 102 pounds of alfalfa hay takes the place of 64 pounds of grain. Assuming that it requires 529 pounds of grain to produce 100 pounds of gain, as indicated in the lot without alfalfa, 714.5 pounds of the 3,780 pounds gain in the lot with alfalfa is to be credited to the grain and the remaining 97.5 pounds to the alfalfa fed. At this rate the alfalfa hay would produce 235 pounds of pork per ton.

The pasture is not only economical from the standpoint of gains but it furnishes succulence and variety and keeps the hogs in a healthier condition. R. J. KINZER.

Wichita Poland-China Sale.

The day after Thanksgiving, Messrs. W. M. Messick & Son, Piedmont, and W. R. Peacock, Sedgwick, held a combination sale of Poland-China swine in Wichita, Kans., under the very able leadership of the auctioneers, Col. J. W. Sparks, Marshall, Mo., and Col. L. F. Burger, Wellington, Kans. The animals were all in good condition and showed up well in the sale-ring, but the buyers were not as much in evidence as they should have been, and we believe that the fact of the sale being held the day after Thanksgiving would help account for the shortage of bidders. And while the prices realized were reasonable, none of the animals sold for what could be called high prices, nor in fact probably within 25 per cent of what they should. But as the consignors stated at the beginning of the sale, if a bid was made on an animal it would surely be sold. We believe that if these gentlemen hold a sale next year the prices prevailing will be better. One other reason for prevailing low prices at this sale in this locality was the high price of corn. Some of the breeders felt that they could not buy any more animals than those which they were actually in need of. The top price for hogs was \$50 for L's Corrector 87083 A, who was bred by Winn & Mastin and owned by W. M. Messick & Son, and went to S. J. Larimer, Derby, Kans. The top of the sow sale, May Lighter 227104 A, bred by Winn & Mastin and owned by W. M. Messick & Son, went to A. M. Campbell, Salina, for \$80. Mr. Campbell was not present in person but had authorized his agent to bid as high as \$100 for this animal. The other buyers were John D. Snyder, Winfield; J. S. Wallace, E. Clark, W. M. Ranson, L. C. Huber, Jas. Wilson, T. H. Sparks, Wichita; S. R. Hefner, Piedmont; F. H. Wineke, Marion, Iowa; Ed. Pray, Kiowa; Frank B. Hughes, Purcell, I. T.; C. C. Fair, Sharon; J. R. Mingle, Anthony; A. Van Riper, Arlington; Geo. T. Ecton, Liberty, Mo.; W. W. Trego & Sons, Sedgwick; W. J. Honeyman, Madison; Ray Krack, Andover; G. Dick, Whitewater; F. M. Sumpter, Argonia; John B. Freese, Clearwater; J. B. Hall, Rose Hill; Thos. Marnane, Benton; F. B. Hughes, Purcell, I. T.

The 26 head sold by W. M. Messick & Son brought \$684, averaging \$26.30; 15 boars

brought \$360, averaging \$24; 11 sows brought \$324, averaging \$29.45. W. R. Peacock sold 18 head for \$339.50, averaging \$18.86; 7 boars brought \$98.50, averaging \$14.07 and 11 sows brought \$241, averaging \$21.90.

Missouri Berkshire Association.

Editor Kansas Farmer:—The following named Berkshire breeders met in the Moberly Commercial Club parlors Thursday evening, November 17, 1904, for the purpose of organizing a State Berkshire Breeders' Association: T. A. Harris, Lamine, Mo.; J. K. King, Marshall, Mo.; Evan Davies, Dalton, Mo.; L. E. Frost, Moberly, Mo.; C. D. Tudor, Salisbury, Mo.; J. C. Roberts, Clarksville, Mo.; Holman Brothers, Auxvasse, Mo.; James Wren, Keytesville, Mo.; Sam Spelman, Sturgeon, Mo., and C. E. Buchanan, Moberly, Mo.

Mr. Davies called the meeting to order, and stated that the object of the meeting was to form a State Berkshire Breeders' Association, the object of which would be to promote the best interest of all Berkshire breeders in the State, to hold public sales of Berkshire hogs and to disseminate more information regarding the Berkshire hog than has been done in the past. He stated that there was at present a marked interest among the farmers generally in the Berkshire hog, and in his opinion the Berkshire had a great future.

L. E. Frost was made chairman, and Mr. C. D. Tudor, secretary of the meeting. The election of officers resulted in L. E. Frost being elected president, and Mr. C. D. Tudor secretary, and Mr. J. O. Roberts treasurer. Name of the association to be "The Missouri Berkshire Breeders' Association," and every Berkshire breeder in Missouri to be eligible to membership. Mr. King suggested that a sale of bred sows be held somewhere in the State some time during the month of February, and that in all future sales not over 25 per cent of the total number catalogued be males. In fact it was his opinion and also that of every other member present that it did not pay to sell male hogs at public sales, but it would be better to discriminate more carefully, and only keep the very best males and sell them at private sales. It was determined

to hold two sales a year, time and place to be set by executive committee.

A committee on by-laws and constitution was named consisting of Evan Davies, T. A. Harris, and June K. King. Committee to report as soon as possible. The officers of the association, together with committee on by-laws was named as executive committee. Thanks of the association was voted Mr. W. E. Hurlbut, of the Ruralist, for his untiring efforts in behalf of the Berkshire breeders and the Berkshire hog.

Every breeder of good standing in the State of Missouri is urged to become a member of this association, and until the association is in perfect working order, there will be no assessment of any kind, and the annual dues in the future will be a very nominal sum.

It is hoped that all breeders will send in their name and address to Mr. C. D. Tudor, Salisbury, Mo., as it was the consensus of opinion of the members present at this meeting that by a united effort on the part of the Missouri Berkshire breeders that the Berkshire hog could be placed on the high plane where he belonged, believing that when farmers and feeders became better acquainted with the true merits of this hog that the already large demand for them will be greatly increased. C. D. TUDOR, Secretary.

Sunny Slope Berkshire Sale.

One of the most successful sales of Berkshire swine held in the West during recent years, was the first auction offering of Berkshires ever made by C. A. Stannard, Emporia, on November 23.

Notwithstanding the fact that Berkshire sales in the West the last two or three years have not been very successful, Mr. Stannard's offering was so uniformly excellent that the bidding was fairly lively and the general results considered satisfactory, although he had a right to expect higher values, considering the breeding and quality of the offering.

Col. R. E. Edmonson, Kansas City; L. F. Burger, Wellington; and O. P. Updegraff, Topeka, managed the selling in a very satisfactory way. Several sows bred to Berryton Duke, a full brother to the \$1,000 Masterpiece, sold well. The highest price realized for sows was \$56, and nine head sold for \$40 and upwards. The heaviest buyers at the sale were T. F. Guthrie, Staffordville, Chase County, Kansas, and E. O. Crighton, Roswell, N. M.

The result of the sale, sixteen boars averaged \$16.53, fifty-five sows and gilts averaged \$28.16, seventy-one Berkshires brought \$1,845.50, a general average of \$26.

The sale was admirably managed—a feature of all Sunny Slope sales. Everything was in place before the sale. There was no waiting, but everything moved smoothly. With two such veterans as C. A. Stannard and his manager, George W. Berry, however, nothing less was expected. It was one of the cleanest, straightest, most satisfactory sales of the year, and for the number sold, one of the best that has been held in this section in Berkshire sales in many months.

Among the buyers other than those mentioned were the following: E. D. King, Burlington, Kans.; M. M. Detar, Edgerton, Kans.; F. A. Scherzinger, Nelson, Neb.; George Wilder, Emporia, Kans.; Daniel Keller, Americus, Kans.; John Perrier, Emporia; Chas. Hager, Randolph, Kans.; J. H. Howe, Emporia; Norman Dietrich, Plymouth, Kans.; J. H. Macy, Emporia; W. F. Gray, Allen, Kans.; T. E. Roberts, Tecumseh, Neb.; J. M. Rogers, Saffordville, Kans.; W. F. Nevius, Fairfax, Neb.; H. Rogler, Bazaar, Kans.; R. C. Hunter, Cottonwood Falls, Kans.; W. I. Brown, Emporia; R. L. Jones, Emporia; John R. Lewis, Lafayette,

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Lot.	No. of hogs.	Days fed.	Grain consumed, lbs.	Gain, Total, lbs.	Daily per head, lbs.	Grain consumed per 100 lbs. gain, lbs.
I. No pasture.....	10	98	3,801	1,023	1.04	271
II. Rape pasture.....	10	98	3,244	1,076	1.09	301
III. Alfalfa pasture.....	10	98	3,244	1,078	1.10	300

ette, Ind.; W. B. Shockey, Derby, Kans.; B. B. Burns, Admire, Kans.; J. W. Mizer, Saffordville, Mo.; J. J. Collard, Oipe, Kans.; Sanford Smith, Carthage, Mo.; S. J. Wilkinson, Saffordville, Kans.; W. F. Corbin, Corder, Mo.; J. E. Wells, Weston, Mo.; W. O. Knapp, Guthrie Center, Iowa; A. E. Stoughton, Madison, Kans.; J. F. Pierce, Lyndon, Kans.; A. B. Smith, Lyndon; W. C. McLean, Checotah, I. T.; Daniel Richard, Ope; T. Pickens, Honey Brownsburg, Ind.; W. T. Pickens, Honey Grove, Texas; Fred Cottemyer, Emporia.

Before the sale Mr. Stannard made an appeal to his neighbors to use the Berkshires and in his remarks said: "I breed Berkshires because they make more meat for the same amount of feed and time, and because I can make the most dollars from them. I have bred Poland-Chinas, Chester Whites, and Durocs but the Berkshires have proved the most profitable."

Ranson's Shorthorn Sale.

On Saturday, November 26, Wm. H. Ranson, of North Wichita, Kans., held a most successful public sale of Shorthorns at Wichita, at which Col. L. F. Burger, of Wellington, Kans., and Col. J. W. Sparks, Marshall, Mo., did a creditable piece of work as auctioneers. Mr. Ranson supplemented his draft from the Evergreen Ridge Herd by including eleven head from the herd of W. W. Vaughn, Marion, Iowa. The top prices realized for bulls was \$150 paid for Baron Knight, the son of Gallant Knight, Tomson's herd bull, Dover, Kans. This was sold to W. A. Hotchkiss, Valley Center, Kans. The other top-notch sale was for the bull, King Richard 2d, a young bull consigned by W. W. Vaughn, which sold to J. H. Hensel, Salt Fork, Okla., for \$155.

The top price for cows was for Merry Lad 3d and b. c., sired by Highland Chief 136717. Fourteen bulls sold for \$1,080, an average of \$77.14. Eighteen cows and heifers sold for \$1,430, an average of \$80. Thirty-two Shorthorns offered sold for \$2,150, a general average of \$78.44. The sale in detail was as follows:

BULL SALES.

Baron Knight 134946, W. L. Hotchkiss, Valley Center, Kans.	\$150
Daniel, E. Kerns, Sedgwick.	65
Lord Wild Eyes 227242, Ira Kelly, Valley Center.	55
General Stone 220687, M. Kops, Derby.	85
Lord Peri, J. E. Cockrell, Wichita.	65
Leader, Cliff Smith, Kingman.	55
General Kuroki, W. E. Brooks, Wichita.	50
Jocko, W. M. Booth, Waco.	65
Alexander, L. W. Stewart, Sedgwick.	65
Merry Monarch, P. B. Wycoff.	65
General's Sharon, H. M. Nelson, Clearwater.	50
Favorite, Clark Kincaid, Wichita.	80
Jim Lytton, J. P. Royal, Oatville.	85
Proud Hero, Chas. Schafer, Sedgwick.	80
Punch, Ed. McKellip, Valley Center.	70
King Richard 2d, J. S. Hensel, Salt Fork, Okla.	155

COW AND HEIFER SALES.

Butterfly Queen, F. M. Cecil, Lahoma, Okla.	\$130
Merry Lass Third and b. c., Clark Kincaid, Wichita, Kans.	150
Wild Eyes Beauty, Thos. Murphy, Corbin.	100
Mary Stone, Thomas Murphy.	80
Mary Stone 2d and b. c., W. T. Garthwaite, Benton.	85
Mary Stone 3d and c. F. M. Cecil.	75
10th Perle Duchess of Maple Grove, J. M. Sloan, Wichita, Kans.	65
10th Perle Duchess, Clark Kincaid.	95
Red Peri, R. H. Williams, Maize.	70
Blithesome Nell, G. T. Granfield, Wichita.	40
Trilby 2d, J. E. Cockrell.	65
Goddess of Liberty, John Engel, Derby, Kans.	55
Red Nancy, E. Kerns.	40
Glendale Matilda 2d, J. S. Hensel.	85
Honest Girl, L. W. Stewart.	50
Annie Rooney 2d, John Engel.	70
Annie Rooney 3d, L. W. Stewart.	50
Lucille, Chas. Schafer.	105
Bessie, Chas. Schafer.	100

William Wales' Great Shorthorn Sale.

On November 23, 1904, Wm. Wales, Osborne, Kans., held a remarkably successful sale of Shorthorn cattle, one of the very best held in Kansas this year, making the highest average of the three sales held in Kansas last week. This speaks well for the class of cattle offered and the enterprise of the breeders of Northwest Kansas. The Riverside Herd is headed by Brave Knight 3d 182522, by Gallant Knight 124468 out of 2d Bele of Dover by Thistlepot 83876. It will thus be seen that he has one of the best bred bulls in the State and the record he made in his sale is at once creditable to this bull as a sire and to the breeders who were present as purchasers. The details of the sale were as follows:

BULLS.

Star of Riverside 226305, Chas. Galley, Osborne.	\$115.00
Grand Knight of Riverside 226309, A. R. Prather, Luray.	133.00
Royal Highlander of Riverside 226304, G. W. Willis, Kirwin.	202.50
Pride of the Farm 226303, S. S. Simmons, Mankato.	100.00
Chunk of Riverside 226207, W. A. Billings, Stockton.	149.00
Gold Dust of Riverside 226299, Frank Dunkleburg, Bloomington.	113.00
Choice Knight of Riverside 226296, I. L. Stockbridge, Alton.	190.00
Gloster of Riverside 226298, R. L. Parrott, Osborne.	127.00
Knight's Best of Riverside 226301, L. F. Stone, Portis.	117.50
Scotty of Riverside 226318, F. A. Dawley, Waldo.	123.00
Oakland Lad of Riverside 226302, F. Gorman, Lucas.	116.00

FEMALES.

Ruby of Riverside, F. D. Moore, Osborne.	\$126.00
Beauty of Riverside, L. M. Noflinger, Osborne.	168.00
Pansy of Riverside, Geo. McMullen, Burr Oak.	115.00
Lady Grace, S. S. Simmons, Mankato.	159.00
Violet of Riverside, F. D. Moore.	104.00
Lady Grace 3d, I. L. Stockbridge.	159.00
May of Riverside, R. L. Parrott.	151.00
Sunshine of Riverside, W. F. Bleam, Bloomington.	137.50

Daisy Dean of Riverside, W. F. Bleam.	101.00
Princess of Riverside, Geo. McMullen.	100.00
Hazel 5th of Riverside, Len White, Delphos.	112.00
Orphan Girl of Riverside, F. F. Layman, Portis.	125.00
Ophelia of Riverside, F. A. Dawley.	101.00
3d Josephine of Riverside, F. Layman.	90.00
Oakland Lady 3d, S. S. Simmons.	108.00
Sunflower of Riverside, Geo. McMullen.	112.50
2d Blossom of Riverside, F. Layman.	95.00
Victoria of Riverside, F. Layman.	85.00
Pride of Riverside, F. Layman.	126.00
Lady Knight of Riverside, F. Layman.	15.00

In this sale eleven bulls brought \$1,486, average \$135.10; twenty one cows brought \$2,447, average \$116.52; thirty-two head brought \$3,933, average \$122.90.

Breeders Combination Sales at Hope, Kans.

On November 22, the Hereford breeders of Dickinson and Marion Counties made the opening sale in the new sale barn and pavilion, erected by the cattle- and swine-breeders of Dickinson and Marion Counties, as a place for future breeders' combination sales of Hereford and Shorthorn cattle, Berkshire, Duroc-Jersey, and Poland-China swine, and as usual in such cases the first sales encountered the difficulties incident to a joint offering of different sorts and ages of stock, and in consequence of which the offerings were not made with that system which is found necessary in an individual sale, resulting in lower average prices than might have been obtained.

The auctioneers in charge of the Hereford sale were Col. J. W. Sparks, Lee Stagg, and A. C. Marriott. Twenty-five bulls sold for \$1,640, an average of \$65.60, and twenty-two cows and heifers sold for \$1,215, an average of \$55.23. The forty-seven Herefords sold for \$2,855, a general average of \$60.74. The top price realized for bulls was for the imported bull, Duke of Clarence 138106, consigned by W. H. Rhodes, which went to Albert Dillon, Hope, for \$115. The top price for females was the heifer, Java's Princess 148844, consigned by W. H. Rhodes and sold to David Musz, Hope, Kans., for \$130.

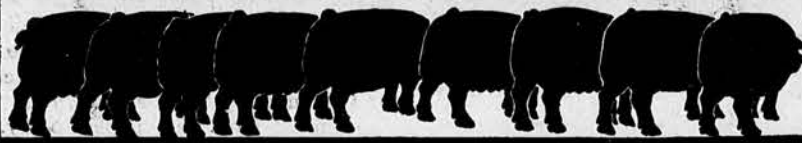
The contributors to the sale were: Albert Dillon, Hope; A. L. Evers, Dillon; J. B. Shields, Lost Spring; W. H. Rhodes, Tampa; and Mrs. E. C. Chamberlain, Hope, Kans.

The complete list of purchasers are as follows: S. M. Lehman, Leoti; Thos. Gribben, Hope; A. L. Hollinger, Pearl; Geo. Dillon, Hope; R. Longhofer, Woodbine; J. H. Mapes, Salina; J. K. Frank, Lost Springs; David Musz, Hope; W. F. Ziebell, Herington; M. Rhodes, Tampa; H. Kohman, Dillon; C. E. Rhodes, Tampa; Thos. McLain, Dillon; Arthur Hill, Hope; John Riffel, Herington; Geo. Dunlap, Hope; John Congrove, Elma; Chas. Kyntoon, Wakefield; Henry Kandt, Herington; A. Lietz, Herington; Ernest Myers, Hope.

The second day's combination sale was under the auspices of the Dickinson County Shorthorn Breeders' Association, and the following members contributed from four to eight head each: C. W. Taylor, Pearl; D. Ballantyne & Son, Herington; J. F. Landis, Abilene; G. W. Kelly, Detroit; and H. R. Little, Geo. Channon, M. C. Hemenway, and S. H. Lenhart, of Hope, Kans. Colonel J. W. Sparks, assisted by L. R. Brady, Manhattan, and Lee Stagg, Hope, did excellent work in overcoming the difficulties and obtaining the results made.

Seventeen bulls averaged \$53 and thirty-one cows and heifers averaged \$70, forty-eight Shorthorns selling for \$3,027.50, a

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general average of \$63.07. The top price of the sale was \$120, paid by Richard Waring, Abilene, Kans., for Lone's Hope, a 2-year-old heifer sired by Royal Crown. The bull, Pride's Crown, topped the male offering at \$110, and sent to Carl Gaughann, Lincolnville. Both of these animals were consigned by H. R. Little, Hope.

The number and average price realized for each consignor was as follows: C. W. Taylor, five head, average \$67. D. Ballantyne & Son, six head, average \$57.08.

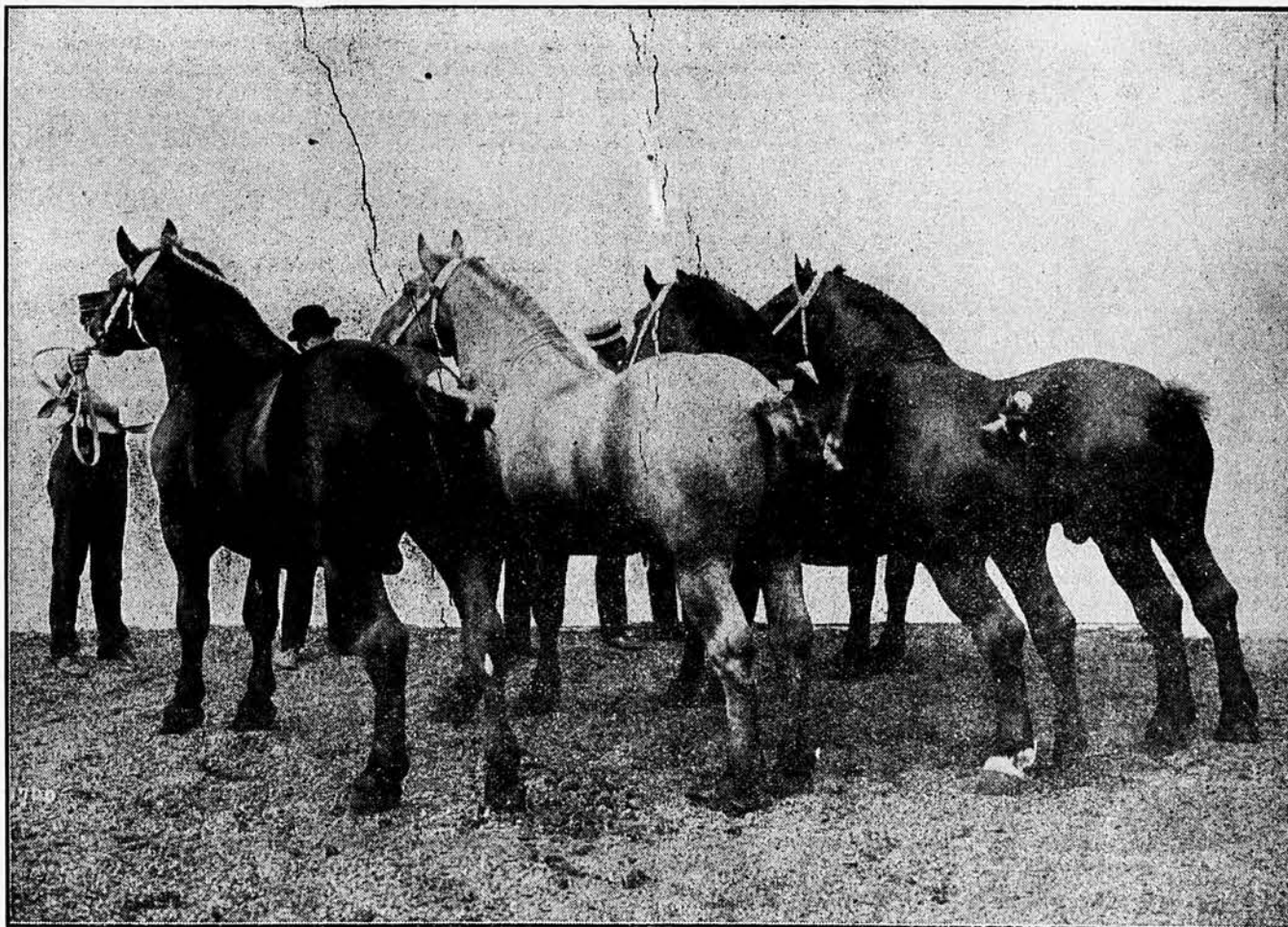
H. R. Little, eight head, average \$84.37. Geo. Channon, eight head, average \$58.12. J. F. Landis, five head, average \$72. M. C. Hemenway, seven head, average \$51.43.

