

Volume XLIII. Number 26

TOPEKA, KANSAS, JUNE 29, 1905

KANSAS FARMER.

Published every Thursday by the
KANSAS FARMER CO., TOPEKA, KANSAS
E. B. COWGILL
SUBSCRIPTION PRICE: \$1.00 A YEAR
E. B. COWGILL
Entered at the Topeka, Kansas, postoffice as second class matter.



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There is apprehension that a war is brewing between France and Germany concerning disputed rights in Morocco. The unwisdom of such a course ought to be apparent to both Nations. Why not take the matter before the International Tribunal at The Hague?

The progress of the preliminary steps, towards peace between Russia and Japan, under the direction, or at

least at the suggestion of President Roosevelt, is gratifying to all humanity. It now seems certain that the plenipotentiaries of the two countries will meet at Washington early in August. Whether another great land battle will be fought in the mean time seems uncertain. If such battle shall be fought, there is little doubt that Japan will add another to her unbroken line of great victories.

The web-worm has been perniciously active in various parts of Kansas. The remedy usually prescribed is Paris green spray. One pound of Paris green, one pound of fresh lime and 150 gallons of water is the standard prescription of the entomologists. Some reports indicate that the worms are not as susceptible to poison as could be wished. The entomologists think they will not be able to assimilate a steady diet of Paris green without losing their appetites and curling up for a last long sleep. The Kansas FARMER desires reports from all users of sprays or other means of combating this enemy.

PRODUCER-GAS FOR POWER.

A large proportion of the coal that is mined in the world is burned under steam boilers in the production of power for driving machinery used in the industries of mankind. A regretable feature of this use is that generally less than one-tenth of the energy stored in the coal and liberated by its combustion is made available in the steam engine. Another fact quite as regretable is that this loss of ninetenths or more of power is inherent in the steam-engine system, so that there is no prospect of overcoming it.

The attention of thoughtful investigators has recently been given to the use of gas instead of steam in the engine cylinder. The gas engine has been brought to a perfection comparable to that of the steam engine and has been adapted to the use of gasoline. For small powers the gas and gasoline engine has been found economical. This economy as compared with the steam engine has, however, been largely the result of saving in labor of attendance.

Scientific and other journals have recently contained various allusions to an economical producei source of power. But there has been lack of specific information of authoritative tests of the efficiency of this new method of obtaining and applying the stored energy of coal.

During the Louisiana Purchase Exposition, the U.S. Geological Survey instituted at the exposition a series of varied tests of coals. Among these tests were several to determine the value of different coals for the manufacture of producer-gas. These determinations included the use of the gas in a gas engine and comparison of the power derived from this use of coal with the power derived from using the same kinds of coal in the production of steam and the application of the steam in a steam engine.

A preliminary report of these official tests has just been published by the Government. It shows that the power

derived from a ton of coal used by the producer-gas method averages two and a half times as much as the power derived from a ton of coal used by the steam-engine method. It is further shown that the attendance required in the producer-gas method is about the same as that required in the steam-er gine method.

The report calls attention to the fact that by substituting producer-gas for steam in warships, a vessel's complement of coal will enable it to go two and a half times as far as the vessel is able to go by the use of steam. It is to be hoped that the world will soon have so realized the folly of war as to eliminate interest in the warship problem. But with the disappearance of wars the industries of mankind will go on and increase. Vastly more power for driving machinery is likely to be used in the future than in the present. To obtain a fourth of the energy of coal instead of a tenth means a great cheapening of power. Further developments and fuller official reports will be awaited with interest.

ANOTHER TRIUMPH FOR GOVERN-OR FOLK OF MISSOURI.

Some citizens of the older set remember well that when a State of the Union, once upon a time, concluded that certain laws of the United States should be nullified within the State's jurisdiction, the President of the United States, one Andrew Jackson, said, "By the Eternal, these laws shall be obeyed," or words to that effect, and that he proceeded to use the means at his command for their enforcement,

This "By the Eternal" spirit seems to have been caught up in these latter days by the Governor of one of the States, namely, one Joseph Folk, of Missouri. The gamblers of St. Louis have long supposed themselves immune from the operations of law. The sheriff and perhaps other local officials were apparently of the same opinion. A new law as to gambling at races went into effect a few days ago. The sheriff gave it out that he would not make arrests as required by this new law. Governor Folk, who has a way of speaking out plainly to all the people concerning his intentions as chief executive officer of the State, let it be known that this law would be enforced even if the aid of the militia were necessary to enforce it. The sheriff replied that if militia should come upon the scene the State's soldiers would be likely to get hurt.

Within a day or two the gamblers have consulted eminent lawyers as to the limitations of the powers of the Governor in such cases. They have hinted at injunctions against the use of the militia except as called for by the sheriff—The sheriff would not call for the militia and if the Governor's hands could be tied the law could be disregarded. But the attorneys are reported to have given the opinion that the Governor could send his soldiers "and run over both the sheriff and the race-track people." Thereupon the sheriff got busy, the great and lively business of the gamblers was a gloomy failure, at least for Monday of this week, and the Governor of Missouri appears to be entering upon anothe

cooperative experiments near acPherson, conducted by the U.S. Department of Agriculture and the Kansas State Experiment Station are under the immediate charge of H.F. Blanchard, cerealist, who reports as follows:

"During the past few days we have een cutting our grains and are geting some important results from investigation for the present season. Most of the winter barleys, wheats, and ryes have been cut, also many of the spring barleys and oats are in the shock. We have gained some compartive results regarding early and late fall plowing, also early and late seeding. Land plowed in August and well worked before seeding gives a much better stand than land plowed as late as December. Grains on the early plowing have not suffered from the dry weather of the first half of the present month as much as those sown on late plowing. Grains on early plowing gave thrifty growth in the well-formed kernels while those on late plowing are very short and will not give the yield that they should. We will begin our fall plowing just as soon as the grain can be gotten off the ground and will keep it well harrowed until time for seeding. We notice that some of the farmers do not work their ground but once after plowing and then start the drill. This is evidently a mistake and can not be given too careful consideration.

"Regarding early and late fall seeding, our results show that during the present season grains that were sown as late as October 15, are giving excellent yields while those sown from September 15 to 20 are making only fair yields. Last fall we had considerable dry weather before growth ceased for the winter. Grains that had made much growth and required a good deal of moisture suffered during the late fall. The Hessian fly got into the early seeding and did a good deal of damage. The late seeding did not suffer, and when growth stopped it had a very green and vigorous appearance. Grains that were damaged in the fall did not survive the winter as well as those that were not and as a consequence the late seeding has made a much better growth this spring and this grain is making fine yields. Investigations for a series of years indicates that the best time for the seeding of fall grain here is from September 15 to 20. The present season seems to be an exceptional one, although we have been having some wet weather of late. We have been very fortunate in getting our grain cut and shocked thus far. There has been no rust or smut to contend with."

A Summary of U. S. Bulletin No. 214. Bacteria and the Nitrogen Problem.

GEO. T. MOORE.

HOW NITROGEN IS LOST.

1. Removal of crops. 2. Sewage.
3. Dentrification. 4. Washing out of soil. 5. Burning of explosives.

Twenty-three pounds of nitrate of soda (used in explosives), would yield an increase of 1 bushel of wheat per acre

HOW NITROGEN IS GAINED.

 Nitrate of soda, of Chile and Peru.
 Guano. 3. Some small amount from the distillation of coal in gas-making.
 The atmosphere. 5. Nitrogen-flxing bacteria.

ROOT TUBERCLE BACTERIA.

Ever since the time of the earliest writers on agriculture it has been no-

ticed that certain leguminous crops, such as clover, beans, and peas, did not require the amount of fertilizer that other crops did, and that these crops left the soil in better shape than before they were planted. The cause of these conditions was generally believed to be the fact that these crops had longer and stronger roots than other plants, and so could draw upon food which was not available to other plants.

While the root tupercles had been noted for some time and speculated upon, they were supposed to have been caused by the bite or sting of insects. But of recent years it has been shown that these tubercles are the real cause of the difference in the yield of the crops themselves, as well as of those that follow; and that they are the homes of microscopic bacteria, that in some way have the power of fixing the nitrogen of the air into a condition that the plant can use.

MICROSCOPIC APPEARANCE OF TUBERCLES.

If a cross-section of a tweercle is taken, the cells will be found to be much larger than those of a normal root, and almost the entire contents of the cells have been replaced by minute bacteria, which have gained entrance by means of the root hairs. As these, when examined by means of a microscope, were found to vary from the regular rod and globular form of bacteria, some observers consider them as a form between bacteria and fungi; but it has been proven that they are the true bacteria.

It has been a debatable question as to whether the bacteria fixed the nitrogen into nitrates or whether they merely acted as a stimulant and the leaves were enabled to do the work. The condition of the tubercles late in the season has led to the belief that they themselves do the work.

EFFECT OF TUBERCLES.

It is a well-established fact, as shown by experiment, that crops with tubercles will exceed crops without them by from 100 to 1,000 per cent.

METHOD OF INOCULATION.

A field may be inoculated by applying from 500 to 1,500 pounds of soil from another field in which the tubercles are found to be growing, or by inoculating the seed with the bacteria prepared in a culture, and then sowing the seed in the usual way.

It has been shown that batceria raised upon nitrogen-free culture, will be more active than those raised upon

nitrogenous culture.

A Synopsis of Illinois Bulletin No. 94. Nitrogen Bacteria and Legumes.

J. L. PELLHAM.

For the successful growing of leguminous crops, the presence of the proper species of nitrogen-gathering bacteria are absolutely necessary, and the many failures of leguminous crops in normal seasons and normal soils is undoubtedly due, in part at least if not wholly, to the absence of the proper bacteria.

On acid soils where clover has never been grown, it may be necessary to make application of ground limestone.

As a rule, if the soil is suitable, cowpeas need not be inoculated, for most soils seem to contain the necessary bacteria, or else the seed carries the bacteria with it. If a good stand is not secured from the first seeding and the tubercles do not seem to be present, a second seeding the following season will generally be successful.

Cow-peas grown in infected soil in an experimental field contained about four times as much nitrogen as those sown on similar land without the bacteria.

Soy-beans may be grown on the same field for three or four years before the soil becomes thoroughly infected. This is explained by the difference in the size, shape, and condition of the seed—the cow-pea seed cracking and having considerable dirt about it, while the soy-bean seed is smooth and generally quite clean. So, as a rule, it will pay to inoculate the soil for soy-beans.

A series of experiments gave conclusive evidence that alfalfa-fields may be inoculated with soil or bacteria from the sweet clover, with about the Rope that's all rope!

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same result as by the use of the same material from alfalfa-fields. So far as known, these are the only two legumes that are known to have bacteria that will work on each other: yet it is possible that the bacteria of other legumes, as the red clover, may live on the roots of other plants.

While it is not as yet definitely known, five or six years is considered the extent of time that the bacteria of a legume will survive in a soil, without the presence of its hosts.

Synopsis of Alabama Bulletin No. 87.

J. L. PELLHAM.

The body of the bulletin is a report of experiments, in the field and pot, to show the effect of the inoculation of soil with nitrogen-fixing bacteria of the different legumes.

Hairy vetch, without fertilizer, produced in a field where the plant had been repeatedly grown, 17,765 pounds of green forage, or 4,174 pounds of hay per acre. On a field where vetch had never before been grown and where fertilizer applied contained phosphoric acid and potash, but no nitrogen, the yield was only 235 pounds of hay per acre. On an adjoining and similar field, the seed for which was inoculated with earth from an old vetch field, the yield of hay was 2,540 pounds—an increase of 995 per cent, and with a treatment which cost nothing except a small amount of labor.

On the inoculated plots the tubercles were present, but were absent in the other which had not been inoculated.

A series of pot experiments in which the soil was inoculated, showed the following results: Hairy vetch increased 89 per cent in yield; Canada cow-peas increased 138 per cent in yield; crimson clover increased 146 per cent in yield; lupines tested in only one soil, no increase. The German fertilizer prepared for vetch was effective on Canada field peas.

Special Requirements of Corn Growing in Western Kansas.

HOMER MYERS, HUTCHINSON, KANS., BE-FORE THE KANSAS CORN-BREEDERS' ASSOCIATION.

The person who made the selection of this subject must have thought there are some special conditions of soil or climate in Western Kansas detrimental to the growth of corn, and he wishes me to tell this association concerning it.

I suppose there are some: First let

us look at the conditions with which we have to contend. On account of the lack of moisture over one-half of the West one-third of the State will have to be thrown out as not worthy of consideration, as they do not raise enough corn to be considered at all, and in the remainder of the West, one-third only raises about sufficient corn for their home consumption. Let us look at the acreage of a few of these counties for 1904. Morton County had only 25 acres; Stanton, 176; Stevens, 35; Seward, 133; Haskell, 322; Grant, 77; and Hamilton, 120; so we will only consider that portion which has sufficient acreage to be considered.

As Professor Holden and others have stated over and over again, the seed should be selected with the greatest care and should be bred in that section of the country where it is to be used. I am satisfied that home-bred corn will produce better and more corn than imported seed, anyway for a number of years. It might be well to bring in from a distance every few years enough to breed from; but from actual experience it takes from five to six years for this foreign seed to get acclimated so as to produce as well as our home-grown seed. The one thing that we must at all times bear in mind and work to overcome is the lack of moisture at earing time. To aid in that respect, in the section where I live we plant our corn twenty inches apart in the drill, but further West they must plant further apart than we do, whereas, in Iown and Illinois they only plant from 12 to 14 inches apart; consequently, we should have a longer and larger ear than they have there. We have one advantage, however, over localities blessed with a greater rainfall in the fact of the early maturity of our corn, and the hot, dry fall dries it out to such an extent that it is not necessary to kiln-dry our seed as it is there. I suppose this statement will meet with some opposition, but the question has been thoroughly canvassed and settled as far as the farmers of my section are concerned. A few days since at our farmer's institute, a number of our best corn-raisers discussed that question thoroughly, and all decided that to be the case.

As I have mentioned above, our greatest drawback to the corn industry in the West is the dry, hot weather. In 25 years continual experience in raising corn I have never seen a crop come to maturity without being more or less injured by drouth and hot winds although we frequently have corn which makes from 40 to 60 bushel per acre; but as you go further west the yield very materially diminishes. Notwithstanding lower average yield per acre, which is caused first by planting thinner and the injury to crops by dry weather, a man can usually raise as much or more corn than he can further east, for there are more good days for work, and on account of less rain the weeds do not grow so fast and the ground works lighter and easier. For these reasons, one man usually attends to from 60 to 100 acres and he will do it as easily and as well as a man further east will take care of 40 to 60 acres. After the seed, the one thing needed is a special cultivation which should be done after every rain. The principal thing is to keep a dust mulch as much of the time as possible. In this connection I would like to say a few words concerning the hot winds, While we do not have them often as we formerly did, still there are some and the causes are, mainly, the heat of the sun, beating down on the sun-baked prairies which starts the hot wind that withers any vegetation it touches. I am satisfied that the opening of Oklahoma to settlement is worth millions of dollars to Kansas in the one thing of obviating or stopping the hot winds; the breaking up of those prairies which the winds have been blowing over for centuries has made a material change in the climate of Southwestern Kansas. In several instances I have known of corn firing half way up in one day from the effects of the hot winds even

when the ground had plenty of moisture.

Another thing which would be of great benefit to the corn interests of Western Kansas, would be to have a tall row of trees or something similar running east and west, say every one-half to one mile apart. It would serve to break the wind and retard evaporation which we must seek to do as much as possible. I do not suggest this with the expectation of ever seeing it carried out, but merely as a suggestion of something needed.

We need better seed, better attention to the planter and planting and more and better cultivation, but we also need later cultivation than we do further east, for we must keep a dust mulch as much as possible, to favor the conservation of moisture. The last time over the corn counts for more than the most of us think; for instance, at one time I had a boy plowing corn for me while the rest of the men were in the harvest field. I discharged him because he was doing so poorly, yet he was making over \$5.00 a day—as I found when I gathered the corn-and I was only paying him 50 cents per day. Sometimes it pays to be imposed upon. But the professors have told more about the seed, planting and cultivation than I can, so in summing it up, the special thing that we need the most is some better man: ner of conservation of moisture.

One thing I wish to commend the station for is, asking for a law making the poor-farms for different counties sub-experiment stations. It is a fact, at least in our county, that it is impossible to get the farmers-especially those that need it the most-to come to the farmers' institute. The best farmers realize that they have much to learn, but the poorer and more ignorant will not attend. I believe that, in making this change, the station can attract more attention to its experiments, and dissiminate more information by the use of the sub-stations, and I would like to see them interest the average farmer in how to better conserve soil moisture, for that will tend more to the enlargement of our crop than any other one thing. Our special requirements are, first, a large and longer ear for seed; second, cultivation to preserve dust mulch; third, some method or way to break or modify the wind, especially the hot winds of July and August; fourth, some method of beating more information into the head of the average farmer.

Burning Prairie-Grass Meadow—Seeding Questions.

I desire further information in regard to the best way to treat a prairie-grass meadow which is kept exclusively for hay. The custom here is to burn it off every spring. Is this a good way?

When should rye be sown in this locality for a fall and winter pasture?
Would it be profitable to sow cowpeas in corn at the last plowing, the land to be again put into corn next season?

Is it best to sow turnips broadcast or in drills and cultivate, the object being to use them as stock food?

Neosho County. T. E. BAKER. Burning the prairie-grass off from the meadow each spring certainly exhausts the soil fertility more rapidly than would be the case if the grass were not burned. On the other hand if the meadow is covered with a thick growth of dead grass it is almost necessary to burn it off in the spring in order to get a good quality of hay which may be readily cut with the mower. I observe the dead grass interferes very much in mowing. If such a meadow were pastured in the fall with sufficient stock to eat off the grass it would not be necessary to burn the land over in the spring; however, too close pasturing late in the fall should be avoided.

In order to make a prairie-grass meadow productive, it should be given a dressing of good barn-yard manure occasionally, and once every few years the sod should receive a thorough disking, with the purpose of breaking up the sod, killing out some of the grass and causing a new growth of young

grass. That disking has a beneficial effect in causing a new growth is shown by experiments which have been performed in different parts of the West by the United States Department of Agriculture. The purpose was to loosen the sod by disking and start domestic grasses on old prairie pastures which were partly run out. As a result of these experiments the prairie grasses renewed their growth, again making a productive meadow or pasture.

As to burning off dead grass in the spring, probably this practice is necessary when the meadow is not pastured in the fall. At least it is the common custom, and has been for years, and still the prairies continue to produce. I would recommend, however, not only to cultivate the meadow by disking and harrowing as described above, but also to seed a little alfalfa or clover at the time of the cultivation, preferably early in the spring. We have noticed that clover and alfalfa will make a catch in old prairie sod, and the effect is to cause a renewed growth and increased production of the prairie grasses, besides the yield produced by the legume itself.

For fall pasture, if the rye is sown in open ground in a prepared seed-bed it may be planted about the first part of September. If sown in corn, the usual practice is to seed at the last cultivation of the corn, or the rye may be seeded in the corn any time up to the last of August.

We have experimented with sowing cow-peas in corn at the last cultivation during the past two seasons. Although the seasons have been very favorable as regards soil moisture, yet the stand of peas was thin and the growth rather feeble; in fact, the peas made very little growth until the corn was cut. With a heavy crop of corn feeding on the soil and shading the land, cow-peas will not make much growth in the average season. Probably in your part of the State the practice of plenting cow-peas in corn will prove more successful than at this station; also, if cow-peas are planted in early-maturing corn, the results are apt to be much more favorable than if the peas are planted in late-maturing

Cow-peas may be pastured in the fall if the corn is removed from the ground; or it is the practice in some parts of the country to turn sheep in the corn to pasture upon the pea vines. The cow-peas make a cover for the ground during the winter and will not interfere at all in preparing the land for corn-planting the next season. Although for the purpose of producing forage or pasture there may be no profit in sowing cow-peas in the corn. yet there may be a profit in planting the cow-peas in the corn because of the fact that the cow-pea crop acts as a fertilizer to the soil.

I would prefer as a rule to sow the turnips in drill-rows and cultivate, on old land. On sod or new land, perhaps the better method is to sow broadcast.

A. M. Tenevok.

Clover Questions.

I see by a bulletin issued by the college that an excellent stand of clover was secured on the college farm. What kind of clover was this? What time in the season was it sown, and what was the previous crop? T. E. BAKER.

Neosho County.

The clover in question was seeded in the spring of 1903, and includes the varieties Alsike, Mammoth, and Medium Red clover. Each of these clovers starts uniformly well, but I believe the Medium Red clover is better adapted for our soil and climate and as a combination to sow with grasses than either of the other combinations named. We have had no difficulty in getting clover to start during the past three seasons. Our plan is to sow early in the spring, as soon as the ground is in workable condition.

We have made no particular preference as to what crop should precede clover. We have a nice stand secured by seeding early this spring on cornstubble land, which was simply disked and harrowed to prepare a seed-bed. The clover was sown about March 15. In the spring of 1903 part of the seed-



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ing was on spring-plowed land and part on fall plowing, and the previous crop was Kafir-corn. In the spring of the same year we got an excellent stand of clover by seeding on land which had produced sowed cane the previous season, simply disking and harrowing the ground in preparing the seed-bed.

The important part in getting a stand of clover on any land in the average season is to sow in a proper seed-bed. The seed-bed for clover, grasses, or alfalfa should not be too deep or mellow, rather it should be mellow but fined only about as deep as the seed is sown, and below the depth at which the seed is planted the soil should be rather firm and compact; such a seed-bed can usually be secured by disking corn-stubble land early in the spring, or by plowing grain land early in the fall it becomes sufficiently settled during the winter so that an ideal seed-bed may be prepared for early spring seeding.

For fall seeding of grasses or alfalfa I usually prefer to disk and harrow grain-stubble land, although occasionally it is necessary to plow such land in order to prepare a favorable seedbed. In case it is necessary to plow, the land should be plowed soon after harvest and cultivated occasionally in order to settle the soil and clear it of weeds, sowing, in this State, the grasses or alfalfa about the first of September.

Cow-peas or soy-beans make a good crop with which to precede the fall seeding of grasses or alfalfa. Such land does not need to be plowed after the legume crop is removed; simply disking and harrowing puts the soil into excellent seed-bed condition. I have mailed to you copies of Press Bulletins Nos. 125 and 129, which give information regarding the seeding of grasses which is also applicable to clover, except that the clover should not be seeded in the fall.

A. M. TENEYCK.

___Berticulture

State Horticulturists at Wichita.

EDITOR KANSAS FARMER:-It was an occasion of no small importance that took us away from our work for a week, the semi-annual meeting of the Kansas State Horticultural Society at Wichita, June 7-8-9. Elaborate preparations had been made and great credit due to our vice-president, W. T. Shell, for the planning and carrying out of the beautiful floral decorations. Surely his heart was set on enjoying the unique meeting in the beautiful hall selected for the occasion. It was quite remarkable that so many of our members could be brought together at this busy season.

We shall not attempt to give the program in detail. The first afternoon and evening were given to reports of trustees by congressional districts on horticultural conditions and prospects; appointment of session committees; introduction of members from abroad; to music, greetings to all horticulturists by Mayor Finley Ross; welcome to State horticulturists; to response on behalf of the State society by Maj. F. Holsinger, president of the society, and to music, elocution and question box-in short, every day was crowded with the reading of papers, discussions, admirable addresses, music, socials. Much to the regret of all, our honored ex-president, Judge Wellhouse, was not able to be present.

