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## KANSAS FARMER.

Established in 1863.

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The American Shorthorn Breeders' Association has lately issued a very valuable and comprehensive list of the Shorthorn breeders of the United States. The list is divided by States and Territories and contains the names of all known owners and breed-

ers of Shorthorn cattle. It is neatly bound in cloth and handsomely printed and sells for \$1.50 per volume. By special arrangement with Secretary John W. Groves, the KANSAS FARMER will furnish this book and one year's subscription for \$2, all charges prepaid.

For the twenty-second consecutive time there will be held, on June 22, a great picnic gathering near the dividing line between Shawnee and Osage Counties. From the active interest taken by Mr. Frank Stahl, and because it is held at his grove, this annual event has come to be known as Stahl's picnic. Farmer Stahl, whom the people of the capital city twice induced to take the position of chief of police, and who is cordially hated and dreaded by crooks, jointists, and other law-breakers, takes an active interest in this picnic. Nine Sunday Schools will take part this year. Governor Hoch and Rev. Chas. M. Sheldon are the speakers of the day. The interest has become so great as to pass beyond the limits of the two counties and the picnic is becoming an annual event of State importance.

At the last meeting of the Iowa Legislature a State Highway Commission was appointed consisting of Prof. A. Marston, Dean of the Engineering Division; Prof. C. F. Curtiss, Dean of the Agricultural Division; and Thos. H. McDonald, assistant in charge of good roads investigation of the Iowa State College. Among the duties required of this commission is that of conducting a school of instruction in road-building and road-maintenance for township trustees, road superintendents, county supervisors and all other men who are responsible for the public highways. The work in this school will consist of a series of lectures on different phases of the road question; practical work in the use of surveying instruments, and the preparation of road maps, profiles and plans; demonstrations in the use and care of road machinery and in the construction of culverts and bridges. The meeting began on June 12 at the Agricultural College at Ames, Iowa. The railroads gave special reduced rates to aid in the success of this first attempt at a good-roads school in the State of Iowa.

## PEACE IN SIGHT.

At the time of going to press the prospect for a speedy termination of the war in the far East is assuring. Both Japan and Russia have responded in favor of acting on President Roosevelt's suggestion that they appoint plenipotentiaries who shall meet and attempt to arrive at terms. Each nation will probably appoint two of its most representative men. They will meet at some point in the United States. Hostilities will cease during their deliberations.

The question of indemnity for Japan's expense in the war will be one of serious importance. Russia has said that she has never paid indemnity and does not propose to depart from her established precedents. Some observers have suggested that Japan

would find it difficult to enforce the payment of indemnity should Russia refuse; that, since there is now no Russian navy, no more damage can be inflicted upon the high seas and that Japan would not want any portion of Siberia and could not, therefore, afford to march her armies into that frozen country. But Russia's commerce is considerable. Every vessel in the Russian merchant marine may be attacked and taken by Japanese men-of-war. Without a navy Russia can not prevent Japan from even sending a fleet into the Baltic and menacing St. Petersburg.

Russia almost has to accept Japan's terms unless she can turn the fortunes of war in Manchuria. She has thus far lost every battle on sea and land and will probably do well to conclude peace before she shall suffer another disastrous defeat on land. Japan, it is thought, will ask that the few Russian war vessels which escaped to neutral ports and the one which reached Vladivostok be surrendered to her. She will keep Port Arthur and may demand Vladivostok. She will insist on maintaining protection over Korea and that Manchuria be turned back to China and Russian influence in that country abated. In addition to all this, it is intimated that Japan will demand \$1,000,000,000 cash indemnity.

Such terms are not harder than would be demanded under like circumstances by any of the leading nations of Europe.

## SHALL THE WHEAT BE STACKED?

To stack or not to stack, is a question which, some say, is too often answered in the negative in Kansas. The fact that the portion of the Kansas crop which first reaches the market finds the stores of last year's crop at their lowest so that prices often start at better figures than are afterwards maintained stimulates the desire for thrashing immediately and from the shock. The impossibility of obtaining enough men and machines to handle the entire crop as soon as dry enough makes it necessary in many instances to choose between the risk and loss of long standing in shock and the labor of stacking.

Old-fashioned millers used to say: "Wheat is bound to go through a sweat. It will sweat in the stack, in the granary, or in the flour-bin, and the best place is the stack." They held that wheat which "had gone through the sweat" in the stack was brighter, heavier, and made better flour than any other, and that there was risk of damage if the sweat took place in the granary or in the flour-bin.