S. H. Lenhart, five head, average \$57. G. W. Kelly, four head, average \$48.75.

Eight times in the sale the \$100 mark was reached or exceeded. C. W. Taylor's 11th Linwood Hill sold for \$105 to J. E. Brechhill, Moonlight, Kans. D. Ballan-

tyne & Sons' Roan Prince sold for \$100 to F. P. Harnett, Solomon City, Kans. H. R. Little's Lady Barrington 4th and Pride's Crown sold for \$110 each, the buyers being respectively C. E. Rhodes, Dillon, Kans., and Charles Gaughann, Lincolnville, Kans. George Channon's Roxanna brought \$105, James Lombard, Hope, Kans., buying her. J. E. Landis' Royal Lady sold for an even hundred to C. E. Rhodes, and M. C. Hemenway's Red Rose sold for \$100 to J. H. Long, Ramona, Kans. Messrs. S. H. Lenhart and G. W. Kelley consigning mostly younger things failed to reach the \$100 mark. Buyers not already mentioned are: John Keefer, Hope, Kans.; James Haley, Hope; John McLoren, Herington, Kans.; J. P. Scott, Navaroe, Kans.; Henry Musser, Donegal, Kans.; Victor Anderson, Burdick, Kans.; L. H. Brandt, Ramona, Kans.; Clem Bell, Holland, Kans.; D. Ballantyne, Herington, Kans.; J. R. Hatfield, Hope, Kans.; Aaron Moss, same; Henry Schill-

(Continued on page 1190.)



Turco.

Chichi.

Fronton.
(Grand Champion.)

Casino.

The four winners of First Prize in the regular stallion classes, St. Louis, 1904. Owned and exhibited by McLaughlin Bros., Kansas City, Columbus and St. Paul.

The Young Folks

CONDUCTED BY RUTH COWGILL.

The Washerwoman's Lament.

An sure I was tould, to come in till yer Honor
To see would ye write a few lines to me Pat?
He's gone for a soldier is Mither O'Conner,
Wid a stripe on his arm, and a band on his hat.
And what'll ye tell him? Sure it must be alsy
For the likes of yer Honor to spake wid a pen.
Tell him I'm well, and mavourneen Daisy (The baby, yer Honor) is better again.
For when he went off, so sick was the darlint,
She never hilt up her blue eyes till his face,
And when I'd be cryin' he'd look at me wild-like.
And ax, "Would I wish for the country's disgrace?"
So he left her in danger, an' me sorely gravin'.
And followed the flag wid an Irishman's joy;
And it's often I drame of the big drums a batin'.
And a bullet gone straight to the heart of me boy.
Tell him to send us a bit of his money
For the rint, and the roctor's bill due in a wake;
But sure—there's a tear on your eye-lashes, honey,
In faith, I'd no right wid such fradom to speak.
I'm over much triffin'. I'll not give ye trouble—
I'll find some one willin'—oh! what can it be?
What's that in the newspaper yer foldin' up double?
Yer Honor, don't hide it, but rade it to me.
Dead! Patrick O'Conner! oh, God! it's some ither.
Shot dead! Sure a week's scarce gone by;
An' the kiss on the cheek o' his sorrowing mither,
It hasn't had time yet, yer Honor, to dry.
Dead! Dead! Oh, my God, am I crazy?
Shure it's brakin' my heart, yer tellin' me so.
And what in the world will become of me Daisy?
Oh, what can I do! Oh, where shall I go!
This room is so dark, I'm not see', yer Honor;
I think I'll go home—and a sob, hard and dry,
Rose up from the bosom of Mary O'Conner,
But never a tear-drop welled up to her eye.

—Anonymous.

A Great Privilege.

"What a splendid fellow he is!"

Howard Tyler's face brightened with admiration as he watched his young host alight from his wheel and guide it carefully along the carriage-way to the side entrance. Then, resuming the search through his bag for a missing collar-button, his thoughts ran on:

"I'm going to be just like Walter Chase as soon as I get the chance. There's a fellow that has his own way in everything. I wish my father and mother would take pattern from his. Judge Chase treats Walter as if he were a gentleman, and not a boy to be kept under. He's a champion golf player. I must learn golf. He likes football; he said so. He rows, too. Oh, he's up in everything! His mother says he's studying hard. I suppose I'll have to, when I get into high-school. He isn't any better-looking than I am," with a sidelong glance into the mirror. "But isn't he straight! Mother's always talking to me because I'm round-shouldered. This is the way he goes;" and Howard straightened his back and walked across the room in awkward imitation of the young athlete's graceful carriage. "My! it makes me feel tall. Guess I'll have to practice it."

Judge Chase and Mr. Tyler had been classmates and chums at Yale, and since both were prominent lawyers they visited each other occasionally, for the double purpose of renewing their friendship and consultation on some perplexing law case. A year ago Judge and Mrs. Chase had spent a few days at the Tylers' home in Nickleton; and now Mr. Tyler and his wife had come to Gay Harbor for a short visit, with Howard—their only son—who had been included in the judge's invitation.

Howard had never been in Gay Harbor before, and this was his first meeting with Walter Chase. As Walter was three years his senior, Howard

being but thirteen, he had looked for little attention from the judge's son. In this he was happily mistaken, Walter receiving him with such cordiality, and entertaining him so delightfully, as to win his heart at once.

After luncheon Judge Chase addressed his son, at the same time taking a large envelope from his pocket: I promised Senator Browning that he should have this paper to-day. It is valuable, and the new office-boy is too careless to be trusted with it. Can you find time to leave it at his house this afternoon?"

"Certainly, father," was the ready response; "I will go now." Then, turning to Howard:

"Will you come? Senator Browning lives on one of the pleasantest streets in the city."

"So he does have to do errands!" Howard thought, as they left the house; and his mind reverted to the week before, when he had grumbled because his father asked him to carry a package to a distant part of the town.

As they met a gentleman, Howard noticed that his companion touched his cap, in addition to the customary greeting. In his impulsive fashion, he blurted out his surprise:

"That's a new fad, isn't it? Do you have to do that to every man you know?"

"I don't have to do it at all," was the pleasant answer. "That is our minister, and it isn't much to pay him so slight a mark of respect, is it?"

"Oh, no," returned Howard; "only I never saw a fellow do it in Nickleton."

It was not alone for the clergyman that Walter's little graceful act of courtesy was performed; other gentlemen received the same token of esteem. And when they passed some girls of about Howard's age, Walter's cap was doffed with as much deference as to ladies.

Howard commented silently; he did not wish further to display his ignorance in matters of etiquette. He was in the habit of lifting his hat when he met his teacher or those friends of his mother, whom he little knew. He had never deemed it necessary to take such trouble for ladies whom he saw frequently at his father's house; and as for giving his girl acquaintances more than a nod—why, he would have scouted the suggestion of such a thing. Yet he admitted to himself that these small acts seemed to add to the grace and dignity of Walter Chase.

"I'll teach the Nickleton boys some lessons in politeness," he thought. "But won't they stare!" and Howard almost laughed aloud.

The evening was passed at home, and when Walter brought forward a book of pictures that he had taken during his summer vacation, Howard was obliged to add to the list of his host's accomplishments that of amateur photography.

"I'll have to be smart if I equal him in all these things," was the younger boy's mental comment, while he listened to graphic and amusing accounts of Walter's vacation journeys.

The elder folks were enjoying themselves in front of the blazing hearth-fire, and the boys were still occupied with the photographs, when the small clock at the other end of the library proclaimed that the hour was nine.

A gentle voice made itself heard at the table where two heads bent over Montmorency Falls:

"Walter, good-night!—if Howard will excuse you. You know there is a lesson to prepare before school in the morning."

Instantly the lad arose, and with a word and a smile for his companion, and a graceful good-night to his parents and their guests, he was gone.

"Well, he knows how to mind!" exclaimed Mr. Tyler, admiringly. "I've noticed it all day. How do you manage it, Mrs. Chase?"

The lady smiled. "He has always been obedient from a little child," she responded.

"Yes," added Judge Chase, in his earnest, impressive way, "Walter is a good boy; he has never caused me one moment's bother."

"I would give a thousand dollars to

FREE

Our new Catalogue, a 336-page book with over 5,000 illustrations, descriptions and prices of Mermod & Jaccard's celebrated Watches, Precious Stone and Gold Jewelry, Solid and Plated Silverware, China, Cut Glass, Leather Goods, Umbrellas, Canes, Optical Goods, Stationery and Art Goods—the finest book of its kind ever published—the largest assortment of the best goods at lowest possible prices—quality and price guaranteed. See These Special Offers.

Cuff Buttons \$1.25 pair

Extra heavy finely finished Solid Silver Cuff Links as illustrated for only \$1.25 pair. In Solid Gold—extra heavy—\$6.50 pair.



Locket—Solid Silver—plain satin finish heart-shaped Locket with place for 2 portraits—\$1.50—in Solid Gold—extra heavy—\$12.

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Scarf Pin 25c. Solid Silver Horseshoe Pin for only 25 cts. In Solid Gold for \$2.50.

MERMOD & JACCARD JEWELRY COMPANY
The Finest Jewelry House in the World. ST. LOUIS, MO. Lowest-Priced House in America for Fine Goods.

be able to say that of my boy," returned Mr. Tyler.

Howard caught the soft "Sh!" from the lips of his mother, and saw the quick shrug of his father's broad shoulders as he involuntarily glanced that way.

The conversation by the fire-place passed to other topics, and Howard bent closely over the photographs. But the lad's thoughts were in a whirl, and, instead of the beautiful Canadian views, he seemed to see blazoned upon the pages:

"Walter is a good boy; he has never caused me one moment's bother." . . . "I would give a thousand dollars to be able to say that of my boy."

And this was the youth who he had supposed was his own master!

Howard started violently. His mother stood at his elbow.

"Haden't you better go to bed now," she said softly.

As he looked up into her eyes, he read the entreaty written there. Without a word, he closed the book, and with a somewhat awkward good-night he left the room.

He sat down by the side of his bed and began to unlace his shoes, but his mind was busy, and he toyed idly with the strings. He well knew why there had been that appealing look in his mother's eyes. He had always wanted to sit up a little longer than the hour when he was expected to retire, and often paid slight heed when his mother reminded him that it was bedtime. If he were reading and wished to finish a book or a chapter, he kept on. When obedience was enforced, he would go in dogged silence or with a sullen good-night.

"He has never caused me one moment's bother."

The words rang in Howard's ears, and he could not get rid of them. As he laid his head on his pillow, he said to himself that he would not sleep. But he was a healthy boy, and he was tired, and the next thing he knew his mother was telling him that it was almost breakfast time.

That day was a round of enjoyment to Howard. In the morning he went driving with his mother and Mrs. Chase. He took a sight-seeing excursion with Walter in the afternoon; in the evening there was a small party for young folks, given in his honor. Every hour seemed to strengthen his admiration for Walter Chase; and, in truth, there could scarcely have been a more considerate, devoted host.

On the last night of Howard's stay in Gay Harbor the lads were return-

ing from the post-office, whither they had been to mail some letters for the judge, when the younger boy broke out suddenly with:

"I say, do you always like to mind as well as you seem to?"

Walter could not repress a little laugh at his companion's question; but he saw that Howard was desperately in earnest, and he checked his amusement, as he answered soberly:

"Not always, I'm afraid."

"Well, do you know, when I first came I fancied you had your own way in everything; that your father and mother let you do exactly as you pleased."

"I should be a pretty poor sort of a fellow if that were the case. I'm always sorry for a boy who has no one to advise him and to see that he does not go wrong; he is almost sure to make mistakes. It is a fortunate thing to have a father and mother like yours or mine."

Howard said nothing; he did not know what to say. His comrade went on:

"I tell you, it is good for a boy to have to do things that he doesn't want to do; it makes a man of him. Of course, our parents know best, though it is often hard to think so. Many a time when I have inwardly rebelled at their decision, and for weeks could not help feeling that they were wrong. I came to see my mistake, and have been so thankful that I did not have my own way. Haven't you found it so?"

"Yes," assented Howard, with a flushing face. He was grateful for the darkness.

"It is a great privilege," said Walter, slowly and in an undertone, as if to himself, "a great privilege."


"Privilege?"

"Yes—to be allowed to profit by the experience of those who are older and wiser and better than we. If you were traveling in a strange country, and had to go through a rough, mountainous region, full of snares and pitfalls and all sorts of dangers, wouldn't you consider it a great privilege to have some kind person, who knew every inch of the road, tell you just what course to take and how to avoid or surmount the perils of the journey?"

"Oh, yes!"

"Well, that is just the way of it. Our parents and teachers have been over the road we are traveling; they know every crook and corner of it, all its temptations and its dangers."

"I never thought about it like that at all, Walter."




Simpson - Eddystone Prints

The standard calicoes of the United States for more than half a century. Your grandmother used Simpson Prints. They were good then because the character of the manufacturer was stamped on the materials and entered into their making. To-day they are better than ever before—the old-time high ideals have been maintained and Eddystone improved art and machinery have raised the standard of Simpson Prints still higher. Ask your dealer for Simpson-Eddystone Prints.

In Blacks, Black-and-Whites, Light Indigo-Blues, and Silver Greys; Shepherd Plaid effects and a large variety of new and beautiful designs. Thousands of first-class dealers sell them.

Sole Makers, The Eddystone Manufacturing Co., Philadelphia, Penn.



"But it is so. Father explained it all out to me when I was a little chap. I have never forgotten it."

Walter's night-key was in the lock.

Howard felt that he ought to make some comment.

"That—is a pretty good idea!" he said.

"I think so," Walter responded, laying his hand on the other's shoulder.

"What has come over Howard!" exclaimed Mr. Tyler, after his son had performed some little service in a particularly prompt and pleasing manner. "He seems like a different boy since our visit to Gay Harbor."—Emma C. Dowd, in the Boys' World.

Autobiography of Sacajawea.

Sacajawea, the Bird-woman, belonged to the Sashone, or Snake Indians, a mountain tribe which, in the days of Lewis and Clark, was in danger of extermination at the hands of the Minnetarees, or Blackfeet. She had been taken captive when a child by these foes. When Lewis and Clark, coming up the Missouri, reached in their first winter the Mandans and Minnetarees, Sacajawea, a girl of 16, had shortly before become the slave and wife of Chabonneau, a French voyageur, who like many a waif of his race, had sunk far toward savagery, and was living with the wild men. Perhaps the best strike the captains made in preparing for their work was in engaging Chabonneau and Sacajawea to join the expedition. It was believed that he would be a useful interpreter, and that the Bird-woman, too, might be of some service when they reached the mountains from which she had come. When the party started westward in the spring of 1805, these two were included—the degenerate Frenchman and his poor little slave-wife, who, although she carried strapped to her back her papoose, born so lately as the preceding February, had no choice but to follow her lord.

From the first, however, the Bird-woman won upon the captains and their men by mild and engaging qualities, and as they worked their canoes up the Upper Missouri, she showed extraordinary efficiency. Though burdened with her babe, she labored with the men with paddle and tow-rope, and soon rendered important service.

It was through this heroic Indian girl those remotest wilds first heard of the greatness of Uncle Sam and the good things he meditated for his newly gained children of the forest. Nor was it solely as an interpreter that she was useful. As the party passed from tribe to tribe, who were always timorous at the first encounter, disposed to fly like frightened deer, the sight of Sacajawea with her papoose, riding with the captains, was reassuring. It could be no war-party if a squaw and her baby were among them.

Details of the expedition as given by the explorers themselves, show that in more than one instance this quick-witted, kind-hearted slave-wife averted a catastrophe that would have made the expedition end in a tragedy instead of a triumph that has gone ringing down the years.

History tells us that Sacajawea remained with Lewis and Clark and returned with the expedition as, in 1806, it worked its way back toward St. Louis. She was their guide and time and again proved the salvation of the expedition, and when she again arrived with the captains at the Minnetaree village from whence she started,

she and her husband Chebonneau, bade adieu to Lewis and Clark and remained at the point where they had enlisted.

There is one later mention of Sacajawea. In 1811, the traveler, Breckinridge, sailing up the Missouri, records a meeting with an old Frenchman and his wife, who he learned had crossed the continent with Lewis and Clark. The woman seemed fond of white people, tried to imitate civilized ways in her dress and manners, and in general appeared like one in whom an inspiration had been aroused for something higher than slavery. She was, says the traveler, in feeble health. Probably she died soon after, and there is no memorial of her. The river to which the captains gave her name bears now another designation. When and where she laid down her life, and what became of the baby, which, with its mother, had so strange an experience, no man can say.

Next to Jefferson, who sent them, it is Sacajawea who guided them, who deserves to be eulogized with Lewis and Clark.

For the Little Ones

Starting.

They sit upon the barnyard fence,
The baby swallows in a row;
Four little dusky, silken things,
With soft bright eyes and close-shut wings.
Their mother flutters to and fro;
The golden rod is all aglow;
The maple shows one scarlet leaf;
The time to stay is very brief.
They must be ready. For their sakes,
A constant twittering she makes,
"Try, try, my downy darlings, try
To spread your little wings and fly."

They sit unheeding on the fence,
The baby swallows in a row;
They see no cause of haste at all.
They look so innocent and small!
What will befall them when they go?
How much have they to learn to know?
All the strange mystery of flight
Above the sea is storm and night!
And all its rapture, circling round
A sky with sunset roses crowned.
What swallow hopes, and fears, and cares,
And loves and dangers will be theirs!
But never more within the nest
They'll feel their mother's sheltering breast.
Yet still that mother for their sakes,
This constant, troubled twittering makes:
"Try, try, my downy darlings, try
To spread your little wings and fly."
—Selected.

Shut-in Days.

Little Adelaide had been mildly sick for some days. Her dolls had all gotten tired, and some of them were sick, too, so they couldn't have tea-parties or go to church or Sunday-school.

"Mama, what can I do? I'm so tired doing nothing."

The mama got the scissors and brought out all the old magazines and told the little girl she might cut out all the pictures of furniture from the advertisements. When she had a lot of them neatly trimmed Mama went to the store-room and brought down a big piano catalogue. A large sheet of blank paper would have done quite as well, but this mama happened to have a piano catalogue. Then she made some smooth paste, such as mamas know how, and little children can learn how, to make.

They were ready for work, and they decided to furnish a hall. They drew, near the bottom of one of the big pages of the catalogue, two lines coming together at an angle, to show where the floor and walls joined, and two, parallel to these, above to mark the outline of the ceiling, and one perpendicular line from one angle to the other. And lo, there was a corner of

a room with a floor and walls. (Any picture of an interior would serve as a suggestion for these lines.) It was wonderful how the advertising pictures fitted in. They papered the walls and put carpet on the floor, and a strip of brown paper made the baseboards, and one of fancy paper the border. Then they put in the hall clock, a stair-case, fire-place, stand, and three chairs, and put on the wall a tiny picture of a stag's head with a narrow strip of gilt paper around it for a frame.

When this was done they were tired of pasting, so they planned the parlor with an elegant table, five chairs and a couch, fire-place, piano, piano-lamp, three pictures for the walls and a window with paper-lace curtains.

Adelaide still had pictures cut out for kitchen, dining-room, bath-room, library, and bedrooms. When her house is done it will be a very luxurious establishment, and she is learning a lot of things in doing it.

If any of you should try this some day when, for any reason, you can not play out of doors, among other things you will discover that in putting pictures on the walls, while their sides will be parallel with the sides of the page, the top and bottom must correspond to the slanting lines that make the outlines of floor and ceiling.

Adelaide found this kind of house-furnishing great fun, and there is a wonderful chance for the exercise of ingenuity in it, and there are artistic possibilities without limit.

Adelaide is a very little girl, but there is another way of furnishing a house that you can try if you are old enough to spell. One child says, "Let us furnish a hall; I will put in 'stairs.'" Another says, as quickly as possible, "I will put in a 'sofa,'" taking care to use a word whose first letter is the same as the last letter of the one mentioned before. The next might be an "arm-chair;" then "rug," "glass," "stand," "door-mat," "tumbler," "riding-whip," "pillow," etc. After that room is done, you can furnish the parlor, and so on through the house. It is fascinating work, and you will forget that you are sick, or that it is raining out of doors.

If you get tired of the house, the window will furnish entertainment of the same sort. "I see 'rain,'" says one. "Nest," says the next; "thrush," "hill," "lightning," "grass," "sand," "dove," "elm," "maple."

You can plant a vegetable garden, and put in it "potato," "okra," "aloe," "eggplant," "tomato," etc. Or you can make a flower garden or start a zoo in the same way.—L. A. M. B., in Advance.

No Pay, No Cure.

"Mister," said a little child to the herb-doctor, or "root-doctor," as they are sometimes called in some parts,—"Mister, mama says them las' pills you sold her didn't do no good, and she told me to ask you to send her some other kind this time," and saying which he placed the empty box on the doctor's rickety desk.

"Lemme see," said the Doctor, as he adjusted his glasses and looked over his book. After inspecting the book for a few moments he looked up and said:

"Humph, humph! I see whar de trouble is. You tell yo' mammy, honey, dat she neva had paid fur dem las' pills she got, an' tell her she can't spec' fur dem to do her no good 'cep'n dey's paid fur!"—Silas X. Floyd, in Lippincott's.

Cures Bone Spavin Quickly.

Seward, Neb., June 3, 1904.
Dr. B. J. Kendall Co., Enosburg Falls, Vt.
Gentlemen:—Please send me a copy of your "Treatise on the Horse and His Diseases." I have your Kendall's Spavin Cure continually in my barn, and would not be without it. About two years ago I had a mare which had bone spavin for a few years. I took her to the best doctor in the State, he fired her but the spavin remained. Her lameness grew every day so that I could not use her at all. At last I secured a bottle of Kendall's Spavin Cure and in two months bone spavin and lameness were completely removed. I can say that your Kendall's Spavin Cure can not be beat. A dollar's worth of it goes further than five dollars given to a doctor. Yours truly,

PAUL HOHN.

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both steel and cast-iron; new patterns, large square ovens, guaranteed fire backs. Shipped blacked and polished ready for use. If not satisfactory in every way, send it back and we refund every cent paid us. We are actual manufacturers, not simply jobbers—the only manufacturers of stoves in the world selling exclusively to the user direct. Send postal for approval offer and catalogue No. 127.

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The Kansas State Agricultural College

The short courses in agriculture and dairying will begin Jan. 3, 1905 and will continue 12 weeks. The winter term of the college begins on the same date. All of the common school branches are taught each term, and classes are formed in all of the first-year and nearly all of the second-year studies each term. Write for catalogue.