Twenty-five years is not a great span in the life of a nation, yet it is amazing what a State can show in that brief period. Where can one go on the face of the earth and find more scenery than on the Arkansas River? We are convinced that the Garden of Eden was not in it with Wichita and its environments. With its broad, tree-bordered streets, attractive homes and numerous parks, the city looks like a terrestrial paradise. The wooded bluffs with their rugged sand-faced banks on the sides of the great river, the retreating valleys, rich with growing harvests, the distant landscapes, the broad tide of the Arkansas River, sweeping on toward the Gulf, the emer-

ald green of midsummer, the bridges spanning the current, the network of estuaries, lagoons and backwaters, all set in a framework of green, very vivid after the bounteous rain, made a scene of entrancing and exceptional beauty. Take the castles away from the Rhine and the famous stream would be excelled by the Arkansas. Some time historic legends will add their charm to this view. Poets and romance writers will do for this lovely region what Scott and Burns have done for Auld Scotia, Wardsworth and Coleridge for England, Irving and Burroughs for the Hudson, Emersan and Longfellow and Hawthorn for New England.

A half day was spent with a party of seven in a three-seated rig, a splendid vehicle drawn by two powerful horses, jogging leisurely along across the bridge which spans the Arkansas with its gorgeous panorama on either side, amid the beauties of nature, noting the waving golden grain, the multitude of wild flowers, the orchards with their symmetrically proportioned trees loaded with a promising crop of fruit, listening to the thrush, robin and blackbird, filling the mind with joy and gladness. Another afternoon we dashed on a flying "auto" of the big, racing type at twenty-five miles an hour over the city of Wichita, a marvellous city with its broad boulevards, attractive homes and numerous parks, resembling a terrestrial paradise, filling the soul with admiration. S. M. Crow. Shawnee County.

> Pruning Raspberries, JOSEPH MEHAN,

As soon as raspberries have finished fruiting for the season, go over the plantation and cut out all the old canes, leaving only those of new growth of the same season. The old canes are of no more use after fruiting, and by cutting them away the whole strength of growth goes to the new canes. Very often too many young canes sprout up, and these may as well come out at once, cutting them off level with the ground. Where winters are severe and there is occasion to fear a loss in winter of some of the canes, it is preferable to let all grow through the summer, cutting away in spring what are not required. Sometimes a new plantation can be made of the overstock of canes. In this case, do the work in spring. Lift the canes with all the roots possible, and after planting them, cut them down to a few inches above the ground, No fruit should be expected the first year of planting, and when the canes are cut back there will be new canes formed for the season coming.

The Cause of Unproductive Orchards.

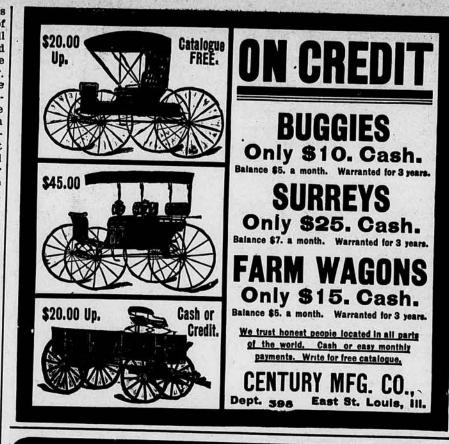
The Illinois Experiment Station has done considerable work on orchard cultivation and management. In Bulletin 59 the following are given as some of the reasons why many orchards in the State are unproductive:

1. Too many growers are expecting a crop to be given them without putting forth any efforts themselves after the trees have been set. The appletree requires the same careful attention as do other farm crops.

Lack of moisture is a common cause of failure to the apple-grower in that State, especially in Southern Illinois. This is because grass and other crops are allowed to compete with the trees for the moisture supplied by rains. Water is just as essential to the apple-tree on a hot summer's day as it is to the laborer in the harvest field.

3. Injuries resulting from attacks of insects or of failure. These depredators will probably consider that they have as much right to the products of the farm as the farmer himself. For this reason he must get his artillery and ammunition to fight the enemy.

4. Lack of fertility is a very common cause of failure in Southern, Western, and some sections of Northern Illinois. The apple orchard can not produce a profitable crop unless provided with an ample supply of nitrogen, potash, and phosphoric acid, and the same reasons may well apply to the unproductive orchards of not only Illinois, but Kansas, Nebraska, and other States of the Mississippi Valley.









WHEN WRITING ADVERTISERS PLEASE MENTION THIS PAPER.

The Stock Interest

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

or are to be advertised in this paper.
September 1, 1905—Poland-Chinas at Bennington,
Kans., C. N. White.
Sept. 12, 1905—Shorthorns at Kansas City, T. J.
Wornall, Liberty, Mo.
Oct. 12, 1905—American Galloway Breeders' Association sale, Kansas City, Mo.
October 18, 1906—Fancy Poland-Chinas at Osborne,
Kansas, by F. A. Dawley, Waldo, Kans.
Oct. 24, 1905—Jno. W. Jones & Son, Delphos,
Duroc-Jerseys.

Duroc-Jerseys.
Nov. 14, 1905—S. H. Lenhert, Hope, Kansas
Poland-Chinas.
Nov. 15, 1905—S. H. Lenhert, Dispersion Sale of

Nov. 16, 1905—Registered stock at Arkansas Nov. 16-18, 1905—Registered stock at Arkansas City, Kansas by the Improved Stock Breeders' Association of the Wheat Belt. Chas. M. Johnson, Sec'y, Caldwell, Kans. Dec. 8, 1905—American Galloway Breeders' Asso-ciation sale, Chicago, III. Dec. 12 and 13, 1905—Imported and American Herefords. Armour-Funkhouser sale at Kansas

Dec. 12 and 13, 1905—Imported and American Herefords. Armour-Funkhouser sale at Kansas City, Mo. J. H. Goodwin, Manager. February 15-17, 1908—Third Annual Sale of the Improved Stock Breeders Association of the Wheat Belt at Caldwell, Kans., Chas. M. Johnson, Sec'y. February 21-23, 1908—Percherons. Shorthorns, Herefords and Poland-Chinas at Wichita, Kans. J. C. Robison, Manager, Towanda, Kans.

Hogs Following Cattle in the Feed-Lot.

HERBERT W. MUMFORD, CHIEF IN ANIMAL HUSBANDRY, AND LOUIS D. HALL, FIRST ASSISTANT IN ANIMAL HUSBANDRY, IL-LINOIS EXPERIMENT STATION,

Of all who replied to the questions submitted in this investigation 458, or 90 per cent, keep hogs with cattle when on feed. As to the breed of hogs preferred for the feed-lot, a summary of the replies of 396 correspondents shows that 70.7 per cent favor Poland-Chinas 9 per cent, Berkshires; 4.5 per cent, Duroc-Jerseys; 3 per cent, Chester Whites; and 12.8 per cent, "any breed." One correspondent mentions Tamworths. This summary is not to be looked upon as a criterion of the relative merits of the breeds mentioned for feed-lot purposes, because the wide distribution of the Poland-China, for example, makes it most familiar to and best understood by the average feeder, and thus most in favor with him. To what extent the comparative distribution of the breeds is the result of their respective merits is another question.

The best age at which to put hogs in the feed-lot varies with their condition and previous method of feeding. A summary of the experience of a large number of feeders, however, will be of interest. Three hundred and fifty-seven feeders report as follows: Fifteen per cent prefer pigs-4 months old or less; 13 per cent prefer pigs 41/2 or 5 months old; 38 per cent prefer them 51/2 or 6 months old (mainly the latter); 9 per cent prefer them 61/2 or 7 months old; 9.5 per cent, 71/2 months old; 4.5 per cent, 81/2 or 9 months old; 7.5 per cent, 10 to 12 months old; and Thus 3.5 per cent reply, "any age." it is seen that 6-months-old pigs are most generally preferred, and the number of replies reporting above and below that age respectively are not materially different.

The weight of hogs desired for following cattle varies from 40 to 225 pounds, according to 400 correspondents reporting on this point. Six per cent prefer pigs weighing 75 pounds or less; 7 per cent prefer weights above 75 and below 100 pounds; 23.5 per cent prefer 100-pound shoats; 28.5 per cent prefer more than 100 pounds up to and including 125 pounds; 23 per cent choose weights from 130 up to and including 150 pounds; 10 per cent, from 160 to 225 pounds; and 2 per cent reply, "any weight." In other words. three-fourths of those reporting, favor pigs from 100 to 150 pounds weight, and the average of all is practically 125 pounds. Considering this result in connection with the average age recommended above, namely, 6 months, we find that, in general, pigs desired for feed-lot purposes are light, young hogs, and necessarily thin in condition at the weight given for the age of 6 months.

Eighty-three per cent of those who report keeping hogs with cattle give them feed in addition to that secured from the droppings of the steers. The remainder aim to keep just enough pigs following the steers to consume the droppings. The former plan is followed mainly because most feeders prefer to keep all their hogs of suitable age in the cattle-yard for convenience

in handling, and to regulate their feed by means of additional corn rather than by adapting the number of pigs to the amount of feed available in the manure

Four hundred and two correspondents reply to the question as to how many 150-pound shoats will thrive well on what they can secure from the droppings of each steer without additional corn being fed. Of these, 10 per cent report less than one shoat per steer; 43 per cent report one shoat; 21 per cent from one to one and one-half shoats; 20 per cent, two shoats; 6 per cent, more than two shoats, the highest number of hogs per steer mentioned being three. In view of the fact that 83 per cent of the feeders here included give additional corn to the pigs, the reports on the matter under consideration must be taken as estimates, rather than as the results of experience. It is believed by the writers of this circular that most of the estimates given are too high, since it is probable that many of the correspondents have overlooked that part of the question referring to the addition of corn to the feed secured from droppings. This is indicated by the fact that of the feeders who keep only enough hogs with the cattle to consume the droppings, 11 per cent keep less than one hog per steer; 56 per cent keep one hog per steer; 16 per cent, one and one-half hogs per steer; 12 per cent, 2 hogs; and 5 per cent, more than two hogs per steer; thus showing that this system of handling hogs with cattle reduces the number of hogs to a greater extent than is appreciated by cattlefeeders who feed additional corn, and have merely estimated the number of hogs required to consume the droppings alone. For experimental data on this subject the reader is referred to Bulletins Nos. 73, 83, and 90 of the Illinois Experiment Station.

The average daily gains secured upon pigs where additional corn is not fed are reported thus by 259 correspondents: Nine per cent secure less than one pound per head; 42.5 per cent, one pound; 8.5 per cent, between one pound and one and one-half pounds; 18.5 per cent, one and one-half pounds; 16.5 per cent, from one and one-half to two pounds; and 5.5 per cent, more than two pounds. Here again it should be noted that undoubtedly many correspondents have failed to consider the last clause of the question, referring to the feeding of additional corn, so that their replies are made to some extent upon the assumption of extra corn being fed to the

The question is often asked as to what proportion of the corn fed to cattle is used by and should be charged to the hogs following. Estimates on this point have been secured from 256 cattle-feeders in this investigation. Eleven per cent of these state that onetenth or less of the corn fed should be charged to the hogs; 8 per cent name proportions above one-tenth and below one-fifth; 21.5 per cent name one-fifth as the correct proportion; 23 per cent name one-fourth; 31 per cent one-third; and 5.5 per cent, one-half. Thus it is seen that three-fourths of all the correspondents charge from onefifth to one-third of the corn to the hogs. Of course, the replies vary largely with the method of preparing That is, the the corn. the corn almost invariably charge relatively small proportions of it to the hog, while those who feed shock, ear, or shelled corn, count on the hogs using a much larger per cent.

Oil-meal fed to steers is often said to have a beneficial effect upon the pigs following. Of 120 correspondents who replied to a question upon this point, 37 per cent state that such feed has been a decided advantage to the pigs. The remainder, 63 per cent, reply that they have not found it to be of marked advantage in that respect.

Unlike oil-meal, cottonseed-meal fed to cattle is believed by many feeders to exert an injurious effect upon the pigs. Forty correspondents have answered that it is undesirable to turn hogs after cattle receiving cottonseedmeal, while 60 per cent have observed no injurious effects.

Thirty-three correspondents mention

THE MARK AND THE MOTTO "The Recollection of Quality Remains Long After The Price is Forgotten"

Trade Mark Registered



The difference in worth between a good tool and a poor one is always more than the difference in cost. Counting the time wasted in constant sharpening and the short life of inferior tools, a poor tool is really more expensive than a good one.

Whenever you need a tool of any kind, it will pay you to buy the Keen Kutter brand, and have the best. All kinds of tools are made under this name, and every kind represents the very highest quality of material, workmanship and finish.

KEEN KUTTER

and are the only complete line of tools ever to receive an award at a great exposition—the Keen Kutter line being awarded the Grand Prize at the St. Louis Fair.

Following are some of the kinds of tools made under the Keen Kutter Brand: Axes, Adzes, Hammers, Hatchets, Chisels, Sorew Drivers, Auger Bits, Files, Planes, Draw Knives, Saws, Tool Cabinets, Scythes, Hay Knives, Grass Hooks, Brush Hooks, Corn Knives, Trowels, Pruning Shears, Tinners' Snips, Scissors, Eye Hoes, Shears, Hair Clippers, Horse Shears, Razors, etc., and knives of all kinds.

If your dealer does not keep Keen Kutter Tools write us and learn where to get them. Send for Tool Booklet. SIMMONS HARDWARE COMPANY,

St. Louis, U. S. A. 298 Broadway, New York.

other supplementary feeds which have been equally as good as oil-meal in their effect upon the pigs. Of these, 66 per cent mention various condimental stock foods. The remainder mention salt, ashes, cottonseed-meal, cow-peas, wheat, and clover hay. One of the most successful feeders states in his report that he has used successfully a self-feeding box in supplying mineral substances to the hogs. Wood ashes are mixed by the wagon-load with salt, copperas and sulfur and placed in a small self-feeder similar in construction to those used for cattle,

Summarizing the answers of 400 feeders regarding the form of shelter provided for pigs when following cattle, we find that 79 per cent use sheds (doubtless most, if not practically all, refer here merely to the cattle-shed, rather than to a separate hog-shed): 8 per cent use barns; 8 per cent, hoghouses; 2.5 per cent provide no shelter; 1.5 per cent depend upon racks, cribs and feed-boxes; 1.5 per cent upon woods, and 1.5 per cent upon strawstacks. In other words, only 8 per cent furnish permanently constructed houses for the hogs, while practically all of the remainder allow only such shelter as they can secure within or without the sheds or barns provided for the cattle.

The Selection of Feeders.

The success or failure of the cattleon his ability to select his cattle as on any other factor. It matters little how skillful the feeding or how costly and complete the stables and equipment, if the feeder makes many mistakes in his selection, writes A. P. Ketchen in "Orange Judd Farmer."

If, in a bunch of 20 cattle a man has five or six of the wrong sort, his chances for profit are very considerably diminished. A few rough, coarse feeders in a bunch not only make unsatisfactory gains themselves but spoil the appearance of the others, making it harder to sell to advantage.

To be a good judge of cattle for feeding-purposes a man must have the natural intuition of the cattleman. The unerring eye that enables a man to make a close discrimination between the good and the bad in live stock is like an ear for music; more a natural gift than an acquired quality. Like

other gifts it can be brought to perfection only by practice.

Of all classes of cattle, steers are the hardest to judge. Fat cattle and even breeding stock must be judged for what they are as they appear before you at the time, but feeders must be judged for what they are likely to be five or six months later. In the one case, you are passing judgment on the finished product; in the other on a bundle of probabilities. Indications of good breeding, therefore, are of paramount importance in a lean feeder; for, if in any chance we must gamble more or less on future possibilities, it is much safer to speculate on a wellbred bullock than on one of common or inferior breeding. If we believe in heredity at all we must believe that the ability to lay on flesh thickly and in the right places is an heredity trait.

QUALITY INDICATED BY THE HEAD.

Some of the most reliable indications of quality and breeding are to be found in the head. Many experienced cattlemen attach quite as much importance to the conformation of the head as to that of any part of the animal, not because the head has any value in itself, but because it is a very reliable index of the breeding and general character of the animal. The face should be broad between the eyes and short from the eyes to the muzzle with a fine, clean-cut appearance. The muzzle should be large and well defined.

I do not think I have ever known a good feeder with a small muzzle. The eyes should be full and bright, but calm and placid. A flery, restless eye indicates the wrong kind of nervous temperament for a feeder; and on the other hand a small, dull, sunken eye indicates a sluggish circulation and a low vitality. A long, narrow, pinchedlooking face is to be avoided; it is almost always associated with a general spareness throughout.

In bodily conformation, the feeder should be deep, thick, blocky and low set. It is important that we have a long and well-sprung rib, giving him a wide, level back and a large middle. I do not advocate a paunchy animal. This is an undesirable extreme and is usually an indication of unthriftiness. A steer must be deep and full in both the fore and hind flank to give him plenty of room in front for the heart and lungs, and ample storage for hay

back of that. It is folly to put good feed into a light-middled steer, and hope for satisfactory gains.

Smoothness is another important feature of a good feeder. Coarseness of bone, large, rough points, and angularity of frame, usually go together, and an animal having these characteristics is extremely hard to finish. He may make large enough gains for food consumed, but he does not show it; you can not get him covered; and when you put him on the market he appears at a disadvantage and will not command the highest price. He should be medium in bone and smooth over the shoulders and hocks, to cover even-. ly and smoothly with flesh.

WHAT TO LOOK FOR IN THE SKIN.

The skin is another valuable indication of the feeding-qualities of a bullock. It should be soft, mellow and loose; you should be able to pick up a handful of it anywhere. It should be covered with a thick coat of fine, glossy hair, which looks and feels as though it had some life in it. 'A hard, harsh skin with a dry, staring coat, indicates a feeble circulation and general lack of thrift.

This may be due to some temporary causes, and once in a long time a bad handler will respond to good care and feeding, but this happens so soldom that it is always safer to let some one else make the experiment. If a steer comes off the grass in bad condition, he is not likely to make good gains on winter feed.

As to the best age at which to buy feeders, opinions differ. A well-grown 2-year-old in tolerably good flesh is usually the most profitable. A lean and undersized 2-year-old will usually start to grow when put on good feed, and although he will make large gains for food consumed, it is almost impossible to get him fat enough in one season. It is usually necessary to give him a run at grass the following summer to get him finished.

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 postofice, 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.

Where the Kansas Farmer readers cannot obtain the services of a veterinarian, or, if living at a distance from a drug store, they may obtain the necessary materials at a reasonable price, prescribed in the Veterinary Department of the Kansas State Agricultural College, Manhattan, Kans.

Ruptured Colt.-My 6-weeks-old mare colt is ruptured just in rear of navel; rupture about the size of a large hulled walnut. What can I do for it, or will it get well of its own . accord? A. B. S.

Moran, Kans. Answer.-We have found it very desirable in such cases as you mention to simply bandage the rupture, using a wide bandage, say two feet wide, put it entirely around the body of the colt, and fasten so it can not slip in front or behind. Then pad the bandage where it comes in contact with the rupture; this will hold the contents of the rupture in the abdominal cavity. andage on for several weeks, which, of course, is more desirable than resorting to an operation.

Garget.-I have a cow that gives lumpy milk by spells. Is there any cure? If so, what is it? W. C. Ingersoll, Okla.

Answer.-You had better rub a little ointment into the cow's bag three times daily, using lard or vaseline, which I think will have the desired et-C. L. BARNES. fect.

Cow With a Bad Udder.-My 2-yearold, high-grade Shorthorn calved May 27, was very fat, with a naturally solid udder which was somewhat inflamed, but by the tenth milking, the milk was perfectly good in three teats; the other teat, although soft with no impediment as to flow of milk, gives only a few streams and never more than half a pint at a milking. We do not use this milk although it seems to be as good as the rest. That division of the udder seems slightly caked, especially at the point where milk should flow into the teat. I have tried manipulation, which helps some but does not increase the flow of milk. What is the matter and what can be done for the trouble? E. T. P.

Tully, Kans.

Answer.-From the nature of the description you give I would think that a little lard or vaseline rubbed thoroughly, three times daily, into the base of the teat, would be all that is necessary to restore the cow to the proper milking capacity. If you find that this fails to help let us hear from you

Gossip About Stock.

The Kansas Farmer has received a number of inquiries for good milking strains of Shorthorns. Breeders who have this class of stock would doubtless receive some good orders from advertising the same.

Mr. E. S. Cowee, Route 2, Scranton, Kans., was a caller at the Kansas Farmer office the other day and announces that he has a fine lot of bred gilts for sale. His spring farrow of pigs is doing well and he will be able to furnish animals as demanded by his trade, but he makes a special offer now of the bred gilts which he offers at a very reasonable price. Notice his change in advertisement on page 688, and write him if you want some good hogs.

Attention is called to the new advertising card of J. M. Dryden, owner of Missouri Valley Herd, O. I. C. swine, Watson, Mo. Mr. Dryden has a lot of extra choice spring pigs that are now ready to ship and can fill orders very promptly. They are all out of mature sows, a number of which are descended from prizewinners. The pigs were sired by Silver Dick 9186, a large-boned, heavy-quartered hog with deep sides, short legs, and measuring six feet and two inchs from end of nose to root of tall, with a weight of 700 pounds in breeding condition. Although large, this hog is smooth and well-proportioned and as a breeder he stands in the front rank. Quick buyers will get the cream of this bunch of pigs.

stands in the front rank. Quick buyers will get the cream of this bunch of pigs.

Chas. Dorr, of Osage City, Kans., who is one of the great Duroc-Jersey breeders of Kansas and who always has his advertisement in the Kansas Farmer, has had good success this year with his spring pigs. During the past few weeks, he sold a trio to Robert Mabry, Talala, I. T.; two head to J. C. Ellison. Young, Ariz. (Mr. Ellison lives one hundred miles from a railroad station); two head to D. Peterson, Wichita; a trio to J. W. Bean, Lindsborg; a trio to M. E. Kelso, Havana; a trio to T. L. Griggs, Nelson, I. T.; a trio to J. S. Arnold, Florence, Okla; two head to C. D. Milster, St. Louis, Mo.: a boar pig to Lee Condit, Winfield, Kans.; a boar pig to Lee Condit, Winfield, Kans.; a boar pig to H. F. Fritzmeyer, Stafford; two head to L. P. Paxton, Aspen, Colo.; and one boar pig to Hy B. Bailey, Oliver, La., in addition to those sold in the immediate vicinity of the Gold Standard Herd. We mention these facts to show the territory from which buyers are brought through advertising in the Kansas Farmer, as well as to show the success which has come to a good breeder of good hogs. Mr. Dorr still has some nice gilts, weighing from 125 to 150 pounds that are of good color and well made that he will sell cheap. He also has a number of boar pigs that are priced right. Notice his advertisement on page 688 and write him, or better still, go and see him.

Any of our readers who ship stock to market will do well to get in touch with

on page 688 and write him, or better still, go and see him.

Any of our readers who ship stock to market will do well to get in touch with Clay, Robinson & Co., the well-known commission firm, who have well-equipped houses at Kansas City and each of the six leading markets and are in position to handle all consignments, whether large or small, to the best possible advantage, Their salesmen have an enviable reputation for securing top prices for all classes of stock. A very large part of their business comes from small feeders who market only a car load or two at a time and they cater especially to this class of business. On the other hand they also enjoy the patronage of a large number of the heaviest feeders and shippers in the country. No shipment is too large for their facilities and none too small to receive their most careful attention. We strongly advise any of our readers who have never yet done business with the above firm to give them a trial consignment, or at least write them regarding stock which they have for market. They are always pleased to advise regarding market prices and prospects and are often able to give valuable advice as to the best time to ship and as to the best market to ship to. As they have houses at the six principal markets it makes no difference to them which one a man ships to and their only object is to assist their customers to realize the highest price for their stock.