There is wisdom in the views of those old millers. While they lacked confirmation as to exactness, there are thousands of well-informed people who think that Kansas will furnish better bread and will improve the enviable reputation for her wheat and flour when farmers shall stack their wheat.

If wheat is to be stacked, it should be well stacked. Almost every neighborhood presents at least one example of the man who expects the thrashers in a few days and thinks it not worth

while to take much pains in stacking, and just throws it together so it will turn a light shower. The light shower is too often a soaker. The man who does his work in this way is the one who is "always out of luck." The difference between the labor of slipshod stacking and good stacking with middles well filled and sheaves well laid amounts to but a few hours for the crop. The difference in the outcome is sometimes half the value of the crop.

Well-made stacks look good. They are good for the grain, good for the bank account, good for the reputation of Kansas wheat and flour, good for prosperity.

## THE FARMERS' COOPERATIVE SHIPPING ASSOCIATION.

The second annual meeting of the Farmers' Cooperative Shipping Association was held at Topeka last week. This association does business in Kansas, Nebraska, and Oklahoma, and has headquarters at Kansas City. It did a large business during the year which ended last June and reported profits of some thirty thousand dollars. The management was continued and it was hoped and expected that the record of profits would be at least duplicated in the year just closed. But instead of profits there are losses whose aggregate is not officially published but which is said to amount to from \$30,000 to \$40,000.

The capital stock with which this association was chartered is \$200,000. Of this \$120,000 has been subscribed and paid in. There is invested in elevators \$105,000. The last year's business amounts to several millions of dollars.

The management of the association's business was in the hands of Mr. C. B. Hoffman, of Enterprise, Kans. He is an experienced and capable man whose success in conducting the large milling and grain business of C. Hoffman & Son was mentioned by the KANSAS FARMER at the time of his appointment as giving assurance of success for the new association. At the end of the second year Mr. Hoffman tendered his resignation and stated publicly that he would not under any circumstances continue in the position of manager.

The inevitable dissatisfaction on the occurrence of losses was disagreeably manifest at the annual meeting. An amendment to the bylaws was adopted which Mr. Hoffman publicly construed as intended to bar him from further employment by the association.

Fairness can not be done to this association's record without saying that its presence in the markets doubtless added materially to the price of every bushel of wheat sold at the points at which it does business.

This being one of the most extensive practical cooperative organizations which has ever undertaken in this country to benefit farmers by handling their products, it will be well to give a little further attention to it.

As a cooperative association it seems to have proposed to be guided by correct business principles.

(Continued on page 630.)



## Agriculture

### Rotation of Crops.

For raising wheat the ground should be plowed early in July, or not later than the latter part of July or the first week in August, the earlier the better. No matter how dry the ground may be, take a good riding-plow, put more horses on and turn it over. And then, when the first good soaking rain comes, take the harrow when the land has dried off a little and harrow it over at least once, let it lay till the next rain comes and cross-harrow. Let it lay then till the next rain, and harrow again, and so on. Then the land will be fine and smooth. Then along about September 10 to 20, drill in your wheat, a bushel and a half to the acre. A good press drill is best. Sow never later than September 20. Always drill your wheat east and west and it will not winter-kill so easily. Drill it about two inches deep. I have raised wheat for twenty years in this way and have never had a failure. People say that Nemaha County is no country for wheat, but I say that this is a good wheat country, much better than Southern or Western Kansas. The majority of our farmers never have their ground in shape. Then, too, the majority of them pasture their wheat in the fall, and that, too, is a mistake. Never under any circumstances let cattle or other stock tramp or eat the wheat. By raising a patch of wheat every year a farmer will keep his farm in much better shape, and year in and year out, will raise from seven to ten bushels more of corn per acre than when the land has been almost continuously in corn.

As soon as the wheat is stacked or thrashed, a farmer can disk the stubble and sow it to millet. I have done it successfully many times, and it will not hurt the land a particle. In 1903 I had twenty acres of wheat which yielded 24 bushels per acre. I plowed over the stubble and sowed it to golden millet the latter part of July. I let it go to seed, thrashed it and got 350 bushels of seed. That was two good crops in one year, and this year the twenty acres was planted to corn and yielded 45 bushels per acre, and the ground was perfectly clean, not a weed in the field.