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The Home Circle

CONDUCTED BY RUTH COWGILL.

Little Boy Blue.

The little toy dog is covered with dust,
But sturdy and staunch he stands;
The little tin soldier is red with rust,
And his musket molds in his hands.
Time was when the little toy dog was new,

And the soldier was passing fair;
But that was the time when Little Boy Blue
Kissed them and put them there.

"Now don't you go till I come," he said,
"And don't you make any noise;"
So toddling off to his trundle bed
He dreamt of the pretty toys.
And as he was dreaming an angel song
Awakened our Little Boy Blue.
Oh, the years are many, the years are long,
But the little toy friends are true.

Aye, faithful to Little Boy Blue they stand,
Each in the same old place,
Awaiting the touch of a little hand,
The smile of a little face;
And they wonder, as waiting these long years through
In the dust of that little chair,
What has become of our Little Boy Blue
Since he kissed them and put them there.

—Eugene Field.

Hardships of Pioneer Life in the Short-Grass Country.

[The following sketch will illustrate the pioneer history of Western Kansas. Many stories of just such privations and such pluck were told us during our stay in that progressive and rapidly developing part of the State.—Editor.]

With a family of eight small children the subjects of our narrative moved from Indiana to Graham County, Kansas.

Their means being scanty they

he awoke and ate the two biscuits his mother had saved for him he was not satisfied; and with tears stealing down his face he looked up at his grandmother and said, "Grandma, when I get to be a man I am going to buy me a biscuit."

Such was early life in Graham County. Let us go with this family to Decatur County, where they secured a timber claim on a quarter-section near one of the creeks.

They now had a home, which consisted of a bare room. Their first floor was a carpet laid over hay and nailed at the edges to the dirt floor. In this home sickness and death visited them, taking away a bright little girl.

Doctors were scarce and very hard to reach, it being many miles to the nearest town. (Now this place has rural mail and telephone.)

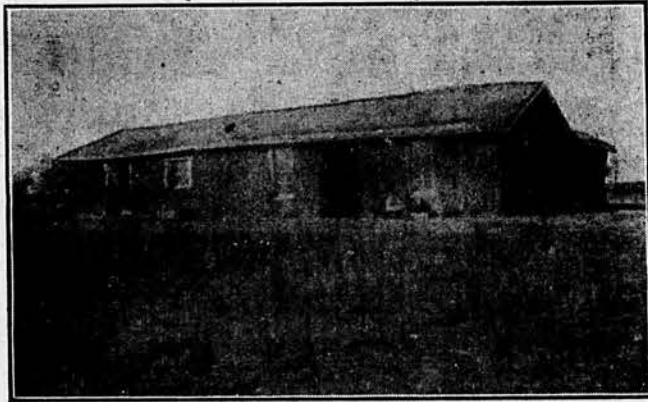
These children could go to school only when there was no work they could get to do; viz., when the weather was so bad they could not herd the stock.

Day after day these bright boys and girls stood on the prairie watching a herd of sheep or cattle with not even a book to help make the time pass. Thus passed their early life, and now they leave the valley for a homestead on the divide. Their fortunes are beginning to rise. The one room has grown to two rooms, partly floored and plastered. The family also is larger, consisting now of ten children. Thus they grow up, struggling through the failures and disappointments of early life in Decatur County, until now there is, in place of ten little children, a family of men and women, most of them being mothers and fathers. That pioneer mother says: "She would not again go through with what she has endured for the State of Kansas." Do you blame her?

Her four sons are well-to-do, respected citizens, one being a merchant in the far West, the others Kansas farmers. Three of the daughters are married and raising little folks of their own, but under circumstances very different from those which surrounded their own early life.

The parents have arisen through all of their trials as only patient, God-fearing people can. The mother is a social and literary worker. No doubt many who read this have read her sketches.

How much we owe to such women we can not realize. But we can show greater respect and more love for the mothers and fathers who endured the trials and privations of pioneer life



A Sod-House.

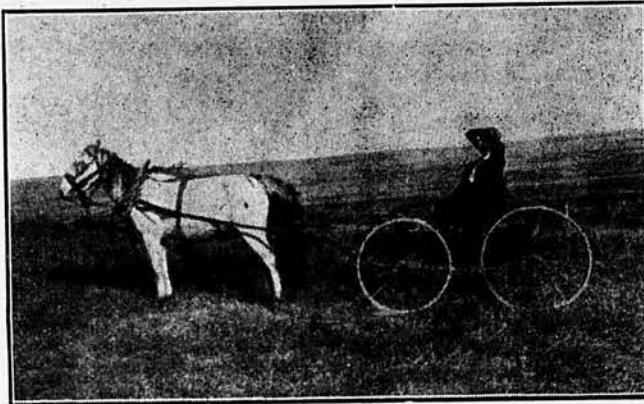
came West to make a home. "Poor people have not room in the East to raise and provide for a family."

These friends of ours managed to do their farm work with a few rude tools and an ox team, horses being very scarce at that time. Remember, however, that Western Kansas was not then one vast corn- or wheat-field but a great prairie sea, with now and then a small patch of what is known as "sod corn," and perhaps a garden.

The most of their scanty living was earned by herding sheep; the children could do this. The oldest of these children was perhaps fourteen. Think, ye busy housewives of to-day of doing all the work for family of ten in a 12-foot sod room, lacking both floor and plaster.

Only the children that were old enough to work knew the comfort of shoes in winter. The girls, little misses of 10 and 12, were forced to wear dresses made of coarse denims, a calico being quite beyond their means. Their living consisted chiefly of corn-bread and molasses, white bread being a great luxury, and a greater treat to those children than pie and cake are to Kansas children of to-day.

At one time flour had been obtained and biscuits made in honor of company. One of the little boys was asleep during the dinner hour; when



A stout team is necessary for the long drives in the short-grass.

and made it possible for us to be what we are and to have what we have. God bless our pioneers. N. M. B.

Letter from the Short-Grass Country.

I went out upon the hills one evening to take my leave of the short-grass country which had been so kind to me. The silent evening shadows were just creeping over the gentle

hills. They came with slow step settling upon the patient prairies gently. Soon the whole earth would be enveloped in shadow, and only the stars twinkling in the far heavens would pierce the blackness. This time, half mournful, half mystic in its serene promise of to-morrow, were a fitting time for a long farewell.

I looked far off through the starshine over the distant hills and saw the shadowy outlines of the little houses, and thought, with very kindly feelings, of the cheerful, friendly people who were probably just sitting down to their evening meal. I thought of all the things they had endured, and of their long, long twenty years since they had first come, and of the prosperity they had at length won for themselves and the cheerful equanimity they had kept for themselves in both storm and sunshine, failure and success, and I said to myself as I walked back slowly through the peaceful dark, it is good to live in the short-grass country.

The next day the fickle weather had changed, and I left the land of sunshine in a driving blizzard! It was a gray day—gray sky, gray earth, gray atmosphere. We were shrouded with a sunless cold, a blanket of grayness. But I had said my farewell to the land before, and always in my memory I shall think of it as I saw it then. Not so small thing as a blizzard can alter my thought of the short-grass country as a land of peace and serenity.

The Best Society.

FLORENCE SHAW KELLOGG.

"The town is getting full of what I call brick-yard aristocracy, which I would not wipe my feet upon. I never have to do anything to get into the best society. I was born there and have never been in any other kind," and my pompous little neighbor lifted his head still higher in his proud consciousness of his own superiority, while to me the thought came that, if one is really "born there," the fact need not be told in words; for life, thought and action, the daily "walk and conversation," will bear convincing testimony to that of which the word of assertion will always bring a doubt. True worth is always modest and retiring, and only that which is questionable is proclaimed from the housetop.

But what is the best society? What is the criterion by which to judge it? The "open sesame" by which the golden gates are opened? Is it the possession of wealth, represented by a bank account, or is it the true riches of mind and heart? Some way the little man's remarks brought a discord, a painful jarring in the midst of our pleasant, neighborly chat, and as we rode homeward in the hush of the sunset hour the thought came to me, Would the lowly Nazarine be admitted as one of the best society now any quicker than he was nineteen hundred years ago? Would not the cry still be raised, "He is the friend of the publican and the sinner," and many doors be closed against Him? Yet is not He in His glorified manhood our standard and example? Ought not the best society be such as rallies around the watchword of love He gave us? He knew no dividing lines save the inevitable ones that grow out of the heart—rather soul-life of those to whom He came in His blessed ministry. Need we do differently? Ought not true worth, character, honest striving for all that is of good report to be the test, and one be admitted to fellowship with the best if he shows that he is reaching after these things.

By what right may one man lift himself above another and say, "I am of the best—you are 'brick-yard aristocracy'?" Nature has her noblemen but this is not the badge they wear. The best society should only mean those who are striving most earnestly and persistently for true manhood and womanhood, and its doors should open easily to whomever would put on the armor of truth and live upwardly, its most worthy member being he who most closely imitates Christ in doing good to all and living in loving fellowship with whomever has need of him.

Fifty Years the Standard



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CHICAGO.

Whether he be found in the luxurious parlors of the wealthy or in the humble homes of honest poverty, it matters not. "A man's a man for a' that," and as such let him have a kindly welcome to our homes while we each help the other on the road to true living, loving—and thus will it be "That the great light be clearer for our light, and the great soul be stronger for our soul."

Some Texan advice, given in Forest and Stream, is worth remembering: "My boy," said a Texas man to his son, who was starting out for an Eastern city, "let me tell you something which may be of help to you. You get up there and you'll see a heap of people who have got more money than you have—a heap of people who have got more brain than you have, and more success. Some of them may even be better-looking than you are. Don't you worry about that, and don't you be scared of anybody. Whenever you meet a man who allows he's your superior, you just look at him and say to yourself, After all, you're just folks. You want to remember for yourself, too, that you're just folks. After you have lived as long as I have, and have knocked around the world, you'll learn that that's all any one of us is—just folks."

His Wish.

Fond Mother—You will be five years old to-morrow, Willie, and I want to give me a real birthday treat. Tell me what you would like better than anything else.

Willie (after thinking earnestly for five minutes)—Bring me a whole box of chocolate creams, mother, and ask Tommy Smith to come in any watch me eat 'em.—Youth.

Publisher's Paragraphs.

One of the greatest fur- and wool-houses in the West, is the McMillan Fur and Wool Company, Minneapolis, Minn. They deal in furs, hides, sheep pelts, wool, deerskins, tallow and grease, beeswax and ginseng and seneca roots. They issue a circular which contains a great deal of information, not only in regard to the markets for the products in which they deal, but also in regard to how hides and pelts should be prepared for shipping. Their last circular states that the market for all classes of hides and skins is active and prices are high. They recommend that green hides and pelts be salted according to directions in the circular and shipped at once or at least as soon as the weather gets cool. The top prices quoted in the last circular are \$3.40 for green horse and mule hides; 10½ cents a pound for green, salted, heavy steer hides; 17½ cents for flint Indian trimmed hides; with others in proportion. Tallow is quoted at 4½ cents in cakes, or 4½ cents in barrels. Nebraska and Kansas unwashed wool is quoted up to 22½ cents, or 23 cents for tub-washed, and mohair is quoted up to 30 cents for the best. Write them for this circular and price-list. It is interesting reading.

The Right Road.

The Chicago Great Western Railway offers superior service and lowest rates to any one contemplating a trip to Chicago, St. Paul, Minneapolis, or Des Moines. For further information apply to G. W. Lincoln, T. P. A., 7 West 5th St., Kansas City, Mo.

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Our Club Roll.

Mutual Improvement Club, Carbondale, Osage County (1896).
Give and Get Good Club, Berryton, Shawnee County (1902).
Woman's Literary Club, Osborne, Osage County (1902).
Woman's Club, Logan, Phillips County (1902).
Domestic Science Club, Osage County (1888).
Ladies' Crescent Club, Tully, Rawlins County (1902).
Ladies' Social Society No. 1, Minneapolis, Ottawa County (1888).
Chalisco Club, Highland Park, Shawnee County (1902).
Cultus Club, Phillipsburg, Phillips County (1902).
Literatae Club, Ford, Ford County (1903).
Sabean Club, Mission Center, Shawnee County, Route 2 (1899).
Star Valley Woman's Club, Iola, Allen County (1902).
West Side Forestry Club, Topeka, Shawnee County, Route 8, (1903).
Fortnight Club, Grant Township, Reno County (1903).
Progressive Society, Rosalia, Butler County (1903).
Pleasant Hour Club, Wakarusa Township, Douglas County (1899).
The Lady Farmers' Institute, Marysville, Marshall County (1902).
The Woman's Progressive Club, Anthony, Harper County.
Taka, Embroidery Club, Madison, Greenwood County (1902).
Mutual Improvement Club, Vermillion, Marshall County (1903).
[All communications for the Club Department should be directed to Miss Ruth Cowgill, Editor Club Department.]

The ladies of Vermillion and vicinity organized the Mutual Improvement Club October, 1903, each member paying a yearly membership fee of \$1. This, together with books and cash donation, was used to start a public library. The club membership numbers seventeen, has a printed pamphlet form of program for the year, and meets with the members in alphabetical order semi-monthly. They have 287 volumes in the library and many periodicals in paper and magazine form. Club members, serving in alphabetical order, keep the library open two afternoons of each week. The library is well patronized. The secretary is Lucy Curtis.

ELLA-C. ACKER.

The Mutual Improvement Club of Marshall County, comes to us this week with a most interesting account of its history and of its accomplishments in one short year. The founding of a library is a thing to be proud of, and they have surely had unusual success. We would like to know what kind of meeting they have and what they do there. I hope we shall hear further from them. Meanwhile, their name is added to our Club Roll.

Kansas History Program.—Were There Two Sides to the Kansas Question?

Roll-call—Current events in Kansas.
I. The pro-slavery view and its methods.

II. It might have been.

III. The free-state view and its policy.

IV. After half a century.

V. Discussion—Was it possible for a man honestly to take the pro-slavery side?

The responses to roll-call, on current events in Kansas, ought to be a most interesting and instructive part of the program.

The paper on the pro-slavery view should be prepared with great faithfulness. It is perhaps hard for the average Kansan to put himself in the frame of mind to consider impartially this subject. Yet it will surely be helpful and interesting to do so.

The second paper requires some little imagination. To suppose the other side had won and to fancy what would have been Kansas history in that event, will be the duty of the writer of the paper. It will certainly be a delightful part of the program.

The third topic is an easier one than the first one, because it will call for merely the expression of the opinion of the present-day Kansan.

The fourth topic is merely a brief and spirited review of the most salient points of our State's history during the fifty years of its life, especially after the first three years, when

it became evident that the free-state policy was to be adopted. Both this paper and the one on topic II should deal principally with the war, Kansas' conduct therein, and the results.

The discussion of topic V should be led by one member, and the rest of the club should continue it.

Household Program.—The Christmas-tide.

Roll-call—Christmas sentiments.

I. Reading.

II. The true significance of Christmas.

III. How to celebrate Christmas—practical hints, etc.

IV. A Christmas story.

V. Song by the club.

After the roll-call, this Christmas program should open with the reading of a poem appropriate to the occasion. If no other one seems better, the following, by James Whitcomb Riley, will be very fitting:

A FEEL IN THE CHRIS'MAS AIR.

"Theys a kind of feel in the air, to me.
When the Chris'mas-times sets in,
That's about as much of a mystery
As ever I've run a'gin!"

"Is it the racket the children raise?—
W'y, no!—God bless 'em!—no!
Is it the eyes and cheeks ablaze—
Like my own wuz, long ago?"

"Is it the beat o' the whistle, and beat
O' the little toy drum and blare
O' the horn? No! No!—it is jest the
sweet
The sad, sweet feel in the air."

The paper on the second topic will treat of a subject already much talked of, yet one to which our attention needs often calling. The tendency is too much toward making of this holy time an occasion of worry and weariness, of soulless giving and thankless receiving.

The practical paper which is to follow this will be very welcome to the mothers who are planning for the occasion. It may be well to have discussion of the subject by the club after the paper, for almost every one will have ideas on the subject.

The Christmas story may be either original or selected. It is better to have original work as much as possible; even though it may not be quite so well written as one which could be selected. The one written for the occasion by your own club member will be more enjoyable.

One of the grand old Christmas hymns will be delightful for closing the afternoon, and if the club as a whole does not feel inclined to sing, perhaps there will be one member who will favor them with an old song.

Michigan Demands Attention.

The progress made by Michigan in every branch of industry is attracting widespread attention. Home-seekers see in that State their future and are going there to cast in their lot with the people, who by their ability, thrift and energy, have placed their State in the high position it now occupies. Not only does Michigan rank among the foremost States in commerce, but also in agriculture. It possesses fruit-growing, farming and stock-raising land that is the "apple of the eye" of the home-seeker.

The Michigan Land Association's offer of land in The Cadillac Tract at \$10 to \$15 per acre is of general interest. This land is located in the heart of the fruit belt and a rich farming and stock-raising district.

Louis is an ideal location. The land is very productive and yields fine crops that command the highest prices. The climate is uniform and excellent. Splendid water, free gravel pike roads, churches, schools, and one-half to six miles from a busy city of 8,000 inhabitants.

Mr. S. S. Thorpe, district manager, The Michigan Land Association, 16 Webber Building, Cadillac, Mich., says: "There is no other location where every condition is so conducive to health and prosperity as The Cadillac Tract."

Mr. Thorpe has a wide circle of admirers. His integrity and business ability have won for him an unshakable position in the commercial world.

Mr. Thorpe will send full particulars of The Cadillac Tract to any one who is interested.

We call the attention of our readers to the advertisement of Mermod & Jaccard Jewelry Co., St. Louis, which appears in this issue. They are one of the oldest established jewelry houses in the United States and have the best of reputation. Their goods are always reliable and guaranteed in every respect. We have known them for a great many years and take pleasure in saying to our subscribers and readers that they need have no hesitancy whatever in dealing with Mermod & Jaccard Jewelry Co., because they will always receive satisfaction and obtain the very best goods manufactured.

They offer their very large and beautifully illustrated catalogue free to those who ask for it, and we suggest that if you are thinking of making holiday presents, that you send for one of their handsome catalogues before making your purchases.

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How you can be cured?

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Telling me your principal symptoms,
age and sex, and I will diagnose
your case and send you a course of

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That you may rest assured will put
an end to your pains and aches.

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Does away with useless drugs and
medicines, and cures in an almost miraculous manner diseases pronounced
incurable by physicians. In fact, with
it there are

No Diseases I May Not Cure

However severe, chronic or long standing. It has been successfully tested in thousands of cases and cannot fail to do all I claim for it. That is the reason I am willing to send you treatment, and give you my services and medical advice absolutely free of charge. I mean this offer especially for those who have tried doctors, druggists, patent medicines and other so-called remedies without receiving benefit. I prefer cases that have been given up as hopeless by the medical profession. Write now before looking at the rest of the paper. The stories CAN WAIT—your health cannot. Here is what a few of those I have cured say of my treatment.

"I am entirely cured and never have the slightest return of any of those troubles. You have done what doctor after doctor, and all their medicines failed to do, and I cannot be grateful enough." Jas. Anderson, West Bay City, Mich.

"You literally saved me from the grave." Mrs. C. M. Weston, Barnegat, N. J.

"The doctors said they could do no more for me unless they used the knife. . . . Your treatment not only made me better—it cured me entirely. I think you are one of the greatest blessings God has given to humanity." Mrs. Lois Pierce, Jonesboro, Ind.

"I have taken medicines from a great many doctors, and tried a great deal of patent medicines, but I am glad to say that you, under our Blessed Master, have cured me when all else failed. I had stomach, liver and kidney disease, asthma and bronchitis, but you cured them all." Mrs. B. J. Garrett, Rafter, Tenn.

"Thank God I found you just in time to save my life." J. S. Bunting, Savannah, Ga.

"Your efforts must be accompanied by the Holy Spirit to accomplish such miraculous cures. I know and believe that there is nothing to equal your treatment for the release of suffering ones from pains, weakness and disease. I wish all suffering ones knew of its power to heal as I do. When your treatment

comes in contact with disease, illness must give way to health." Rev. Samuel Sutton, Williamsburg, Ky.

"Hereafter I am through with quack doctors and their useless drugs, for they are not worth a pinch of salt compared with your treatment. You have driven the disease out of my body as you promised. I feel that you have saved my life." O. S. Harrell, Oato, Ark.

"If curing cancer of the stomach and other diseases that were the matter with me—well if this isn't a miracle then I do not know what to call it. You surely saved me from death, and I do advise all sufferers to apply to Dr. Hadley." Jos. R. Stewart, Camden, N. J.

"I firmly believe that I would be in my grave now if it was not for Dr. Hadley's wonderful treatment." Miss J. L. Fulley, Oberlin, Ohio.

"After taking treatment but two weeks I am thoroughly cured." Mrs. E. Seasmund, Darlington, Mo.

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"I have tried ever so many prescriptions, but got nothing to help me until I wrote to you." Mrs. S. F. Choane, Abilene, Texas.

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F. E. ROESLER, TRAV. PASS. AND IMIG'N AGT., KANSAS CITY, MO.

SOME FEATURES OF THE TARIFF QUESTION.

(Continued from page 1178.)

than elsewhere. But the unexpected has happened; for, while we are still exporting a little wheat and flour, there are great mills near our northern line whose managers would very much like to buy Canadian wheat. Wheat is about 23 cents lower north of the line than south of it. But the 25-cent tariff on wheat looms up without beauty in the eye of the Minneapolis miller. He is likely to see to it that a proposition for lowering this bar to his profits shall be introduced and strongly advocated in Congress. Wheat-growers in the United States in general, especially those tributary to the great Northern mills, are interested in maintaining the present rates. They are likely to be seconded by the influence of all millers whose remoteness from the Canadian fields is such that they can not profit by importing. Indeed, the abrogation of the tariff on wheat would give the Northern miller at least the advantage of the difference in the freight on wheat from Canada to Minneapolis and to points further from the line. Kansas and Missouri millers are interested with the farmers in maintaining the tariff on wheat. Congress should be made to feel the weight of these interests.

Among the arguments likely to be used to quiet the opposition of farmers and centrally located millers to the proposed reduction, it will doubtless be suggested that the present condition as to shortage of wheat is only temporary so that the removal of this 25-cent tariff should not be regarded as a serious matter. On this point the most interested outside observer is Great Britain, whose breadstuffs have been largely supplied from the United States. In a serious review of the situation the London Times of November 7 said:

"The reduction of wheat exports [from the United States] in the fiscal year 1904 can not be accounted for by a shortage in production, since the crop of 1903 was larger than the average of the last five years, and—with the exceptions of 1898, 1901, and 1902—was the largest on record. The wheat crop of 1903 was but 33 million bushels below that of 1902, whilst the exports of the fiscal year ended June 30, 1904, fell 82 million bushels below those of 1903, the reduction of exports being thus much greater than the crop reduction.