Flies Decrease Profit.

These are the days when all farmers ought to be fighting the flies. If you want milk from your cows and good work from your horses, keep the flies away from them. Stock which is constantly tormented by these pests is sure to lose in weight, no matter how much food is consumed. It is the dairyman who suffers the most severe loss from this nuisance. The cows should have peace and quiet while ruminating, if they are to turn their feed back into the milk-pall in profitable quantities. Investigation shows that the average shrinkage of the milk yield is from 25 to 30 per cent, if nothing is done to save the cows from flies. The flies are a great drain on the energy of working horses, too, not to mention the bother to the man behind them, so that, aside from saving his animals a great deal of suffering, every

farmer will find it a paying investment to use a good preparation that will keep the files at a safe distance. For this purpose we would recommend the use of FLI-KIL, an olly liquid prepared by the Moore Chemical & Mfg. Co., of Kansas City, Mo. It is economical to use, easy to apply and is practically free from the disagreeable odor so common in goods of this kind, so that, while it is most effective, there are no unpleasant features. It stops the kicking, stamping and tail switching at milking time. This preparation, when applied to sheep, prevents the dreaded grub in the head also. Considering how much there is at stake, it is poor economy not to use it.

Horse Show Dates Changed.

After due consideration and request among the horse-breeders of various districts, the management of the Lewis and Clark Exposition have decided to change the date of the horse show of the live-stock exhibit of the exposition, to correspond with that of the cattle-show, which will combine all the stock exhibit within the period (September 19 to 29 inclusive); these dates will not conflict with the Northwest Fair circuit nor other neighboring State fairs at which many of the exhibitors have planned to attend. Time for entries in this division has been extended and will close August 1.

McLaughlin Horses at Paris.

Last week the Kansas Farmer reported the success of McLaughlin Bros.' horses at the French National Horse Show at Rouen. After their remarkable success at Rouen these horses were taken to Parls and shown with the results as stated in a recent letter, a part of which is here quoted:

"The French Government has come."

here quoted:
"The French Government has cooperated with the authorities of the city of Paris to establish an annual horse show. The first one is taking place in Paris this week. Our horses are there and we are just in receipt of a cable message from Mr. James McLaughlin saying that we won four first prizes and also championship collection. Altogether we won twenty-five medals. This is another evidence that Mr. McLaughlin is maintaining his reputation of buying the best that France produces."

Auctioneer Harriman.

Auctioneer Harriman.

Col. R. L. Harriman, of Bunceton, Mo., leads a pretty strenuous life. Last week he was in Texas where he conducted the biggest horse sale even known in those parts. On his return home he assisted in conducting the farmers' and stockmen's picnic and had charge of the big Shorthorn sale held in connection with it at Bunceton. He then conducted the big blue ribbon sales of Shorthorn and Hereford cattle at Kansas City, where he did all the selling. Now he goes back to Texas to make another horse sale. Not only has the Colonel had the most successful year of his business life but he has already booked sales for every month of the year to come. He is sure a moneygetter at sales. He conducted the Shorthorn sale made by the Shawnee Breeders' Association at Topeka last month and did his work well. It is always cheaper to employ a good auctioneer to sell purebred live stock because he knows how to give good service to his employers and because he always gets better prices for the stock sold. Secure a good auctioneer for your next sale. His address is R. L. Harriman, Bunceton, Mo.

A Big Chance for the Boys.

A Big Chance for the Boys.

We understand that a prize name competition has been inaugurated by the J. Stevens Arms & Tool Company, makers of the world-famous Stevens Rifles.

The object of their competition is to get a name for a new Boy's Rifle. Every wide-awake lad the country over has a chance to win one of the prizes they offer. A "Favorite" No. 17 Rifle goes to the boy sending in the best name; a "Little Krag" No. 65 goes to the boy sending in the second best name; a "Crack Shot" No. 16 goes to the sender of the third best; a "Stevens-Maynard, Jr." No. 15 to the fourth best, and a "Tip Up" No. 41 Pistol to the fifth.

Their competition closes August 15, 1905. Every boy can send in as many names as he chooses, though of course he can only secure one Stevens as a prize.

The conditions are very simple. Write

he can only secure one Stevens as a prize.

The conditions are very simple. Write on but one side of the paper, date the communication, state name and address plainly, and send it to The Prize Rifle Competition, 404 Main Street, Chicopee Falls, Mass. If a number of boys send in the same names, the boy sending in the name first will receive the prize. The officers of the company are to be the fudges.

We feel sure that such a generous offer as this will bring in thousands of replies from boys the country over.

AMATIVE Roofing, which so many of our readers know about, is reported to be very successful. Its price is reasonable and the protection which it affords against the weather is perfect. The simplicity of laying it is remarkable, everything required for the work being furnished free by the makers. Free sample can easily be obtained by addressing the Barrett Manufacturing Company, New York, Chicago, Philadelphia, Cleveland, Cincinnati, St. Louis, Allegheny, Kansas City, New Orleans, Minneapolis.

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THEY ARE TURNING PUBLIC AT-TENTION.

(Continued from page 667)

of office has lacked spectacular features. But he has the enmity of those who desire to violate the law quite as decidedly as if he had attracted attention and secured popularity by a more rigorous course towards offenders. His "slow but sure" methods should bring results eventually and with them the hearty approval of the great law-abiding public. Should he declare that all violators of law look alike to him, except that the official who has sworn to enforce the law as the law says he shall enforce it, but who fails to efficiently perform his duties, looks more despicable than the common law-breaker, and should he cause the penalties of the law to descend upon the heads of negligent officials the act would not be deemed spectacular, but it would place the name of Hoch above every other politician's name in Kansas. Doubtless the course of events will vindicate the firm confidence with which the best elements of his party will stand by Governor Hoch for a second nomination.

Another office of extreme importance in the honest and efficient enforcement of the law is that of Attorney General. An Attorney General who is active and aggressive for the honest enforcement of the laws need have little trouble in Kansas. An Attorney General under obligations to persons who profit by non-enforcement or by indolence in law enforcement should never be allowed to secure a nomination in Kansas.

The other State officers are important, but the rising tide of demand for the observance of law and for its enforcement, when and where not willingly observed, gives a prominence to the offices of Governor and Attorney General beyond that attaching to other

In the matter of legislation, the people are awaking to the fact that promoters of special interests have had undue influence. The Lieutenant Governor as presiding officer of the State Senate exerts great power over legislation. The name most frequently mentioned in connection with the dominant party's nomination for Lieutenant Governor is that of Judge Ansel R. Clark, of Rice County. Judge Clark was speaker pro tem of the last House of Representatives. He has a way of facilitating business that fits well with his absolute candor, his honesty of purpose and his appreciation of the interests of the people. His respect for law is that of the jurist who has long been guided by its precepts in his position of judge upon the bench.

The KANSAS FARMER is not in politics, and has no personal interests to advance, but it hopes that its readers will every one take time by the forelock and assist in forecasting political action of his party and will create an influence in favor of fidelity to law and to faithful performance of duty by public officials.

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 ma 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 and 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 subscriber may choose, viz., "Woman's Magazine," "Western Swine Breeder," "Vick's Family Magazine," "Blooded Stock," "Kimball's Dairy Farmer," or "Wool Markets and Sheep."

Miscellany

Official Oil-Burning Test at Kansas City.

The engineer at the city hall, Kansas City, has been testing fuel oil in comparison with coal. Following is his report:

"The Test of Fuel Oil in Comparison with Coal.—In a ten-days' run we burned 160 barrels of oil at a cost of 67 cents per barrel, or at a cost of \$107.20 for ten days, or \$10.72 per day.

"Coal.—For the month of May, 1905, we burned \$494.16, or \$16.35 per day. For the month of June, 1904, we burned \$385.92 or \$12.90 per day, or at a saving on cost for fuel in favor of oil \$5.65. The expense of moving cinders is about \$1 per day. The oil being burned furnished by the Standard Oil Company is a residium after coaloil and gasoline are taken out. It shows an efficiency of 11.1 to 1, that is 11.1 pounds of one to one pound of oil. The coal shows an efficiency of 6.6 pounds of water evaporated to one pound of coal. I am satisfied that oil with all its properties will give an efficiency of 25 or 30 per cent above the oil being used. The burning of oil solves the smoke problem, as there is no smoke when oil is being used."

Eastern Colorado.

EDITOR KANSAS FARMER:-For the benefit of the young man with small means from whom you recently published a letter of inquiry as to the advisability of coming to Western Kansas or Eastern Colorado, I would like to reverse the question and ask if it would be advisable for a young man with small means to go East?

It would seem to me that the man going East would be confronted with land too high for his purse and too high for any reasonable expectancy of material increase in value. He would therefore immediately enter upon the hopeless life of a renter and would more than likely remain a renter, with no home to call his own. On the other hand, the man going West would find low-priced land steadily and surely increasing in value (or a free homestead if he preferred). The few dollors brought out with him would do the work of ten times the amount in the East. He would have a home of his own from the day he landed here. Every furrow he turned, every tree he planted, every building he erected would be his and he would experience from the very first the grand and ennobling feeling of independence.

For a while there might be a few discomforts incidental to life in a comparatively new country, but day by day they would grow less and the bank account would grow larger.

There never was a better time to come West and secure a home than this summer. Every facility is being given to help the homeseeker in the West. Even the Government has taken a hand in the work and in Eastern Colorado has cancelled all the old treeclaim filings that for various reasons had not been proved up, thus throwing open for homestead filing many thousands of acres of choice land, much of which lies close to thriving towns and in well-settled communities Even the cattlemen have given up their long and bitter fight against the encroachment of the farmer and have sold off their large herds and have gone to farming themselves, and are giving the newcomer a hearty wel-

People have always been coming West and will continue until every quarter-section of this rich soil becomes a valuable farm. AN OLD SETTLER.

The Farmer as a Citizen.

Kiowa County, Colorado.

L, M. PEAIRS.

As a rule the farmer of to-day does not give as much attention to his duties as a citizen as he should. Men in other occupations are compelled to take an active interest in, and to participate to some extent in politics; but



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JAMES HOPKINS, Goddard, Kansas

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the farmer, although just as much affected by the political situation, does not seem to realize that by his own efforts he might do something to promote his own best interests. Too often the country representative in the State Legislature is some person sent there because, perhaps, he happens to have more money than any one else in the community, and he wants the honor. Or it may be an old soldier or some person who needs the money, and the farmers would just as soon see him have it as any one else. In most cases the most competent man is not selected. On the other hand, we see the city men choose some one that can and will rush the business they want through the Legislature and thus be of practical use to the community which sends them.

If the fact that legislation affects the farmer just as much as it does the men engaged in any other kind of business could be impressed upon the minds of the rural population, then the farmers who are always on the alert where they know that their interests are at stake would immediately begin to take a more important part in the politics of the Nation.

In many places the farmers are the most intelligent and efficient part of the voting public, but it is safe to sage that this is the exception rather the the rule. This is not because the far er is as a rule any less intelligent than any one else; on the contrary, the farmers are as a class the most intelligent and well educated of any of the classes of American citizens. more plausible explanation is that the farmer generally works harder and longer hours than the "other fellow" and so has less time and becomes careless of his outside duties. The country polls show a smaller percentage of the total number of voters who really vote, than do the city polls, while the per cent of educated voters is greater. It takes more time and effort for the average farmer to go to the polls than it does for the city voter. The candidate for office in the city sends means of transportation, and so forth, to the city voter; the countryman, on the other hand, often has to go a long distance

(Continued on page 683)

The Houng Folks

CONDUCTED BY RUTH COWGILL.

Queer Solomon Oaks.

A queer old fellow is Solomon Oaks; He belongs to the good-natured order of

folks;
He sings and he whistles about the work,
And nobody has ever known him to shirk,
And he makes you think, with his blithe
good cheer
Of the merry blackbirds when spring is
here.

If they come to him with a doleful tale of a neighbor's faults, they always fail To rouse attention to what they tell. At such a time he can't hear very well; But if they praise up a neighbor—then He can hear as well as the best of men.

He always endorses the good things said By his friends of the living as well as the dead.

If he's asked what he thinks of a man

gone wrong, the lines of a main gone wrong, He'll pause, perhaps, in his cheerful song, And say, "I'm sorry, but there must be Some good to his credit, it seems to me."

"I haven't time to keep track," says he,
"Of the sad things and bad things that I
might see
If I was to look for them; so I try
To shut my eyes as I pass them by,
And see only good things along the way—
And I find a lot of them every day.

"By always having something to do
I keep out of trouble and mischief, too.
I stick to my business, as best I can,
And keep on good terms with my fellow
man—
And the better I treat him, it seems to
me,

The better my fellow man treats me."

A queer old fellow this Solomon Oaks, With his merry laugh and his pleasant jokes, And his faith in his fellows, said or sung. He's a host of friends among old and

young.

He makes them and keeps them by smile and song.

And the word that helps us when things go wrong.

His life holds a lesson 'twere well to learn:
Shut your eyes to the bad; all the good discern;
Keep busy; be cheerful; and aim to make This old world better for love's sweet

sake.

Queer? Well, it may be; but this I say:
More of such queerness we need to-day.

—N. Y. Tribune.

The Business of a Happy Life.

Seneca was an old heathen philosopher, born a half-dozen years before Christ; yet some of the things he said are surprisingly worth reading. For instance, here are some of his thoughts about happiness, a subject on which the mind of the world's philosophers is still laboring:

"There is nothing in this world," he says, "perhaps, that is talked more of, and less understood, than the business of a happy life. It is every man's wish and design, and yet not one in a thousand knows wherein that happiness consists. We live, however, in a blind and eager pursuit of it; and the more haste we make in a wrong way the farther we are from our journey's end. Let us, therefore, first consider what it is we would be at; and secondly, which is the readiest way to compass it. If we are right, we shall find every day how much we improve; but if we either follow the cry, or the track of people that are out of the way, we must expect to be misled, and to continue our days in wandering and error. Wherefore, it highly concerns us to take along with us a skillful guide; for it is not in this, as in other voyages, where the highway brings us to our destination; or, if a man should happen to be out, where the inhabitants might set him right again; but, on the contrary, the beaten road is here the most dangerous, and the people, instead of helping us, misguide us. Let us not, therefore, follow like sheep, but rather govern ourselves by reason than by other men's fashions. It fares with us in human life as in a routed army—one stumbles first, and then another falls upon him; and so they follow, one upon the neck of another, until the whole field comes to be but one heap of miscarriages. And the mischief is, that we perish by other men's examples. But we shall be healed if only we separate ourselves from the vulgar. For the question of a happy life is not to be decided by vote. Human affairs are not disposed of so happily that the best things please the most men. It is an argument that the cause is bad when the common sort applaud. The common sort find it easier to believe

than to judge, and content themselves with what is usual, never examining whether it be good or no. By the common sort is intended the man of title as well as the clouted shoe; for I do not distinguish them by the eye, but I have a better and truer light; let the soul find out the good of the soul. Worldly felicity, I know, makes the head giddy; but if ever a man comes to himself again, he will confess that whatsoever he has done he wishes undone, and that the things he feared were better than those he prayed for.

TRUE HAPPINESS.

"True happiness is to be free from perturbations; to understand our duties toward God and man; to enjoy the present, without any anxious dependence upon the future; not to amuse ourselves with either hopes or fears, but to rest satisfied with what we have, which is abundantly sufficient, for he that is so wants nothing. The great blessings of mankind are within us, and within our reach; but we shut our eyes and, like people in the dark, we fall foul of the very thing we search for without finding it. Tranquility is a certain quality of mind

nor sloth, nor fear, for it makes a discord in a man's life. He that fears serves. The joy of a wise man stands firm without interruption; in all places, at all times and in all conditions, his thoughts are cheerful and quiet. Into what dangerous and miserable servitude he falls who suffers pleasures and sorrows (two unfaithful and cruel commanders) to possess him successively! I do not speak this either as a bar to the fair enjoyment of lawful pleasures, or to the gentle flatteries of reasonable expectations. On the contrary, I would have men to be always in good humor, provided that it arises from their own souls and is cherished in their own breasts. Other delights are trivial; they may smooth the brow, but they do not fill and affect the heart. True joy is a serene and sober motion, and they are miserably out that take laughing for rejoicing. The seat of it is within, and there is no cheerfulness like the resolution of a brave mind, that has fortune under its feet. He that can look death in the face and bid it welcome, open his door to poverty and bridle his appetites, this is the man whom Providence has established in the possession of inviolable delights.



which no condition of fortune can either exalt or depress. Nothing can make it less, for it is the state of human perfection; it raises us as high as we can go, and makes every man his own supporter, whereas he that is borne up by anything else may fall. He that judges aright, and perseveres in it, enjoys a perpetual calm, he takes a true prospect of things; he observes an order and measure in all his acture; he squares his life according to reason, and draws to himself love and admiration. Without a certain and unchangeable judgment, all the rest is but fluctuation. Liberty and serenity of mind must necessarily ensue upon the masterings of those things, which either allure or affright us, when, instead of those flashy pleasures (which even at the best are both vain and hurtful together), we shall find ourselves possessed of an excellent joy assured and a continual peace and repose of soul. There must be a sound mind to make a happy man; there must be a constancy in all conditions, a care for the things of this world, but without trouble, and such an indifference to the bounties of fortune that either with them or without them we may live content. There must be neither lamentation, nor quarreling,

The pleasures of the vulgar are ungrounded, thin and superficial; but the others are solid and eternal. As the body itself is rather a necessary thing than a great, so the comforts of it are but temporary and vain; whereas peaceful conscience, honest thoughts, virtuous action and an indifference for casual events are blessings without end, satiety or measure."

Do Animais Reason?

A well-known librarian at one of the principal London free libraries was recently talking about animal stories and the growing interest in that line of literature, despite the preposterousness of some of the tales, and the almost impossible things credited by authors to horses, dogs, and other animals, when the writer related to him what, as a boy, he had seen an uneducated farm-horse do. The old horse had pushed the barn door open and walked out. The door, being out of plumb, at the hinges, swung against the side of the barn. The horse turned about, hooked his feed feeler over the edge of the door, slammed it shut, and started to walk away, but he had closed the door with so much force that it bounded open, though not so wide as before. Then he stopped, turned about again, and closed it not quite so hard.

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This time the rebound threw it open about ten inches. The horse looked at it for five or ten seconds, and then nosed it up again very softly. It remained closed, and the horse walked off. When midway in the road, he stopped, looked in the direction of the barn, and then went to the water trough and took a long drink.

"Three months ago," said the librarian, "a neighbor of mine died. At the house they kept a very ordinary dog, which my neighbor had never made much of; but, being a kind, good-natured man, he had never abused him. After my neighbor's death, this old dog would take his place on the path outside the gate to meet his master, who had always reached home at a certain hour. The family noticed the dog's actions, but not one of the members of it could remember having ever before seen him watch for his master.

"Yesterday I called at their home and found a stranger there. The old dog trotted across the room, but stopped when he heard the stranger's voice. He looked at me, and I spoke to him. The stranger spoke again, and the dog turned and faced him. The man had not paid the slightest attention to the dog, but the animal's actions were so unusual that I could not take my eyes from him. The old fellow tilted his head to one side, took a few steps forward, and then sat in front of the man and gazed into his face. Next he put his front feet on the man's knees and listened intently while the man, heedless of the dog's familiarity, talked to me. He climbed into the man's lap, and looked up at his face. Then he stood on his hind feet, put a paw on each of the man's shoulders, and gazed into his eyes.

"It may have been only my imagination, but it seemed to me that I had never before seen such a troubled, puzzled look in an animal's eyes as that dog's wore as he stared into the man's face and tried to reason it out."

"What was the cause of his behavior?" I asked.

"The stranger was the dead man's brother, whom the dog till that day had never seen."

Lord Jesus, who hast so graciously promised to be our portion in the next world, prevent us from choosing any other in this.-Horne.

For the Little Ones

In Candy Land.

"In Candy Land the little folks Wear candy buttons on their cloaks, And candy buttons on their shoes— Indeed, on everything they use."

"Why, I should think the things would break!"

"They do; and then the children take The broken pieces, great and small, And eat until they've eaten all.

"In Candy Land the girls all know With candy needles they must sew; The boys who work use candy tools, And they have candy books in schools.

"In Candy Land they think it nice To go and skate on candy ice; They rest themselves in candy chairs, And go to bed on candy stairs."

The candy-lover on my knee In wonde:ment still questioned me-

"And if the candy stairs should break?"

"The children must the pieces take, And very quickly down must sit And eat up every single bit."

"What if the candy buttons break?"

"The pleces then the children take, And very calmly down they sit And eat up every single bit.

"In Candy Land the girls and boys Play every day with candy toys; They always eat from candy plates, And do their sums on candy slates.

"Sometimes the children eat all day To get the broken bits away."

"And must the children eat them all?" "Yes, every piece, both great and small. This is the law in Candy Land; And you must own 'tis wisely planned;

"For in that land, as you can see, So many things must broken be That bits of candy soon would strew The sidewalks, roads, and houses, too; So children must the pleces eat, That Candy Land be clean and neat."

The candy-lover on my knee In blank amaze looked up at me.

"Why, Candy Land's a dreadful place!"—
Then dawned a wise look on his face—
"I used to think it would be grand
To go to live in Candy Land;
But now I only wish to go
Each day and stay an hour or so!"
—Emilie Poulsson, in St. Nicholas.

Dancing Dickey.

A VERY TRUE TALE.

Till he was almost two years old, which is quite grown up for a canary, he lived in Grandpapa's sunny south room, and spent his time tweaking off the little sweet alysium buds in the window garden and doing other snippy things. He and Grandpapa visited all day long, and he learned to sit on Grandpapa's finger and to eat bits of nuts held between Grandpapa's lips; but as yet he was plain Dickey Bird, just as he was christened when Papa Burton brought him home, a dear, fluffy, tailless baby.

But one day Dickey Bird could not find Grandpapa, though he called and called, and, though the sun smiled his brightest, poor Dickey Bird was not to be comforted.

At last Papa Burton came through the room.

"Upon my word!" he exclaimed, softly, "I believe the little fellow is grieving, too." And he took the cage and swung it above the dining-room win-

Dickey Bird was so grateful that he could hardly wait till dinner time to show what he could do, and no sooner was grace said than he threw back his. small green head and burst into a lusty carol, accompanying himself wild mazurka-like dance, up and down the perch, through the swing and back again, finishing with an elaborate bowing and scraping, worthy of a spoiled prima donna, till every one stopped eating and laughed heartily, except Papa Burton.

"Allie," he said, soberly, "I'm going to open the door. I think the little

chap wants to get out." Dickey Bird began to flutter with delight as Papa Burton came towards him, and when he slipped his fingers in to lift the latch the canary flew upon them, screaming and pecking in comical fashion. And when the door was finally open and Papa Burton had retired to his chair he stepped down daintily and put his roguish little head out, looking this way and that, with a triumphant twinkle in his black eyes. The next instant he hopped to the edge of the cage, and, to the delight of the family, began another of those riotous

songs and dances, for which he became

Suddenly, however, in the midst of this exciting performance he lost his balance, his weak wings only helping him to alight gracefully at Papa Burton's feet, and there he stood and screamed till Papa Burton put down his hand. Then up he hopped and began the second of his notable stunts, "climbing the stairs;" that is, hopping from one of Papa Burton's outstretched fingers to another as they were alternately held above him.

That afternoon he was rechristened, with a drop of violet perfume, "Dancing Dickey," and immediately became the most popular member of the Burton family, both at home and abroad; for he had no false modesty and few prejudices, and the larger and more clamorous his audience, the greater his delight.