The farmers must change their land by rotating crops, and wheat is always a sure crop if put in properly. Even the straw is valuable on the farm for bedding and making manure, besides having a ready sale.

HERMAN ENGELKIN.

Nemaha County.

### Legumes.

P. A. SCHNEIDER, BEFORE FARMERS' INSTITUTE, SENECA, KANS., JANUARY, 1905.

Legumes form one of the largest and most important natural order of plants, including about seven thousand species, dispersed throughout the world. They are trees, shrubs, or herbs, differing widely in habit and size.

For convenience, in botany they are divided into four sub-orders: Papilionaceae, represented by beans, peas and lentils; Swartzia, represented by clover, alfalfa, and vetches; the other two sub-orders, Caesalpinieae and Mimosa, are represented by acacias, logwood, tamarinds, sensitive plants, etc.

Leguminous plants differ from the true grasses in methods of fruit formation and in arrangement of the leaves. The legume starts its seed often in a showy flower, which later changes to a pod and usually splits in halves when the seed ripens. The seeds of grasses are never borne in pods, and the grass leaves are arranged in two ranks and are parallel veined. The compound or simple leaves of legumes are netted, veined and usually arranged alternately on the stalk. Wheat and Indian corn are

classed with the true grasses, while clover, alfalfa, beans, peas, etc., are of the same order as locust trees.

We find the first mention of legumes in the Scriptures, when Esau, coming home from the chase empty-handed and famished, sold his birthright to Jacob for a mess of lentils. These plants are highly prized in agriculture because of the high protein content of their fruit and forage as food for man and animals, and the nitrogen-fixing quality of their roots as a fertilizer and subsequent plant-food for plants.

All fertility or plant-food may be said to consist of nitrogen, potash and phosphoric acid. A plant can not grow when there is a total absence of any one of these ingredients in the soil, and for its best development they must be present in sufficiency and the proper form and ratio. Lime and gypsum are called indirect fertilizers, because they are not a plant-food and merely serve to change unavailable into available forms.

Of these three fertilizer elements, nitrogen is the most expensive when bought on a commercial basis. It is also the most soluble in water, and therefore the easiest to leach and wash away and the quickest to give out in our soils. But it seems that nature has come to our aid and furnished us a plant with which we can replenish this deficiency from the free and inexhaustible supply of nitrogen of the air. Four-fifths of the air consists of nitrogen, yet all plants, excepting the legume, can make no use whatever of this gaseous nitrogen. It had been noticed for a great while that they increase the supply of nitrogen in the soil, and it was thought that their long tap-roots, going down deeply in the ground, brought it near the surface. But in the last fifteen years scientific research in agriculture has brought out the fact that leguminous plants make use of this free nitrogen of the air.

On the healthy roots of a legume may be found many little bunches, enlargements, nodules, tubercles, varying in size from that of a pin-head to a pea. These have about the consistency and very much the appearance of very small potatoes, but an examination with the microscope would show that they contain vast numbers of living things, actually myriads of living organisms, scientifically named bacteria. These bacteria draw the small mineral part of the nourishment from the roots on which they grow, but the far greater nitrogen supply essential to their life they gather from the air which circulates through the soil. Each individual of these low forms of animal life exists only for a few hours and at death mingles with the soil and goes through a process of decomposition, similar to that which takes place in other organic matter. The only difference is that when vegetable matter decays, it leaves in the soil only what it has taken from it, but these bacteria add the nitrogen they have absorbed from the air and changed into a form available for succeeding crops. Some soils do not contain these bacteria, but they can be inoculated into it by scattering soil which does contain them. The assertion is here made that legumes increase the nitrogen supply in the soil, and, with a judicious rotation of crops containing them, nitrogen would never run out. But their growth also absorbs large quantities of potash and phosphoric acid, and when the crop is harvested and removed from the ground, it would become exhausted and deficient in these elements unless they were returned in some shape of fertilizer. The method of marketing hay or grain always appears to me like hauling the farm away by the wagon load.

One way to fertilize with these crops is to plow them under green, but a more economical way is to feed them to fattening stock. Marketing them removes only about 15 per cent of the original plant-food. Plowing under green seems a wasteful method, considering the high feeding-quality of the fruit and forage of legumes.