"The reduction in exports appears to be due to greatly increased home consumption, owing to the enlarged market created by a rapidly growing population, whilst there is the further fact that the wheat-growing countries other than the United States had an unusually large crop in 1903, and thus, to some extent, reduced the European demand for American wheat and undersold it. From a detailed study of the figures it would appear that,

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in the soul of the fruit belt, a productive farming and stock-raising district, in the grand State of Michigan. Every advantage of modern farming. Unlimited opportunities.

John M. Stahl, secretary Farmers' National Congress, has purchased some of this land. Fourteen practical farmers from Indiana secured over 2,000 acres. Dozens of others have bought. You will, too, when you investigate.

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H. S. Williams, formerly of Augusta County, Virginia, says: "I am thoroughly satisfied that I have bettered myself by settling on land in THE CADILLAC TRACT."

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whilst the production has remained stationary on the whole, the quantity retained for home consumption has about doubled, whilst the proportion of domestic wheat available for export has dropped steadily from 40 per cent of the crop to 19 per cent [of the 1903 crop].

"This state of affairs is not transitory; it is an index of future conditions. The wheat crop of the United States will be more and more consumed at home. The rapidly increasing population not only demands more food for man and live stock, but is raising prices. As the country settles up, land increases in value, and it does not pay to grow wheat on land worth a hundred dollars an acre; the land can be used more profitably in other ways. The acreage under wheat will, therefore, not increase; on the contrary, it may be expected to diminish, since in many cases lands have been exhausted by continued wheat-cropping under a system which takes all the fertility out of the soil without putting anything back. The question of the abandonment of wheat-growing or the resort to fertilizers is, in 99 cases out of a hundred, answered by abandonment and change of cultivation. And, as prices rise, the home market becomes relatively and actually more valuable."

The American wheat farmers' interest in the tariff is likely to be greater and more direct from this time forward than at any time in the past.

It has been charged and admitted that some American trust-made manufacturers are sold at lower prices abroad than in this country. It is necessary to the making of sales in the open markets of the world to make prices as low as those of any other country. In the protected market of this country outside competition may be disregarded if only the domestic price is not made greater than the foreign price plus the duty. In the case of those trusts which have acquired a practical monopoly of the home market there is no home competition, so that there is practically no necessity of selling at a less price than the foreign price plus the duty. Some of the great trusts of the United States have found need of a foreign market to prevent the accumulation of surplus stocks. They have preferred not to lower prices in the home market and thereby stimulate consumption to the point of taking the entire product, but have maintained prices to the home consumer and lowered them to the foreigner sufficiently to undersell the foreign producer. An instance in which the manufacturer sells to the foreigner at a lower price than to the American consumer is presented in connection with the case of the Northern millers. By giving bond to export the entire product made from imported wheat they are excused from paying duty. This enables the millers to sell the flour and other products cheaper in Canada than in this country. The millers find it difficult to export and sell the bran, the foreign demand being less active than the domestic use for this product. They are, therefore, making specious arguments in favor of such modification of the bonding law as will enable them to sell in this country the bran from imported wheat, without subjecting the wheat to pay duty.

It is easily seen that the complications attendant upon the artificial conditions produced by the tariff are very great. Every attempt at modification runs counter to somebody's interests. There is, however, a prevailing disposition to reduce the protection to monopolies and on the raw materials used by manufacturers. Inasmuch as farmers' and miners' finished products are the raw materials for some factories, and the finished products of some factories are the raw materials for still other factories, the contest seems liable to become a contention for special favors against the preservation of special favors in all cases except in those affecting monopolies

only in which there is likely to be a union of the monopolists on the one side and the use of their entrenched positions with consummate skill under trained leaders on the one hand against an organizing force of the general public on the other hand. The general public is approaching the opinion that there must be either such competition as will prevent monopoly, or that the socialists' contention for no competition is the alternative. Those responsible for the policies of the near future are not likely to admit a readiness to adopt socialism. The tariff complications are, therefore, likely to thicken with the progress of the effort to restore competition to its ancient place as a regulator of prices and profits. In the contest to ensue it is important for the farming as well as other interests to secure due attention to their problems as affected by tariff changes.

ABATING THE HUNTING NUISANCE.

The annoyance of having the farm run over by hunters, together with the attendant dangers from accidental shots and from fires, to say nothing of the insolence to which farmers are sometimes subjected, constitutes the question of abating this nuisance an important one to many who live in the vicinity of towns. The evil has been endured in an aggravated form near Topeka until a remedy became a necessity. Partial and temporary relief was obtained in some cases by the acquisition of dogs of such breeds as attend to business. Some of these were poisoned and poisoned bait was eaten by pigs and chickens, entailing severe losses.

Last week some of the suffering farmers were commissioned as deputy sheriffs. They promptly arrested the intruders and took away their guns. Prosecutions will follow until the festive nimrods shall have learned to respect the rights of farmers to immunity from trespass.

BLOCKS OF TWO.

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

Special to Our Old Subscribers Only.

Any of our old subscribers who will send us two NEW SUBSCRIPTIONS at the introductory rate of fifty cents each, will receive any one of the following publications as the old subscribers may choose, viz., "Woman's Magazine," "Western Swine Breeder," "Vick's Family Magazine," "Blooded Stock," "Poultry Gazette," "Dairy and Creamery," or "Wool Markets and Sheep."

THE FANNING-MILL.

It used to be a saying among the best farmers of Ohio that the most useful machine that could be brought to a farm was a fanning-mill. In those days it was necessary to reclean the grain as it came from the thrasher. But the most important use of the fanning-mill was for cleaning seed. Carelessness in this regard has resulted in introducing upon many farms weeds which years of toll have not eradicated. In preparing alfalfa, clover, and grass-seeds for sowing, the utmost care is necessary. If foul seeds are sown with these there is in many cases no opportunity to destroy the noxious weeds they produce without destroying

the stand of grass or clover. In all seeds that are sown it is important to use the best. Light seeds produce weakly plants which may live to interfere with their more vigorous neighbors but they are never profitable. As an improver of wheat and oats the fanning-mill deserves to be ranked as a scientific plant-breeder. Blow out the light grains and sow the heavy for a series of years and permanent improvement in the yield and quality of the product results. It pays.

NATIONAL LIVESTOCK ASSOCIATION.

The eighth annual convention of the National Live-Stock Association is called to meet in Denver, Col., on January 10-14, 1905, at which time a vast amount of very important business will be presented for action. On Monday, January 9, the National Wool-Growers' Association will hold its annual meeting at the same place, and the Inter-State Cattle-Growers' Association will also hold its meeting in Denver during the week.

Miscellany

Kansas Farm Products for 1904.

The Kansas State Board of Agriculture in its summary of the agricultural, horticultural, and live-stock products of Kansas—yields, numbers and values—for the year 1904, says:

Winter Wheat.—The total yield of winter wheat was 64,793,399 bushels. Its home value is given as \$51,149,917. The area sown, as returned by assessors in March, was 5,816,495 acres, and on all this the average yield per acre was slightly over 11 bushels. While the aggregate yield is less by 30 per cent than that of 1903 its total value is nearly as great as that of last year's yield, which was the most valuable wheat crop ever produced in the State, the average, home selling-price for the past twelve months having been higher than for any year since 1890.

Of the State's annual wheat production this year's output ranks fifth in total yield. Four of the bulkiest crops in the State's history have been grown in the past five years, as shown by the following table (which includes the insignificant proportion of spring wheat grown), along with their values:

1900	77,339,091	\$41,974,145
1901	90,333,095	50,610,050
1902	54,649,236	29,139,490
1903	94,041,902	52,426,355
1904	65,141,629	51,409,255

The total production for these five years has been 381,505,000 bushels, worth \$225,559,750, or an average annual output of 76,301,000 bushels, worth \$45,111,950—a record without a parallel.

This year the largest yields per acre were in the central third of the State, as usual, and the output of the leading sixteen counties in winter wheat, amounting to slightly over 56 per cent of the year's crop is as follows, the counties being named according to their rank in yield:

Sumner	3,327,642
Reno	3,518,235
Barton	3,414,671
Harper	2,911,080
Stafford	2,757,488
Pratt	2,557,242
Rice	2,251,578
Sedgwick	1,971,255
Kingman	1,915,312
Russell	1,860,157
McPherson	1,733,370
Pawnee	1,627,430
Ellsworth	1,552,977
Saline	1,520,736
Rush	1,500,912
	1,475,472

The area reported as probably sown for next year's crop is 5,906,272 acres, an increase from last year of 1.5 per cent, or 89,777 acres. Seventy-five counties report increases, and among those showing decreases are several of the leading wheat-producers, a condition attributable in the main to unseasonable dryness in those particular localities.

On the whole, soil- and weather-conditions since seeding have been fairly

Allen's Lung Balsam

will positively break up a deep, racking cough past relief by other means.

favorable, yet in various sections the situation is unmistakably not promising, owing to quite continuous dry weather; a notable instance of this is afforded by Sumner County which reports the lowest average, or but 61—100 representing a good stand and wholesome condition. However, on the same basis, the general average condition for the State is 88. Twenty-five counties report averages of 100 or over, and as a rule the better conditions exist in the Northern and Western parts of the State. Hessian flies are noticed in occasional fields but not in such numbers as to cause any serious apprehension.

Corn.—The corn crop amounts to 132,021,774 bushels, which is 37,337,995 bushels less than one year ago; its value is \$50,713,955. The returns this year present an unusual circumstance in that by far the larger yields per acre of corn are almost invariably found in the central third of the State popularly referred to as "the wheat belt." In aggregate yield Jewell leads with 6,400,680 bushels, Smith coming next with 5,819,485 bushels, and Phillips third with 4,954,212 bushels. The counties having the largest average yields per acre are Phillips with 38 bushels and Smith and Rooks with 35 bushels each.

Oats.—Yield, 21,613,357 bushels, worth \$6,872,890.

Irish Potatoes.—On a diminished area was produced a crop larger than last year's by 21 per cent, aggregating 6,078,391 bushels, worth \$3,034,120.

Sorghums for Grain and Forage.—There has been a decrease in acreage of the chief varieties of sorghums, while Jerusalem corn and milo maize show an increase; the combined value of these is \$8,357,776.

Hay and Live Stock.—Tame and prairie hays have been fully up to the average in quantity and quality. Some of the counties with the heavier corn yields report larger supplies of hogs than one year ago, and all live stock seem to be healthy and comparatively free from disease.

KANSAS' CROPS AND PRODUCTS IN 1904.
The yields and values of the year's crops and products are as follows:

Winter and spring wheat, bu.	65,141,629	\$51,409,255
Corn,	132,021,774	50,713,955
Oats,	21,613,357	6,872,890
Rye,	1,110,378	635,585
Barley,	5,344,422	1,674,714
Buckwheat,	3,387	2,709
Irish and sweet potatoes,	6,495,777	3,326,151
Castor beans,	2,925	2,925
Cotton, lbs.,	59,625	4,770
Flax, bu.,	372,524	337,410
Hemp, lbs.,	20,600	1,030
Tobacco, lbs.,	14,400	1,440
Broom-corn, lbs.,	12,133,535	371,049
Millet and Hungarian tons,	444,625	1,600,444
Sorghum for syrup, gal	1,135,613	411,243
Sorghum, Kafr-corn, milo, maize and Jerusalem corn for forage,		8,357,776
Tame hay, tons,	1,598,628	8,792,454
Prairie hay, tons,	1,325,637	4,910,464
Wool clip, lbs.,	504,020	80,643
Cheese, butter and milk		7,793,076
Poultry and eggs sold.		7,561,871
Animals slaughtered or sold for slaughter,		51,846,671
Horticultural and garden products and wine,		1,252,854
Honey and beeswax, lbs	1,422,056	192,677
Wool marketed,		146,211
Total value,		\$208,290,267

NUMBERS AND VALUES OF LIVE STOCK.

	Number.	Value.
Horses,	835,580	\$62,668,500
Mules and asses,	103,436	9,050,650
Milk cows,	792,712	19,817,800
Other cattle,	2,757,542	51,014,527
Sheep,	167,721	503,163
Pigs,	2,127,482	15,956,115
Total value,		\$159,010,755
Grand total,		\$367,301,022

Epsom Salts for Pigs.

EDITOR KANSAS FARMER:—I had a little experience with one of our young gilts not many weeks ago. We had eighteen gilts, and as I went out to feed them I noticed that one of them lay off by itself. I threw in some feed and she would not get up. I gave them some slop, which consisted of shorts and salt and water, but she did not move. I drove her to the trough, and she ate, but not so greedily as the others. She looked dumplish for a

week. Then I mixed her some salts in fresh milk but she even refused to eat that. So we gave her a drench of a teaspoonful of Epsom salts in half a pint of fresh milk and turned her loose. In the evening when feeding-time came she came up to the trough, and I gave her another teaspoonful of salts in a pint of milk, which she took herself. The next day I gave her another light dose, and she picked up right along and is now as fat as any of them. We treat our hogs occasionally to a dose of salts and find it a very good thing for them.

This may be of some use to our brother and sister breeders, as we never are too old to learn. I think it a good plan if all of the readers of the KANSAS FARMER would give a little of their experience.

MRS. HENRY SHRADEK.

Chautauqua County.

Kansas Historical Society—Program of Annual Meeting.

Meeting of the board of directors, 1.30 p. m., December 6, 1904, at the State House, Topeka. The board will meet for the transaction of ordinary business.

AFTERNOON MEETING.

General business.

Reading of papers: "The Alliance Movement in Kansas with Relation to the Origin of the People's Party," W. F. Rightmire, Topeka; "Poziglione," S. W. Brewster, Chanute; "The Saline River Country in 1859," J. R. Mead, Wichita; "The Victory of the Plow," W. D. Street, Oberlin.

EVENING MEETING, 7.30 P. M.

Invocation, Rev. H. D. Fisher, D. D. Election of thirty-three members of the board of directors.

Historical addresses: "Early Navigation of the Missouri River—Rise and Fall of Steamboating," Phil. E. Chappell, Kansas City, Mo.; "Was the English Bill a Bribe?" Charles Harker Rhodes, Wellington; "Samuel A. Kingman," Joseph G. Waters, Topeka.

On the adjournment of the annual meeting, the board of directors will convene for the election of officers for the ensuing year.

PAPERS IN HAND OR PROMISED.

The Administration of John P. St. John, by I. O. Pickering—The Administration of George W. Glick—The Administration of John W. Leedy, by Ed. C. Little—Navigation of the Kansas River, by Albert R. Green—The Railroad Convention of 1860, by George W. Glick—Twentieth Kansas Boys Killed in Battle, by Joseph G. Waters, Topeka—The Story of a Wheat-Field in 1875, by T. C. Henry—Oregon Emigration Through Kansas Sixty Years Ago—The Story of the Eleventh Kansas Regiment, by S. H. Fairfield—Border War: When, Where? by H. E. Palmer, Omaha—Fort Zarah, by Julia A. Chase—Reminiscences of the Indian War of 1868, by Ben. Jenness—Bushwhacker Raids on Gardner, by Stephen J. Wilson—Voting for Lincoln in Missouri in 1860, by D. P. Hougland, Olathe—A Southerner at the Battle of Franklin (Kan.), 1856, by F. H. Sapp—Battle of Shiloh, by Leander Stillwell, Erie—A Trip to Santa Fe Seventy-Seven Years Ago, by Milton E. Bryan—Kaw and Kansas: a Monograph, by Robert Hay—Experience in 1855 and 1856 in Kansas, by R. M. Ainsworth—The Drouth of 1860, by George W. Glick—Company A, Eleventh Kansas, in Price Raid, by H. E. Palmer—Pioneer City Marshals: Thomas James Smith and Thomas Allen Cullinan—The Cheyenne Raid of 1868, by John Madden—John Brown Never in Breckinridge County, Kansas Territory, by W. E. Connelley—E. A. Ogden's Letter to Joseph Lane in 1853, Suggesting Present Lines of Road to Oregon—Semicentennial Addresses of William H. Taft, Secretary of War, Willis J. Bailey, T. F. Garver, George R. Peck, and Geo. W. Martin, at Topeka and Lawrence—Incidents of the Retreat of Quantrill from Lawrence, by Albert R. Greene.

Samuel J. Crawford, third Governor of the State, 1866 to 1870, has promised a paper on the claims of Kansas against the General Government, and also a general historical paper of a military and political nature.

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The Veterinarian

We cordially invite our readers to consult us whenever they desire any information in regard to sick or lame animals, and thus assist us in making this department one of the interesting features of the Kansas Farmer. Give age, color and sex of animal, stating symptoms accurately, of how long standing, and what treatment, if any, has been resorted to. All replies through this column are free. In order to receive a prompt reply, all letters for this department should give the inquirer's postoffice, should be signed with his full name, and should be addressed to the Veterinary Department, Kansas Farmer, Topeka, Kans., or Dr. C. L. Barnes, Manhattan, Kans.

Pony Out of Condition.—I bought a mare pony last August and thought she was all right then; but in a short time she began to gain in flesh, her bag on the left side began to swell and broke and discharged and has never healed up. It swells, then breaks and discharges, and seems to hurt her. She is not in as good flesh now as she was a few weeks ago. She eats well. She raised a colt and I think it was weaned in the early part of the summer. What can I do for her? W. H. M.

Heman, Okla.
Answer.—It will probably be well to poultice the pony's bag with hot water and try to take the inflammation out of it. When it breaks, syringe out the part that is discharging with peroxide of hydrogen once daily. If this treatment is not successful in bringing about the desired results, please let us know.

Stifles Out.—I have a 2-year-old filly that is in the habit of throwing her stifles out. The first attack was last August. I called a veterinarian and he blistered it. She did all right for a few days but soon began the same old trick again, and she is not able to get around more than half the time. Can you give me any information on this matter? JAS. P. Beloit, Kans.

Answer.—Your treatment for the filly I believe to be all right, and would advise you to blister the stifle again, giving your filly absolute rest, keeping the affected leg perfectly quiet.

Abortion.—I have two cows that lost their calves by abortion. They were about six months along. One would have been fresh in November, the other in January. I have no idea what the cause was. Did not know there was anything the matter with them until the day they aborted. Cows have been running on pasture all summer and fall. I have fed some sorghum, hay and corn the past four or five weeks. I have been told that it was a disease and would run through the herd, and would like to know what to do to stop it. One of the cows had something wrong with her udder; it began swelling or caking in the right hind part of the udder about a year ago. It came on gradually, the flow of milk decreasing as the cake enlarged; she gives very little milk out of the teat. The cake is not getting larger the last six months. It is caked from the lower part of the udder and extends up the back part near to the top, just one quarter being affected. The cake seems to be deep-seated, as the outside of the hide is loose and pliable. I have used a "scattering" liniment and have also used raw turpentine, at different times until it

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Farmers' Sons Wanted with knowledge of farm stock and fair education to work in an office, \$600 a month with advancement, steady employment, must be honest and reliable. Branch offices of the association are being established in each state. Apply at once, giving full particulars. The Veterinary Science Association, Dept. 15, London, Canada.

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blistered the udder, but it had no effect in reducing the cake. R. O. E. Lenora, Kans.

Under separate cover we send you a press bulletin on contagious abortion; it may give you some hints as to the cause of the trouble with your cows. In regard to the cow with the caked bag, I would try poulticing with bran or oil-meal, keeping the poultices as hot as the cow can bear it. At night, after finishing your work, take the poultice off the cow, and rub into the udder, thoroughly, over the affected quarter, poke-root tincture. If you can not get the tincture of poke-root, get the fluid extract. It will be well to cover the udder with a sack or blanket so as not to cool the bag down too quickly after removing a hot poultice. The next morning continue the hot poulticing and keep this up for at least a week. If you do not get the desired results write us again.

Lump on Jaw.—I have a cow 8 years old that has a lump under her jaw about as large as a man's fist; it is not connected with the bone. She came in from pasture some two months ago with the swelling. I immediately blistered it with coal-oil but this did not reduce the lump, only the swelling around it. About two weeks ago I made a small incision and got a little matter and blood; the lump seems to be hard and sometimes a little matter oozes out of it. I have been rubbing some strong liniment on the lump but it does not seem to have any effect. It does not grow, but is sore by pressure. What can I do to remove it? It is close to the jugular vein. Cow is doing well otherwise. Lyndon, Kans. G. H. B.

Answer.—From your description I judge that there is some matter in the center of the lump and if you will have somebody open it who knows the location of the important arteries, nerves, etc., and allow the matter to escape, then wash the wound thoroughly with 5 per cent carbolic acid solution daily, allowing this disinfectant to cleanse the pocket in which the pus is contained, I believe your cow will improve wonderfully. C. L. BARNES.

A Sample of Many.

EDITOR KANSAS FARMER:—Please change my paper from Eskridge to Marion, Kans. I began reading the FARMER in 1888, and I can't get along without the "Old Reliable."

Wishing the paper and all concerned with it unbounded success, I am, Yours truly, Marion, Kans. T. G. SCOTT.

PILES

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In the Dairy

Experiments With Dairy Cows.

EXCERPTS FROM BULLETIN NO. 125, KANSAS EXPERIMENT STATION, BY D. H. OTIS.

Of the agricultural industries contributing to Kansas success, dairying is playing a very important part, and is destined to become still more important as land becomes more valuable and as population increases. This is especially true in the Central and Western parts of the State, where the income from crops is more or less uncertain.

At times the dairy industry of the State has received a setback, because of too much enthusiasm from the possibilities of getting rich quickly. New creameries and skimming-stations have been started, and every one who had a cow, no matter what her capacity, was induced to milk her and send the milk to the skimming-station. For a time the creamery or station would appear prosperous; but on account of milking cows that were not profitable, it was not long until the interest began to fail, and the farmers would say that it did not pay to milk cows. Doubtless it did not pay to milk the class of cows that some farmers owned, and on account of these experiences with unprofitable cows it has been very difficult to get these men to engage in dairying with profitable cows.

For continued success of the dairy industry it is not wise to laud its possibilities to the skies, but more effort should be spent in demonstrating what kind of cows it will pay to milk. Work of this kind will result in much more permanent good than injudicious exhortation to go into the business regardless of the class of cows milked. There are just as many business principles involved in successful dairying as there are in successful merchandising, and the dairy industry, in order to obtain permanent success, must be based upon certain underlying business principles.

The Kansas Experiment Station has been working with common grade and pure-bred cows, with a view of trying to solve some of the principal problems that assail our Kansas dairymen, and in this bulletin are detailed our experiences, together with comparisons that are drawn from outside sources.

WHAT THE AVERAGE KANSAS COW IS DOING.

From the statistics gathered by the Kansas State Board of Agriculture, we

have sized the average Kansas cow as to what she is doing in butter-production and in cash income. In constructing the following table, the value of the butter produced was divided by the number of pounds produced, which gave the average price per pound. Assuming that the milk used in cheese-making and what was sold was on the same basis, we divided the total value of these products by the average price per pound, which gives the total pounds of butter produced; dividing this by the number of milch cows in the State, we have the number of pounds of butter produced by each cow. By adding the total values together and dividing by the number of cows, we have the cash income per cow:

Table I.—Showing what the average Kansas cow is producing.