There was no acrobatic trick suggested that he would not attempt; and his small heart so brimmed with joy that he often awoke and sang in the night if he chanced to hear any one stirring. But, strangely enough, there was one time when he could not be induced to sing and that was in the morning before Mamma Burton, who was not very well, was up. His cage stood close to her door. When Papa Burton would slip out for an early wrestle with his sermon, Dancing Dickey greeted him with a subdued chirp; but not until he saw Mamma Burton stirring behind the portiere, would he really sing.

It was Papa Burton's delight to put him into a well laundered white cuff and get him to whirl round and round in the slippery tube, following his fingers as he presented them first on one side and then on the other till he resembled nothing so much as an animated bunch of tumbled feathers.

Another little trick of his was to light upon the tip of a person's shoe and scream till he was tossed up like a football. If he hit the ceiling, so much the better, and, beside himself with glee, down he would drop upon the foot almost before it could resume its position on the floor, and again demand to be thrown up; nor would he tire of this till his attention was diverted to some other form of amusement.

He was a veritable little mischief, too. He would contemplatively preen his feathers while Papa Burton settled himself for a nap, but hardly had his breathing grown regular than down he would swoop and excute his favorite song and dance upon the poor man's face. But it was all so merrily meant that no one could be angry at him.

He liked, too, to drop down from a picture upon Helen's head. Of course his claws would get mixed up in her hair, and then such a screaming as there would be before he was liberat-Once or twice he tried it upon Papa Burton's bald spot, but he very soon learned better and after that flew to his shoulder. Another place he liked to ride was on top of Mamma Burton's high back comb.

He was a bit spoiled, and if the family were sewing or reading he took various ways of apprising them of his presence, walking over the pages or tweaking the needle out of their hands.

One day Papa Burton was writing and had no time for small birds. Dancing Dickey trotted back and forth over the sermon paper and finally took hold of the nib of the pen, letting it go again so that it spattered ink all over the page. But Papa Burton was determined not to be disturbed. Dickey watched him out of the corner of his wicked little eye a moment as if to say, "You won't, eh?" then he lit upon his hand and tried to get hold of the other end of the pen. Failing of this, he hopped up Papa Burton's sleeve to his shoulder and began to sing close to his ear, a form of torture he usually reserved for Billy, the hired man, of whom he for some reason strongly disapproved. Of course, by this time the sermon was forgotten and Papa Burton awaited developments. They came quickly enough, for Dancing Dickey suddenly ceased singing, tweaked a long hair on the lobe of Papa Burton's ear, then, flying to his lapel, jumped onto his beard and stuck his incisive

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OUR STANDING IS INDICATED BY THE FOLLOWING ENDORSEMENTS

Belleville, Kans., May 10, 1905.

This is to certify that we are personally acquainted with Beecher & Beecher and know them to be honest, reliable men who can be depended upon to carry out any agreement into which they enter. (Signed) W. T. Dillon, Judge District Court; J. F. Angle, Cashier National Bank; R. B. Ward, Ex-State Senator; H. B. Swanson, County Treasurer; F. M. Johnson, President Belleville State Bank; F. N. Woodward, Ex-County Clerk.

Inland Empire Colonizing Company

Beecher & Beecher, Gen. Agts., Belleville, Kans. P. O. Box F.

little bill into the minister's mouth. This won the day and a great romp followed.

Dancing Dickey was no one's fool, and though he came at call gladly, he knew the instant any one wanted to put him into his cage, and down he would snuggle on the topmost round of a chair, close to the seat, and keep as still; but his sociable little heart could not stand it long, and presently he would betray himself by the tiniest cheep.

Every day he developed new tricks, and he became the pet of the entire parish. Many a man and woman who came to the parsonage weary or heartsore went away with a smile on their lips at the bird's winsome antics. Dear, jolly Dancing Dickey, no one can convince the Burtons that there ever was a birdling quite so bright and loving as he!-Adeline M. Jenney, in Congregationalist.

Hot Weather Troubles.

Hot Weather Troubles.

The season of hot weather is now upon us and while it is of inestimable benefit to crops, it will be well to consider some of the evils which come with it. About live stock barns, stables, pens, etc., dirt and filth that has accumulated during cold weather will, under the rays of a summer sun, become breeding places for disease germs and all sorts of parasites. Feeding and watering troughs are especially liable to become infected, and transmission from here to the body of animals is easy. It would be difficult to imagine a better incubator for disease germs than that furnished by a shallow trough containing a small amount of liquid food or water, exposed to the warmth of a summer day. Many stockmen have learned that a simple, effective and cheap method of cleansing and purifying such places is to use Kreso Dip freely as a disinfectant at the rate of one part of the dip to one hundred parts water. It is simply sprayed or sprinkled about the barns, stables and pens, where it destroys disease germs and insects, drives away flies, purifies the air and makes for sanitation. Upon the animals themselves, especially colts, calves, and plgs, lice, fleas and mites are very likely to be present in numbers, while swarms of flies and mosquitoes are a continual source of worry—the worry that puts stock back. Here again Kreso Dip is of great value. It is used as a dip for hogs, sheep and calves; as a hand-dressing for animals that can not be dipped, it is exceedingly convenient and effective. In the strength recommended it can be used freely without danger of injury and it readily destroys all sorts of skin parasites, cures skin diseases and improves the coat of the ani-

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mal. Many first-class breeders use it as a dressing for show animals. It makes the hide soft and promotes the growth of hair, making it fine and glossy, in the fleece making it soft and white, and it does no harm to animals or operator. The swine department of the Iowa Agricultural College says, "Of all the dips we have used we like Kreso best, for this reason—that it not only kills the lice but leaves the skin of the hog in such a good condition." In poultry quarters and about pet stock, Kreso Dip is quite as effective. The pleasant freshness and purity which follows its use in such quarters makes them entirely unoffensive to visitors and attendants, and the expenditure of time and money required is very slight indeed. Parke, Davis & Co., Detroit, Mich., manufacturers of Kreso Dip and other products of interest to stockmen, will gladly send full descriptive advertising matter to readers of Kansas Farmer who write for it.

When writing advertisers please mention this paper.

CHOROROR

CONDUC

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The Bome Circle

CONDUCTED BY RUTH COWGILL.

"Hearts and Hands."

If I had known in the morning
How wearily all the day,
The words unkind
Would trouble my mind
I said when you went away,
I had been more careful, darling,
Nor given you needless pain;
But we vex our own
With look and tone
We might never take back again.

We have careful thoughts for the We have careful thoughts for stranger,
And smiles for the sometime guest,
But oft for our own
The bitter tone,
Though we love "our own" the best.
Ah, lips with the curve impatient,
Ah, brow with that look of scorn,
"Twere a cruel fate
Were the night too late
To undo the work of the morn!
—Selee

-Selected.

Short Talks on Home Happiness.

The source of almost all the happiness in the world is in the homes. From the happy homes come influences that reach out to unimagined places. Little children, sad and unsatisfied people, the tempted, the uninspired, are given faith and an ideal, by the silent and unseen power that radiates from the homes of our land.

The inmates of the happy homes go out into the world in later years, to be the useful, helpful people of their generation. Parents-husbands and wives -who neglect the duty of self control, who quarrel and bicker, and indulge their own dissatisfaction in complaint and reproof, do not realize that it is not alone to their own immediate circle that they are responsible, but to the whole wide world whose happiness is to some greater or less extent in their keeping.

I have found in two or three little talks, from different homes which contain ideas and suggestions which are interesting in this connection.

Charles Wagner, who has become so. well and affectionately known through his book, "The Simple Life," has many helpful things to say in a later book, "By the Fireside." One of his little

SINCERITY BETWEEN HUSBANDS AND WIVES.

He says: "It is to the highest advantage of both that each should be kept frankly informed as to everything concerning their mutual interests, material or spiritual, and that each should bear part of the responsibility of these things. Especially should perfect sincerity be fostered and encouraged by each one's mode of speech, and the manner in which he receives the other's confidences. There are husbands and wives who have put an end to all frank understanding, by their narrow-mindedness and their unpleasant remarks. Man's sincerity should never be put too rudely to the test, it needs encouragement and most indulgent welcome. He who rebuffs it by inhospitality is likely to frighten it from his house. Even if there is surprise at learning certain things, and if what is disclosed can not always be approved, at least the candor should be acknowledged.

"With honesty and kindness on both sides, it is always possible to find a way out of our difficulties; but the moment one knows fear in the presence of the other, or prefers to conceal his sentiments for the sake of peace, the union has received a hard blow. Then, built by their own hands, between these two who ought to understand each other, there rises a wall that grows forever more and more impenetrable. Under the same roof and at the same table it separates one from the other, cutting off all real communication. Many a man comes to regret having left his wife in ignorance of things upon which his prosperity, his health, or his honor depended, but few husbands and wives ever regret having kept each other informed. How many misfortunes has this one habit not warded off! Husbands and wives must share frankly life and all that it brings. And let neither withhold his own confidence while demanding the confidence of the other; the advance

should come from both sides, heartily and loyally.

"Those who do not follow this course know not what they do. In all the trying events of life they become for each other a cause of unhappiness and a source of strife, and every such event shows them their isolation by uncovering their mutual dissimulations. The burdens are thus made heavier, the evils worse. O, the pity of the troubles that make discord between those who ought to bear them together!

"On the other hand, what a resource when two make one, and can count upon each other absolutely! No matter what happens, they bear it with one effort, saying to each other, "Thy pain is my pain." There is no thought of mutual accusation. Each regrets the faults of the other as though they were his own, and tries loyally to attone for them. Where harmony is lacking, every difficulty that presents itself is like an enemy with inside information; where harmony exists, the stronghold is well guarded, each is at his post.

"To work together, fight together, suffer together, never to find one's self shut out when he needs to be calmed or encouraged; to walk abreast, like comrades in arms—how good it makes life! what courage it gives us! The farther on we go, the more closely allied we feel; all the common past binds us together. And when this harmony is once experienced, it becomes the most cherished thing in the world, everything else is secondary. How often have I heard such words as these, spoken from hearts attuned to it: 'Come what may, so long as we two remain of one mind! ""

An exchange gives the following bright talk on

HOME COURTESY.

"Arriving one afternoon at a small town, a temperance speaker was met at the station by a soft-voiced woman, with a young face under silvered hair.

"As the two ladies were riding along the shady street, pupils from the public school began to throng the sidewalks. At a crossing, a bright-faced boy, about ten years old, stood waiting for the ladies to pass, and lifted his cap with a courteous gesture and sun-

"The hostess leaned from the carriage with a pleasant greeting, and the gray cap covered the brown curls again as they drove on.

'One of your Sunday School class?' ventured the speaker.

"'No,' replied the hostess, 'my only

son, Harry,' "As they approached the home, they nearly overtook a young girl of about fourteen and a middle-aged man, walking briskly. The man was listening in a deferential way to the girl's merry chatter. At the gate they paused, the man lifted his hat in a pasting salutation, as he held the gate for the girl to precede him; then bowing he passed

proaching carriage. "This is our home; that is my husband going to his office,' said the host-

on, as if hurried, not observing the ap-

"'And you have another guest-or is the young lady a caller?' asked the speaker.

"That is Margaret, our eldest child. She and her father are great chums,' replied the hostess.

"At the daintily appointed tea-table, the youngest child, a bashful girl of seven or eight years, had the misfortune to drop and break a fragile piece of china. Her face crimsoned with distress, and the violet eyes lifted to her mother's face were large with gathering tears. The speaker winced, dreading discordant notes, where all had been harmonious. 'I hope they will only send her away in disgracepoor little thing!' her thoughts ran, But even as she thought, with perfect courtesy the mother spoke the same conventional words of reassurance which she would have used had the honored guest broken her cup. Seeing the quivering lips of her cherished child—her gift from God—she added softly: 'Mother knows you are sorry, dearest. Just let it pass, and overcome it;' while the father, with

ready tact, engaged the speaker in conversation."

The sense of humor is a very useful part of the equipment for a hampy life. Thomas Nelson Page tells the following good story of

A MAN WHO OBEYED HIS WIFE.

"The squire laid down the law to those about him, but Mrs. Rawson-'Elizy'—laid down the law for him. This the old fellow was ready enough to admit. Sometimes he had a comical gleam in his deep eyes when he turned them on his guests as he rose at her call of 'Adam, I want you.'

"'Boys, learn to obey promptly,' he said; 'saves a sight o' trouble. It's better in the family'n a melojeon. It's got to come sooner or later, and the sooner the better for you. The difference between me and most married men around here is that they lies about it, and I don't. I know I belongs to Eliza. She owns me but then she treats me well. I'm sort o' meek when she's around, but then I make up for it by bein' so mighty independent when I'm away from home. Besides, it's a good deal better to be ordered about by somebody as keers for you than not to have anybody in the world as keers whether you come or stay."

Fruits In Their Season.

Fruit Snow.—Use 2 cups boiling water, 2 tablespoons corn-starch, 1 cup sugar; when cooked till clear, remove from the fire and add 2 cups fruit (red currants, raspberries, blackberries, oranges, or lemons), mashed and pressed through a colander. Beat the whites of 2 eggs and pour over it.

Berry Desert.-In 2 cups of water simmer 4 cups of any berries desired, sugaring to taste; boil 2 tablespoons of corn-starch in 2 cups water for 15 minutes; then stir in the fruit, turn it into molds and set it in a cold place to harden. Serve cold with cream.

Fruit Cups.—Stir 2 teaspoons baking-powder into 2 cups sifted flour; add water to make a soft dough. Butter coffee-cups, drop in a little of the dough, then two or three teaspoons of berries, or stoned cherries, or chopped peaches; then enough more dough to fill the cups about half full. Put the cups in a pan of hot water, set in the oven, cover closely and steam 30 minutes. Eat with sugar and cream.

Fruit Whip.—Take raspberries or strawberries or other fruit, sweeten to taste, mash and add 4 well-beaten eggs for every quart of fruit; stir together well and set on ice.

Fruit Flummery.—Line a dish with any stale plain cake; pour on a thin boiled custard, and on this spread a layer of sliced and sugared peaches, or sugared berries. Cover it with a frosting made of the whites of eggs beaten stiff with pulverized sugar. Serve at once.

Preserved Cherries.—Cook the fruit and sugar together for ten minutes. Then pour into a wide, shallow dish or porcelain platter, set in the hot sun for about six hours, then can. They are delicious preserved in this way.

Longevity of Animals.

Tortoises, pike, and carp have been known to live 150 years; eagles, ravens, and parrots, one hundred years and over. The elerhinoceros 70 years, the camel 50 to 80 years, the horse 20 to 40 years, the ox 15 to 20 years, the sheep 12 years, lion 20 to 40 years, dog 12 to 34 years, cat 10 to 18 years. From the number of layers of whalebone found in the jaws of certain large whales, it is computed that the longevity of this animal is at least 400 years.—Ex.

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Backache.

It has cured more cases of Leucorrhoes than any other remedy the world has ever known. It is almost infallible in such cases. It dissolves and expels Tumors from the Uterus in an early stage of development. That

Bearing-down Feeling,

causing pain, weight and headache, is instantly relieved and permanently cured by its use. Under all circumstances it acts in harmony with the female system. It corrects

Irregularity,

Suppressed or Painful Menstruation, Weakness of the Stomach, Indigestion, Bloating, Flooding, Nervous Prostration, Headache, General Debility. Also

Dizziness, Faintness,

Extreme Lassitude, "don't-care" and "want-to-be-left-alone" feeling, excitability, irritability, nervousness, sleeplessness, flatulency, melancholy or the "blues," and backache. These are sure indications of Female Weakness, some derangement of the Uterus. For

Kidney Complaints

and Backache of either sex the Vegetable.Compound is unequaled.

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Our Club Roll.

Mutual Improvement Club, Carbondale, Osage Ounty (1895) det Good Club, Berryton, Shawnee Give and Get Good Club, Berryton, Shawnee County (1992). Women's Literary Club, Osborne, Osborne Coun-

Women's Literary Club, Osborne, Osborne County (1893).
Women's Club, Logan, Phillips County (1892).
Domestic Science Club, Osage, Osage County (1888).
Ladies' Orescent Club, Tully, Rawlins County (1893).
Ladies' Social Society No. 1, Minneapolis, Ottawa ounty (1888).
Chalitso Club, Highland Park, Shawnee County, (1992).

(1902).
Cultus Club, Phillipsburg, Phillips County (1902).
Literature Club, Ford, Ford County (1908).
Sabean Club, Mission Center, Shawnee County, Route 2, (1899).
Star Valley Women's Club, Iola, Allen County

(1902).
West Side Forestry Club, Topeka, Shawnee County, Route 8, (1903).
Fortnight Club, Grant Township, Reno County

(1903).
Progressive Society, Rosalia, Butler County (1903).
Pleasant Heur Club, Wakarusa Township, Douglas County (1899).
The Lady Farmers' Institute, Marysville, Marshall County (1992).
Women's Country Club, Anthony, Harper County
Taka Embroidery Club, Madison, Greenwood
County (1902).

Women's Country Club, Anthony, Harper County
Take Embroidery Club, Madison, Greenwood
County (1903).
Mutual Improvement Club, Vermillion, Marshall
County (1903).
Prentis Reading Club, Cawker City, Mitchell
(county (1903).
Cosmos Club, Russel, Kans.
[All communications for the Club Department
should be directed to Miss Buth Cowgill, Editor
Club Department.]

ART STUDY PROGRAM.

Sir Edwin Landseer.

Roll-call—Items of interest about art.

I. The later years of Landseer's life. II. Famous friends and honors that came to him.

III. Description of one of his pictures

IV. Points to consider in looking at a picture.

The art study program for this week is simply the completion of the Landseer study.

The roll-call should be answered by some item of news or comment that pertains to pictures and their makers.

The material for the first two papers is given in a very interesting way in the little books which are suggested for this study.

For the third topic, a picture of a different style than the one given at the former meeting should be chosen. If a dog picture was chosen then, one of his beautiful deer pictures will do for this time. Many of his pictures have a story back of them, which makes them especially good for such an occasion as this.

The fourth topic could very well be given as a symposium by the club or by a chosen four of the members. There are many things to consider in judging of a picture which it will add much to one's appreciation to know. If several members give their opinion on the subject, many points will be brought out which the average observer would fail to consider.

A Japanese Party in Kansas.

One of the interesting clubs of Kansas is the Domestic Science Club of Manhattan, one of whose members has kindly sent us a calendar of their last year's work, together with an account of their last meeting, which must have been thoroughly delightful. The year's work has included a study of Japan, so that it was very fitting that this special meeting should be a Japanese Garden Party.

The mansion and grounds of the hostess were ideal for such a gathering. The front piazza had been transformed into a veritable Japanese summer-house, looking out over a smooth, green lawn shaded by beautiful elms and evergreens, while the air was made sweet by the fragrant blossoms of the snowy syringa bushes. The thick vines of the roses, clematis, honeysuckle and woodbine ran riot over the porch trellis, making a beautiful background to the group of ladies who received the guests in a bower of oriental loveliness under canopies of bright umbrellas. Gay lanterns, fans, screens, cushions, divans and straw mattings gave the color and Japanese

effect needed to make the picture per-

The ladies were gowned in the fashion of the "new Japanese woman" at such fest als white gowns embroidered or painted with the flowers of June in nature's colorings.

The guests on entering the reception hall were served with Japanese punch before passing into the drawing rooms where an orchestra was playing softly in an imprisoned alcove screened by white roses, asparagus fern and foliage.

The floral decorations of the back parlor were daisies and scarlet pop-The decorators took as their motto that of the Japanese floral artist: "Ben, Chi, Jin," meaning, God, Universe, and Man, each flower arranged to look its best without detracting from the rest.

The conservatory opening into the parlors was hung with crimson shades that shed a beautiful glow over a pretty Japanese tea-table decorated with iris. Here tea and cakes were served in the daintiest of Japanese ware.

The program was largely musical, all music being Japanese except in its excellence. The first number on the program was a piano solo, "The Heart of Hyacinth;" roll-call responses, "Fun-ny Stories;" music, "Japanese Love Song," One of the members gave a short talk on the value of federation and invited the club women to attend the district chautauqua to be held during midsummer at Clay Center. Another talented member then rendered a catchy little Japanese composition, "Hi, Hi, Hi, Hi, Hi," in a way that brought back all the echoes from "Fair Japan on the Pike" to those who had been there. Then followed an interesting talk on "Forestry for Club Work," and the song, "The Little Japanesey Baby," after which a paper on Japanese music was read and illustrated. This number was greatly enjoyed by the hearers.

A social hour followed the program, during which refreshments were served in the dining-room and tearoom. Pretty booklets with covers of Japanese cloth were given as souvenirs by the club officers and program committee of 1904-5.

It was with a feeling of genuine regret that the D. S. C.'s said goodbye to the last page of the fascinating study of Japan and it was with a still deeper feeling that they spoke their final adieus to their gentle hostess and president as they left her standing on the threshold of her flower-decked home—a true queen of clubs in her gracious and kindly administration.

THE INTERNATIONAL SUNDAY-SCHOOL LESSON.

(Copyright, Davis W. Clark.) A Preview for the Half-Year.

Under the International . System, which undertakes to complete the circuit of the Bible once in seven years, a return is now made to the Old Testament after six months spent upon the life of Jesus. The narrative is taken up just where it was dropped; namely, with the history of Judah, which is brought down to the latest date. The kingdom of Israel had passed out of existence through the Assyrian conquest. Rome was only half a century old. Kings had ceased in Greece, and the chief magistrates (archons) were ruling in their stead. Assyria was the supreme world-power. The discovery of the royal library at Ninevah, with its ten thousand inscribed tablets, furnishes remarkable confirmation of the sacred records. Sennacherib, Hezekiah, Isaiah, Josiah, Jehoiakim, Jeremiah, Ezekiel, Daniel, Ezra, Zechariah, Esther, Nehemiah, Malachi, are some of the characters, good and evil, that will pass in review. The Assyrian invasion, the finding of the Bible (the book of law), the Babylonian captivity, the return from exile, and rebuilding of the temple are some of the

Third Quarter.—Lesson I. 2 Chronicles 32:9-23. July 2, 1905. Sennacherib's Invasion.

The Nile was Sennacherib's real destination. But to reach Egypt he must needs pass through the tiny realm of the Hebrews. Nothing there could



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prove more than a momentary impediment. So thought the Ninevite. He was ignorantly omitting, however, one invincible factor from his calculations. That factor was the religious faith of the people whose country he was invading.

One courageous, patriotic soul stood out against the threatening-tide of invasion. The accident of royal office gave him added prestige. It was Hezekiah the king. He proceeded with ut-most discretion, taking into his counsel the princes and other men of influence. While he increased the water-supply of the city, he destroyed that of the district in which the enemy must needs camp. He strengthened the outer and inner fortifications of the city, and filled the arsenals with newly-made armor, offensive and defensive. He mobilized the army. He infused his own devout and dauntless spirit into the garrison, in an address which for faith and patriotism has never been surpassed.

Every precaution which the king had taken to preserve the morale of the garrison was necessary. The servants of Sennacherib, captain, enunch, and cup-bearer, appeared upon the neighboring hillsides and addressed the people, who crowded to the walls. They were sappers and miners sent to honeycomb the courage of the defenders of the city. They showed Machiavelian skill; but they failed. Even the threatening letters of Sennacherib fell short of their purpose. All flery darts were quenched by the faith of the people in God and His servant, their king.

In the last extremity Hezekiah betook himself to prayer. He believed the as yet unwritten Scripture, "The fervent, effectual prayer of a righteous man availeth much." He took every as if everything depended nition. upon himself. Then he prayed, as if everything depended upon God.