The most important and valuable foodstuffs for man or beast are mineral substances, which serve for the development and support of bone,

nerves and muscle, and these are grouped under one heading and known as the ash.

Secondly, materials which contain nitrogen. These are converted into lean meat, cuticle, hair, and the casein and albumen of milk, etc., and are termed by chemists the proteins.

Third, sugar, starches, fats and similar materials not containing nitrogen, chemically classed as nitrogen free, or carbohydrates.

Protein, the nitrogenous portion, is the most valuable because it is the basis of animal tissue and can easily be made over by the animal body into its own substance, that is, into muscles, tendons, and the various working membranes which are necessary parts of the animal machine.

The carbohydrates are the heat- and energy-producers. Their consumption generates the power which runs the mechanism. They can not be used to build up animal tissue, and an animal fed exclusively on them would starve. Protein might also serve as a heat- and energy-producer, but for this purpose the carbohydrates would be much cheaper. Most of our common feeds (except the by-products of flour- and oil-mills) are excessively rich in carbohydrates and correspondingly poor in protein.

The legumes are an exception to this. They are rich in protein.

About the correct ratio in which these elements should stand to each other in a food is, one part by weight of protein to six parts of the carbohydrates. Corn, prairie hay, sorghum, timothy, millet and such feeds have only one part of protein to every eight to sixteen parts of the carbohydrates. Legumes have one part of protein to every four to five parts of the carbohydrates. From this it appears that they should be fed together, and form what is termed a balanced ration, conforming to the aforesaid figures, 1:6. These theories are now generally accepted by all the leading agriculturists in the world. I have dwelt on them at some length to make more plain the advantages and properties distinguishing most leguminous from other plants.

Nearly all legumes now grown in the United States have originated in the Eastern Continent. One of the first to be introduced and the most widely grown east of the Missouri River is clover, but here in Kansas alfalfa is taking its place. Clover has been called the corner-stone of agriculture, not because its forage and soil-improving qualities were better than those of other legumes, but because its forage is more easily handled as hay and therefore is more widely grown. Its growth and characteristics are too well known generally to need much commenting on. I only want to add my testimony to the soil improvement it has wrought. On the place I have been farming the last few years, where there was a piece of clover about ten years ago, the corn has made from five to ten bushels more per acre than elsewhere and the ground always seems to be in better working order.

With us, alfalfa is proving the best for permanent meadow or a hay-crop. For pasture it is not of much service, except for porkers. It yields the most forage of any of the legumes, but one disadvantage of its growing is, that it must be harvested three or four times a year and often at a time when other crops need the most attention. Its nutritive ratio is one part protein to about four of carbohydrates compared with clover, which is one part protein to about six carbohydrates.

One of the legumes extensively grown in the northern part of the United States is the field-pea. Shaw, in his "Forage Crops," among other things, says: "These peas are generally spoken of in the United States as Canada field-peas. The term is a misnomer, for many varieties of field-peas are grown there which did not originate in Canada. The field-pea, as is generally known, is of an upright habit of growth until it reaches a certain height from the ground, more or less according to the presence or absence of wind and rain. Then it falls over, unless sustained by other grain sown along with it, and it completes its



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growth in a recumbent position. It is because of this habit of growth that the pea is generally sown along with one or the other of the cereals to provide pasture and forage. Peas usually succeed best in a cool and also in a moist climate, in which the summer temperature is not extreme in its variations, and where the nights are cool. Hot and dry climates are ill-adapted to the growing of field-peas and more especially where winds, hot and dry, are apt to prevail at that season of the year when the peas are coming into bloom." According to this, the weather and climatic conditions of Kansas do not seem favorable, although sown with oats they might make considerable forage. They would be better adapted to the cool mountain valleys of Montana and Colorado, where of late their growth and use as feed for sheep is extensively carried on.

In the South a legume has long been grown which, for that part of the United States, seemed better adapted than any other. It is called a pea, though in relationship and habit of growth it might just as properly be called a bean. In the South, perhaps because it is extensively fed to cattle, it is called the cow-pea. It is an annual belonging to the genus vigna and closely related to the lablab, Lima, and haricot beans of our gardens.