Year.	Number of milch cows.	Butter, lbs.	Cash, lbs.
1893.....	567,353	53	\$8.54
1894.....	524,127	52	9.29
1895.....	517,254	67	8.72
1896.....	515,075	79	9.58
1897.....	552,538	77	9.51
1898.....	606,925	77	9.98
1899.....	684,182	71	9.54
1900.....	712,582	65	10.46
1901.....	793,889	55	9.74
1902.....	791,844	62	10.79
Averages....	626,426.9	65.8	\$9.615

In figuring Table I, the average seemed to be so very low that the figures were checked over several times. Of course, it is possible that the assessors do not get account of all the cows and perhaps do not get account of the full production of all the cows; but even allowing a good margin for any discrepancy of this kind, the average production of the Kansas cow is shamefully low. Even at the high average, twenty cents per pound for butter, the average Kansas cow is hardly producing enough to pay for the expense of milking, to say nothing of the cost of feed, interest on the money invested, etc. The cash income is also remarkably low; and unless a man can realize more than is shown in these figures he can not expect to make a profit out of dairying.

CREAMERY PATRONS' INVESTIGATION.

In order to inquire more fully into the results that are being obtained from Kansas dairy cows, the Kansas Experiment Station inaugurated an investigation during the summer of 1898. The Meriden Creamery Company kindly lent every assistance possible to carry out this investigation and in getting data throughout Jefferson County. An attempt was made to secure this information through the medium of letters containing an outline of the information wanted. Of the 300 letters sent to patrons, only eight replies were received. It became evident that in order to get this information personal interviews must be made with the individual patrons. Not all of these seen were able to give any idea as to the results they had obtained with their cows. One man said if he could answer the list of questions sent him that he would run for Congress. Through the kindness of the creamery management, who furnished a man and rig to drive to the patrons' homes, we were able to collect records and notes from eighty-two different patrons. Tables II and III give a summary of the results obtained.

Table II.—A year's record of best five herds.

Number of cows kept.	Milk produced per cow, lbs.	Butter per cow, lbs.	Income from milk per cow.	Total income per cow.
20.....	5,546	317	\$42.09	\$54.38
3.....	6,371	243	34.29	45.87
9.....	5,159	244	31.46	45.14
4.....	5,229	236	30.87	40.33
6.....	5,075	226	30.00	39.95
Averages....	5,476	253	\$33.74	\$45.13
Av. of 82 patrons....	3,441	123	\$19.79	\$32.86

Table III.—A year's record of poorest five herds.

Number of cows kept.	Milk produced per cow, lbs.	Butter per cow, lbs.	Income from milk per cow.	Total income per cow.
27.....	1,117	57	\$ 7.54	\$20.69
12.....	1,466	67	8.04	18.04
10.....	1,678	70	8.84	23.42
3.....	1,901	84	10.70	19.12
8.....	2,057	91	12.08	36.71
Averages....	1,644	74	\$ 9.44	\$23.59

Yield of Milk.—In the yield of milk, the herds varied all the way from 1,117 pounds to 6,371 pounds, a difference of 5,254 pounds of milk, or 470 per cent. Examining the two tables, it will be noticed that the average yield per cow of the best five herds

was 5,476 pounds, and of the poorest five herds 1,644, a difference of 3,832 pounds per cow, or 233 per cent.

Yield of Butter-Fat.—It is interesting to see that there is a very great variation. The annual average of eighty-two patrons is 104.5 pounds of butter-fat. Figuring this butter-fat to butter (which is 85 per cent butter-fat) we have the average yield of butter per cow as 123 pounds. This is nearly, though not quite, twice as much as given in Table II. It should be borne in mind, however, that at the time of this investigation Jefferson County was one of the very best dairy districts in the State. Comparing the butter-fat yield in the two tables, we see that the last yield is from a herd of twenty-seven cows, which made an average of 48.5 pounds per cow, and the highest is from a herd of twenty cows, which averaged 269.5 pounds per cow. The difference between the average of the poorest and the best herd is 221 pounds of butter-fat per year, or an increase of the best herd over the poorest herd of 456 per cent. An average of the best five herds is 215.05, and of the poorest five herds is 63 pounds, a difference of 152.05 pounds, or 241 per cent.

Enterprising dairymen claim that it will take 150 pounds of butter-fat a year per cow to pay for keeping her, and the profit comes from the yield given above that amount. If this be true, the cows that belong to the poorest dairy herds are, so far as milk- and butter-fat production are concerned, running their owners in debt, and were it not for the redeeming features of the calves produced, they would be better off without any cows.

Cash Income for Butter-Fat.—The eighty-two herds averaged \$19.79; the best herd averaged \$42.09, and the poorest herd \$7.54, a difference of \$34.55 per cow; the difference between the average of the best five herds and the poorest five herds was \$24.30 per cow. If this difference were figured on the basis of ten cows it would amount to \$243 per year, or \$2,400 in ten years.

Value of Calves.—An estimate of the value of calves at weaning time was obtained from each of the eighty-two patrons. This estimate varied from \$4 to \$20 per head. The estimate of the value of the calves from the best five herds averaged \$8 per head and

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from the poorest five herds \$12 per head. From this it will be seen that the poorest herds had the best calves by \$4 per head, to compensate for the great loss of milk and butter-fat.

Estimates were also obtained as to the value of the skim-milk. These estimates ranged all the way from the equivalent of so much dish-water to fifty cents per 100 pounds. Counting in the income from the butter-fat, to which we add the estimate of the patrons as to the value of the calf and the value of the skim-milk fed to pigs (the value of the skim-milk fed to calves being counted as part of the value of the calf), we have the total income per cow for each of these herds. The total annual income per cow of the eighty-two patrons was \$32.86, for the best herd \$54.38, and for the poorest herd \$18.04—a difference between the best and poorest of \$36.34 per cow. The average for the best five herds is \$45.13, and for the poorest five herds \$23.59—a difference of \$21.54, or ninety-one per cent. One of the patrons that received the lowest income valued his calves at \$20 per head.

The difference between these herds is more than really appears on the surface. To show this difference, we will assume that it costs the owners of the poorest five herds \$15 per year to keep a cow. This amount will doubtless be greater with the owners of the best five herds, as they will furnish better care and probably better feed. We will add one-third more, or \$20, as the cost of the keep of a cow of the best five herds. Subtracting \$20 from the total income from the best herds,

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there remains a profit of \$34.48 per cow. Subtracting \$15 from the total income of the poorest herd we have left \$3.04 profit, or a difference in the profit of these two herds of \$31.34 per cow. To put it in another light this amounts to one cow in the best herd bringing as much clear cash to a man as eleven cows from the poorest herd, and only one cow to milk, shelter, and feed.

If we take the average of the best five herds in the same manner, we have a profit of \$25.13; from the poorest five herds, a profit of \$8.59—a difference of \$16.54 per cow. In other words, one average cow from the best five herds brings a man as much clear cash as three average cows from the poorest five herds.

In the above comparisons only averages of the herds have been used. If it had been possible to have carried the investigation further, and found what each cow was doing in the herd, we would doubtless have found as much variation between individuals of the herds as between the herds.

Why the Difference?—Doubtless many conditions enter in to produce these differences, but back of them all is the one great difference, the man. A man's cows seldom exceed his ideas of what a cow should be. Out of seventy-nine patrons who expressed themselves on the subject, fifty-six were general-purpose men, thirteen beef men, and ten special dairymen. Three of the general-purpose men intimated that the dairy business was unprofitable unless there were children at home to do the milking, and one man went so far as to say that he left his cows unmilked if the children happened to be away at milking time. Such men will not make a success of dairying no matter what their environments are.

Next to the man himself, the cow doubtless stands as the cause of this great variation. Too many cows are to-day debt-contractors instead of debt-lifters, and, unfortunately, too many of our dairymen are unable to distinguish between the two. They seem to think that because they get a little milk from a cow they are so much ahead; but they do not figure what it has cost to produce that milk. The importance of a good cow will be discussed a little later on.

The feed problem is another important factor in accounting for the difference in these herds. The grain ration fed to the best five herds contained bran, oats, and oil-meal in addition to corn and roughness. The corn-fodder and prairie hay were balanced by alfalfa and red clover. In the poorest five herds there was one man who fed no grain whatever, three fed ear-corn alone, and only one herd was fortunate enough to have oats in connection with cornmeal. Stalk-fields, corn-fodder, prairie hay or millet constituted the roughness, only one herd being fed a little clover hay.

The kind of sires used by these men undoubtedly had much to do in regard to the class of cows that were being milked. Among the eighty-two patrons there were nineteen who were using pure-bred sires. The majority were breeding to grades of the beef type. A few patrons exhibited their lack of gumption by breeding to any kind of a bull that would get fresh cows. One man remarked that he did not know what kind of a bull he had last year, but that he had a good one this year. When asked the breed, replied: "Don't know; guess he's a Red Polled."

The lack of shelter, salt, and pure water also contributed a share to the poor results obtained.

(To be continued.)

A Ration for Milch Cows.

The writer runs a seventy-cow dairy and has plenty of good ensilage but is at a loss to know just what to combine with the ensilage to produce the most milk. We are now feeding at the rate of a bushel basket full to three cows. To each cow we feed a quart of cottonseed-meal along with the ensilage twice a day, but find cottonseed-meal rather too expensive. For roughness, we use good cane or mixed hay and keep the cows in barns at

night. Please give your experience, but remember that the State does not pay our expenses, and by this we mean that we want to try to use farm-grown feeds if possible. MARSHALL HARKER.

Franklin County.

In order to suggest a definite ration, it is necessary to know what the different feeds available will cost. You neglect to state what you are paying for cottonseed-meal. I assume, however, that you can procure it for \$25 per ton. You are certainly fortunate in having plenty of good ensilage and I suppose you have probably made a calculation as to the amount on hand and are feeding it at a rate which will make it hold out until grass comes again. I do not see how I can reduce the expense of your ration to any great extent. It will be absolutely necessary to feed some concentrates rich in protein as corn ensilage does not contain a sufficient amount to maintain a high milk-flow. I do not believe you can purchase protein in any cheaper form than in cottonseed-meal.

The roughness which you are using, cane-fodder and mixed hay, is also very deficient in protein although an excellent roughage with the proper feeds to balance it. I would advise you in the future to endeavor to raise cow-peas and soy-beans and make your ensilage of corn, cow-peas and soy-beans, mixed. This will make an excellent ensilage and will be a much better balanced ration, the cow-peas and soy-beans being very high in protein; they also help to maintain the fertility of the land as clover does. I judge you are feeding about 25 pounds of ensilage a day. You can probably buy bran by the ton at about \$16 to \$17.

Below is a table which gives the digestible nutrients of a daily ration which would be suitable for a cow giving about 20 pounds of milk daily:

	Dry matter.	Protein.	Carbohydrates.	Fat.
Cane fodder, 20 lbs.	10.06	0.480	6.42	0.320
Ensilage, 25 lbs.	5.22	0.225	2.82	0.175
Cottonseed-meal, 1½ lbs.	1.38	0.558	0.253	0.183
Bran, 2 lbs.	1.77	0.258	0.802	0.068
Total	18.43	1.521	10.295	0.746

This ration, estimating cane-fodder at \$3 per ton, ensilage at \$1.50 per ton, cottonseed-meal at \$25 per ton and bran at \$18 per ton will cost a trifle over 8 cents which is not a very expensive ration. For cows giving larger quantities of milk, you need simply increase the quantity of grain mixture and possibly also give more ensilage.

G. C. WHEELER,
Kansas Experiment Station.

Feeding for Milk-Flow.

Would you kindly give a little information regarding the feeding of milch cows, so as to get the largest possible flow of milk during the fall and winter. I have been giving my cows morning and night a gallon of dry bran, sometimes a little soaked oats with the bran. They get a fairly good feed of alfalfa hay morning and night, are turned into the blue-grass pasture during the day, though there is not much grass. They have plenty of good water. Kindly tell me if I am feeding right, and any other information you can concerning their feed as to quantity, kind, etc., and it will be greatly appreciated. R. B. DALE.

Douglas County.

If you have alfalfa hay to feed your milch cows you will have little difficulty in procuring a large flow of milk at comparatively low cost for purchased feed. Alfalfa contains about 11 to 13 per cent protein, which is very deficient in many of our Kansas feeds. For the grain ration, however, I would not feed bran alone as it is rather expensive this year, and where alfalfa hay is fed it is not necessary to provide so much protein in the grain ration. I would suggest a mixture of bran and corn-chop. While oats are most excellent feed for dairy cows they are also too expensive. For cows producing about 30 to 35 pounds of milk I would suggest the following daily ration:

	Dry matter.	Protein.	Carbohydrates.	Fat.
Alfalfa, 15 lbs.	13.74	1.150	5.940	0.180
Corn, 5 lbs.	4.45	0.395	3.335	0.215
Bran, 5 lbs.	4.42	0.645	2.005	0.170
Total	22.61	2.190	11.280	0.565

In feeding this ration it will be necessary to note the effect that it is having upon the cow, and if she is decreasing in milk-flow and laying on fat, the grain ration must be decreased. I believe the above ration will be as satisfactory and as economical as any ration you could feed your cows, and I am certain you will get good results from it if you will give a little attention to the daily yields of the cows and also note their condition from day to day.

G. C. WHEELER,
Asst. in Feeding Experiments, Kansas Experiment Station.

A Special Cow Ration.

Please give me a ration for a cow weighing about 750 pounds, giving at the present time 18 to 20 pounds of milk daily. She has been milked over nine months and produced 6923 pounds of milk, with test of 5½ per cent. I have other cows of the Jersey breed that are a little heavier than this one. Ground corn will cost \$1 per cwt.; speltz, \$1.15 per cwt.; bran, 90 cents per cwt. I am now getting bran from a country mill, and it is not cut up as badly as usual and I think is a stronger feed. For roughage, I have clover and timothy hay, second crop, and well cured; it runs about half and half.

Brown County. W. M. SHIRLEY.

If the rest of your herd are as good as this cow, you have a herd which it will pay you to feed properly. At the prices you have to pay for feed I would not recommend you to buy speltz at all, nor would I advise buying oil-meal to feed to the whole herd. It would be well to have some on hand and to cows giving very large quantities of milk it might be well to feed a half pound daily. For the general ration I would suggest the following as the daily ration:

	Dry matter.	Protein.	Carbohydrates.	Fat.
Clover hay, 8 lbs.	7.29	0.384	3.752	0.080
Timothy hay, 8 lbs.	6.94	0.224	3.472	0.112
Corn, 3 lbs.	2.67	0.237	2.001	0.129
Bran, 5 lbs.	4.42	0.645	2.005	0.170
Total	21.32	1.490	11.230	0.491

This amount of feed will furnish sufficient nutrients for cows of this size producing 20 pounds of milk. The timothy and clover will nearly supply sufficient nutrients for maintenance and the mixture of corn and bran is about in the right proportion for the production of milk. You can vary the quantity of this mixture in proportion to the milk each cow is giving. The cost of the above ration, estimating the hay at \$6 a ton, will be 12 cents. Your corn is apparently costing you rather high. If you could procure corn-chop at something nearer the price of ear-corn the ration would be considerably cheaper. In spite of the high cost of

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this ration, however, I think you will find it a very satisfactory one for the kind of cows you have.

G. C. WHEELER,
Kansas Experiment Station.



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Dust Bath for Fowls.

Nearly, if not quite, all species of land birds use the dust-bath. It is what water and soap are to the human family. They choose a spot of fine soil and scrape holes in it where they pulverize the dirt until it is reduced to a fine dust. In this place they roll and shake their feathers and allow the dust to penetrate to the skin.

It appears that in some way this is deleterious to the parasites which infest the plumage or skin of the fowls. It has been said by some naturalists that as all insects breathe, not through the mouth, but through small openings in the skin situated in rows along the side of the body, the fine particles of dust close these openings, so that the parasites die of suffocation as quickly as quadrupeds would if held under water. This has been denied by other scientists, who say these holes are defended by a very delicate but effective apparatus that makes it impossible for any foreign matter to enter, no matter how minute it may be. Be this as it may, we know that wild fowls take dust-baths whenever the weather and the state of the soil permit. We know also that all fowls like to take a dust-bath in places where the soil is fine and mellow. Nature is a good guide, and whether the dust-bath is for the prevention and absorption of effete matter which has become too odorous, or whether it acts as an insecticide, it is certainly advantageous to fowls, or they would not use it.

Therefore, the careful poultry-keeper will provide boxes or bins filled with fine road-dust, coal-ashes, sandy loam or fine clay thoroughly pulverized. They need this more especially now that they are penned up, for they can not possibly get a dust-bath in their pens, unless you provide it for them. It makes little difference which of these varieties of soil are used. The principal thing is to have it clean; that is, not a highly manured soil, but a comparatively unfertile one is preferable. Subsoil will do very well. The next qualification is that it must be perfectly dry, and one other qualification that it must be thoroughly pulverized. The best place to locate the dust-bath is just inside the south or east window where the fowls may enjoy the health-giving rays of the sun, and where the dust in the bin will be most apt to be kept thoroughly dry.

Poultry Notes.

The day before Thanksgiving is rather an inappropriate time to urge one to raise more turkeys. You ought to have several score ready for market just now and realize twenty cents per pound for them, for that is what they are paying for them to-day in Topeka. But one may prepare for another year by determining to buy a trio or more of turkeys at the winter shows and then you will have some to sell by next Thanksgiving.

Turkeys are good farm property, if the stock is vigorous and the birds are heavy. Some breed them so long without changing the male that they become delicate and difficult to raise as well as light in weight. Send off and get a first-class tom for next season's mating and it will repay you many times in the increase in weight and vigor of the offspring. After the first few weeks of their life, turkeys are not hard to raise and will almost secure their own livelihood by foraging on the farm.

In answer to an inquiry as to the best time to pick ducks for their feathers, I would say: The breeding ducks may be picked several times a year, generally from four to six times. Do not pick until the feathers are ripe, which can be told by pulling a few from different parts of the bodies of several birds. If they come out easily without any bloody fluid in the quill, they are all right and should be

picked at once or many feathers will be lost. In picking, pull only a few feathers at a time, by taking between thumb and forefinger and giving a quick jerk. Do not pull the bunch of long, coarse feathers under the wing. Before you begin picking, tie the duck's legs together with a piece of soft cloth, and if the duck is inclined to object to the picking by thrusters with the bill, slip an old stocking over its head. Use no unnecessary harshness with any of the birds and be especially careful with laying ducks. Sitting ducks and those that are soon to be set should not be picked. In warm weather much of the down may be taken from the drakes. Do not take any in cold weather. Duck feathers always bring a good price, especially white ones, and should be saved when dressing ducks, if they are sold dressed; if not sold dressed, do not pluck just before selling as they do not look as tempting and plump as when they have all their feathers on.

There is no sale for guinea fowls in market, but the guinea fowl is, nevertheless one of the finest of all table fowls, possessing a certain game flavor that is not found in other fowls. They have full-meated breasts, and possess but a small proportion of offal compared with hens. If their real value for the table were known, they would sell at high prices. On the farm they cost almost nothing to raise, being industrious foragers and there never was a better insect-exterminator than the guinea. Their eggs are very rich and nutritious and have an exceedingly hard shell, which keeps them fresh longer than chickens' eggs. Besides providing eggs without cost, they destroy thousands of insects, and though their efforts in that direction may not be apparent, yet the work goes on with them constantly. They are never idle, being busily engaged from early morn till late at night.

A farmer who has raised turkeys many years, and who takes pleasure in making experiments, writes that charcoal, turkey-fat and diamonds are alike in some respects, all being different components of carbon. It is a fact that more fat can be gotten out of charcoal than one would suspect without a knowledge of chemistry. There is an account of one experiment. Four turkeys were confined in a pen and fed on meal, boiled potatoes and oats. Four others of the same brood were at the same time confined in another pen and fed daily on the same articles, but with one pint of very finely pulverized charcoal mixed with their food—mixed meal and boiled potatoes. They had also a plentiful supply of broken charcoal in their pen. The eight were killed on the same day, and there was a difference of one and a half pounds each in favor of the fowls which had been supplied with charcoal, they being much the fattest, and the meat being superior in point of tenderness and flavor.

As we have stated repeatedly, for chicken cholera there is no sure cure, but one of the best and most accessible remedies is a teaspoonful of carbolic acid in a quart of water. The symptoms of cholera are intense thirst (the surest sign), prostration, profuse greenish dropping and death in a short time. Indigestion, often mistaken for cholera, does not cause thirst and a fowl may live a week or more. The cause of indigestion is usually overfeeding, and the best remedy is sharp grit.

Peel three or four onions and chop them up with a chopping-knife in a wooden bowl and give to your fowls. Onions are one of the most healthy vegetables to feed raw to poultry. Some poultrymen give each pen of fowls a raw onion every day, and say that while they practice this they never have a sick chicken.

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ALVIN LONG, Lyons, Kans.

EGGS! EGGS!

A Timely Tip!

Highest known market prices will be paid this season: inevitable, great demands, scarcity, preserve yours for coming high prices with my practical Egg Fertilizer. Infallible, economical, peerless, prevents staleness; keeps eggs fresh indefinitely; long felt want and valuable necessity to every hen owner. Price \$1. Be wise: order it now and reap profitable returns. Address W. L. JOHNSON, Dept. N, Clarksville, Tenn.

White Plymouth Rocks

EXCLUSIVELY.

Three Grand Yards of the Best Strains in the Country.

White Plymouth Rocks hold the record for egg laying over any other variety of fowls: eight pullets averaging 280 eggs each in one year. I have some breeding stock for sale at reasonable figures. Eggs in season, \$2 per 15, express prepaid anywhere in the United States. Yards at residence, adjoining Washburn College. Address

THOMAS OWEN, Topeka, Kansas.

POULTRY SUPPLIES

Thanolice (lice powder).....25c
Creo-carbo (lice killer).....30c
Egg Maker.....25c
Poultry Cure.....25c
Roup Pills.....25c
Medicated Nest Eggs.....5c
Conkey's Roup Cure.....50c
Buckeye Cholera Cure.....35c

OWEN & COMPANY

520 Kansas Ave., Topeka, Kans.



DUFF'S POULTRY

All our Fine Breeders of this season, also Spring Chickens for sale after the first of June. Barred Rocks, White Rocks, Buff Cochins, Partridge Cochins, Light Brahmas, Black Langshans, Silver Wyandottes, White Wyandottes, Silver Spangled Hamburgs, Black Minorcas, S. C. Brown Leghorns, and Belgian Hares. Buy the best now at the lowest prices. Write your wants. Circulars free. Choice Breeders and Show Birds.

A. H. DUFF, Larned, Kan.

\$12.80 For 200 Egg INCUBATOR

Perfect in construction and action. Hatches every fertile egg. Write for catalog to-day. GEO. H. STAHL, Quincy, Ill.



Largest Optical Mail Order House in the West.

Any eyes examined free accurately by mail. Any style glasses for \$1. Write for free examination sheet and illustrated catalogue. Satisfaction guaranteed. P. H. Parker Optical Co., 624 Kansas Ave., Topeka.