We may never known the precise way in which the Assyrian host was destroyed. But deliverance came to Jerusalem. The crimson shields of Assyria covered the pillars of the temple, so lately stripped of their gold to buy a worthless truce. Sennacherib returned in defeat, to die at the hands of an assassin. A great page of worldhistory turned that day. On the under side Assyria disappeared, and on the upper Babylonia came into view.

The Teacher's Lantern.

The prophet Isaiah describes the approach of the world-conqueror with nervous and poetic picturesqueness. Like a desolating tide his army reaches the height of Lebanon. The cedars feel his fire at their roots. Da-

Young Men Wanted

How would you like to secure a commission as an officer under Uncle Sam? If you are between Uncle Sam? If you are between the ages of 17 and 35 years, pos-sess the necessary common school education, are moral, persistent, and can pass the re-quired physical examination send me four one cent stamps to pay postage, and I will mail you a personal letter, literature, etc., that will tell you of the qualifications required for positions leading to promotions of high rank as an officer in our army or navy.

H. W. PHILLIPS, LOUISVILLE, KENTUCKY

mascus is a heap. Hamath, Arpad, Sepharvaim, Hena, Ivah, Calno, Carchemish, are the milestones in his march of ruin. He pauses at Michmash, the Rubicon of sacred history. Ramah, Gibeath, Geba, Benjamite cities, fall in one day. Two score "fenced cities" of Judah are taken. Jerusalem alone remains inviolate, and the ruthless invader even now stands at Nob and shakes his head defiantly at the daughter of Zion.

The extremity is reached. Jerusalem is an oasis in a desert of desolation. The destroying floods break in angry roar and foam about the rock of Zion. Hezekiah is as a bird shut in a cage. Sennacherib is about to thrust his hand into the holy city, as he has into the nest of every nation, and de-

In this darkest hour the patriotism of Hezekiah shines with incomparable splendor. He was no stoic-he was keeply sensitive to the situation. He was no hair-brained zealot, ready to impale himself on the enemy's pike. He maintained his poise. He had what has been aptly called the greatest possession; namely, self-possession.

Hezekiah at prayer for his nation is a scene worthy the greatest artist. Justified by the awful emergency, he probably entered the Holy of Holies, and, casting himself before the mercyseat, spread out before the Lord Sennacherib's grievous letter.

For three thousand years the destruction of Sennacherib has stood as a glorious memorial of answer to prayer,

of Burning Fuel Oil in the Central West Will Be Made at Refinery Opening July 4 Greatest Actual Test

Refinery Stock Will Be Advanced at Least 20 Per Cent July 3, and Present Allotment of Stock

May All Be Sold Before That Date---Better Telegraph Your Orders.

Company Now Owns and Controls 78 Oilers, Four Pumping Plants and Over 17,000 Acres of Oil Lands in Labette,

Montgomery, and Elk Counties---Has Quarter of a Million Dollar Refinery Practically Completed, Fran-

chises for Pipe Line to Navigable Waters, With Miles of Pipe Arriving Daily.

ing Fuel Oil.

There is hardly a hamlet in Kansas, or in adjoining States, that is not vitally intersted in the fuel problem. Now at Cherryvale on July Fourth, the management of the Uncle Sam Refinery Company will have an oil burner in operation showing the fuel oil as it heats the boilers. Come and see an actual test. If you are a miller or a machine man or running a thrashing machine take a good off at Cherryvale. You can have a good time and at the same time see something that may mean the saving of a good many dollars to you. Better send in \$80 and secure 1,00 shares of this valuable refinery stock and then be doubly interested. Remember that in ten days you may not be able to buy the stock at two times this price.

Will Organize Oil Granges and Estab-lish Oil Stations All Over Kansas.

The Uncle Sam Company now has in the State of Kansus alone over 1200 stockholders, and there are thousands of people whose good will and induence will back the company, because it is a home concern and offers a square deal to a home products. Kansans stand by each other and the Uncle Sam refined and other and the Uncle Sam refined and the right side now and invest some month of the other in while safe and increase in value several fold. The people are behind the company and that means protection of your property. You can now secure 5,000 \$1 shares for \$400, by sendin a week the stock that will be sold at this price may all be gone. Oil granges will be organized all over the State and distributing stations at all important points.

Railroad Switch Long Ago Completed

The Uncle Sam Company has crowded things from the word 9c. While others have talked it has done the work. A railroad switch was completed into the refinery grounds over 18x weeks ago. Byerything is now nearly completed for work next month, when the company will commence refining oil and turning gold into the treasury.

Upwards of Thirty Miles of Lateral

룹

Pipe lines now run from the refinery in every direction connecting the greater part of the Cherryvale field. Every minute, hour and day the oil is pouring from the various fields into the refinery storage tanks. Other lines are being laid and soon over 200 wells will be connected up with the refinery tankage. Pipe Lines Completed

is backing this great independent refinery and there is brations ever known in Southern Kansas. Special trains will bring in HE Uncle Sam Company have just what they have advertised from the start and are making special efforts to assist people to come have gladly joined hands one of the greatest celethousands of business men who will combine business with pleasure great independent refineceiving unlimited finan-

to Cherryvale and see for themselves. They with the Cherryvile fire department to hold on July 4, and join Kansas in dedicating this ery, one that has over 1,000 Kansas stockho

port of practically the entire State and is cial aid from all over the United States.

The above photo was taken about a week ago at Wheeling, W. Va. The Uncle Sam Company is securing the pipe for the Kansas City pipe line from the Wheeling Steel and Iron Works of Wheeling, W. Va. This is the greatest independent pipe company in the United States. Write to them and they will tell you that they are rushing their shops to crowd our shipments of pipe, as the Uncle Sam Company now has the first big refinery completed, and will stand and will soon crowd her to completion. Remember that the very minute that the pipe line reaches Kansas City you will not be able to buy the stock that you can now secure at \$30 per thousand shares at even six times that price. There is a banner on each side of each car of pipe in this train and the Uncle Sam pipe constitutes the entire train. oto of Solid Train of Pipe for Uncle Sam Pipe Line Pulling Out of Wheeling. W. Va., Wednesday, June 14, En Route for Kansas. White Spots Are Banners on Engine and Cars. Contraction of the Contraction o

UEL users of the Central West are especially invited to visit Cherryvale on July 4, where, at the refinery grounds, every man can From Winfield, headed by Camon's Military Band, and from Wichita, led by Sanford's Military Band, will come large and enthusiastic delegations. From Northern Oklahoma and all over Southern Kansas great crowds will come to Cherryvale. The G. A. R. commander of Kansas, Patrick Henry Coney, assisted by other boys of the '60s, who are still in the fight for justice and a square deal and to down opgathering in the Central West, backed by righteous indignation, that will checkmate the present oil robbery in the oil fields and the Uncle Sam Company, with its pipe lines and refinery, owned and controlled PECIAL trains will be run into Cherryvale from all directions pression, will light the fires under the Uncle Sam furnaces. All Kanmostly by Kansas taxpayers and home people, is a forerunner of a successful campaign which will yield handsome profits to every investor.

see for himself the actual heating value of fuel oil. By trunk and lateral pipes this great independent enterprise will lay down nature's own fuel to the taxpayers of the Central West at living prices. Company now owns and controls enough oil lands on which to drill over 6,000 producing wells. Owning its own production and its own transportation facilities, the Uncle Sam Company offers a practical making investment, one that will increase twenty-fold.

Stockholders in Every State and Ter. refinerles the first of ritory in the Union and in Canada able Kan Company is not only to burn in protected by the strong arm of the State just what

is ed with the Uncle Sam Company, it was pany does not intend to try and make orpression of the company on John a wide-small fortune on his investment in this awake, energetic company, one that is a stock and at the same time give the condy winner and one that will pay you divise stock. Settles but some as dends on your investment. Doesn't it of this stock. John our band now over the look good to you? It does to hundreds of 3000 strong and help women?

and make profit, we will soon pay for the line in the and 9 cents on installments. It very man a saving of freights alone? Size up this in great demand. Figuring on a ent in this proposition from every standpoint and tive estimate, at least \$800,000 we the con- you will find it one of real merit. It is realized to the treasury of the rous some not impossible for the stock now selling before the treasury of the low over at \$80 per 1,000 shares to go to \$10 per share | With this money the course.

the first of the f in Every State and Ter-e Union and In Canada Stockholders in Every State ritory in the Union and in C and Old Mexico.

The Uncle Sam Company is not only to protected by the strong arm of the State judy Kansas and backed by public approval to but is securing financial aid from every tis State in the Union. Men are working for rist everywhere. The company is strong had hourly growing stronger. Better buy had Mondo shares now at \$500 and come down generate July Fourth.

Room for Over Six Thousand Producing Wells and Oil Enough to Supply the Refineries and Feed the Pipe Line, When Field Is Developed, for More Than a Century.

Owns and Thousand enty-Eigl Plants a

Lines.

It's not every day that you have such a practical and profit-making enterprise to affering you a square deal, and stock at of dividends and be a bread winner for your family after you are gone. Stop and consaider for a minute. The Uncle Sam Company has a great production of oil that the room on oil lands for over 6,000 addition-family aftery with hundreds of stockholms in the surrounded its consuming territory with hundreds of stockholms and builts, and with the crude was product to start with can not help but be a great money-maker. This will absolutely be your last chance to secure and think twice before you let this opporting think twice before you let this opporting think twice before you let this adout the way of this stock at present prices. Better Not tunity go by. If you don't see this ad unad the check and the graph the secretary to we hold your stock or it may soon be taken a contriber.

Quarter of a Million Dollar Refinery Practically Completed and Paid

The Grea

The first in the West has been confinery. It is it holds 1,60 fortune, but The Uncle Sam Company has crowded the work from the word go with great vim. They now have nearly completed one of the largest and most up-to-date

Patrick Henry Coney, Kansace mander of the G. A. R., Assisted by Other Able Men, Will Start the Wheels of the Refinery Going on

te, Montgomery, and Elk Coun-ncle Sam refinery holds some test and most choice developed reloped oil properties to be

Camon's Military Band from Winfield, be Sanford's Military Band, from Wich-or ita, and a Parade Several Miles Long K With Fifty Teams Hauling Pipe for With Cherryvale-Kansas City Pipe Unit of the Cherryvale

PERSONNEL OF COMPANY

er, Jr.

The above-mentioned men placed the Publishers' Oil Company on a dividend-paying basis in less than one year. The great bulk of the Publishers' stock sold at from 8 to 12 cents per share.

Stock Will Be Advanced 20 Per Cent on Monday, July

a few more days the Uncle Sam Company will sell Treasury Stock

A00.00	5,000 Sh		
•		•	

The Stock is Non-Assessable, and the par value is \$1.00 per Share.

INSTALLMENT OFFER GIVES EVERY MAN A CHANCE.

notice the company will sell stock as follows on insaliments:

4,000 shares \$40 cash, with 5 monthly pay;
monthly payments of \$16, 5,000 shares \$60 cash, with 5 monthly pay;
monthly payments of \$2, 10,000 shares \$200 cash, with 5 monthly pay
monthly payments of \$48, 20,000 shares \$200 cash, with 5 monthly pay without ith 5 mo with 5 with 5 with 5 with 5

HOW TO SEND MONEY

Cherryvale, Kansas TUCKER, Jr., Secretary,

Ils Now Almost Completed. Photo June 10 One of the Great Batteries of St

This photo was taken a few days ago and show the furnaces as it is nearing completion. At this day car loads of machinery arrive on the refinery graph as we would like to. This is one little corn Buy your stock now and come down and look it ov member that the stock advances 20 percent on July

Make your checks, drafts or money orders payable to the Uncle Sam Company or to H. H. Tucker, Jr., Secretary. Write your name plainly, tell us how, or to whom you want the stock issued, and we will forward stock by return mail, and also send you weekly report thereafter, thus keeping you fully posted. Address,

In the Dairy

Experiments with Dairy Cows. Excerpts from Bulletin No. 125, Kansas Experiment Station, by D. H. Otis.

(Continued.) CREAM TESTING

With the rapid increase of hand separators the subject of accurately testing cream becomes a very important one. It is impossible to test cream correctly in the same way you test milk. The reason of this is, that the cream may vary in its content of butter-fat from 12 or 15 per cent to as high as 50 or 60 per cent. On account of this variation, the weight of a given volume varies considerably. As the Babcock test is based on weight rather than volume, it stands to reason that this variation would produce inaccuracy in results where cream is measured. With milk the per cent of fat is much more uniform, and samples can be measured that will weigh so closely to the amount required that it answers all practical purposes. Furthermore, in handling cream a large number of air bubbles are liable to be incorporated in it; this will also give us considerable variation in a given volume. In measuring the column of butter-fat in cream, special attention must be paid to the temperature; for best results this should be 140° F. If it varies much above or below this there will be considerable contraction or expansion of the fat, which will produce inaccurate results.

Variations in the Tests of Cream .-At first thought one might expect that, with the same separator, the same speed, and no change in the cream screw, the test of cream would be uniform. Experience shows that this is not the case. The amount of water used in flushing the bowl will vary enough to give a variation to the cream. The speed of the machine may not always be the same, even with the same man running it. The faster the machine is turned the thicker the cream. The rate of feed will cause variation; if the milk is fed slower the cream will be thicker. The temperature of the milk may not always be the same, the warm milk usually producing richer cream. Where the milk is from the same cows and the conditions as to separation are practically uniform, there ought to be, and doubtless will be, much more uniformity in the richness of the cream, especially if the proportion of the milk and cream remain

During the past winter the dairy department made a test of the different hand separators, and although in this test every effort was made to have the conditions just as uniform as possible, is was still noted that the variation of the per cent of cream was considerable in all the machines that were tested.

Results with two of these machines have been taken, from figures furnished by one of our senior students, Mr. E. W. McCrone, who did considerable work along these lines for his graduating thesis. The results obtained with all the machines show practically the same variations as the illustrations given in Table LV.

TABLE LV.—Variations in per cent of butter-fat in cream separators under normal and practically uniform conditions.

9.	arator No.		cek test.
No of trial.	emperature of milk.	Milk.	Cream
1	89 90 90 90	4.0 4.1 4.2 3.2 4.1	38.4 38.8 33.8 39.2 32.8
Sep	arator No.	. 2.	
1	90 93 90 93 90	4.2 4.1 3.6 4.2 4.0	44.3 34.4 30.9 35.0 36.1

It will be noticed that in trials 2 and 3 under hand separator No. 1 the temperature of the milk was not exactly the same; the per cent of butter-fat was only 0.1 per cent different, while the per cent of cream varied 5 per cent. In trials 4 and 5 it will be seen that the temperature was exactly the same, but the test varied from 3.2 to 4.1; when it came to cream, the lowtesting milk produced the highest-testing cream.

With hand separator No. 2 the temperatures varied somewhat, but where the test is the same the high-temperature milk does not seem to produce as rich cream as the low-testing milk. However, the difference in temperature of three degrees would make comparatively little difference. In trials 1 and 2, it will be seen that there is a variation of 10 per cent in the richness of the cream.

These great variations in the per cent of cream with milk at the same temperature, with practically the same per cent of butter-fat, hardly seems creditable, and yet this is true with every machine we have tested. Just why there should be this great variation we are unable to explain.

Variations in Test of Skim-Milk.—As cream and skim-milk are so intimately associated, and as we do not have one without the other, it is interesting to note the variations that take place in the skim-milk. In the following table we have arranged the different hand separators according to numbers, rather than by names, for the reason that if we give the names one might draw comparisons between the different machines that would be unfair, for the reason that there are other considerations to be taken into account.

TABLE LVI.—Variations in the test of skim-milk with different hand sepa-

	ators.	
Separator No.	Range of variation.	Average test.
1	0.03 to 0.06	0.04
2		.04
3	.03 to .05	.03
₫	.03 to .08	.05
5	.03 to .08	.05
6	.01 to .04	.03

The tests of this skim-milk were taken at the same time as the tests of cream mentioned above. It will be seen that, although there is a great riation in the per cent of cream, practically none of this variation is due to an increase of butter-fat in the skim-

Effect of Low Speed upon the Test of Skim-Milk.—With two of the machines a test was made of running the milk through the machine as about threefourths of the listed speed. The results are shown, as follows:

TABLE LVII.-Test of skim-milk with

listed	speed.	tourths
Separator.	Run.	Test.
1	1	.16
1		.19
2		.25

In this test it will be seen that the amount of butter-fat in the skim-milk is materially increased by lowering the

Effect of Cold Milk on the Test of Skim-Milk .- A temperature of 90° F. is

BESTOFSEPARATORS ACTUALLY FREE OF COST.

This is really the fact in the purchase of a DE LAVAL CREAM SEPARATOR. Any reputable person may buy a DE LAVAL machine on such liberal terms that the machine actually pays for itself.

And it not only does this the first year, in which it saves its cost, but goes on doing it for fully twenty years to come. In the face of these facts buying trashy "cash-in-advance" separators, or any other than the best, is penny wise, dollar foolish. Such machines quickly lose their cost instead of saving it, and then go on losing instead of saving.

There is no possible reason why any buyer of a Cream Separator should be content with less than the DE LAVAL, and there never was a more promising time to make this most profitable of all farm investments.

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THE CREAM CHECK SYSTEM

Will make your cows pay more money in actual cash than you can realize by any other system.

It Is Done This Way:

Use one of our separators bought on easy payment plan and deliver your cream to one of our 500 cream receiving stations. In return you get our check two times a month with a complete statement of your account attached.

At each of our stations you can see your cream weighed, sampled and tested. Our butter-fat prices are quoted in advance of delivery and the test of each delivery of cream enables you to know at once the actual cash value of each can delivered. If you need money before checks are due we advance cash on your account. If you can't reach one of our stations you can ship direct. If you have no separator and want one, write us for information about the De Laval and we will tell you how a little cream each month will pay for one.

Ask us any question you please about any phase of the dairy business.

THE CONTINENTAL CREAMERY CO. TOPEKA, KANSAS.



ever devised. A fair trial on your own farm under your own conditions. We can save you from The easiest to clean, the easiest to run, the best skimmer. \$20.00 to \$30.00. Write and we will prove it to you. We will also send you a free book, telling just how the Cleveland is made and how it is sold. Write to-day. The Cleveland Cream Sep. Co., 34 Michigan St., Cleveland, O.



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usually regarded as the most favorable for separating milk. To ascertain the effect of separating milk at a lower temperature, four machines were used in separating milk at a temperature of about 75° F. The results are shown as follows:

TABLE LVIII.—Test of skim-milk when whole milk was separated at 75 deg. F.

eparator.	Run.	Test.
1	1	.075
1	2	.055
2	1	.085
2	2	.04
3	1	.175
3		.10
1	1	.15
4	4	

It will be noticed that the cold milk did not have as much effect on the test of the skim-milk as the slow speed; nevertheless, there is considerably more loss than where the separators are run at their listed speed.

Test of Skim-Milk from Aquatic, Hydraulic or Dilution Separators.-During the last few years a large number of so-called separators that have passed under the names of "Aquatic,"
"Hyrdaulic," "Dilution," etc., have been extensively advertised and sold at from \$8 to \$15 dollars apiece, the agents claiming that they would do the work of a high-priced separator. Prof. Ed. H. Webster, formerly dairyman at this station, made a thorough test of one of these machines. Out of 184 pounds of whole milk testing 3.2 per cent butter-fat put into this machine, he drew off 168 pounds of skimmilk and 16 pounds of cream. The cream tested 11.1 per cent and the skim-milk 1 per cent, or a loss of 1.68 pounds of butter-fat in 168 pounds of skim-milk

Another example that came under our observation was that of a man that lived at Kinsley, Kans., His so-called separator held ten gallons of milk, which at the time of the test contained 4 per cent of butter-fat. After standing for five hours only three gallons of the thinnest skim-milk was drawn from the bottom and found to contain 1.2 per cent fat. If all the skim-milk had been drawn it would have undoubtedly tested higher. In both of the above tests no water was added to the milk.

In Bulletin 151 of Cornell University, two tests are given where as much water as milk was added to the milk. In each test six trials were made. In the first one the skim-milk tested 0.76 per cent to 1.2 per cent, with an average of 0.94 per cent butter-fat. In the second the skim-milk tested from 0.66 to 1.4, with an average of 1.01 per cent butter-fat. A test of the skim-milk from a Cooley creamer, made at the same time, varied from 0.9 to 1.2, with an average of 1 per cent butter-fat.

These tests indicate very plainly that a large amount of butter-fat is left in the skim-milk of these so-called separators, and, as far as the test of skim-milk is concerned, they are about as efficient as any ordinary tin can of the same size.

Test of Skim-Milk Under the Gravity System.-Milk that has had the cream removed by hand, in the old basin, pan or crock system, contains much more butter-fat than separator milk. An illustration of this is furnished in a sample tested by an advanced student in the dairy couse, where he found that the whole milk tested 4.4 per cent butter-fat, and the skim-milk left by hand skimming 1.7 per cent. that produces 6,000 pounds of milk per annum, this would mean a loss of 102 pounds of butter-fat during the year. The loss of fat by hand-skimming will vary a great deal by the way the milk is handled.

Summary.—In the portion of this bulletin devoted to testing the aim has been to show some of the causes of the variations in the tests of milk, cream, and skim-milk, and also to show the range of variations that may take place under varying conditions. The reader will observe that there are a large number of variations for which we are unable to give any adequate reason, but they nevertheless do occur, and we should know the fact, and later may be able to discover the cause. On account of these variations more or less friction is liable to occur between the creameryman and the patron. Neither party can afford to have

any friction of this kind, because each is dependent upon the other for business success, and both should know that variations do take place, and both should also be willing to investigate, and, if possible, find out where the variation comes in, and not feel that the other is trying to cheat him. The more we know about tests the less positive we are that we can tell just what will take place, and the more we know about it the more lenient we ought to become.

Successful dairying involves considerable testing, both of individual cows and of milk and cream sent to the creamery or skimming-station. No dairyman can afford to continue to milk cows unless he knows what they are doing, and he is unable to know this without weighing the milk and testing it from time to time for its butter-fat content. For this reason it behooves every dairyman to have a hand tester, at least; it will soon pay for itself from a monetary standpoint, besides adding much interest and satisfaction to the owner who is milking the cows. It will enable him to know which cows are his money-makers and what cows are his debt-contractors.

The feeding and handling of cows and cow-products is a business proposition, the same as handling dry goods or groceries, and should be done on business principles. The Babcock tester and the milk-scales will show where the leaks come in and in which direction the efforts should be directed to remedy the trouble.

Butter-Fat not the Whole Thing in Milk.

In an address before the annual meeting of the Holstein-Fresian Association of America, June 7, 1905, Mr. A. A. Cortelyou, president of the association, presented the following considerations:

I wish to state, that much attention should be given to impressing upon the public that but a small portion of the virtue of milk as food is due to its butter-fat content. It is vastly more important to Holstein interests and to the future of the human race to demonstrate and make universally known, that it is the solids other than fat in the milk, upon which our children thrive and grow, and which makes milk the one absolutely indispensable food; and further, that milk produced by a vigorous race of cattle gives vitality and strength.

Those races of cattle yielding a small amount of milk, containing a reltively high percentage of fat, are well known to be able to raise but a small percentage of their offspring and such milk fed to human beings produces the same results.

Thus, I say, that attention should also be given to developing and making known those virtues which Holstein milk is, to us, well known to possess, viz., the great and indispensable quality and value of the solids other than fat.

And upon this point, of the value of milk containing from 3 to 4 per cent fat and 8 per cent and upwards of solids not fat whole communities have gone astray, and milk standards for States have been made and enacted into laws, which totally disregard the fact that the majority of cows do not produce milk of the fat percentages necessary prevent their being adjudged adulterated. No State is worse off in this respect than Massachusetts, which State requires for a large portion of the year, milk to show 3.7 per cent fat; and indeed, the standard adopted by the United States Government, doubtless under influences largely leaning towards the smaller races of cattle requires 3.25 per cent fat.