There are a large number of named varieties of this forage plant, and they occur in every gradation of habit, from a compact, stocky, upright bush having stems a foot high, with very short lateral branches, to those with trailing runners growing as flat on the ground as melon or peanut vines, the prostrate stems fifteen to twenty feet in length. The pods vary from four to sixteen inches in length and the peas are of many different colors, as white, green, pink, gray, red and black, and others are mottled or speckled. The short, upright, or bush varieties ripen in a shorter season than the long, trailing kinds. (This from Farmers' Bulletin U. S. Department of Agriculture.)

The kind most generally recommended for Kansas and the kind I have had the most experience with is the speckled or Whippoorwill variety. It is of the bushy or upright form and matures in about ninety days. Although from the South come reports of much larger yields, the most grain mine ever produced was about twelve bushels per acre. Even at that it would be a remunerative crop (with the seed selling at \$2 and better per bushel), if we had a more convenient way of harvesting and thrashing them. It seems to be a drouth-resisting plant and made a much better growth in the dry season of 1901 than in the wet one of last summer. I think the best use of this pea is as a catch-crop and to supply nitrogen to the soil. The forage is just as good as alfalfa and it can be had at very little expense, excepting the seed, for it can be sown in the cornfield at the last cultivation. This is what I did last summer and then used the field for pasture for my lambs. Stock will eat these peas with relish even when they are ripe and dry. The lambs prefer them to any forage in the corn-field. Another convenient way to get a growth of peas might be to plant them with a lister, or disk them in on small-grain stubble.

I think that for a crop to be used in this way I should prefer cow-peas to soy-beans, because they produce more forage and the grain does not shatter out so badly. Two years ago I planted about ten acres to cow-peas just for a trial. This was followed by corn and each time the corn-crop in that end of the field showed up a foot higher, the color was darker and the general appearance thriftier than anywhere else in the field. It has been stated that some of the wornout farms of New England have been brought back to a fair state of fertility by the application of some phosphoric



acid, potash and a crop of cow-peas. If these legumes have caused this improvement, may we not look to them as the best method of improving our deteriorating soils?

#### Navy Beans on Wheat-Land.

I desire to plant some navy beans, if possible, after I have taken off my wheat, which will be off the land about June 15. Our season here is probably ten days earlier than with you and my ground is the best of stump land. Will beans probably mature before the October frosts? We rarely have a frost before October 20.

However, I would like to know the best season of the year to grow navy beans and how you would plant them. I had intended to plant the beans with a corn-planter and after keeping them well cultivated until September 1, again plant the land to winter wheat, harvesting the beans when they are matured, which I thought would probably be later on, toward frost time.

Coffey County. H. J. ADAMS.

In 1904 navy beans planted June 6 at this station were matured August 25, requiring a period of eighty days to reach full maturity. These beans were planted on a well-prepared seed-bed, land which had been cultivated since early spring, so that the beans started evenly and grew well all the season.

There is little question but that there will be time to mature beans by planting on wheat land after the wheat has been harvested. It will depend largely upon the season, however, whether the beans will start and whether they will make much of any growth. Usually the land upon which a crop of wheat has been grown will lack in moisture and in available soil fertility, so that a crop planted after wheat often makes a poor stand and dwarf growth. We usually plan to plant navy beans about the first part of June. The crop has not produced very well at this station so far as we have tested it; in 1903 the best yields were less than ten bushels of beans per acre, and this may be considered a fair crop. The corn-planter is a good machine with which to plant the beans, and I would advise to plant the land immediately after harvest, giving it a thorough harrowing and using the subsurface packer, if you have this machine. If planted before June 20, I believe the beans will mature so that the crop may be harvested and removed from the ground early enough to prepare a seed-bed for wheat. Your plan, however, seems to be to sow the wheat with a one-horse drill before the beans are harvested, and this method of planting ought to prove even more successful with beans than with corn. I have observed here that wheat planted in corn is often inferior to wheat planted on plowed land.

I think it advisable for you to undertake planting beans after wheat in the manner which you have suggested, and I shall be pleased to have a report of your success. I would suggest that you try a small area the first season, and learn by experience whether beans can be grown successfully in this way.

A. M. TENEYCK.

#### Egyptian Clover.

Some time since I received a sample of "Egyptian clover" seed from the John A. Salzer Seed Co., La Crosse, Wis., said to be native of the Nile region. Do you know anything of this clover? Does it succeed in this region and will it mature a seed crop?

F. W. KURTENBACH.

Dickinson County.