Grange Department

"For the good of our order,
our country and mankind."

Conducted by E. W. Westgate, Manhattan, to whom all correspondence for this department should be addressed. Papers from Kansas Granges are especially solicited.

National Grange.

Master..... Aaron Jones, South Bend, Ind.
Lecturer..... N. J. Bachelder, Concord, N. H.
Secretary..... C. M. Freeman, Tippecanoe City, Ohio

Kansas State Grange.

Master..... E. W. Westgate, Manhattan
Overseer..... J. C. Lovett, Bucyrus
Lecturer..... Ole Hibner, Olathe
Steward..... R. C. Post, Spring Hill
Assistant Steward..... W. H. Coultis, Richland
Chaplain..... Mrs. M. J. Ramage, Arkansas City
Treasurer..... Wm. Henry, Olathe
Secretary..... Geo. Black, Olathe
Gate-keeper..... G. F. Kyner, Lone Elm
Ceres..... Mrs. M. J. Allison, Lyndon
Pomona..... Mrs. Ida E. Flier, Madison
Flora..... Mrs. L. J. Lovett, Larned
L. A. S..... Mrs. Lola Radcliff, Overbrook

Executive Committee.

E. W. Westgate..... Manhattan
Geo. Black..... Olathe
T. Lincoln..... Madison
A. P. Beardon..... McLouth
Henry Rhoades..... Gardner

State Organizer.

W. G. Obryhim..... Overbrook

From the National Grange.

We give below some of the many good things we have been or heard in Oregon:

It is rather surprising to find cornfields as fresh and green as in July; lawns like June; roses and other flowers in profusion; trees gaily dressed in their autumn foliage; rain falling every day but one since we came—and all day, too, but somehow it is a rain that does not seem to wet much. Streets are full of people—meeting of Grange attended by thousands. Churches well filled on the Sabbath. Umbrellas more necessary to a lady than her hat, and "they say" an Oregon babe carries an umbrella by instinct.

The opera house was crowded both afternoon and evening to-day with candidates for the sixth and seventh degrees of our order.

The sixth degree was conferred by the Oregon State Grange assisted by the master of the National Grange. The seventh degree in all its beauty of robes, regalias, and all its lessons from the past for the present, in the realms of mythology, science and religion was conferred by the officers of the National Grange in a manner very near perfection.

E. W. W.

Portland, Oregon, Nov. 19, 1904.

THE GOVERNOR'S ADDRESS OF WELCOME.
In giving the address of welcome on behalf of the State of Oregon, Governor Chamberlain said:

"As executive of the State I extend to you a most cordial welcome. Oregon is proud to entertain as her guests such a distinguished body of ladies and gentlemen as those who compose the National and several State Granges, and all of her people hope that your stay here may be most pleasant.

"A number of congresses and conventions have been held in this city in the past year, comprising delegates and representatives from every State and Territory, men of National and international reputation. All of them have had for their end and aim organization of their forces and the cultivation of a unity of sentiment and action as the best means of advancing the several interests which they have been called upon to represent. All of these conventions have been important, and have been productive of good not only to the individuals who have been able to attend, but to the country at large, and it is no disparagement of any of them to say that none have been of more importance to the welfare of our people than the one which convenes here to-day.

"The National Grange has had for its first object the betterment of the condition of the farming classes in the United States, and it is impossible for any one to calculate the good that has been accomplished by it and its membership throughout the country. This is an age of organization, and that body of men is best able to meet and overcome obstacles in the way of successful enterprise who can breast them with perfect organization and consolidation of its forces.

"Although there are a greater num-

ber of individuals engaged in agriculture than in any other industry in the United States, it is nevertheless true that until the organization of this order little in the way of State or Federal legislation was ever accomplished in their behalf. Certain it is that it has been largely through their influence and instrumentality that grants of land and appropriations of money have been made for the establishment of agricultural colleges in nearly if not every State in the Union. But for their efforts and those of its distinguished head, who is present with us to-day, it is questionable whether the rural free delivery, which has brought the farmer into close and intimate touch with urban life, would ever have been established. And certain it is that the slow recognition of agriculture as the foundation of our country's wealth was brought about through the efforts of the Grange, and now it has been so dignified through their combined energy that a department has been created with a representative at its head who sits in the official family of the President of the United States.

"No one can say that the accomplishment of these things has been brought about by misdirected effort. The result has been beneficial both to individuals, State and Nation, and as united effort and concentration of energy have brought about the achievements which I have mentioned, there is much yet to be done in the interest of the farmers and their families in this country. Let me suggest a few: "Greater attention ought to be paid in the public schools of the State to instruction along the lines of field and farm. The trend of public thought is in this direction, but until some concentrated effort is put behind it to force this thought to the front and cause it to be put into practical operation not much can be expected at the hands of those in authority.

"The farmer either by direct or indirect taxation pays more to administer the affairs of Government than any other class of laborer. His lands, which are his stock in trade, are open and visible and contribute to county and State support, whilst wealth in the form of money and securities escapes its just proportion of direct taxation; and the burden imposed by excessive tariff rates, being a tax upon consumption, rests more heavily upon the farming classes of the country than upon the wealthy denizens of the cities.

"How can relief in these directions be obtained? An income-tax law is a first step in the direction of compelling wealth to contribute with the farm its just proportion of taxation. In the light of the decision of the Supreme Court of the United States, a constitutional amendment may be necessary to accomplish this end.

"A revision of the tariff along certain lines would be a second step to bring relief to an over-taxed and overburdened farming community. Certainly upon those articles which are manufactured by the trusts a tariff ought to be placed which would not compel the consumers of the country to pay tribute to those who have grown wealthy because of special privileges granted to them by law.

"There is no reason why agricultural implements and machinery, barbed wire, nails, sewing-machines and other articles which enter into the every-day life of the farmer should cost our own people more than they cost the subjects of Great Britain, Russia and other foreign powers. The improvement of the public roads of the several States will materially advance the interests of the farmers, as does everything which tends to cheapen transportation. There is no reason why Governmental aid should not be applied to the improvement of the public roads of the country with the same liberality that it has been extended to waterways and other commercial highways.

"I only call attention to a few of the things which it seems to me ought to receive the attention of the farmers of the United States, for if they put forth the same energy and effort in bringing about reforms along these lines that have been exerted by them

in the accomplishment of those which I have mentioned as due to their efforts, there is no question but that they will be relieved of many of the burdens which are imposed upon them by law, and which they bear in silence. It is not fitting for me at this time, or upon this occasion, to dwell at length upon these matters. I merely direct your attention to them, and bid you enter into these fields with that enlightened determination which has characterized whatever you have undertaken to do.

"In conclusion, permit me to say that I feel honored in being permitted to welcome you, and I know that I but echo the wish of every man, woman and child in the State when I express to you the hope that your stay amongst us may be most pleasant. If some time it rains in Oregon, the gloom of such a period is more than counterbalanced by the magnificence of the sunshine and the beauty of our landscape, and we all hope that you may have an opportunity during your stay to look out upon our evergreen hills and snow-capped mountains with naught to obstruct the view or mar the picture that has been painted by the brush of the Almighty Himself."

Pomona Grange Organization.

Delegates from subordinate granges of Shawnee County met in hall at 121 West Sixth Street for the purpose of organizing a Pomona Grange. Each grange of the county was represented. Meeting was called to order by A. E. Dickinson, and William Sims was elected chairman and O. F. Whitney, secretary.

Article ten of the constitution of the Kansas State Grange was read for the purpose of getting directions to properly organize a Pomona Grange. H. H. Wallace then moved that members present proceed to organize.

A. E. Dickinson moved that a committee consisting of one representative from each grange be appointed to nominate officers and board of trustees for the year of 1905.

The following is the adopted report of that committee:

Master, J. B. Sims; overseer, J. S. Longshore; lecturer, A. E. Dickinson; steward, J. M. Pollom; assistant steward, Wm. Kelley; chaplain, J. P. Carroll; treasurer, E. Higgins; secretary, O. F. Whitney; gate-keeper, W. L. Staples; Ceres, Villa McCord; Pomona, Josephine Sims; Flora, Mabel Waters; lady assistant steward, Sarah Danber; board of trustees, J. F. Cecil, W. H. Coultis, H. H. Wallace.

On motion it was ordered that on January 14, 1905, at 10 o'clock, we meet and install the officers of the Shawnee County Pomona Grange, and have an all-day open meeting, with a literary program, commencing at 2 p. m.

A motion prevailed that the lecturer of each subordinate grange be requested to prepare a literary program for the union meeting.

To make the labors of the day lighter on the matrons of the grange, a committee was appointed to furnish a suitable lunch for the members who attend the union meeting. The lunch will be served in the dining-room of the hall and a small fee will be charged to cover cost.


Persons desiring to bring their own lunch will be furnished tables, chairs, etc., for their convenience.

Adjourned to meet January 14 at 9 a. m. O. F. WHITNEY, Secretary.

Very Low Excursion Rates for Christmas Holidays

to all points on the Nickel Plate Road between Chicago and Buffalo. Excursion tickets on sale December 24, 25, 26, and 31, 1904, and January 1 and 2, 1905, good returning January 4, 1905. Three through express trains daily. No excess fare charged on any train. Also lowest rates and shortest line to Cleveland, Buffalo, New York, Boston and all Eastern points. Modern sleeping and dining-cars. Individual Club Meals, ranging in price from 35 cents to \$1, served in Nickel Plate dining-cars; also service a la carte. All trains leave from La Salle St. Station, Chicago. City ticket office, Chicago, Ill., 111 Adams St. and Auditorium Annex. For further particulars address John Y. Calahan, General Agent, 113 Adams St., Room 292.

Any one of our readers having a farm to rent will find a desirable tenant, A. O. Bachnick, advertising for the same in this week's Kansas Farmer.



expands and bursts every starch cell, makes a fine, white, bubbling dough, and brings out every nutritive value of the flour. Do you want never-failing good bread? Use Yeast Foam; it's

Safe Yeast

Poor yeast means badly-raised, badly-baked, dangerous bread. Yeast Foam means the best and most strengthening bread in the world.

The secret is in the yeast.


For sale by all grocers at 5c a package—enough for 40 loaves. "How to Make Bread"—free.

NORTHWESTERN YEAST CO.,
Chicago.



Trippl Gear Tiltig Hopper A Fast Grinder

Write for Circulars and Prices
Kingman-Moore Imp. Co.
Kansas City, Mo.



MORE BUTTER

with LESS WORK can be made with the Double Diamond "O. K." Churn than with any other. A child can run it. Buy direct from manufacturer and save dealer's profits. If you are not satisfied return in 30 days and get money back.

PRICES—CASH WITH ORDER

No. 6, 5 gallons, to churn 3 gallons,	\$3.50
No. 1, 10 " " " "	3.75
No. 2, 15 " " " "	4.00
No. 3, 20 " " " "	4.50

Challenge Churn Mfg. Co., Paw Paw, Mich.

Chicago Agency, 35 Randolph St., Chicago



\$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.,
Topeka, Kansas.

We Risk It

Druggists Who Sell Dr. Miles' Nervine Agree, If It Fails, To Refund Cost.

Of course we reimburse the druggist. You know him, and trust him. Dr. Miles' Nervine is medicine for your nerves.

It cures diseases of the internal organs, by giving tone to the nerves which make these organs work.

It is a novel theory—not of anatomy, but of treatment; first discovered by Dr. Miles, and since made use of by many wide-awake physicians, who appreciate its value in treating the sick.

If you are sick, we offer you a way to be made well—Dr. Miles' Nervine.

This medicine is a scientific cure for nerve disorders, such as Neuralgia, Headache, Loss of Memory, Sleeplessness, Spasms, Backache, St. Vitus' Dance, Epilepsy or Fits, Nervous Prostration, etc.

By toning up the nerves, Dr. Miles' Restorative Nervine will also cure those diseases of the internal organs due to a disordered nervous system.

Some of these are: Indigestion, Bilious Headache, Kidney Trouble, Chronic Constipation, Dropsy, Catarrh, Rheumatism, etc.

"My brother had nervous prostration, and was not expected to live. I prevailed upon him to try Dr. Miles' Restorative Nervine, and now he has fully recovered. You remember I wrote you how it saved my life a few years ago, when I had nervous trouble. I preach its merits to everyone."—REV. M. D. MYERS, Correctionville, Iowa.

FREE Write us and we will mail you a Free Trial Package of Dr. Miles' Anti-Pain Pills, the New, Scientific Remedy for Pain. Also Symptom Blank for our Specialist to diagnose your case and tell you what is wrong and how to right it. Absolutely Free. Address: DR. MILES MEDICAL CO., LABORATORIES, ELKHART, IND.

Breeders' Combination Sale at Hope, Kans.

(Continued from page 1179.)

Ing. Herington, Kans.; George Hay, Hope; C. A. Weaver, Admire, Kans.; G. H. White, Antelope, Kans.; D. Baitnyne, Herington, Kans.; Leo Bohanes, Dillon, Kans.; J. W. Shuster, Hope; Frank Larson, Dillon, Kans.; W. G. Kreps, Banner, Kans.; Earl Robinson, Hope; G. A. White, Marlon, Kans.

Snyder Bros. and J. R. Cooper & Son's Sale.

Snyder Bros.' annual sale was this year enlarged by the addition of a consignment by J. R. Cooper & Son, the sale being held at the latter gentlemen's place, two miles north of Winfield, Monday, November 28, 1904. Special credit is due to the auctioneers, Col. Jas. Sparks, Marshall, Mo.; Col. Lafe Burger, Wellington, Kans.; and Col. J. R. Miller, Winfield, Kans., for the general fair prices prevailing, as this section of the State is no exception to other parts where the price of feed is high. This, and the coming on of winter accounts for the fact that higher prices were not received. The animals were in fair condition, being in their every-day clothes and not specially rigged up for the occasion. Of the large herd which Snyder Bros. have, they had 32 head in this sale, and J. R. Cooper & Son had 19 head. The weather was perfect and the crowd was correspondingly good, though there were not as many breeders in attendance as would naturally be expected under more favorable conditions. The top of the sow sale was a gilt owned by J. R. Cooper & Son, which was sold to Fred C. DeMott, Arkansas City, for \$41. Among the other buyers were: Jas. Alley, J. S. Veall, T. A. Hubbard, Wellington, Chas. Craig, Oxford; A. B. Goodwin, New Salem; W. H. McKinley, Orlando, Okla.; L. C. Robertson, J. R. Cooper & Son, G. W. Newman, T. H. Harrod, R. B. Sanford, W. F. Gill, W. F. Melton, J. C. Poucher, D. B. McCollum, J. A. Hill, Isreal Sands, W. I. Beach, M. D. Snyder, S. H. Riggs, and John H. Falkingham, Winfield; G. E. Hayder, Newkirk, Okla.; Ed. Pray, Kiowa; J. C. Alsip, Arkansas City; Benj. Ahlerich, Akron; Marshall Bros. and Harry E. Lunt, Burden; L. W. Whitson, Hackney; Geo. W. Hough, Milan; L. E. Parsons, Udall; H. W. Gates, Anthony.

Snyder Bros. sold 32 head for \$465, averaging \$14.53; 11 boars brought \$141, making \$12.82 average; 21 sows brought \$324, making \$15.43 average.

J. R. Cooper & Son sold 19 head for \$329, making \$17.32 average; 10 boars brought \$167, making \$16.70 average; 9 sows brought \$162, making \$18 average.

Spriggs' Horse and Jack Sale.

A very important sale of draft- and coach-horses and mammoth jacks will be held at Ottawa, Kans., on December 15 in the Forest Park sale pavilion. The bulk of this offering comes from the blue-ribbon herd of S. A. Spriggs, Westphalia, Kans. The offering includes a pair of fine Percheron mares weighing in full flesh 3,700 pounds, age 6 years. This pair won first and second prizes at the American Royal Show of 1903, having never been defeated in the show-ring, and both are in foal to an imported stallion. Another mare is Bernice 18851 that won so many premiums at Kansas and Missouri Fairs this year. She is the dam of four good young stallions, one of which sold at 3 years old for \$1,400, and Mr. Spriggs refused \$1,000 for her yearling stallion sired by Casino, the \$7,000 stallion at the head of the famous herd of J. W. & J. C. Robison, Towanda, Kans. This mare is safe in foal to Imp. Fauto, champion of the Missouri State Fair. All the mares included in the sale are black or very dark brown and all in foal to the big black imported Percheron stallion. There will also be included a splendid lot of jennets safely bred to King Jumbo, the champion of Missouri and Kansas State Fairs this year. Visitors at the fairs will remember that Mr. Spriggs made the best show of jacks and jennets seen during the fair season of 1904. Mr. Spriggs has acted in the capacity of expert judge two years at the Missouri State Fair, also at leading Kansas fairs where he was not an exhibitor. He is the owner of one of the largest herds in the West and his offering at Ottawa is certainly a very attractive one for buyers who are in need of choice stock. Remember the place of sale and for further information address S. A. Spriggs, Westphalia, Kans.

\$200 Reward for Stolen Percheron Mare.

Stolen or strayed from our farm near Wakefield, Kansas (Clay County), a fine, 2-year-old Percheron mare, some time since September 25, 1904. She is a large mare of slightly rangy type that would weigh close to 1,500 pounds at the time she left the pasture but might weigh less now. Color black with small star in forehead, but as she had run in pasture all summer was sun-burned or faded. Head large and a trifle coarse with one ear split near the point about three-fourths of an inch (think it was left ear). Had quite heavy mane and tail for so young a mare. Feet were irregular and considerably broken.

If stolen \$100 reward will be paid for the return of the mare and \$100 for the arrest and conviction of the thief or thieves.

For further information write or wire to Henry Avery & Son, Wakefield, Kans., or United States Head Sheriff, Clay Center, Kans.

Gossip About Stock.

On December 21, M. L. Ayres, Shenandoah, Iowa, sells 30 registered Percheron brood mares at auction. See fall announcement next week. The big event of the season. Write for his catalogue.

In a recent letter from S. W. Artz, breeder of O. I. C. swine at Larned, Kans., he states that he recently sold a trio of O. I. C. pigs to a man in Old Mexico. He states that his spring crop is all sold but that he has a number of extra-good fall pigs for sale yet. Write him for information, and mention the Kansas Farmer.

J. F. Chandler, Frankfort, Kans.,

changes his ad in this issue and writes that his Duroc-Jersey boars are coming along in fine shape. They are in excellent breeding condition, weighing from 175 to 225 pounds. Any breeders who are interested in good hogs should write Mr. Chandler, and they will receive courteous treatment and reasonable prices. Mr. Chandler will hold a bred-sow sale on February 20, 1905.

Geo. W. Berry, manager of the Berkshire division of Sunny Slope Farm, owned by C. A. Stannard, Emporia, writes as follows: "It may interest you to know that I have just sold for export, four Berkshire boars to Hon. Richard H. Beattie, Manzanillo, Cuba. The animals which have been selected for export are four choice boars sired by Headlight 74739, and from sows that were sired by Black Robin Hood 66086."

The Kansas Farmer is in receipt of Volume 59 of the American Shorthorn Herd Book, containing pedigrees of animals, calved before April 6, 1904. In this book are recorded the pedigrees of bulls from 214519 to 219824, and about an equal number of cows, together with a complete index for each sex. Interested parties may secure a copy of this volume by addressing Secretary John W. Groves, Chicago, Ill., and remitting the usual price.

On Thursday, December 15, James A. Carpenter, Carbondale, Kans., will make a dispersion sale of forty Hereford cattle, consisting of cows, heifers and calves and the herd bull, Beau Gondolus 133277, a son of Beau Brummell. The cows trace to Lord Wilton, Grove 3d, Anxiety 4th, and Boatman. In connection with the dispersion sale of Herefords Mr. G. B. Scott, Carbondale, will sell forty-five head of pure-bred and registered Poland-China hogs. For catalogue address as above.

Our readers will notice in the dates claimed for thoroughbred stock sales that Mr. F. A. Dawley, Waldo, Kans., has announced a sale of bred sows from his herd of Poland-Chinas, to be held on February 2, at Osborne, Kans. We predict for this sale a success that will break the records for that section of Kansas. Mr. Dawley has lately added a half dozen remarkably fine gilts, purchased from the herd of F. M. Lail, Marshall, Mo. Two of these are sired by C's Perfection and the others by Grand Chief, and the fact that they come from Lail's herd is of itself sufficient recommendation of their quality. It is too early to give particulars about the consignment to this sale at this time, but Mr. Dawley thinks that he has a spring boar, by his herd boar Woodbury out of Gwendoline, the dam of Highroller, that is better than anything that he saw in the six-months class at St. Louis. Mr. Dawley is a pretty good judge of hogs, too.

The forthcoming sale to be held at Archie, Mo., on December 6, 1904, of fifty head of top quality selections from the two great Missouri herds of A. E. Schooley, Austin, Mo., and J. R. Young, Richards, Mo., is an attractive event that should especially interest the Poland-China breeding fraternity of Kansas and Oklahoma, in view of the fact that the champion boar, Predominator and his son Dominator, a World's Fair winner, and Mr. Young's Perfect Perfection, a winner at the Missouri State Fair and the St. Louis World's Fair, are to be sold. It is the greatest array of prize-winners yet to be offered this year. The twenty-five pigs consigned by Mr. J. R. Young are sired by Missouri Black Perfection, Chief Perfection 2, Perfection E. L., Mascot, etc. He also sells five sows bred to Confidential, his great herd boar, a fine son of Missouri Black Perfection. Notice the advertisement in this issue, get catalogue and try to be present at the sale or send bids to either auctioneer, care of Mr. A. E. Schooley. Mr. Schooley has given an option on his farm, which he is offering for sale, and therefore includes breeding animals in this sale that he would not otherwise offer for sale. No culls, all tops.

Great Boer War Exhibition from World's Fair Will Visit Kansas City in December.

The South African Boer War Exhibition Company, universally acknowledged to be the biggest single attraction of the late St. Louis World's Fair, and certainly the most marvelous spectacle in the world today, is coming direct from St. Louis to Kansas City, and will give performances daily from December 5 to 14, inclusive, in Convention Hall.

General Ben J. Viljoen, second in command of the entire Boer forces during the late war, and author of two wonderfully thrilling books on his experiences on war, viz., "Under the Vlerkleur" and "My Reminiscences of the Anglo-Boer War," is president of the company and camp commandant. General Viljoen went to St. Louis in advance of the company, and has all through taken a most active part in the administration of the company's business.

Then, there is General Piet Cronje, champion of many a fight against the savage tribes of his country, but known to all as the "Hero of Paardeburg." A strong, rugged face this Dutch general has, with a round, stubborn head set firmly on his heavy shoulders, his hair and flowing beard unkempt, and plainly dressed in an old black suit; he rides into the arena in an apparently unconcerned manner and receives the plaudits of the crowds. General Cronje during his stay at the World's Fair was asked by many persons how it was that he could bring himself to enact over again these heart-rending scenes, but his reply has always been, "It is only play." If questioned further, Cronje will explain that there is a very great lesson to be learned by this spectacle, for by witnessing modern warfare with all its attendant horrors so vividly portrayed, one can not fail to carry away an earnest desire for universal peace.