Proper and persistent effort should be made to convince the people in those States having these unreasonable standards that this sort of legislation secures to them neither purity of product nor a desirable quality.

The most important work of a public nature which, in my opinion will operate to advance the interests of owners of Holstein cattle, is the promulgation of a better knowledge among consumers of milk, of the dietetic value of the grade of milk produced by our

cows. It is a well-known fact that the offspring of those breeds of cattle whose milk is rich in butter-fat are reared with the greatest difficulty. Such offspring appear to be deficient in vitality and especially subject to stomach and bowel troubles which are fatal in many cases; and it is now being more generally recognized by physicians and consumers that milk rich in butter-fat is an improper food for young children and is deleterious in its effects and produces generally the same effects in human beings as in animals.

These results are now said by scientists to be due to several causes and primarily to the excess of fat in the milk, and in the case of children, particularly, are probably also due to the extraordinary character of the fat globules, which in these small breeds of cattle are extraordinarily large, and entirely unlike those in Holstein milk, which nearly corresponds with human milk in its solid contents.

It is also becoming widely recognized that the milk from the large and vigorous races of cattle, especially Holsteins, possesses another quality, characterized by Professor Carlyle as vitality, and that this quality is communicated to the consumer, whether man or beast. Thus we have large, strong, vigorous calves when reared upon Holstein milk, and puny, weak ones from those reared upon milk rich in fat; and human beings, fed upon milk possessing the characteristics of Holstein milk, are likewise healthy, strong and vigorous.

The investigations of the Storrs Connecticut Agricultural Experiment Station, as published in Bulletin No. 31 wholly confirm these assertions and I commend this bulletin to you as worthy of most careful study,

Professor Carlyle was right in affirming that "there is such thing as vitality in milk and that it is of equal, if not greater importance than its chemical composition, especially for the milk supply of cities, and there can be no question but that the vitality of milk is closely associated with the vitality of the animal producing it."

I will quote generally from the Storrs Bulletin: "In the country at large the product of one cow in five is sold to be consumed as whole milk. It will not be denied that milk varies in its food values and in its composition. The experiments were conducted for the purpose of showing the relative food value of solids from milk poor and rich in fat content when fed to young growing animals."

"For the first forty days the pair of pigs receiving the skim-milk gained sixty-two pounds; the pair receiving milk poor in fat 54.8 pounds; and the pair receiving milk rich in fat 42.2 pounds. For the next ten days the gain was for each pair, twenty-two pounds, twenty and one-half pounds, and three and one-half pounds respectively. From fifty to sixty days the results were twenty pounds gain, twenty-one pounds gain and six pounds loss

INTERESTING TO WOMEN



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respectively. After forty days of feeding, the pair receiving the milk rich in fat were affected with loss of appetite and diarrhoea and finally did not consume enough to sustain life."

And I wish here to interpolate that there can be little, if any, doubt that the same effects are produced on young children by the feeding of milk of certain breeds of cows, that is clamored for by a class of health officers in our cities and urged upon the parents, especially those who are able to afford a high-priced product. Not unfrequently the milk of such cows is also dangerous from other causes.

To proceed with the quotation. "The pair receiving milk poor in fat content as well as those receiving skim-milk, maintained good appetites until the close of the trial."

"The failure of a pound of milk solids in rich milk to make equal or better gains than a pound of solids in the poor milk was not due apparently to lack of nitrogenous material, but rather to the excess of fat or to the character of the fat."

"Larger fat globules were found in the richer milk, and this fact, in connection with the digestive disturbances, would seem to indicate the reason for the larger gains from a pound of solids with the poorer milk.

"Fat globules in human milk are smaller than the fat globules in cows' milk. If it is safe to reason by analogy from the brute to the human, then whole milk containing a low per cent of fat would seem to be better suited for infant feeding than whole milk high in per cent of fat."

It seems to be that this closing paragraph is one to be taken to heart by every person.



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The Poultry Hard &

CONDUCTED BY THOMAS OWEN.

Chicken Diseases.

We have always contended that it is much easier to prevent chicken diseases than it is to cure them after they once get hold of a flock, and that if fowls have the proper care and attention, an epidemic of disease will rarely attack them. Now comes Miller Purvis, a National authority on poultry, and bears out our contention. He says: "The truth is that this matter of disease among fowls is one on which we have very little information. We learned a good many years ago that disease is about the most unnecessary thing ever found in a poultry-yard. Except a stray case of roup, we have not had a sick hen in ten years where the trouble could not be traced directly to some carelessness in care or feeding, and usually roup is distinctly traceable to carelessness. Roup, gapes, cholera, indigestion and apoplexy are about the only diseases that poultry-keepera must contend with. Gapes indicate the presence of a parasite which no foresight could have prevented, but once its presence is known it may be circumvented by keeping the chicks off the grass when it is wet with rain or

"Every other affliction named above, may be prevented by using proper care in feeding and housing. Feed only good, sound feed, in such quantities as will be eaten clean between every feed. Keep the houses clean, light and warm in winter and clean, dimly lighted and as cool as possible in summer. If these simple things are done, disease will never get hold of the average flock, unless cholera is brought into the flock by direct infection, a thing which is always easily preventable. Feeding medicine to a flock of hens usually means that they will stop laying at once and not begin again until they recover from the effects of the medicine."

Skim-Milk a Chicken Ration.

A product which is plentiful on many farms is skim-milk, and its value as a food for young calves and pigs is well known. That it may be used to advantage in feeding young chickens has been demonstrated by experiment. Its nutritive value is quite high, since the separation of the cream from the nilk leaves behind the greater part of the nitrogenous substances, thus giving the skim-milk considerable nutritive value. The Indiana Experiment Station, not long ago, made some interesting trials for the purpose of determining the value of skim-milk in making up a ration for young chickens. 'Two lots of ten chicks each, from 4 to 6 weeks of age and as nearly uniform as possible, were selected. Beginning on July 11, the feeding tests were continued to September 5, during which time the two lots were fed under identical conditions, except that one lot received in addition to the food given the other, all the skim-milk they could drink. Both lots were given all they could eat of a mixed food consisting of two parts crushed corn, one part bran and one part ground oats. They were fed three times a day, except on Sundays, when an increased amount was given at the morning and evening meals. Both lots were also given all they could consume of cracked bone, cabbage, lettuce and water, of which no record was kept.

It was found that the lot receiving skim-milk ate more of the mixed food and made a more rapid and satisfactory gain than the lot which did not receive skim-milk. Milk-fed chickens made an average weekly gain of 4.6 ounces, those receiving no milk, 2.62 ounces. The most rapid increase in weight occurred at those periods when the largest amount of skim-milk was consumed. The skim-milk is considered especially valuable as a food for young chickens during the hot, dry weather and becomes of less importance as they grow older and the weather becomes cooler. The vessels

in which the milk is fed should be frequently scalded to keep them clean and wholesome.

Poultry-Raising.

P. H. JACOBS, IN FARM AND FIRESIDE.

DISTINGUISHING FRESH EGGS.

Those who sell only strictly fresh eggs are sometimes annoyed on discovering one of doubtful age among those collected, and as some hens are prone to steal their nests, it occasionally happens that a large number of eggs will be found, frequently several hens laying in the same nest. In summer the hens prefer a cool and quiet place, being partial to comfort, and if the flock in large, the hens being at liberty to forage, the number of eggs laid in nests outside of the poultry-house may reach into dozens. If the farmer or poultryman can distinguish the fresh eggsthose only a day or two in age-from those laid previously it will be of much advantage. Of course, as all well know, eggs can be examined with a strong light in a dark room, and all eggs should be clear. Each egg contains an air-bubble situated a little to one side of the large end. In a newlaid egg this air-bubble is very small, occupying a space that is barely noticeable, but the air-bubble grows a little larger each day. If it is as large as half an inch square (it is rather oblong in shape) the egg is not fresh. The best way to learn is by comparison. Use an egg just laid, and closely examine the air-bubble with a strong light. Make a test of several, place them aside, and the next day compare them with eggs laid on that day, and so on with the third and fourth days or more A few days' practice will render the matter of selection very easy, and after a while it will not be necessary to use a strong light, as the egg can be examined by holding it to the sunlight. In other words, to give a rule, the smaller the air-bubble, the fresher the egg. When a fresh egg is cooked, the contents adhere to the shell, while the shell of a stale egg will peel off like the skin of an orange. Fresh eggs require a longer time to boil than stale ones, and the fresh ones respond more readily in frothing when beaten.

THE LATE CHICKS.

It may be profitable to allow the hens to bring off broods as late as June, but much depends upon the location in reference to the market. Chicks hatched in June will not be marketed until about September, and if the weather is then warm they must be shipped to market alive, or packed in ice if killed. The facilities for transportation, as well as the prices expected, should never be overlooked with late-hatched chicks. If the hens are thrifty they will probably prove more profitable as layers rather than to hatch broods, but as there is considerable time lost in preventing sitting hens from bringing off broods it is considered by some as economical to allow them to hatch chicks, as if broken from sitting they may lay but few eggs before attempting the work of in-The late-hatched cubation again. chicks are less troublesome so far as feeding is concerned, but are more exposed to the attacks of lice during the summer, frequently making but slow growth. It will pay to hatch late chicks for the home table, as they can then be disposed of at any time.

Poultry Pointers.

An Illinois woman sold 52 capons recently at \$1.32 each. It cost but little more to raise them than the ordinary chickens.

Charred bone as well as charred corn is good for poultry for the sake of the charcoal, which is very healthy for them, purifying the blood and aiding digestion.

If your fowls are confined in pens, remember that nothing is better for them than green stuff of some kind. Grass cut in short lengths is relished and lettuce and waste cabbage are both eaten greedily. The green stuff

is almost a necessity to penned fowls. Scientists say a hen fed on wheat alone gets in a day one and a half times as much carbonaceous matter as

she needs for an egg, but only onesixth as much protein as is needed. This is a hard and embarrassing mathematical problem for a creature with no more sense than a hen. Help balance her ration with clover, alfalfa, bone,

Jewell County Hens.

W. F. Metz rather broke the record this week on the egg question, shipping out from Jewell County four cars, 1,600 cases, 48,000 dozen, or 5,76,000 eggs. Do you know that this means \$6,249 paid out in this county for eggs in just one week? Do you realize that this means that the hens of the county earned 33 cents this week for every man, woman and child in the county? The hens are steady money-makers for the county.-Mankato Advance.

Wonderful Effect on Human Flesh.

Faribault, Minn., Nov. 1, 1904.

Faribault, Minn., Nov. 1, 1904.

Dr. B. J. Kendall Co.,
Enosburg, Falls, Vt.
Gentlemen:—I have been using Kendall's Spavin Cure for the last eleven weeks, in all about fourteen bottles, and must say that it has done wonders for me.

Two years ago an enlargement came on my side; I had it lanced shortly after which caused a running sore and the doctors were unable to heal it. It caused me much pain and trouble, and I became almost helpless; could not walk or dress myself for over a year. The last doctor I went to in August said I would live about two weeks. Having heard of your liniment, as a last hope I determined to try it; it worked wonders for me; within two weeks the sore was entirely healed and has remained so. I can get around fine; in fact I have been husking corn for two weeks; have gained 24 pounds, have a good appetite and sleep well, and expect to be entirely well in a short time, thanks to your liniment. I have had no doctor treat me since using your liniment, which is the BEST IN THE WORLD, and I shall always praise it as it saved my life. Respectfully yours.

J. F. COMFORD.

There is a Big Difference.

Laundry soap is intended for coarse work, such as washing clothes. Tollet soap is suited to taking the dirst from the skin. Shaving Soap is different—or ought to be. It should thoroughly moist-ought to be being hold them firmly against the ought to be. It should thoroughly moist-en the hairs, hold them firmly against the razor, and then leave the skin smooth, cool and velvety. Williams' Shaving Soap will do just this. The J. B. Wil-llams Co., Glastonbury, Conn., have made three-quarters of a century, and it is the "only soap fit for the face." In another column they offer to send a free trial sample. Be fair to your face and send for it.

Eggs may be bought while cheap and put away for winter use. A lady started with \$10, bought eggs at 8 to 10 cents in summer, preserved them and sold in January. Her profit for eight years was \$163.00. Why not make money on eggs yourself? To preserve them costs % cent per dozen. But any person can get the desired information by addressing the Chemical Supply Co., 827 Quincy Street, Topeka, Kans., enclosing 14 two cent stamps.

Golden Wyandottes

inners at Topeka Poultry Show, January 1905, hen. 3 pullet, 2 cock, 2 cockerel. A few birds for sale. Eggs, \$2 per 15. J. D. MOORE, Route 2, Blue Mound, Kans.

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WHITE WYANDOTTES - Large birds, farm range. Eggs, 75 per 15. Henry Harrington, Clearwater, Kans.

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FOR BUFF PLYMOUTH ROCK eggs, from best stock, send to Gem Poultry Farm; 15, \$2; 30, \$3.50. Pure M. Bronze turkey eggs, 11, \$3. C. W. Peckham, Haven, Kans.

TO GIVE AWAY-50 Buff Orpingtons and 80 Buff Leghorns to Shawnee county farmers. Will buy the chicks and eggs. Write me. W. H. Maxwell, 921 Topeka Ave., Topeka, Kans.

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Won in Every One of Them. If they win for us, their offspring ought to win for you, Eggs, \$1.50 per 15. Elmwood strain of white Wyandottes also hold their own in the show-room. Eggs, \$1 per 15.

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TOPEKA SUPPLYHOUSE, Top

The Farmer as a Citizen. (Continued from page 673)

at a great sacrifice of valuable time. Can we wonder that some who do not realize the full importance of voting do not vote?

Duty as a citizen includes not only voting but also many other things which go to make the community better; such things as taking an interest in the schools of the district, and of the State, especially the Kansas State Agricultural College, the rural mail routes, good-roads movements, farmers' institutes, churches, and the social life of the neighborhood. An active interest in all of these shows what is usually known as the public-spirited

To have the reputation of being public-spirited is not merely a useless honor; it often is worth a great deal to one in good, hard cash as well as in the satisfaction of feeling that one's duty is done. There are a great many people who, through motives of public spirit alone, will give their patronage and even go out of their way to favor a man who is known to be unselfish enough to take an interest in, and give his support to public enterprises.

So, although the farmer may think that these things take time that he can ill afford, he will find that in the long run a little time spent in "being a citizen" is as profitable an investment as could be made. National banks will often favor the man who has a reputation as a man of public affairs in preference to the man who is never heard of except in this own immediate neighborhood.

The time is coming, however, when the farmer will be the leader in public works as well as in wealth and other elements of happiness. In the past the great men in the politics of the country have been from the farm. Why, we may ask, is it no longer so? Not because the farmer has deteriorated in any way in intelligence, but rather that he has become more interested in other pursuits, such as scientific agriculture, and the interest fermerly taken by the most intelligent farmers in politics has thus been turned aside. This state of affairs will come to its proper balance before long, then we will have farmers who will be leaders in politics, in education, in wealth, and in the comforts of living secured by the efforts of the rural legislators for the benefit of the rural population.

Insect Assistants.

The Government imports two kinds of bugs, says William E. Curtis, in the Chicago Record-Herald:

First, parasites and natural enemies of other insects that injure grain, fruits, and vegetables; and second, insects that are useful because of their products or their beneficial relations to cultivated plants.

In the first class are perhaps a thousand species, but only a few of them have been of notable value. When I asked C. L. Marlatt [formerly of Manhattan, Kans.], the entomologist of the Agricultural Department, who is in charge of experimental field work, which foreign bug had been most useful to the people of the United States, he thought a while and then expressed the opinion that the parasite introduced from Russia to drive out the Hessian fly had probably accomplished good although the Australian lady-bird had been exceedingly

"The Hessian fly, which attacks wheat," said Mr. Marlatt, "has caused the farmers of the United States an average loss of \$50,000,000 a year for ten years. In 1900 it cost the farmers of Ohio and Indiana alone \$45,000,000, and but for a parasite which has kept the Hessian fly in check, the loss to the wheat crop would be not less than \$200,000,000 annually. This parasite is a tiny fly which was sent over by mail from Russia some years ago. It is the natural enemy of the Hessian fly and feeds upon it, and the latter has practically disappeared on account of it.

'The Australian lady-bird," continued Mr. Marlatt, "is the next in imporfance of the natural-history importations of the Government, but its name is misleading, for it isn't a bird at all. It's a little red beetle about a quarter

Market Market

of an inch long, with black markings, and is scientifically known as the vedalia. It feeds voraciously both as larvae and as a beetle upon the white scale, a curious insect from Australia which settles upon the leaves, fruit and twigs of oranges and other citrous trees, covers itself with its own secretion of white wax and poisons and kills the trees. Fifteen years ago it was rapidly devastating the orange districts of California, when Dr. Koebele of the Agricultural Department was sent to Australia to discover what was holding it in check there. Koebele is a genius of German birth, and was once a 'beer slinger' in a New York saloon. He used to spend his Sundays and holidays in the country around New York, hunting bugs. He is a natural entomologist, and in some way was discovered by the late Professor Riley and brought to Washington, where, as soon as he had an opportunity to study, he developed into one of the most expert discoverers, collectors and students of insects. He is now in the Hawaiian Islands, employed by the planters to protect their crops against insect invasion.

"In Australia Koebele discovered that the little beetle I have described was the greatest enemy of the white scale. He collected a large number of them from the trees, brought them to Southern California and Hberated them in the orange groves, where they have protected the trees from that time to this like policemen. The State Board of Horticulture cultivates them and looks after them now. They have been shipped from here to Italy, Portugal, Egypt, and South Africa to do the same work, and they have done it

"That was the beginning of insect importation into the United States. Since then we have brought in many other varieties. Next in importance perhaps is the Asiatic lady-bird, a black beetle one-eighth of an inch long, with two red spots, which I brought from Northern China in 1902 to kill the San Jose scale, which is as vicious an enemy of apples, pears, peaches, plums, and other deciduous trees as the white scale is of the orange, and it works the same way. The San Jose scale is so called because it was introduced into this country at San Jose, Calif., by a missionary from China with some fancy plants he brought over from that country, and I was sent to China by the Secretary of Agriculture to discovere whether there was any means of controlling it. I found the Asiatic lady-bird and sent several hundred home through the mails. Their rations were sent with them and they reached Washington safely, but, during the winter of 1902-1903, all died except two. From that pair, however, during the season of 1903, we bred more than five thousand beetles and have kept breeding them ever since. We have distributed them throughout the Southern and Eastern States where they give promise of ultimately becoming very important. They have done the best in Georgia. The San Jose scale has caused an average loss of \$10,000,000 a year to fruit-growers. and every man who has an orchard suffers, but the little beetle will keep it down. Last summer in one orchard in Georgia between thirty and forty thousand beetles were bred from fifty that were sent down from this Department, and they are all busy. The work is only beginning.

"Next in importance is the South African fly. It destroys what is known as the black scale, which affects citrous trees. It is so called because it produces a black fungus which covers the trees and the fruit. It does not always kill the tree, but puts it out of business. The only means we had of protecting orchards from this pest was to fumigate the trees with gases, which is very expensive, costing an average of 50 cents per tree, and as many millions of trees were affected you can form a slight idea of the cost of protecting them.

"The South African fly, however, is doing the business. It is very minute. not larger than a pinhead, and destroys the black scales by laying its eggs in them. It was discovered by accident by Mr, Lounsbury, an entomologist of

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JUST ISSUED

Farm Grasses of the United States

By W. J. SPILLMAN

Agrostologist, U. S. Department of Agriculture

An intensely practical discussion of the farm grasses of the United States of America is presented in this volume. It is essentially a resume of the experience of American farmers with grasses, and it is safe to say that no other work has covered the ground so thoroughly. No attempt has been made to give a connected account of all the grasses known in this country, but the aim has been rather to give just the information which a farmer wants about all those grasses that have an actual standing on American farms. The whole subject is considered entirely from the standpoint of the farmer. One of the most valuable features of the book is the maps showing, at a glance, the distribution of every important grass in the United States; and the reasons for the peculiarities in this distribution are fully brought out. The principal chapters treat on the grass crop as a whole and the relation of grass culture to agricultural prosperity, meadows and pastures, the seed and its impurities; the bluegrasses; millets; southern grasses; redtep and orchard grass; brome grasses; grasses for special conditions; haying machinery and implements; insects and fungi injurious to grasses, etc. etc. The methods followed on some pre-eminently successful farms are described in detail, and their application to grass lands throughout the country is discussed. The discussion of each grass is proportional to its importance on American farms.

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LEWIS & CLARK EXPOSITION

Portland, Oregon, June 1 to Oct. 15, 1905.

South Africa, from whom Dr. Howard, of the Department of Agriculture, got some samples in 1900. They were distributed by Alexander Craw, of California, and have been very successful in that State. He bred several hundred thousand last year, sent them throughout the State, and they took hold of the black scale in such a way as to make orchardmen jubilant.

"Just now," said Mr. Marlatt, "the kelep, or Guatamala ant, is attracting a great deal of attention because it can overcome the boll weevil, a worm which eats into the flower of the cotton plant and kills it. This weevil caused a loss of \$40,000,000 in Texas in 1903, and as much more in 1904, and has done similar damage in other cotton States. Mr. O. F. Cook, a botanist of the Agricultural Department, who was studying cotton-growing in Gautamala, discovered in certain localities that the boll weevil did not appear, and he began to hunt for the reason. He noticed a large ant, half an inch long, living in small colonies in the ground, and after studying its habits, discovered that it was the natural enemy of the weevil and hunted for it in every cotton field. When it finds a weevil it stings it, benumbs it and carries it off for food. Cook dug up ninety ant-hills, put them in fruit-jars and shipped them over to Texas, where they were released into certain cotton-fields last summer. They did good work, but there is some doubt about the ability of the ants to endure our cold winters. Unless they can hibernate and breed rapidly, they will be of no particular value, for we would not be able to import enough from Guatamala to protect more than a few fields.

"These are the insects that destroy pests, but another class, equally useful in its way, has been imported in large numbers from foreign countries. For example, there is a curious, minute fly belonging to the bee-family, which has the habit of laying its eggs in young figs and fertilizing them so that they grow in size, flavor and richness. The best figs of commerce which come from Syria and other Asiatic countries could not be produced but for this insect. They have it also in Italy, Algeria, and other countries where figs are produced in large quantities. Until we introduced it into California the fig-trees in that State were barren. The young figs fell before they were ripened. Under the instructions of Dr. Howard, the chief entomologist, W. T. Swindle, an agent of the Department, who happened to be in Italy, collected some of the insects and sent them over to us in Washington. They were released in a fig-orchard in California, owned by Mr. Roeding, near Fresno, in the San Joaquin Valley. The immediate result was a crop of fine figs, even superior to those shipped from Smyrna, and as soon as the public understood what had happened, hundreds of new orchards were started and the industry is destined to be very large and profitable.

"Several new races of honey-bees are now being imported by the Bureau of Entomology from the Caucasus, Cypria, and the Mediterranean. They are gentler, tamer and more easily handled than our domestic bees and are better honey collectors. We are also trying to cross our domestic bees with wild bees from the Philippines and Java in order to get a more vigorous race. These wild bees work principally in the trees. They build enormous cones attached to the limbs and fill them with honey, and we hope to get a better strain by crossing.

"Bees and other insects are very important agents in the fruit and flower business. The big yellow and black bumblebee, as we call it, is almost essential to the production of fruit and flowers. We could scarcely get along without him. If it were not for him and other insects our orchards would run down. Almost all flowers and fruits must be cross-fertilized—that is, pollen must be brought from one to the other in order to produce, and this work is chiefly done by wild and tame bees. As an illustration, the bumblebee is a native of this country and does not appear in Australia. Down in Australia they had no clover because they had no bees. The bees not

only get a great deal of honey from the clover blossoms, but they fertilize it in the act of getting the honey. Hence, as soon as our bees were imported into Australia and set to work in the fields the clover began to grow and has developed there as well as here or any place else," said Mr. Mar-

Then you think the Judge will be satisfied if you say, "Lord, I had so many names in my visiting book, and so many invitations I could not refuse. that it was impossible for me to attend to those things."-George Macdonald.

Our Special Club List.

By special arrangement with publishers of leading magazines, dailies and other publications, we are able to offer Kansas Farmer subscribers the most attractive club offers ever made by any publisher or subscription

All combination offers include one year's subscription to the Kansas FARMER. If more than one other publication is wanted subtract \$1 from the combination offer and the remainder will show the amount necessary to add for each additional paper wanted. If your subscription is already paid in advance you can send the KANSAS FARMER to some other address. In taking advantage of our Special Club List it is not necessary that all papers should go to one address; they

may be sent to any address you name.
If other periodicals are wanted that are not named here, write for what you want, as we have the lowest clubbing rates with all publications. Address all orders to Kansas Farmer Company, Topeka, Kans.

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Kansas Fairs in 1905.

Following is a list of fairs to be held in Kansas in 1905, their dates, locations and secretaries, as reported to the State Board of Agriculture and complied by Secretary F. D. Coburn:

Allen County Agricultural Society: J. T. Tredway, Secretary, Iola; September 12-15.

12-15.
Barton County Fair Association: W. P. Feder, Secretary, Great Bend; August 29-September 1.
Brown County—The Hiawatha Fair Association: Elliott Irvin, Secretary, Hiawatha; September 5-8.
Butler County Fair Association: H. M. Balch, Secretary, Eldorado; October 2-6.
Chautauqua County—Hewins Park and Fair Association: W. M. Jones, Secretary, Cedar Vale; October 17-19.
Clay County Fair Association: Walter Puckey, Secretary, Clay Center; October 10-12.

Clay County Fair Association: Walter Puckey, Secretary, Clay Center; October 10-12.
Coffey County Agricultural Fair Association: Henry Jackson, Secretary, Burlington; September 19-22.
Cowley County—Eastern Cowley County Fair Association: J. M. Henderson, Secretary, Burden; September 27-29.
Cowley County Agricultural and Live-Stock Association: W. J. Wilson, Secretary, Winfield; October 3-6.
Crawford County Agricultural Fair Association: Frank McKay, Secretary, Pittsburg; September 18-23.
Elk County Agricultural Fair Association: E. B. Place, Secretary, Grenola; September 19-21.
Finney County Agricultural Society: A. H. Warner, Secretary, Garden City.
Ford County Agricultural Society: Nic Mayrath, Secretary, Dodge City; second week in August,
Franklin County Agricultural Society: Carey M. Porter, Secretary, Ottawa; September 5-9.
Greenwood County Fair Association: C. H. Weiser, Secretary, Eurekia

Greenwood County Fair Association: C, L. Weiser, Secretary, Eureka; August

Harper County—Anthony Fair Association: W. W. Bird, Secretary, Anthony, August 7-11.

Harvey County Agricultural Society: J. T. Axtell, Secretary, Newton; September 28-30. Jefferson County Agricultural and MeReference: DAVIS & SON Live Stock Commission Merchants South St. Joseph Mo.

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Sirs:—We take this means of informing you that we have in NITRO-LINE DIP, one that requires only one application by dipping or spraying to thoroughly exterminate all vermin such as LICE, NITS, TICKS, PARASITE GERMS, FLEAS, MITES, GNATS, FLIES, SCREW WORMS, MANGE, SCAB, GALLS, SORES, INSECT BITES, IMMUNES AGAINST CHOLERA, PLAGUE, FEVERS, and TUBERCULOSIS, of all ANIMALS AND FOWLS, while, as you know, two applications within ten days are necessary with other good dips, and very often the results are unsatisfactory even after two dippings, whil we guarantee NITROLINE DIP to do the work with first dipping or spraying, besides NITROLINE DIP costs only 75 cents per gallon in 50 gallon barrels or \$1.20 in 5 gallon cans, or \$1.25 in 1 gallon cans, delivered at your station, by freight. A 50 gallon barrel will make ready for use 3,750 gallons of dip. You can not afford to be without such a remedy about your premises.

NITROLINE SPECIFIC is an infallible remedy for internal diseases among animals and fowls, and will cure if given in time CHOLERA, PLAGUE, TUBERCULOSIS, COL C, WORMS, GRUBS, ROUP, LIMBER NECK, COUGHS, COLDS, Etc. Price \$2.00 per gallon delivered. It pays to dip or spray your stock with NITROLINE DIP, so says many customers who have been using NITROLINE DIP for the past two years.

We have a little book which tells how much it pays; it's yours for the

All orders shipped same day received. Come to see us when in St. Joseph. Our office is corner Lake & Illinois Avenue, where you get off the car at Stock Yard.

CARNES & COMPANY SOUTH ST. JOSEPH, MISSOURI

chanical Association: Geo. A. Patterson, Secretary, Oskaloosa; September 5-8.
Jewell County Agricultural Fair Association: Henry R. Honey, Secretary, Mankato; September 5-8.
Marshall County Fair Association: E.
L. Miller, Secretary, Marysville; September 12-15.
Miami County Agricultural and Mechanical Fair Association: W. H. Bradbury, Secretary, Paola; September 25-28.
Mitchell County Agricultural Association: P. G. Chubbic, Secretary; Beloit.
Montgomery County—Coffeyville Fair and Park Association: R. Y. Kennedy, Secretary, Coffeyville.
Morris County Exposition Company: M. F. Amrine. Secretary, Council Grove; September 26-28.
Nemaha County Fair Association: W. H. Fitzwater, Secretary, Seneca; August 30-September 1.
Neosho County Fair Association: H. Lodge, Secretary, Erle; September 26-29.
Neosho County—Chanute Fair and Improvement Association: A. E. Timpane, Secretary, Chanute; August 28-September 2.
Ness County—Agricultural Association:

provement Association: A. E. Timpane, Secretary, Chanute; August 22-September 2.

Ness County Agricultural Association: J. S. Wagner, Secretary, Ness City; September 6-8.

Norton County Agricultural Society: M. F. Garrity, Secretary, Norton; August 29-September 1.

Osage County Fair Association: E. T. Price, Secretary, Burlingame; September 5-8.

Reno County—Central Kansas Fair Association: A. L. Sponsler, Secretary, Hutchinson; September 18-23.

Rice County Agricultural Fair and Live-Stock Association: E. E. Potter, Secretary, Sterling; September 4-6.

Riley County Agricultural Society: Jno. W. Cone, Secretary, Riley; August 8-11.

Rooks County Fair Association: E. S. Williams, Secretary, Stockton.

Saline County Agricultural, Horticultural and Mechanical Association: H. B. Wallace, Secretary, Salina; September 18-22.

Shawnee County—Kansas State Exposi-

3-22. Shawnee County—Kansas State Exposi-ion Company: C. H. Samson, Secretary, Snawnee County Association; Secretary, Topeka; September 11-16.
Smith County Fair Association: Milo Dimond, Secretary, Smith Center; August 22-25. ust 22-25.
Stafford County Fair Association: Geo.
E. Moore, Secretary, St. John; August

23-20. Wilson County—Fredonia Agricultural Association: J. T. Cooper, Secretary, Fredonia; August 22-25.

\$21,35 to Asbury Park, N. J., \$21.35 and return, via Nickel Plate Road. Tickets good via New York City. Dates of sale, June 29 and 30 and July 1 and 2, with extreme return limit of August 31, by depositing ticket. Chicago City Ticket Offices, 111 Adams St. and Auditorium Annex. Depot, LaSalle and Van Buren Sts., on Elevated Loop.

Publisher's Paragraphs.

Ertel's Hay-Press book is yours for the asking. No other catalogue or hay-press book is so complete and explicit. The man who is going to spend his money for a hay press and whose men and



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For advertising purposes we are giving away FREE a strictly "A Grade" 860 Buggy and we pay the freight. Send us 20 cents in stamps or silver to help pay postage, etc., and we will mail you full particulars how to get this buggy free. Does not cost you a cent.

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PRESERVES EGGS **Better Than Cold Storage**

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Farmers, why not save your eggs at a cost of three and one-third cents per dozen and sell them next winter at 30 cents?

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TARK DEST DY TEST.—78 YEARS. WE PAY CASE
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But let patience have her perfect work that ye may be perfect and entire, wanting nothing.-James 1:4.

teams are to operate it does not want to purchase such a machine blindly. He is usually "from Missouri" and this book is intended to answer all his questions and show him just what points are necessary in a good hay press. A postal card to Geo. Ertel Co., Quincy, Ill., will bring you the book free, without obligation on your part to purchase. Its 80 pages of hay-press hints will surely be worth the price of a postal to you.

One of the most valuable of the late contributions to knowledge will be found in Bulletin No. 133 of the Pennsylvania Department of Agriculture. It is entitled "The Improvement of Corn in Pennsylvania," and was written by Mr. DeWitt C. Wing, of the Breeder's Gazette. Mr. Wing is a young man of marked ability who has already made his mark in agricultural and live-stock literature. This bulletin contains a chapter on the origin and history of corn, followed by other chapters on the botany of corn, the corn belt, importance of the corn crop, the uses of corn, corn-breeding, races of corn, cultivation, etc. To the farmer of the corn belt this bulletin is of much interest and value and reflects credit upon the thoroughness and ability of the author. It is published by authority of Secretary N. B. Critchfield, Harrisburg, Penn., of whom copies may be had.

NOTICE.

State Grain Inspection Department.

Under the provisions of an act of the Legislature of the State of Kansas passed and approved by the session of 1903 to establish grades of grain by the Grain Inspection Commission, appointed by the Governor of Kansas, under the provisions of said act said commission will meet at the office of the Governor at 10 o'clock on the 12th day of July, 1905, to fix and establish grades for all kinds of grain handled in the State of Kansas, to be in effect on and after said date.

The said commission will hear all persons, or their representatives, interested in the grain business at said time and place above mentioned.

G. W. GLICK,
J. M. CORY,
J. T. WHITE.

Done at Topeka, Kans., this 20th day of June, 1905.

The Markets

Bioticioscoccionicoscoccionicoscoccionicoscoccio Kansas City Grain Market.

Kansas City Grain Market.

The light offerings of old wheat sold quite readily at steady prices in most instances. New wheat receipts amounted to about fifteen cars, all of which was soft. It sold rather slowly, but at steady prices, chiefly to mills in this vicinity. The railroads reported 64 cars of wheat received, compared with 67 cars a week ago and 31 cars a year ago. Sales of car lots by sample on track, Kansas City: Hard wheat—No. 2, 1 car \$10,1, nominally \$30c@\$1.01. No. 3 hard, 1 car 97c, 4 cars \$90c. No. 4 hard, 2 cars 88c, 1 car 87c, 8 cars 86½c, 1 car 85c, 1 car 84c, 1 car 87c, 8 cars 86½c, 1 car 85c, 1 car 84c, 1 car 87c, 8 cars 86½c, 1 car 85c, 1 car 84c, 2 cars 81c, 2 cars 80c, 2 cars 81c, 2 cars 81½c, 2 cars 81c, 2 cars 80c, 2 cars 81c, 1 car 10c, 1 car hot 60c. Soft wheat—No. 2 red, 2 cars new 94c, 1 car new 93½c. No. 3 red, 2 cars new 90c, 1 car new 93½c. No. 3 red, 2 cars new 90c, 1 car new 89c. No. 4 red, nominally 75c@90c. Rejected red, nominally 60c@80c.

Corn prices were ½c lower at the start, but recovered the loss. Receipts were large, but offerings on the floor were only moderate. The demand was good. The railroads reported 137 cars of corn received, compared with 67 cars a week ago and 39 cars a year ago. Sales of car lots by sample on track, Kansas City: Mixed corn—No. 2, 4 cars \$90c, 13 cars \$9½c; No. 3, 4 cars 50c, 6 cars 49½c, 8 cars 49½c; No. 4, 3 cars 49c, 2 cars 48c; no grade, 1 car 46½c, 1 car 46½c. White corn—No. 2, 1 car 46½c, 1 car 46½c. White corn—No. 2, 1 cars 50c, 1 car 46½c, 1 car 50c, 1 car 46½c. The few cars of oats offered brought steady prices. The railroads reported 4 cars of oats received, compared with 8 cars a week ago and 5 cars a year ago. Sales of car lots by sample on track, Kansas City: Mixed oats—No. 2, 1 car 25c. White oats—No. 2, 1 car 32½c; No. 3, 1 car 32c. Rye—No. 2, nominally 30c; No. 4, 1 car 25c. White oats—No. 2, 1 car 32½c; No. 3, 1 car 32c. Rye—No. 2, nominally 94c in 100-lb.

No. 3, 1 car 32c. Rye—No. 2, nominally 65@68c. Corn-chop—Nominally 94c in 100-lb

Corn-chop—Nominally \$4c in 100-15
| sacks.
Timothy—Nominally \$2.60 per 100 lbs.
Flaxseed—Nominally \$1.15.
Bran—Nominally 68@69c.
Shorts—1 car 80c.
Millet—Nominally \$1@1.05 per cwt.
Red clover and alfalfa—\$9@11.50 per 100

lbs.
Cane-seed—Nominally \$1@1.05.
Kafir-corn—Nominally \$0@82c cwt.
Linseed cake—Car lots, \$27 per ton; ton lots, \$28; per 1,000 lbs, \$15; small quantities, \$1.60 per cwt. Bulk oil cake, car lots, \$26 per ton.
Castor beans—\$1.35 per bushel in car lots. lots. Barley—No. 3, 2 cars 38c.

Kansas City Live-Stock Market.

Kansas City Live-Stock Market.

Kansas City, Mo., Monday, June 26, 1905.

The cattle market turned out considerably better last week than it promised the first two days. After the bad break Tuesday, 15@30c on beef steers, the run dropped down, and about half the loss was recovered. However, three weeks have passed since the steady decline on beef steers set in, and prices are 40@60c lower in that line, and \$1@1.50 below best time, in April. It is reported from the country that a good many feeders have taken their cattle off corn and put them on pasture, preferring to take chances later than to accept the loss present prices would mean.

The outlook today is better for the cattle market this week than it has been at the beginning of any week in the last month. Only 8,000 cattle are on the market here, and not a very large share of them beef steers, and Chicago has a

Special Mant Column

"Wanted," "For Sale," "For Exchange," and small want 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.

SIX SHORTHORN BULLS—13 to 16 months old, eligible to registry, mostly reds, all sired by British Lion 183692 and out of the finest breeding—mixed Bates, Booth and Cruickshank. Price, \$40 each if taken soon. Address D. P. Norton, Dunlap, Morris County, Kans.

FOR SALE—My entire herd of registered Shorthorn cattle, consisting of 19 head of the Bates, Pomona, Marys, Primrose, and Scotch topped families, all of the large beef type; straight red. Address W. H. Shoemaker, Route 2, Narka, Kans.

HOLSTEINS—Bull calves cheap while they are little. H. B. Cowles. Topeka. Kans.

FOR SALE—Red Polled cattle, male and female D. F. VanBuskirk, Bluemound, Kans.

YOUNG HOLSTEINS—Both sexes; from butter-bred cows and descendants of Sarcastic Lad, World's Fair Champion and other selected sires, Attractive prices. Hillcrest Farm, Greenwood, Mo.

FOR SALE—10 Registered Galloway bulls, cheap. J. A. Darrow, Route 3, Miltonvale, Kans.

FOR SALE—Eight good, registered Shorthorn bulls, four straight Cruickshank, good ones, and prices right. H. W. McAfee, Station C, Topeka, Kansas.

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

small Monday run. Prices to-day are 10@ 15c above the close of last week, and about like last Monday. Unless the promising market of to-day draws in an extra heavy run to-morrow and Wednesday, the market should hold good balance of this week. Best beef steers in the last week sold at \$5.70, but the bulk of steers brought \$4.50@5.25. Cows and helfers have not changed much in a week, \$2.75@4.75, bulls lower, \$2.25@4, veal calves were lower first of the week but have recovered, at \$4.75@5.50. Feeders are some lower, stockers about steady, at \$2.75@4.55, stock calves mostly under \$4.

The hog market declined rapidly first of last week, but when receipts grew smaller, after Wednesday, the market began to improve, and has kept it up, including to-day. Market is \$600c higher to-day, top \$5.45, several loads at \$5.42%, bulk of sals \$5.35@5.42%. Weights below 220 pounds sell highest. Receipts at the five Western markets were more than 25 per cent greater last week than same week last year, yet there is a place for all of them, and the packers appear eager for all that come.

Sheep market lost 15@25c last week, good kinds of lambs about steady, others and yearlings shading downwards. Native ewes sell at \$4.25@4.50, wethers up to \$5, yearlings \$5.25, spring lambs \$6.25@7. Supply to-day 4,000 head, mostly natives, market strong and active.

J. A. RICKART.

South St. Joseph Live-Stock Market.

South St. Joseph Live-Stock Market.

South St. Joseph, Mo., June 26, 1905.

The importance of keeping supplies in Chicago well within the limits of the demand on Mondays and Wednesdays has shown a comparison of the markets of to-day and last Monday. A week ago, Chicago was glutted with 25,000 head and the decline was measured with a 10g25c break, costing the shippers there on that day from \$50,000/75,000. This was followed by similar declines at all other markets and the loss to the country was terrific. To-day Chicago only had 16,000 and instead of a severe decline, prices were advanced 10c not only at Chicago but at all other points, which is equivalent to from 20g30c per cwt. to the producer. If the country will proceed in this method, the greatest of the ills of the cattle-producer will be remedled. The local supply was exceptionally light for the first commercial day of the week, and many more than were offered could have been sold to the advantage of the shipper. Offerings consisted largely of common to fair light and medium weight steers which sold within a range of \$4.15 \text{(3.40}.90. Good to choice export and dressed beef steers of medium to heavy weight would have sold from \$5.1565.40, and fancy offerings would probably have sold around \$5.5065.60. The demand was exceptionally good in the quarantine division, and prices moved fully a dime higher. The market on butcher stock is very quiet, as there were not enough fresh arrivals to make a showing. Packers all seemed to have liberal orders, however, and trading was active and strong to 10c higher on all classes. Bulls and stags were of good sale and generally steady. Native veals were lower but steady with quarantine offerings 25c, higher, good kinds selling up to \$6. The week starts out with a good healthy tone to the stocker and feeder trade, the demand being very strong and prices fully steady with the close of last week. The inquiry is principally for good to choice yearlings and calves and high grade two's, good fiesh feeders would also sell to

HORSES AND MULES.

TO TRADE for good jennets, good registered standard-bred stallion. H. T. Hineman, Dighton 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 loth 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.

FOR SALE—Say! I have some fine, big-boned, broad-backed Berkshires, brood sows or pigs. Want some? Write me; turkeys all sold. E. M. Melville, Eudora, Kans.

FOR SALE—Boars for immediate use. Sons of Perfect I Know, out of daughter of Ideal Sunshine. Geo. W. Maffet, Lawrence, Kans.

AGENTS WANTED.

WANTED—Canvassers for a fruit can holder and ealer. Territory given. J. W. Adams, 741 Tennes-ee, Lawrence, Kans.

AGENTS WANTED Sell 81 bottle Sarsaparilla for 36c; best seller; 200 per cent profit. Write today for terms. F. R. Greene, 118 Lake 8t., Chicago

SEEDS AND PLANTS.

WANTED—English blue-grass or meadow feacue seed. Correspond with us. Kansas Seed House, F. Barteldes & Co., Lawrence, Kans.

PLANTS FOR SALE—Strawberry, blackberry, dewberry, rhubarb, grape-vines. Write for special prices. Address J. C. Banta, Topeka, Kans.

FOR SALE—Seed Sweet potatoes; 6 kinds; write for prices to I. P. Myers, Hayesville, Kans.

FOR SALE—Speits, 60c bu. f. c. b. Two registered Galloway bulls. Wheeler & Baldwin, Delphos, Kans., or S. B. Wheeler, Ada, Kans.

SEED CORN—Both white and yellow at 90 cents per bushel; cane, millet and Kafir-corn seeds. Prices and sample on application. Adams & Walton, Osage City, Kans.

FOR SALE—Spelts, 60 cents per bushel; Soy-Beans, \$1.25; Red Kafir-Corn, 50 cents; sacks free in ten bushel lots. Seed extra nice and clean. C. M. Garver, Abliene, Kans.

POULTRY.

Neosho Poultry Yards

This years breeders in Rose Comb R. I. Reds for sale. Prices reasonable. Breeding stock of Orping-tons all sold. J. W. Swartz, Americus, Kans.

FARMS AND RANCHES.

DO YOU WANT to buy a farm, ranch, city property, or buy, sell or exchange a stock of merchant-dise, or want a bargain in some of my wheat farms, write me F. C. Purdy, Sterling, Kans.

CHEAP HOMES—80 acres, 60 acres second bottom, good alfalfa land, \$1,800; 80 acres, 40 acres cultivated, \$1,000; 80 acres, 5-room house, level land, 12,00; 160 acres nice smooth land, near town, \$3,000; 160 acres, 5-room house, all smooth, \$3,200; 160 acres, 50 acres cultivated, balance pasture, partly rough, \$2,000. We have all sizes cheap. Try us at Florence, Minneapolis or Salina, Kans. Garrison & Studebaker.

WANTED TO TRADE—Good Topeka city property for 160 acre or 80 acre farm within 8 miles of Topeka, Osage or Salina. Frank Johnson, 1121 West 3d Street, Topeka, Kans.

200 ACRE WELL IMPROVED FARM for \$3,200, to close an estate. Address Hurley & Jennings, Emporia, Kans.

FOR SALE—Country grocery store, modern, up-to-date, good trade, good business. Price, \$900; \$450 cash, \$450 time. Stock in good brick building, cheap rent. Write F. C. Purdy, Sterling, Kans.

cheap rent. Write F.C. Purdy, Sterling, Kains.

FOR SALE—The best fruit and dairy farm of 80 acres in Kans. 40 minutes drive from Topeka, finely improved, large barn, 7-room house, 3 chicken houses, large young orchard, hanging full of choice varieties of apples, 400 peach tress, 2 acres grapes, 1 acre blackberries, 50 cherry trees and other fruit in smaller quantities, 10 acres aifalfa, 8 acres clover and timothy, 25 acres tame grass, pastured, 2 acres Kaw bottom in potatoes, 15 acres corn, 5 acres in cane and millet, enough timber for fuel and posts. The above is a very pretty and picturesque place on rural free delivery and telephone; cannot be beat for a home. Also sell the cows and horses, implements, etc. My health will not permit me to farm, the reason for selling. Can give terms on part, equal to or better than rent at 6 per cent. Will give possession as soon as a deal is made. Address R. F. D., care Kansas Farmer, Topeka, Kans.

FOR SALE—In Osborne, Russell, and Rooks Counties, improved farms, pasture lands, two twelve hundred acre ranches, mercantile stocks. Will trade one ranch for good stock hardware and implements. We can please you, write to-day. Otis & Smith, Natoma, Osborne Co., Kans.