With the two Boer generals are twenty Boer officers including Commandant J. N. Boshoff, who was entrusted with the safe keeping of President Steyn during the time the Boers were so hardly pressed from the Orange River Colony to the Transvaal, and Commandant Van Dam, late chief of police at Johannesburg.

HAVE YOU A HORSE?

WOULD YOU LIKE US TO SADDLE? SEND YOU A BEAUTIFUL

FOR THE MOST WONDERFUL SADDLE OFFER EVER HEARD OF, an offer by which anyone can have the nicest saddle in his neighborhood, cut this ad out and send it to us and you will receive our New, Big and Beautiful Special Saddle Catalogue, large, handsome photographic illustrations of all kinds of

Men's, Women's, Boys' and Girls' Saddles, Stock Saddles, Ranch and Range Saddles, SMALL, MEDIUM AND LARGE, PLAIN AND FANCY SADDLES, EVERY IMAGINABLE KIND AND STYLE AND SHAPE OF SADDLE. OUR PRICES WILL ASTONISH AND PLEASE YOU.

You will get our Very Latest and Most Astonishingly Liberal Offer, you will get our New Free Trial Plan, you will receive a saddle offer that every horse owner should have at once. If you own a horse, don't fail to cut this ad out and send to us today and see what all you get by return mail, free, postpaid.

ADDRESS, SEARS, ROEBUCK & CO., CHICAGO.



TOOLS FOR FARMERS' USE

There is no investment a farmer can make of a like amount that will save him as much time and money as will an outfit of tools. The time lost in going to town usually amounts to more than the cost of the repairs. You save both the time and the money when you have the tools.



It is not necessary to be a mechanic to do your own repairing. The average farmer has ability enough to do his own work if he has the necessary tools.

We manufacture an outfit especially for farmers' use and sell it to you just as cheap as we would to the largest wholesale house in the United States. We have no agents.

During the next thirty days we wish to sell at least two thousand outfits. To influence you to purchase at this time, we realize that we must make it to your advantage to do so, hence the most liberal offer ever made in the tool line.

A STEEL FORGE—17x24 inch hearth with an Eleven-Inch Ball-Bearing Fan

FREE ABSOLUTELY FREE

to every person buying an outfit consisting of 1 Malleable Iron Vise, 1 Malleable Iron Drill Frame, 1 Drill Set, 1 Screw Plate, 1 Fifty-Pound Anvil and 1 Hardy. Malleable Iron makes them the strongest, best and cheapest tools made. We also make Lever Forges. We prepay the freight and ship on approval.

Diplomas awarded us at the Iowa, Nebraska and Kansas State Fairs, 1903.

Space will not permit us to describe the tools here, but write us a postal today and we will send you catalogue and full particulars. Don't neglect it, as this advertisement may not appear again. Offer good for 30 days only.

C. R. Harper Mfg. Co., Box 805, Marshalltown, Iowa

Blacklegline

BEST AND MOST CONVENIENT VACCINE FOR BLACK LEG.

PASTEUR VACCINE CO

CHICAGO SAN FRANCISCO

45 High-bred Registered Scotch Collie Pups For Sale 45



READY TO SHIP NOW.

Last Spring had 22, but was not enough to go around. Had to return six money orders. If you want one for a Christmas present put in your order at once.

WALNUT GROVE FARM, H. D. NUTTING, Proprietor, Emporia, Kansas

Going to Business College?

If so, you will be interested in our beautiful illustrated catalogue. It tells all about our courses of study, equipments, methods of instruction, and the success of our graduates. It is free. Address

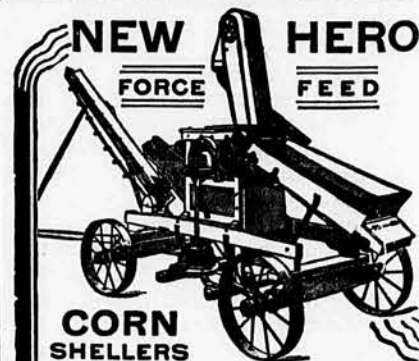
LINCOLN BUSINESS COLLEGE, Dept. 35, Lincoln, Neb.

Officers of the British Army are in command of the British contingent, all of whom served with distinction during the war and hold both the King's and Queen's medals.

The entire body of men, numbering some 350 Boers and 250 British, came over from South Africa in April last on the "Dounce-Castle," a specially chartered Union Castle "Liner" for the express purpose of reproducing scenes from the Boer War at the World's Fair, and every man took an active part in the great struggle. Mimic warfare is child's play to these battle-scarred veterans; the realism infused is wonderful to behold and beyond the comprehension of those who have not witnessed it. Here one may see portrayed in every detail all the awful horrors of war with a realism that makes men shudder and brings tears to the eyes of women.

The Battle of Colenso illustrates the repulse of the British Army, under General Sir Redvers Buller, in the attempt to cross the Tugela River and relieve Ladysmith. The principal feature in this fight is the capture of Colonel Long's guns by the Boers who were under the command of Generals Botha and Viljoen. General Viljoen participated in this battle himself.

The last stage in the Battle of Paardeburg, and capture of General P. A. Cronje with 3,500 men is also re-enacted with great vividness and reality. It is indeed a pathetic sight to see the old General ride in at the head of his men and surrender himself and his command to the victorious Lord Roberts. But the odds are overwhelming—they are surrounded on all sides, their ammunition is exhausted, their water-supply impregnated with bodies of dead horses and men, and themselves utterly worn out with eleven days' incessant vigil and fighting. The words of Lord Roberts as he shakes hands with General Cronje, "I am glad to meet you,



CORN SHELLERS

Never clog—clean shelling—large capacity—great durability. Two and four-hole custom shellers—one and two-hole farmer's shellers. Also corn huskers, feed grinders, feed cutters, horse powers, windmills, manure spreaders, etc. Large catalogue free.

APPLETON MFG. CO., 19 FARGO ST., BATAVIA, ILL.

sir, I am proud to get so brave a man," shows his appreciation of the plucky stand made by Cronje and the Boers.

The final scene is a remarkably clever illustration of one of the famous General de Wet's marvellous escapes when hemmed in on all sides by a strong cord of British troops.

When writing advertisers please mention this paper.

Christmas Holiday Excursion Rates

via the Nickel Plate Road, December 24, 25, 26, and 31, 1904, and January 1 and 2, 1905, good returning January 4, 1905, at a fare and a third for the round trip, between Chicago and Buffalo. Three through express trains daily to Ft. Wayne, Findlay, Cleveland, Erie, Buffalo, New York, Boston and all Eastern points. Through Pullman sleepers and excellent dining-car service, individual Club Meals, ranging in price from 35 cents to \$1, being served in Nickel Plate dining-cars; also service a la carte. No excess fare charged on any train. Chicago depot, Van Buren and La Salle Sts. City ticket offices, 111 Adams St. and Auditorium Annex. All information given upon application to John Y. Calahan, General Agent, 113 Adams St., Room 288.

On November 15, and daily thereafter, until the summer season of 1905, the Frisco System, in connection with the Southern Railway, will operate through Pullman Sleepers between Kansas City, Mo., and Jacksonville, Fla. These Sleeping Cars will be placed in service as part of the equipment of the popular "Southeastern Limited," scheduled to leave Kansas City 6:30 p. m. A modernly equipped train, electric lighted cafe, observation car, etc.—the route of which carries the traveler through the populous cities of the Southeast.

Berth reservations may be made through representatives of Frisco System or connecting lines. Passenger Traffic Department, St. Louis.

Opportunities.

Good openings for all lines of business and trade in new towns. Large territory thickly settled. Address Edwin B. Magill, Mgr., Townsite Department, Chicago Great Western Railway, Fort Dodge, Iowa.

The Markets

Kansas City Live-Stock and Grain Markets.

To-day's cattle receipts amounted to slightly over 14,500 head, of which the greater part was from the range country. The market was generally steady with last week. Beef steers were active and steady though good ones were scarce. Short fed stuff was a little draggy. A good bunch of steers topped the market at \$5.80, with another string its close second at \$5.70. Cows were steady to weak generally but some of the poorer grades were a little lower. Several head of good cows sold above \$3. Stockers and feeders were steady and fairly active, most of the sale being above \$3 and a good many above \$3.25 and ranging as high as \$3.85. There were 20 loads in the Texas division and all that sold went at steady prices. The supply of cattle last week was heavy considering that it was Thanksgiving week. The five days market of last week had 53,209 head of cattle, which was about 20,000 more than the same week last year. The trade in cattle last week was slow and a weaker tendency prevailed throughout the week. This condition is always expected during Thanksgiving week when the market is flooded with game. The top sale last week was \$5.85. The market on the stuff was 10¢/15¢ lower than the previous week. Shipments of stockers and feeders to the country last week was 600 cars. Big heavy feeders sold with a weak tendency, but other kinds were about steady. The top price for feeders for the week was \$4.25, the bulk around \$3.25. Top stockers was \$3.75 and the bulk was around \$3.20.

There was 7,500 hogs here to-day and the quality was exceptionally good for Monday. The market was active but 5¢ lower while a flat dime lower was reported from Eastern markets. The top 10-day was \$4.72½ with the bulk from \$4.45 to \$4.65. Fairly good mixed packers seemed to show the most weakness. Official receipts of hogs last week was 58,549 head, 22,000 more than the corresponding week last year. The fluctuation in prices this week has been very light and the decline for the week is only about 5¢/10¢ under the previous week's finish. Prices are 20¢/25¢ higher than this time last year. The top price last week was \$4.82½ and the bulk was from \$4.45 to \$4.65; the top on light hogs was \$4.62½ and the bulk was close to \$4.45. Hog prices have been 5¢/10¢ higher at this market than any of the five river markets for the past week. Chicago's top to-day was \$4.62½ against \$4.72½ here.

There were 11,000 sheep in the offerings to-day, of which only about 25 per cent were lambs and most of the supply was wethers. The greater portion of the offerings were Westerns of only fair quality. The market opened slow but was generally steady. There was not enough feeding kinds to test the market. The lambs were of a good killing kind and sold readily at steady prices, the best price of the day was \$5.60, paid for some Utahs. Last week's sheep receipts were light, aggregating only 16,323 head. Light receipts at the Western markets lived up to the market for the week and an advance of from 10¢/15¢ for the week. What feeders were offered found ready sale at strong prices. Good wethers will bring \$4.50, Western wethers \$4.55, native ewes range from \$4.25 to \$4.50; choice Western yearlings will bring close to \$5. Good feeding yearlings will bring \$4. The top on lambs last week was \$5.35. No more heavy receipts are expected this season.

The trade in horses after the auction Monday of last week, was rather slow and uninteresting. An occasional buyer would drop in and buy part of a load of cheap Southern horses, and some local demand being for express, coal, or heavy hauling animals. Prices remained but little changed from the week before and over 100 were carried over for this week. The auction to-day was more lively, buyers coming here from Chicago, where no

Special Want Column

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

CATTLE.

FOR SALE—Eight good, registered Shorthorn bulls, four straight Cruickshanks, good ones, and prices right. H. W. McAfee, Sta. C, Topeka, Kans.

FOR SALE—4 Scotch-topped Shorthorn bulls at a bargain, serviceable age. Address, Dietrich & Spaulding, Richmond, Kans.

FAIRVIEW FARM GUERNSEY'S FOR SALE. A fine lot of well-bred young bulls, ages ranging from one month to service age, at farmers prices. Wilcox & Stubbs, Des Moines, Iowa.

FIVE CHOICE YOUNG REGISTERED GAL-LOWAY BULLS to close out, at once. Address Wm. M. McDonald, Girard, Kans.

HOLSTEIN-FRIESIAN BULL CALVES FOR SALE—From best registered stock. Address A. J. White, Route 7, Station B, Topeka, Kans.

FOR SALE—2 one-year-old Hereford bulls, 22 months old; something good. Call on or address A. Johnson, Route 2, Clearwater, Sedgewick Co., Kansas.

FOR SALE—Three choice young Galloway bulls, sired by Staley of Nashua (1897) bred by I. B. and A. M. Thompson. Fine individuals, and bred right. Mulberry herd of Galloways; visitors welcome. Robert Dey, Walton, Kans.

FOR SALE—A 3-year-old Shorthorn bull, sired by Royal Bates. Address Dr. N. J. Taylor, Berryton, Kans.

FOR SALE—6 good Shorthorn bulls, 3 of them straight Cruickshanks; come and see me. H. W. McAfee, Topeka, Kans.

FOR SALE—Guernsey bulls from best registered stock. J. W. Perkins, 423 Altman Building, Kansas City, Mo.

SEEDS AND PLANTS.

WANTED—Cane, Kafir-corn, millet, clover, alfalfa, pumpkin seed, sunflower seed and pop-corn. Send sample and state how much you have. Address A. A. Berry Seed Co., Box 50, Clarinda, Iowa.

HONEY—New crop, water white, 8 cents per pound. Special prices on quantity. A. S. Parson, Rocky Ford, Colo.

WANTED—Cane, Kafir-corn, millet, alfalfa, clover, English blue-grass and other seeds. If any to offer send samples and write us. Missouri Seed Co., Kansas City, Mo.

FOR SALE—New crop alfalfa, timothy, clover, English and Kentucky blue-grass, and other grass seeds. If in want, please ask us for prices. Kansas Seed House, F. Barteldes & Co., Lawrence, Kans.

WANTED—New crop alfalfa, red clover, timothy, English blue-grass, and other grass seeds. If any to offer, please correspond with us. Kansas Seed House, F. Barteldes & Co., Lawrence, Kans.

POULTRY.

ROSE C. W. LEIGHORNS—50 cockerels for sale cheap if taken early. Mrs. A. D. Corning, Route 1, Delphos, Kans.

auction is held this week, and buying supplies. Prices ranged strong and occasionally higher than those of last week. Southerners were in heaviest supply and ranged from \$35 to \$75 per head. Some drivers sold at \$165 but they were choice. The mule trade drifted along much in the channel of the previous week, the demand for cotton mules being fair and a number of lots being sold. Prices on them ranged from \$90 to \$140 per head for the 14 to 15½ hand cotton mules, fat and with some quality. Some heavy mine mules brought \$165 per head. Only the fat, qualified ones are wanted. The commission barn had about 700 for sale and disposed of 550 at steady prices. This morning, they received 200 head, mostly thin, mules and trade has been slow all day.

Receipts of grain at Kansas City to-day were 177 cars wheat, 11 oats, 4 rye. Demand for wheat was fair and the market was slow and lower. No. 2 hard \$1.02½ to \$1.03, No. 3 hard \$1.01 to \$1.02, No. 4 hard \$1.00 to \$1.01, No. 2 red \$1.04 to \$1.07, No. 3 red \$1.01 to \$1.04, No. 4 red \$0.97 to \$0.99. The corn market was lower. No. 2 mixed 44½ to 45¢, No. 3 mixed 43½ to 44¢, No. 4 mixed 42 to 43¢, No. 2 white 44½ to 45¢, No. 3 white 43½ to 44¢, No. 4 white 42 to 43¢. Oat market was quiet and weak. No. 2 mixed 29½ to 29¾¢, No. 3 mixed 29 to 29¼¢, No. 4 mixed 27½ to 28¢, No. 2 white 30 to 30¼¢, No. 3 white 29 to 29¼¢, No. 4 white 28½ to 29¢. H. H. PETERS.

Clay, Robinson & Co. write: For the week ending last Saturday official receipts of cattle were 53,209, compared with 55,348 last week and 37,365 during the same week a year ago. The market for beef steers was none too satisfactory. Hardly enough choice grades came in to test values, bulk of the supply running to short fed stock. Cows and heifers closed the week 10¢/15¢ lower. Bulls were unchanged. Veal calves were steady under a light supply. Prices for stockers and feeders held up quite well and, although a little weakness was apparent in spots, general values were unchanged. Receipts of cattle to-day were 14,500, the greater part of which number consisted of medium quality range offerings. Trade was slow on beef steers but prices were steady for them, although on plain and coarse short fed stuff, some 10¢ lower sales were recorded toward the close of the market. Tops brought \$5.80. Cows were weak to 10¢ lower. Bulls and veal calves were steady. Stockers and feeders were fairly active and steady.

Official hog receipts for the week ending Saturday were 58,549 against 63,489 last week and 33,154 a year ago. The week's closing prices were 5¢/10¢ lower than the preceding Saturday, but around 25¢ higher in at the same time a year ago. Receipts to-day were 7,000 and the market 5¢/10¢ lower. Bulk of sales were from \$4.40 to \$4.65; top \$4.72½.

The sheep and lambs market has been a good one with values advancing. Lambs reached 6¢, wethers \$4.75, ewes \$4.50, yearlings 5¢.

FARMS AND RANCHES.

MARION COUNTY BARGAINS—Two hundred and twenty acres of fine rich land, splendidly improved, 1½ miles from station, 5 miles from county seat; price, \$13,000. 160 acres fine land and one of the best improved farms in the county, one-half mile from station and 6 miles from county seat, at \$8,500. 80 acres good land, fair improvements, 1 mile from county seat; price, \$2,800. Write for list. A. S. Quisenberry, Marion, Kans.

WANTED TO RENT—A good, well-improved farm, from one quarter to one-half section of good farming land, for cash or grain rent. Address A. O. Bachnick, Route 1, Wallula, Kans.

FARMS AND RANCHES FOR SALE—No. 1, 240 acres, dug well, 135 acres broke, all fenced, 100 acres in wheat, 40 acres good alfalfa ground, mostly good farm land; price, \$10 per acre, \$2,400.

No. 2, 400 acres, includes Nos. 1 and 25 acres, broke, house, well and windmill, 10 or 12 acres good alfalfa ground. \$4,000.

No. 3, 480 acres, includes Nos. 1 and 2, \$9.50, \$4,560.

No. 4, 840 acres, includes Nos. 1, 2 and 3 with 320 grass land added, 60 acres alfalfa land, a dug well, \$7.50 per acre. \$6,400.

No. 5, 560 acres, all fenced, 70 acres of wheat, balance grass, one-half can be farmed. \$6.75 per acre. \$3,780.

No. 6, 480 acres, house, well, windmill, stables, granary, living water, all fenced, 150 acres of wheat, 7 acres of alfalfa and about 50 acres of alfalfa land. \$3 per acre. \$3,900.

No. 7, 1040 acres, includes Nos. 5 and 6, \$7,580.

No. 8, 1,880 acres, includes all the above. I will sell in lots as described or all together for \$7 per acre. \$13,160. Call or write L. M. Day, Greensburg, Kans.

180 acres, \$4,100; 40, \$850. Bargains; terms; trades. Buckeye Agency, Route 2, Williamsburg, Kans.

HORSES AND MULES.

FOR SALE—Percheron stallion, 2 years old past, dark brown, 16½ hands high, weight 1,600. Address J. M. Beach, Route 1, Maple Hill, Kans.

STRAY MARE—A black mare came to Wm. Cook's residence, one-half mile east of the city of Downs, Kans., on or about the 10th day of October, 1904, weight about 900 pounds, age about 8 years, worth, \$40; branded on the left shoulder, owner or owners will please come prove property and pay expenses.

SWINE.

HERD HEADERS AND BROOD SOWS—Hand-somely made, fashionable bred Poland-Chinas, size, quality, vigor; grown for successful breeders strictly. If you want a fancy young boar, open or bred gilt, I will make you a low price for next 30 days. Will have bred sow sale in February. H. M. Kirkpatrick, Wolcott, Kans.

POLAND-CHINA HOGS—Tried brood sows, winter and spring pigs, serviceable boars and fall pigs of choice breeding, healthy and all right. Price, about one-half value. L. D. Arnold, Enterprise, Kans.

FOR QUICK RETURNS—11 of the very choicest breeding of Duroc-Jersey boars from premium stock, April farrow, color right, ears right, head right, and all right or money back; special price for the next 30 days. F. L. McClelland, Route 1, Berryton, Shawnee County, Kans.

BUY AT HOME—I have the best in Poland-Chinas for sale. E. J. Knowlton, Alden, Rice Co., Kans.

POLAND-CHINA PIGS, \$7 EACH. Satisfaction guaranteed by Abe Hertje, Tonkawa, Okla.

TWO RECORDED DUROC HERD BOARS Cheap; 70 spring pigs either sex, no kin; \$10 each; here is a bargain. For particulars write to Chas. Dorr, Osage City, Kans.

FOR SALE—Prize winning blood in Poland-Chinas, handsome serviceable boars that are well built and extra good, sired by U. S. Perfection Jr. first prize boar 1903, and Mischief Maker, out of prize winning dams. A. P. Wright, Valley Center, Kans.

REGISTERED DUROC-JERSEY BOARS ready for service, and pairs not akin. E. S. Burton, East Seward Ave., Topeka, Kans.

WANTED—Farmers to use the latest patented husking hook. You can husk more corn with it than any other. Sent by mail, price 35 cents. Address A. W. Toole, 806 North Fourth Street, St. Joseph, Mo.

CHOICE young Shorthorn bulls very low prices; also open or bred gilts, Polands or Durocs. M. C. Hemenway, Hope, Kans.

TAMWORTH PIGS FOR SALE. J. H. Glenn, Wallace, Kans.

PATENTS.

J. A. ROSEN, PATENT ATTORNEY 418 Kansas Avenue, Topeka, Kans.

MISCELLANEOUS.

CONSULT the greatest life reader of the age in regard to your troubles of every kind. Price, \$1 for revealing your future. O. Everett, West Palenbeach, Florida.

WANTED—Right away; a girl to assist with housework; good home, wages, and school if desired. Address at once Langley Stock Farm, Morland, Kans.

FERRETS—Ready for service, per pair, \$6; single, \$3.50. Address Roy Cope, Topeka, Kans.

WANTED—Good strong country girl for housework, one that can do plain cooking and that is willing to learn; good wages, private family. Address Mrs. A. B. Quinton, 1248 Topeka Ave., Topeka, Kans.

FOUR GREAT MARCHES FOR PIANO OR ORGAN—"Odd Fellows Grand March," "Dolce Twostep March," "California Commandery March" and "St. George Commandery March," 16 cents each or the four for 50 cents. If you are not pleased I will return stamps on receipt of music. Offer good for sixty days. Mention Kansas Farmer. Address Isaac Dolies, Indianapolis, Ind.

WANTED—Young men to learn Telegraphy and Railway Business. W. J. Skelton, Salina, Kans.

12000 FERRETS—Finest in America. Bred from rat-killers and field-workers. Low express rate. Safe arrival guaranteed. Book and wholesale list free. Farnsworth Bros., New London, Ohio.

WANTED—Man with rig, in each county; salary, \$85 per month. Write to-day. Continental Stock Food Co., Kansas City, Mo.

FOR SALE—Second-hand engines, all kinds and all prices; also separators for farm use. Address, The Geisler Mfg. Co., Kansas City, Mo.