NICE HOMES—Cheap 80 acres all level bottom land, no better land anywhere, owner estimates improvements at \$3,000. Price, \$4,200. Four miles from town, 320 acres, 6-room-house, barn and outbuildings, 100 acres cuitivated, \$4,500. 316 acres, well improved with buildings, 40 acres stifalfa, 20 acres timothy and clover, 10 acres of blue-grass. Price, \$7,900. We have a few places that we can sell on very liberal terms. Try us, at Florence, Minneapolis or Salina, Kans. Garrison & Stude-

A BARGAIN—320 acres Wakarusa Valley, Shawnee Co., Kansas; 200 acres bottom, first-class buildings. \$40 per acre. H. C. Bowman, Topeka, Kansara

FOR SALE OR TRADE—5 good lots in county seat town in Oklahoma; will trade for western land. Price, \$1,000. Box 27, Waurika, Okla.

FOR SALE—Good farm and pleasant home, one-half mile from county high-school and city public school, three-fourths of a mile from several churches and stores, 2 grain elevators and stations. Farm consists of 800 acres, adapted to farming and stock raising, good 9-room house, with water, bathroom and good cellar, ice-house, tool-house, barns and sheds sufficient to hold 40 tons of hay and 150 head of cattle and horses, affaifa, shade and fruit trees. Farm can be devided. Price, \$15 per acre. Call on or address the owner, Box 192, Wakeeney, Kans.

the packers, and prices were advanced 10@15c all along the line. The first Idaho sheep of the season were among arrivals and sold quickly. The yearlings, ewes and wethers mixed sold up to \$4.90, and good wethers sold at \$4.75, while some fairly good Colorado wethers sold at \$5.05. No lambs were offered but they would have sold to good advantage had they been on sale.

WARRICK.

FARMS AND RANCHES.

FIFTY farms in Southern Kansas, from \$15 to \$70 per acre; can suit you in grain, stock or fruit farms. I have farms in Okiahoma, Missouri and Arkansas for sale or exchange. If you want city property, I have it. Write me. I can fix you out Wm. Green, P. O. Box 966, Wichita, Kans.

FOR SALE—200 acres fine pasture land, 175 acres of it mow land, two miles from Alma, living water that never falls, all fenced. This is a bargain if taken soon. Call on or address Mrs. M. A. Watts,

LAND FOR SALE in Western part of the great wheat State. H. V. Gilbert, Wallace, Kans.

The Cheapest Ranch in Kansas 2,560 acres, 560 acres 1st and 2d bottom, 120 acres fine timber, balance pasture, excellent water privilege, three sets of improvement valued at \$6,000. Six miles to shipping. Price, \$16 per acre. It is to good to last, you had better wire that you are coming and take the first train if you want it.

L. L. KISER, - Eldorado, Kansas

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 will or call

DAVIS, WELLOOME & CO., Stormont Bidg., 107 West 6th, Topeks, Ks.

SPECIAL BARGAINS

1,170 acre highly improved Eastern Kansas farm to exchange for city property. We have a cash customer for 5,000 to 8,000 acres of Western Kansas land; must be a bargain. We have a telephone exchange which shows 20 per cent net profit for sale. Some good clear real estate to exchange for oil stock in producing company. We make a specialty of exchanges and would like to list anything that you have to trade. The Great Western Brekerage Co., Tepeka, Kans.

Farm For Sale at a Bargain Reno County farm for sale, located 5 miles from Langdon, a small town on Rook Island railroad. Farm is good wheat, corn or alfalfa land; 120 acres in cultivation, 40 acres in pasture, farm all fenced, good 6-room house, shed, barn, mill and tank; good water, some timber, 100 acres in wheat, one-third with sale, if sold at once; possession August 1, 1905; price, \$5,000; \$2,000 cash, \$5,000 can run 5 years at 6 per cent, privilege to pay any time. Here is a bargain, you can't beat it. Write

F. C. PURDY, STERLING, KANSAS

California Land For Sale

If you are figuring on a home in the Golden State, write the undersigned for information

KETCHUM & PROCTER, Occidental, Cal.

MISCELLANEOUS.

SEA SHELLS from Long Island Sound; 25 assorted for 15 cents, stamps or silver. Alice L. Crampton, Madison, Conn.

BLACKSMITH WANTED on large ranch to do general repair and farm blacksmithing. Perma-nent imployment. Address Deming Investment Co., Oswego, Kans.

WANTED—A man and wife, to help with dairy farm and housework. Write stating references, and wages wanted. Address Lock Box 15, Bucklin, Kans.

FOR SALE—A second-hand surrey, cheap. E. B. Cowgill, Kansas Farmer Office.

WANTED—Girl for general house work. No washing. Mrs. E. B. Cowgill, 1825 Clay Street, Topeka, Kans.

HONEY New Crop about July 1. Ask for prices. A. S. PARSON, 403 S 7th Street, Rocky Ford, Colo.

WANTED—Middle aged woman with no incum-brances to do house work in a family of three. R J. Linscott, Holton, Kans.

FOR SALE—Second-hand engines, all kinds and all prices; also separators for farmers' own use. Address the Geiser Mfg. Co., Kansas City, Mo.

LEGAL.

PROPOSALS FOR LEASING CERTAIN of the tribal lands of the Klowa, Comanche, and Apache Indians for agricultural purposes. Department of the Interior, Office of Indian Affairs, Washington, D. C., June 24, 1905. Sealed proposals will be received at the Office of the U. S. Indian Agent, Klowa Agency, Anadarko, Okla., until 2 o'clock, p. m., on Monday, December 4, 1905, and will be immediately thereafter opened in the presence of such bidders as may attend, for leasing for farming purposes about 400,000 acres of tribal Indian lands. Maps showing the location and description of each tract to be leased can be procured on application to the U. S. Indian Agent. Such lands will be leased in tracts not exceeding one quarter-section, or fraction thereof, where the quarter is fractional, for the period of five years from January 1, 1906. No bid for a different period or different quantity will be considered; and no person, firm, company, or corporation will be permitted to lease more than two sections. Posters giving fuller information, and the terms to be observed in the submission of bids, can be obtained by addressing the U. S. Indian Agent. The bids must be addressed to the U. S. Indian Agent. The bids must be addressed to the U. S. Indian Agent, Klowa Agency, Anadarko, Okla., and must be plainly marked on the outside of the envelop, "Proposals for leasing Klowa lands for agricultural purposes." Bids not conforming to the requirements of the printed poster may be rejected if such action shall be deemed necessary in the interests of the Indian Agent, Anadarko, Okla. C. F. LARRA-BEE, Acting Commissioner.

Stray List

Allen County—J. W. Kelso, Clerk, HORSE—Taken up by C.C. Thompson, in Cottage Grove tp., May 29, 1905. one 10-year-old black horse, zwhitehind feet, star in forehead, spavined both hind legs; valued at \$15.

WEEKLY WEATHER CROP BULLETIN

Weekly weather crop bulletin for the Kansas Weather Service, for the week ending June 27, 1905, prepared by T. B. Jennings, Station Director:

GENERAL CONDITIONS.

The first part of the week was quite warm, but the latter part was cool, reducing the mean temperature for the week slightly below the normal. Heavy rains occurred from Hamilton County northeastward across the State to Jewell, Washington and Marshall Counties, being heaviest in Cloud, Clay and Ottawa Counties where it was over three inches. The rainfall was light in the northwestern, the southwestern and many of the southeastern counties. Good rains have fallen in the greater portion of the State.

RESULTS. EASTERN DIVISION.

EASTERN DIVISION.

Wheat harvest is over in the southern counties and in some of the central and thrashing has begun. Harvest is progressing in the other counties. Thrashing discloses a well filled berry. The oat harvest has begun in several counties, but the oat crop is not giving as good promise as usual. Corn has grown rapidly, is generally clean, of good color and in many southern counties is being laid by. The second crop of alfalfa is cut and in the stack in the extreme southern counties, while in the central counties it is

Montgomery.—Oats harvest and thrashing in rogress; corn generally laid by and in good

Montgomery.—Oats harvest and thrashing in progress; corn generally laid by and in good condition.

Osage.—Wheat harvest begun and good yield reported; corn doing well.

Pottawatomie.—Beneficial rains; wheat all in shock and some stacked; thrashing commenced; second cutting of alfalfa begun; no further trouble by web worm.

Shawnee.—Wheat harvest begun and crop is very good; oats harvest will begin in one week and the crop has filled well; corn genrally clean and in good condition; some early corn laid by and the crop is making good growth; second crop of alfalfa fair afid is ready to cut; light crop of apples expected; pastures am meadow good; cattle doing well.

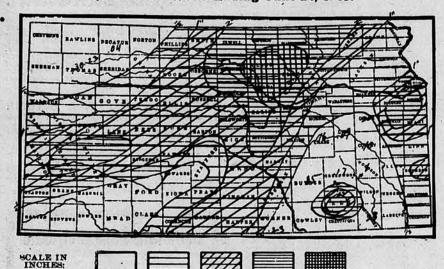
Wilson.—Wheat stacking and thrashing progressing well; good yield of wheat; corn generally clean and making rapid growth; cutting of oats in progress; plums and early apples ripening.

Woodson.—Wheat thrashing begun and crop is giving good yield; much corn laid by; roasting ears on market; prairie hay crop promising; some oats cut; straw short and the oats are not very well filled; apples ripe.

MIDDLE DIVISION.

Wheat harvest is progressing in most of the counties and is finished in some of the southern counties; the crop is good. Oat cutting has begun in the southern counties and the crop gives good promise. Corn is growing rapidly, is generally clean and looks well. The second crop of alfalfa is being cut, and in many counties is an improvement on the first. Grass is good and pasture is fine. Hall caused some damage to crops in Saline County. Barley is mostly cut in Barber County. Petatoes are good in Washington, improved in McPherson and ripe in Sumner Counties. Early applies are ripe in Reno. Gardens are

Rainfall for Week Ending June 24, 1905.



Less than %. % to 1. 1 to
being cut, and is a good crop. Potatoes are
doing well except that in Atchison County
the early have died from the dry weather.
Apples continue to do well except in some
scattered localities. Early apples are ripe
and on the market in the south. Sweet, or
table corn, is, being marketed in Woodson.
Blackberries are ripe in the south. Pastures
are good. The web-worm has hurt alfalfa in
Chase County but has finished its course in
Csage County.
Anderson.—Very favorable conditions for
growing crops; corn growing well and has
good, healthy color; gardens improved by recent rains; wheat all in shock and some oats
cut; thrashing will commence next week if
weather permits.
Atchison.—Soft wheat in shock; hard wheat
harvest just begun; fine crop of wheat; corn
looking well and some laid by; early potatoes
seriously injured by lack of rain.
Brown.—Fine weather for all growing crops;
wheat harvest has begun; all crops in good
condition.
Chase.—Wheat harvest has begun in many
fields; wheat has good quality and there is
prospect of good yield; some corn is being
laid by; this crop is doing well generally and
prospect is good; second crop of alfalfa being
stacked, but it is not so good as first crop on
account of injury by web worm; all crops
needing rain.
Chautauqua.—Wheat all harvested and some
of it already in market; second crop of alfalfa being
stacked, but it is not so good as first crop on
account of injury by web worm; all crops
needing rain.
Chautauqua.—Wheat all harvested and some
of it already in market; second crop of alfalfa
in shock; corn doing well and mostly laid by;
forage crops all doing well; hay is in good
condition and cutting is progressing.
Cherokee.—Too wet for harvesting and general work during first half of week; wheat
harvesting and corn cultivation progressed
well during latter half; a large amount of
wheat has been cut; about one half of corn
fields are in good condition and the crop is
growing well although the ground is very
weedy.
Coffey.—Corn and late potatoes need

Less than %.

growing well although the ground is very weedy.

Coffey.—Corn and late potatoes need rain badly; thrashing has commenced and wheat has good quality and yield.

Crawford.—Wheat harvest delayed somewhat by rain but is making good progress; corn is making rapid growth and being cultivated for last time; oats mostly cut; pastures doing well; tame hay ready to cut; early apples in market but quality not good; blackberries ripe.

Douglas.—Wheat harvest nearly completed; oats and flax doing well; corn doing well since the rain.

Elk.—Too much rain for cultivation this week; all crops growing fast; wheat thrash-

Elk.—Too much rain for cultivation this week; all crops growing fast; wheat thrashing will begin next week if weather conditions are favorable.

Franklin.—Wheat being harvested and in fine condition: very good yield; crops generally doing well.

Greenwood.—Wheat harvest ended; quality of yield good; oats being cut and although straw is short prospect of this crop is good; early corn laid by; second crop of alfalfa being cut; apples scarce although there are some on market.

early corn laid by; second crop of alfalfa being out; apples scarce although there are some on market.

Jefferson,—Wheat harvest just begun and the crop is in good condition; corn doing well; tame hay being put in stack; light crop; oats beginning to ripen and crop good; gardens doing well.

Johnson.—Wheat harvest almost over; wheat has good quality and yield; oats harvest commenced and straw is short, but well headed; corn nearly all laid by and making rapid growth; pastures short and needing more rain.

rain.

Linn.—Fine weather for harvesting wheat; almost all in shock and has good quality; oats and flax will make good crop; corn well cleaned and in good condition; crop of tame hay short.

Lyon.—Wheat harvest progressing well; corn in good condition; too dry for good growth of alfalfa.

Marshall Wheathall wheatha

alfalfa.

Marshall.—Wheat harvest has begun and quality of the grain is good; potatoes and garden products making good growth; all growing crops doing well and ground is in good condition for cultivation.

except that in Edwards some gardens

T, trace. .

Over 8.

good except that in Edwards some gardens are troubled by the web worm.

Barber.—Very beneficial rains during past week; wheat harvest progressing well; oats and barley mostly cut; corn and cane much improved by recent rains.

Barton.—Wheat harvest begun and progressing rapidly; some barley harvested.

Butler.—Corn looking well; alfalfa has not made good progress as expected; garden products of all kinds doing well; wheat and oats in good condition.

Clay.—Harvest begun but delayed by recent rains; oats ready for cutting; corn is clean and is making good growth.

Cloud.—Wheat harvest delayed by rain; corn growing well; pastures in very good condition.

Cowley.—Good week for growth of corn but too wet for wheat harvest; wheat is about all cut, however, and oats harvest has begun.

Edwards.—Harvest progressing well; corn looking well; some garden products injured by web worm but damage is not great.

Ellsworth.—Wheat ripening rapidly and harvest begun in many fields; corn making good growth and looking well.

Harvey.—Fine growing week for corn; wheat harvest progressing well; wheat and oats in good condition; pastures doing well; second crop of alafifa improvement on first.

Jewell.—Beneficial rains during past week; pastures in good condition.

Kingman.—Wheat harvest progressing although rain interfered with it to some extent; corn growing rapidly and looking well.

McPherson.—Rains beneficial to corn; second crop of alfalfa being cut; all crops doing well.

McPherson.—Rains beneficial to growing crops; wheat harvest progressing well; yield of wheat moderate and quality good; alfalfa damaged by worm; potatoes improving.

Marion.—Fairly good week for wheat harvest although rains have interfered in some localities; wheat and oats have good quality; corn beginning to tassel; second cutting of alfalfa in progress, with good yield.

Ottawa.—Corn doing well and promises large crop; wheat harvest interfered with by heavy rain after four days cutting; berry better than usual and yield will be fair; second crop of alfalfa

Pawnee.—Wheat harvest progressing well; corn looking well.

Reno.—Wheat harvest delayed by rains first of week but is now resumed and being pushed as rapidly as possible; although many wheat fiel is are still rather wet in places, prospect of yield is fair to good and the wheat has good quality; corn making good growth but cultivation is delayed on account of wheat harvest; oats ripening and looking well; late cherries and early apples ripe.

Republic.—Wheat and oats ripening and will be ready to cut in a few days; corn cultivation delayed by rains; this crop is uneven but is making good growth.

Russell.—Wheat harvest progressing well although there has been too much moisture; quality of wheat is good; alfalfa doing well and thrashing will begin next week; pastures good; stock doing well.

Saline.—Crops damaged by hall storm in southern portion of county; wheat harvest progressing well although it has been delayed somewhat by rain; corn making good growth.

Sedgwick.—Wheat harvest progressing; quality of wheat good to fine; corn in fine condition and fields clean; abundance of fine garden truck in market.

Stafford.—Good week for wheat harvest.

Sumner.—Greater part of wheat cut; some fields good and some very poor; oats rusting and very short; some oats cut; corn making rapid growth; potatoes ripe.

Washington.—Good week for all growing crops; some harvesting of wheat done; wheat is ripening, is well filled and has good color; corn growing rapidly; potatoes and garden truck doing well; alfalfa and prairie grass good.

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> T. L. KING, Agent The Atchison, Topeka & Santa Fe Railway Co. Topeka, Kansas

WESTERN DIVISION.

Western division.

Wheat is filling well and ripening in the northern counties and is being harvested in the central. Rye is ready to cut in Thomas County. Oats and barley cutting have begun in Finney County. Corn is in good condition, fields are clean, and in the central counties much of the corn is laid by. Range grass is good. The first cutting of alfalfa is mostly in the stack in Decatur County, and the second cutting is progressing in Finney County. Potatoes generally are good, though in Ness County they are not so good. Forage crops are making a good growth. Cattle are doing well. Crops were damaged by hail in central portion of Lane County and the northwest portion of Morton.

Decatur.—Wheat ripening rapidly and will probably be ready to cut by middle of next week; corn doing fairly well although nights have been too cool for rapid growth; first cutting of alfalfa mostly in stack.

Finney.—Good week for maturing small grains; wheat harvest making good progress and cutting is completed in some fields; quality and yield of wheat good; cats and barley are doing well and harvest has begun in some fields; grass in very good condition; harvesting second crop of alfalfa.

Ford.—Rain badly needed.

Lane.—Wheat harvest has begun in a few fields but will not be general until next week; much damage to crops by hall storm in central portion of county.

Morton.—Wheat on several farms in northwestern portion of county damaged by hall storm; meadows needing rain.

Ness.—Corn improving and nearly all laid by; forage crops mostly in and looking well; wheat harvest in progress but rain and windy weather interferes with it some; range grass improving and stock in fine condition; alfalfa doing well; potatoes and gardens not doing so well.

Norton.—Wheat harvest will begin next week; wheat ripening slowly but has fine berry; corn about all cleaned out and making good growth; good week for cultivating this crop; potatoes doing well; cherries ripe but crop is light.

Thomas.—Wheat filling well and ripening fast; late grains ne

to cut.

Trego.—Harvesting commenced with scarcity of help; corn and feed crops doing well.

Wallace.—Wheat, barley and oats doing well; gardens in good condition; range grass doing well; cattle in good condition; some corn fields becoming weedy.

The most attractive Eastern excursion during the coming summer, will be to Asbury Park, N. J., on occasion of the annual meeting of National Educational Association, July 3 to 7, inclusive, via the Nickel Plate Rosd and its connections—either the West Shore or Lackawanna Road, with privilege of stopover at Chautauqua Lake points, Niagara Falls and New York City. Rate \$21.35 for the round-trip. Dates of sale, June 29 and 39, and July 1 and 2, with extreme return limit of August 31, by depositing ticket. Patrons of this route, may have the choice of a ride over the most interesting mountain scenery in New York and Pennsylvania, and through the celebrated Delaware Water Gap, or through the beautiful Hohawk Valley and down the Hudson River, which also includes the privilege of a ride on day line boat on Hudson River, between Albany and New York City, in either direction, if desired. No excess fare charged on any train on Nickel Plate Road. Meals served in Nickel Plate Road. Meals served in Nickel Plate and Incomplete the Road Burnand Club Meal Plan, ranging in price from 35c to \$1; also a la carte. Chicago Depot, La Salle St. Station, corner Van Buren and La Salle Sts. City ticket offices, 111 Adams St. and Auditorium Annex. For further particulars, address John Y. Calahan, General Agent, 113 Adams St., Room 298, Chicago.

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Brange Department CONTROL CONTRO

All communications for this department should be addressed to Mrs. Kittle J. McCracken, Station B, Topeka, Kans. The Kansas Farmer is the official paper of the Kansas State Grange.

KAMBAS STATE GRANGE

STATE ORGANIZER

Grange Notes.

Many of our subordinate granges are without proper accommodations necessary to good work.

One of the most potent influences for upholding our granges is a wellequipped hall, and the mutual resolve to build a home for your grange will inspire the weakest member to a noble activity. All things will work together for your success. It is wonderful the way each step counts if in the right direction and the smallest effort produces important and unexpected results. Get up the progressive spirit and united hearts and hands will accomplish wonders. Getting ready to do a thing is a part of the doing. Get your grange ready.

A plan and a purpose adhered to with intelligence and grit are certain

guarantees of success.

Men of all callings and professions are learning to appreciate the fundamental importance of agriculture. The country is coming to its own. The Grange and its members must keep in the swiftest of the current of right

All organizations have their ups and downs. The Grange organization depends upon good work in steering. It is worth while to review from time to time our work and purposes. The grange that is content to be the same year after year has lost ambition and is merely drifting.

Complaints are rife in regard to nonattendance at grange meetings. If a grange has interesting programs, with some novelty now and then and a few special days previously advertised, the attendance will increase. Variety is the spice of the lecturer's hour.

Cultivate interest in grange meetings. The true foundation upon which our order rests is the regular subordinate grange meeting.

Progress is to be the watchword of the ambitious grange.

Wild Bees.

Some people think that there are only two or three kinds of bees-the honey bee, the bumble bee and possibly one kind of smaller wild bee. So far is this from being true, that no less than 1878 different species of wild bees have been described from North America; that is, including all of the country north of Panama, up to the present day. When we come to study the habits and structure of all these bees, it is possible to understand why they are so numerous in kinds. The pollen of flowers has to be carried principally by insects; that of one flower to other flowers of the same sort, in order to bring about the fertilization and production of seed. Of all the insect carriers the bees are the most important.

They visit the flowers for nectar and pollen, to store up in nests for their young, and when so doing they carry the dust-like pollen from flower to flower, leaving a little of that previously gathered each time they alight upon a blossom. Now suppose all bees visited indiscriminately every sort of

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G. L. COBB,

Southwestern Passenger Agent, 907 Main Street, Kansas City, Mo.

flower, it would continually happen that the pollen of one species of plant would be left on the flower of a quite different species, where it would be altogether useless. It is desirable, therefore, that each kind of bee should visit one particular kind of plant, or at least should prefer certain kinds. This we find to be more or less the case, and there are many bees that never visit more than one sort of flower. The number of different kinds of flowers is very great, and consequently it is not surprising to find that there are many sorts of bees. In numerous instances we find the mouth part of the bees exactly suited to the kind of flowers they

Thus certain kinds with very long tongues can suck the nectar from long, tubular flowers, such as the yellowflowered currant, while others with short tongues can make use of shallow flowers. It is the case of the fox and the stork over again.

Although the described North American bees are so numerous, it is practically certain that we do not know half of those existing. Indeed, it is not impossible that the North American continent, with the West Indies, possesses as many as five thousand spe-Thus the opportunity for the student of these insects is very great. He is absolutely certain to find in almost any part of the country species wholly new to science during his first season's collecting. In Colorado, I am sure that almost any spring or summer day devoted to the search would yield new kinds. In New Mexico, up to today, 508 species have been found, and of those I have been able to describe 315 as new. The discovery and description of new species is, however, only the beginning of the work. After

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C. H. SPEERS, G. P. A.



this comes the most interesting part; the study of the nesting habits and the relation between the bees and the flowers. So the field becomes a very wide one, and seems practically limitless. While the opportunities for study are so great, and of course open to all who have the time, comparatively few can be expected to do much in apidology. There is no reason why many should

not interest themselves so far as to make collections or obtain specimens for the use of students, but only a few will have the zeal, industry and patience to obtain a real grasp of the subject. There are at present only about thirteen active students of bees in the United States and some of these have done very little.-Colorado College Museum Bulletin.

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