PAIATKA—For reliable information, booklets and other literature, address Board of Trade, Palatka, Florida.

FARMS AND RANCHES.

HEDGEWOOD PLACE FOR SALE—The prettiest 40 acre tract near Topeka. Its on the Pike, the prettiest and best street out from Topeka, West Sixth Street, on the hill just outside city limits and known as Hedgewood Place. Will sell it as a whole, or in lots of five to ten acres, from east or west side. Each 5 acre tract would be a beautiful building site. Come away from city taxes, where we are but 15 minutes from Kansas Avenue. Address H. J. Lane, Topeka, Kans.

SOME CHEAP HOMES—80 acres, 8 acres timber, 30 acres bottom, \$1,500; 80 acres, some improvements, 35 acres cultivated, \$1,250; 160 acres, nice smooth land, one-half cultivated, \$2,000; 160 acres, every foot can be farmed, fair improvements, \$2,800; 160 acres, 55 acres bottom, fair improvements, 10 acres timber, \$3,200, will take part in cattle; 200 acres, \$1,500 insurance on buildings, 2 miles from town, (dairy farm) \$4,000; 320 acres, \$3,000 in improvements including new 12-room house, 60 acres bottom, \$6,500. Fine 1,440 acre ranch, owner will stock and take pay in products, 200 acres alfalfa, \$15,000 in improvements, price, \$25 per acre. All kind and sized farms reasonable. We would like for you to write us what you want. Garrison & Studebaker, Florence, Kans.

STOCK AND DAIRY FARM FOR SALE—A fine stock farm in Saline river valley, four miles north of Russell, Kans. It contains 320 acres, 105 acres bottom land in cultivation, remainder fenced for pasture, three to four hundred fruit trees, excellent water and natural shelter for stock, small house, granary, sheds, etc. Price, \$4,800. If sold before Dec. 1, 1904, \$4,000 will buy it. I also have extensive list of improved farms, and wheat land for sale in Russell, Ellis, Trego, Gove, and adjoining counties. Come and see me. E. W. Voorhis, Russell, Kans.

VIRGINIA FARMS—\$5 per acre and up with improvements. Address Farm Dept., N. & W. Ry., Roanoke, Va.

FARMS For rich gardening and fruit-growing. Write J. D. S. Hanson, Hart, Mich.

LAND FOR SALE.

In western part of the great wheat state. H. V. Gilbert, Wallace, Kans.

* WHICH ONE SUITS YOU

Central Kansas—Wheat, Corn and Alfalfa. 160 acres, 75 in cultivation, balance pasture and mow land, 25 acres of alfalfa, frame house, 6 rooms, spring, wells and cistern, orchard in bearing, stone barn for six horses, 3¼ miles from Marion. Price, \$3,700. 80 acres, 4 miles from Marion on mail route, half mile to school, good frame house of 5 rooms, 20 acres alfalfa, bearing orchard. Price, \$2,500.

W. P. MORRIS, Marion, Kans.

FARM LOANS

Made direct to farmers in Shawnee and adjoining counties at a low rate of interest. Money ready. No delay in closing loan when a good title is furnished and security is satisfactory. Please write or call.

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WHEAT LANDS

KANSAS \$6 to \$10 PER ACRE

Splendid sections combined farming and stock raising. \$1.75 to \$5.00 Per Acre. Kansas, Colorado and Nebraska. Only one tenth cash. Best land bargains in West. Ask

LAND DEPT. U.P.R.R. Omaha, Neb.

The Stray List

For Week Ending November 24.

McPherson County—B. Harms, Clerk. MARE—Taken up by B. Reichert, in King City tp., Oct. 29, 1904, one gray mare, branded "J," "C," on left shoulder; valued at \$20.

Week Ending December 1.

Coffey County—W. M. Palen, Clerk.

BULL CALF—Taken up by Harry F. Povenire, in Liberty tp. (P. O., Route 1, Gridley), October 19, 1904, one red and white bull calf, about 3 months old, large red spot on nose; bush of tail white.

Rawlins County—H. W. Robertson, Clerk.

STEER—Taken up by J. F. Steele, in Beaver tp. (P. O. Blakeman), November 16, 1904, one dark red steer, 2 years old, weight about 550 pounds; valued at \$13.

Chase County—J. E. Bocock, Clerk.

STEER—Taken up by C. D. Arnold, in Falls tp. (P. O. Cottonwood Falls), Nov. 8, 1904, one 3-year-old red steer with white face, dehorned, branded L on left shoulder, crop in both ears; valued at \$40.

Wabaunsee County—Gleason C. Smith, Clerk. SOW—Taken up by John Zeller, in Newbury tp. (P. O. Paxico), Oct. 24, 1904, one white sow, weight about 850 pounds; valued at \$15.

Horticulture

How California Fights Her Fruit-Pests.

H. A. CRAFTS, IN FARM AND FIRESIDE.

The fruit-growing world is under a heavy debt to California for the part taken by that State in the work of exterminating insect pests. After her fruit industry had been threatened with destruction, and millions of dollars had been expended in investigations and in the use of expensive sprays and fumigants, Mr. Alexander Craw, an enthusiastic entomologist discovered the parasitic cure.

Mr. Craw's theory was that every species of animal life has its natural enemy. Were it not so, life would increase to such an extent that it would overwhelm the earth. He also argued that where a certain species appeared in abnormal numbers the natural enemy of the species must necessarily be absent, thus permitting the insects to increase without hindrance. The natural cure for the pest was to introduce the insect's parasite, encourage its increase, and then give it free access to its prey, thus, as Mr. Craw put it, "restoring the balance of Nature."

So reasonable did this proposition appear that both the horticulturists and the State Legislature took it up and provided means for the development of the system. In 1891 the State Legislature passed a law appropriating \$5,000 to employ an expert to make search for and procure for the use of the California fruit-growers such beneficial insects as could be found in any part of the world. Prof. Albert Koeble, at attaché of the United States Department of Agriculture, was the first person to be sent out upon this errand. After him came Charles Compere, a native Californian and a self-taught entomologist, whose latest discovery is the enemy of the codling-moth.

The first important discovery made by Professor Koeble was the finding of the parasite of the cottony cushion scale, which at one time threatened to destroy the orange and other citrus fruits of California. He made the discovery in Australia, where he found a small grub feeding upon the scale. He procured the grub, raised it to maturity, and found that it developed into a small bronze-winged bug known as a ladybird. He procured a strong colony of the ladybird, and sent it on to Mr. Craw. But in the meantime he made another discovery, and that was that the ladybird also had its parasite, which was designated a secondary parasite. In order to cleanse the colony of ladybirds it was propagated in close confinement and the secondary parasites killed. This was done by building glass houses over two orange-trees in an orchard.

It was found that when once freed from its parasite the ladybird increased at an enormous rate—in fact, a single female would lay two hundred and fifty eggs every forty-two days the year through, so that the increase of a single pair in one year would run up into millions. The ladybird was successfully propagated in California, and its progeny being distributed among the fruit-growers, actually saved the citrus industry from destruction. In a remarkably short time after the ladybird of Australia had been set to work the cottony cushion scale disappeared, and has since given no trouble.

Acting upon the experience thus far gained, California has steadily gone on conquering the fruit-pests, and has thus achieved the first place in the Union as a fruit-growing State. The horticultural interests of the State are under the supervision of a horticultural commissioner, whose headquarters are at Sacramento. For many years Mr. Ellwood Cooper has acted as commissioner, and under him was Alexander Craw; but within the past year the latter resigned his position to take up a line of important entomological work under the Hawaiian Government. Mr. Edward M. Ehrhorn was appointed in Mr. Craw's place, and Mr. C. K. Carnes

acted as horticultural inspector. The quarantine office and propagation laboratory of the department are in the Ferry Building, San Francisco.

The next step was to take notes of all the insect pests to be found in California. This investigation proved that they had all been introduced from foreign countries. In accordance with the original idea, search was made for the natural homes of these pests; for it was considered a logical conclusion that if the natural home of one of these pests could be found, there, also, would be found its parasite. To accomplish this it was necessary to trace the history of the pest back from California to the country from which it was introduced. An exhaustive examination was made of all procurable entomological works, and then the searcher started out to hunt down his game. His mission was world-wide, but despite the magnitude of his field of research, and the fact that at times he followed false scents, the pest was at last run down.

In the natural home of the pest the work assumed unusual complications. Being kept in check by its parasite, the people of the country were not aware that it was a pest, and consequently the searcher was thrown largely upon his own resources. He actually had to camp on the trail of the pest, and make a study of its life-history, in order to discover its antidote.

Having discovered the pest and parasite in their native haunts, the next thing to do was to secure the parasite, freed from any secondary parasite, and get it in shape for transmission to California. It was necessary to time the hatching period with the departure and arrival of steamships. The next thing was to procure a live plant infested with the pest. The plan was generally placed in a glass case, so as to keep the parasite from it until it had become thoroughly infested. As soon as dates for sailing were determined, the plant was taken out of its glass case, and the parasite allowed to get at it. As soon as the parasite finds the scale it proceeds to lay its eggs beneath it; and very quickly the plant becomes laden with eggs; then it is hustled off to the steamer, and placed

in cold storage. If everything has been timed rightly, the eggs of the parasites will hatch during transit, and the insect will have gone through its various stages of development.

In the meantime all arrangements for the reception of the parasitic family have been made at San Francisco, and if all goes well on the voyage the insects will begin to issue in their matured form upon their arrival. After the horticultural officials have become thoroughly convinced that the parasites are affected by no secondary parasites, notices are sent out to all fruit-growers in infected districts of the arrival of parasites and their readiness for distribution.

At the same time measures are taken in the laboratory for propagating more of the insects, so that there will be plenty to go around. First a large, well-lighted, glass-enclosed room is made use of. This is kept at an even temperature. In the room are growing plants infested with the scale or pest under treatment. Each plant is kept in a breeding-case covered with glass and insect-netting. The parasites are placed upon the scale-infested plants, and under favorable conditions will multiply quickly into thousands.

The device employed in the propagation of beneficial insects vary somewhat in their design, being calculated to suit the different ones treated. For instance, some of them are in the shape of minute flies that are hardly visible to the naked eye; others are in the shape of beetles commonly called ladybirds. Each pest has a ladybird or fly peculiar to itself, which lives upon that pest and absolutely nothing else. They can not even be starved into feeding upon anything else, their digestive organs being so constituted as to prevent their subsistence upon vegetable matter.

This matter of exterminating insect pests is now so thoroughly understood by the fruit-growers of California, and so much confidence is reposed in the manner of treatment, that no sooner does an orchardist discover a new pest upon his trees than he forwards samples of it at once to the horticultural commissioner in San Francisco, in order that the subject may be studied

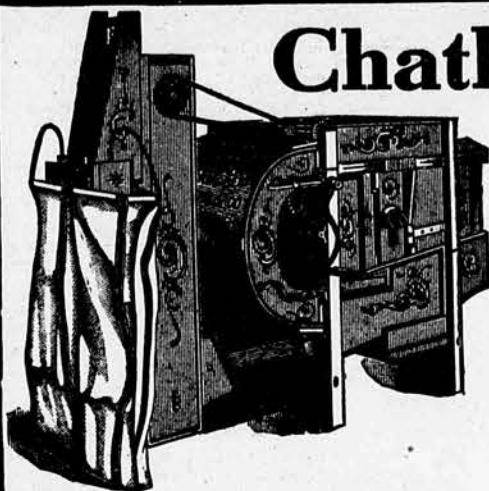
and a remedy found in some parasite. The pest is then identified by experts, and its proper parasite sought for.

The propagation and distribution of beneficial insects has become quite an art in California. In order to capture the reared insects for shipment, the breeding-case is darkened all around the outside, leaving the light at the top only. Then a lid is placed on the top of the case, the lid having been perforated and glass tubes placed in the holes. The light enters the tubes, and the insect naturally crawls toward the light, and soon finds itself within the tubes. As soon as each tube contains its full quota of parasites it is taken out, and replaced with an empty one, and this process is continued until the breeding-case has been depopulated.

The insects are then sent out to the fruit-growers in infected districts through the mails. In the bottom of each tube is packed a little damp moss of the variety that does not turn sour. The open end of the tube is closed with cotton, which confines the insects, and at the same time admits sufficient air for the creatures to breathe. This arrangement is then placed in a mailing-tube open at both ends. In the lower end of the tube a cork is placed, and the glass tube containing the insects is placed in the mailing-tube and against the cork. In the other end of the mailing-tube another cork is placed, but the cork is so cut as to have an opening for the admission of air. They are then sent out by letter-postage, the stamp being placed on the tube, and over the cork, so that in cancelling the stamp at the post-office the blow falls upon the cork and does not endanger the glass. A card of instructions is sent out with each colony.

The Secret of Success.

"Get something the people need. Then let the people know you've got it." That is the plain-talk prescription for business success given by Mr. H. L. Kramer, the famous creator and advertiser of Cascarets, Candy Cathartics, which in a few years have developed a sale of a million boxes a month. Every reader of this paper knows that the manufacturers of Cascarets have persistently used newspaper advertising to "let the people know" and the results have shown that Major Kramer "got something the people needed." It is a great object-lesson in the school of business.



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The farmer who reads farm papers has no right to be uninformed on this subject;



Fig. 11.—Aerial view of a Chatham Fanning Mill, showing the grain arranged as it is separated from the chaff.

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SPECIAL TRAIN of 100 IMPORTED STALLIONS as it appeared traveling from New York City to St. Paul, Neb., August 18, 1904—STALLIONS DIRECT FROM EUROPE. The only SPECIAL TRAIN and largest importation of stallions by any one man in United States.

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They are sensational stallions of quality, big size, large bone and fashionably-bred. In fact, "TOP-NOTCHERS." Positively the best lot IAMS ever owned of draft and coachers.

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He has on hand MORE FULL BLOOD STALLIONS THAN ANY ONE MAN IN UNITED STATES, AND HE MUST SELL THEM.

149 BLACK PERCHERONS, BELGIANS AND COACHERS 149

HELLO, CENTRAL! Did you watch IAMS' SMOKE at 1904 Nebraska State Fair? IAMS' HORSE SHOW of 35 SENSATIONAL PERCHERONS, BELGIANS AND COACHERS was the GREATEST and BEST "HORSE SHOW" ever made by one man in United States. Iams' competitors took to the woods—"went away back and sat down" HARD. Iams' Percherons, Belgians and Coachers won EVERY FIRST, SECOND and SWEEPSTAKES prize in every AGE OR CLASS. A CLEAN SWEEP.

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25 Per Cent Discount for cash, on all sales, until surplus is sold. Come and look at the stock if interested. No trades wanted. Also 20 jennets for sale

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has some fine spring boars and gilts, and four bred gilts. Sunshine bred; also Rose Comed White Leghorn chicks. . . .
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I have about twenty boars ready for use and twenty-five sows bred, and some unbred, and a large number of good pigs, both breeds.

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As I expect to move, am making SPECIAL PRICES to sell all of my Kansas-a Herd of Poland-Chinas. Two Herd Boars, 3 Fall Boars 40 Spring Pigs, 70 Fall Pigs, 25 Sows and Fall Gilts. I don't want to publish my prices, but write me and I will surprise you in the breeding and bargains I offer.

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Twenty serviceable boars at special prices for next 30 days sired by Black Perfection 37132, Black Perfection 32904, Perfection Now 32580, and Ideal Perfection. They are lengthy and good-boned pigs, with plenty of finish. Write me description of what you want and I will guarantee satisfaction.
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Empire Chief 30379 S, 62445 A, head of first prize herd at Iowa and Nebraska State Fairs. Mammoth bone and size, full brother to the champion Logan Chief. Chief Tecumseh 4th, sired by Chief Tecumseh 3d, whose get have won 110 prizes at State Fairs, heads the herd.

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All ages and sex, out of sows of all the leading strains of the Poland-China breed. Write what you want.

POLAND-CHINAS Wilkes Perfection Herd.

Herd Boar—Kleever's Perfection' Seven of his get, dams Wilkes bred, won 1 second, 3 firsts in class and 3 sweepstakes over all breeds at Kansas State Fair 1904. 150 head similar breeding for sale. Prices according to quality and in reach of all. Farm 1 mile northeast of town.
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Choice young boars of April and May farrow sired by Beauty's Extension, for sale. Also bred sows and gilts, all with good colors, some fancy head and ears. The head boar, Beauty's Extension 37954, for sale. Some snaps here. Visitors welcome. Mention Kansas Farmer and write for prices.

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Five yearling boars, strong-boned, lusty fellows, just fit for hard service; will please anyone or money back. Sired by Correct Perfection 32031, by Corrected; dam by Chief Perfection 2d; very reasonable for quality. Also spring pigs, both sexes by same sire that are all right and guaranteed to please. Write for prices and you will buy.
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Notice is hereby given of the withdrawal of the sale announced for December 1, 1904, and the substitution of a

Bred Sow Sale for February 1905.

For sale, at reduced prices, for the next thirty days, four fancy yearling boars, and fifteen tops of last spring's farrow.

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20 Chester White Sows and Gilts

And 10 October Boars
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Choice stock for sale. Prices reasonable. Come and see them or write to
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The largest pure-bred Chester White herd in the West, with the best blood in the Union. Boars ready for business, and young sows to start a herd at prices that are moving them. As I have sold my farm, they must go. Now is your time to get royal blood for a little money. Write or come to-day.
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200 p. digreed hogs, both sexes, all ages. Pairs or trios mated not akin. Bred for size and finish. Nothing but the best offered. We are now booking orders for bred sows. Describe build of hog wanted. Thoroughbred Poultry—W. and B. P. Rocks, W. and G. Wyandottes, and B. Langshans. Stock for sale. Correspondence solicited and satisfaction guaranteed.
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Ready for sale, consisting of 50 fall and spring gilts, that can be bred to any one of the three different herd boars, Mark Hanna, Red Stock Jolly, and a fine herd boar from Illinois. Also 40 young boars for sale for spring farrow.

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Are all O. K. in breeding and quality. One yearling boar and four boars, April farrow, for sale, besides fall pigs.

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Route 1, Lawrence, Kans.

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30 extra choice Boars, 100 to 150 pounds. 40 extra choice Gilts, 100 to 150 pounds. Fancy heads, strong bone and all-around good ones. Bargains at \$15 to \$25 to close quick.

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 a pure Scotch bull of the Bloom tribe, now
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 are all sired by Rosamond Victor 12th
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Write for catalogue and further information. Address either

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Grand Sale of Champion Poland-Chinas

At Archie, Mo., December 6, 1904

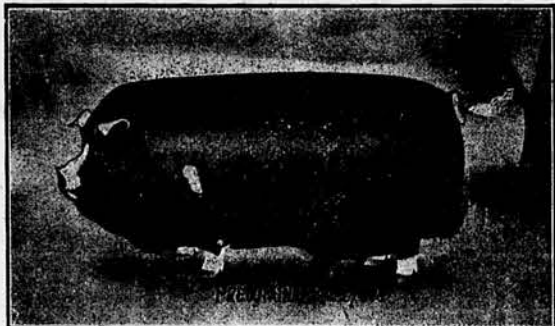
25 HEAD Contributed by **Mr. A. E. Schooley, Austin, Mo.**

That were sired by or bred to Predominator, champion Missouri State Fair, 1902, and sire of Nonpareil, champion in 1904.

25 HEAD Contributed by **Mr. J. R. Young, Richards, Mo.**

That were sired by Champion Missouri's Black Perfection, Chief Perfection 2d, Perfection E. L., and others.

Predominator and Nonpareil Will Be Sold



Ten tried brood sows, ten fall sows of great merit by Predominator, and twenty-five spring gilts. Five extra fall boars by Predominator and a splendid one by Missouri's Black Perfection. Plenty of others that can not be duplicated. We also have the blood of Ideal Sunshine, Keep On, Chief Perfection 2d, Perfect Perfection, and will sell the great sow Fancy U. S. 57512, dam of the \$750 Ideal U. S. and the \$400 Ideal U. S. 2d, and others.

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PUBLIC SALE OF REGISTERED HEREFORD CATTLE

CARBONDALE, KANSAS, THURSDAY, DEC. 15, 1904

40 HEAD 40

This will be a closing out sale and will consist of cows, calves, and herd bull. Beau Gondolus 133277, a son of Beau Brummel 51817 at head of herd. Cows trace to Lord Wilton, Grove 3d, Anxiety 4th, and Boatman.

In connection with the above sale G. B. Scott will sell

45 HEAD OF POLAND-CHINA HOGS 45

These hogs are thoroughbred and registered.

Sale will begin promptly at 10 o'clock a. m. Free lunch at noon. Sale under cover. Come rain or shine. For catalogues address

J. A. CARPENTER or G. B. SCOTT, Carbondale, Kans.

COL. W. Q. HYATT, Auctioneers.

50 Head 50



Percheron Stallions and Mares

(Registered)

**Coach Stallions,
Big Black Mammoth
Jacks and Jennets**

At Sale Pavilion,

Ottawa, Kans., Thursday, December 15, 1904

1 O'clock p. m.

S. A. SPRIGGS, Westphalia, Kans.

JOE FOX, Greeley, Kans.

D. A. ZOOK, Eight Mile, Mo.

For Catalogue write S. A. Spriggs, Westphalia, Kans.

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BREEDERS' SALE

**At Bloomington, Ill., in Coliseum,
January 11, 12 and 13, 1905.**

Sale Commences Each Day at 10 O'clock a. m.

60 REGISTERED CATTLE

To be sold Wednesday, January 11, Aberdeen-Angus, Galloways, and Shorthorns, consigned by a number of the best breeders in the State, and out of their show herds, and of herds that won at St. Louis and the State Fair this year. Consignors: L. H. Kerrick, Bloomington, Ill.; Aberdeen-Angus; A. J. Dodson, Lexington, Ill.; Galloways; Ed. Speers, Cooksville, Ill.; Galloways; Wm. Ritter, Arrowsmith, Ill.; Shorthorns; M. P. & S. E. Lantz, Carlock, Ill.; Aberdeen-Angus; AND OTHERS.

100 REGISTERED HORSES

To be sold on Thursday and Friday, January 12-13, **PERCHERONS**, French Drafts, Shires, Clydesdales, and Coach Horses, Stallions, Mares and Fillies. These horses are consigned by the very oldest breeders in the State and out of the very best families and of show herds that represent 1,000 premiums to their credit. This will be one of the largest sales of pure-bred horses and cattle ever held in the State. Each consignor is going to the sale with the very best he has, as we want to make this a breeders' annual sale. They are "the wide-as-a-wagon kind" and some of them weigh 2,500 pounds. Among the consignors are Hodgson & Plachard, Ottawa, Ill.; Percherons and Shires; John C. Baker, Manhattan, Ill.; Percherons; I. Dillon, Normal, Ill.; Percherons; Ed. Hodgson, El Paso, Ill.; Percherons and Clydesdales; S. Noble King, Bloomington, Ill.; Percherons and French Drafts; D. Augustine, Carlock, Ill.; Percherons; C. W. Hurt, Percherons; and eleven other consignors.



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