We have not grown the Egyptian clover at this station, at least not in a field way. This clover is a native of Egypt, and is botanically known as *Trifolium Alexandrinum*; the proper common name of this clover is Berseem. It is an annual clover and the plant is somewhat similar in appearance to the crimson clover, except that the blossoms are white and the leaves are shorter, also the leaves are narrower than those of the crimson clover.

According to the Farmers' Encyclopedia of Agriculture, published by the Orange Judd Company, "There are three principal varieties—Muscovell,

which is the most important variety and requires abundance of irrigation water; Fachl, a luxuriant heavy yielding variety much grown on land irrigated by the Basin System; the Salda, a trailing variety, which will grow on drier soil than either of the former. Berseem has been grown in the United States in only a few localities and then only on small experimental plots. At the South Dakota Station it made only a very light growth and was killed by frost before seed ripened.

At the Kentucky Station it grew about twelve inches high and is suggested as a crop for testing on overflowed bottom lands. The plants winter-killed in the grass gardens at Washington, D. C."

I do not think that the Egyptian clover will prove a profitable crop to grow in Kansas, and doubtless it will not mature seed in this climate. From the description of the plant it may be suited for growing in the Southern States, with plentiful water supply either from rains or irrigation. It may be advisable to try the crop in a small way, but I would not recommend to spend much money on it. I shall test the crop at this station next season.

A. M. TENEYCK.

#### Second Crop for Seed.

I have three and one-half acres of red clover that is fine, which I will cut next week. It looks as though it might make two more crops. Would you advise me to leave the second or third crop for seed? GEO. ETRIDGE.

Dickinson County.

It is usual to save the second crop of red clover for seed. I never knew of the third crop being cut for seed. In fact, it is unusual to secure a third cutting of clover, even when the second crop is saved for hay. I would therefore advise you to leave the second crop for seed.

A. M. TENEYCK.

#### Red Rust in Wheat.

We have a great deal of red rust in our wheat this year. Unless it rains excessively, will it hurt it any? Will it do to plow the rusted straw under, or does the rust germ remain and cause the next crop to rust if the straw is plowed under? A. LEROY BEELEY.

Comanche County.

The rust is much more apt to injure the wheat seriously with the weather conditions warm and wet, since rust develops in favorably moist warm weather.

It is not yet thoroughly understood as to just how rust is carried over from one season to another. The common red rust of wheat develops first on the leaves of the barberry, where innumerable spores are formed which blow over the fields and infest the wheat plants, usually starting on the leaves. The first stage on the wheat plant is the red rust, and later a second stage or black rust develops on the stems.

There is also a species of rust known as the black rust which is really the rust which often causes the greatest injury to the wheat. It is not known how this kind of rust is carried through the winter. Usually it has not been supposed that the plowing under of rusted grain or straw has had anything to do with infecting the succeeding crop. However, some of the latest investigations along this line would indicate that such may be the case. Yet the fact that in any locality there is always a chance for infection from the adjacent fields would indicate that the greater chance for infection from the field itself would have very little to do with increasing the amount of rust. If the straw were burned on a certain field, the rust spores on that field would certainly be largely destroyed; and it is possible that if such treatment were given all of the fields in a certain locality, it might have some influence in increasing the attacks of rust the succeeding season. As a rule, however, it is not considered a good plan to burn the straw, since by this practice the fertility of the soil is rapidly exhausted.

I think, until we have further information on this subject, I should recommend to plow under the rusted wheat stubble, and proceed as is the usual practice in your locality.

A. M. TENEYCK.

## Horticulture

### Harvesting and Marketing Apples.

F. A. WAUGH (FORMERLY OF KANSAS), PROFESSOR OF HORTICULTURE, MASSACHUSETTS AGRICULTURAL COLLEGE.

The farmers who still adhere to the old-fashioned way of doing things do not find great encouragement in selling apples; on the other hand, those who have taken up with modern ideas, or, better still, have led in the establishment of modern practices, are reaping their just and generous reward.

#### PICKING THE FRUIT.

The time was when the apples used to be shaken off the trees; a still lazier method was to allow them to fall off. Such apples are fit only for second-class cider, and if that was the market to which they were destined, no great damage was done. However, such apples are still sometimes offered in the markets. They are almost always a dead loss to the man who attempts to sell them and interfere, sometimes seriously, with the sales of good, hand-picked fruit. Apples must be hand-picked from the trees in order to be marketable—this is the only way. Moreover, they must be carefully hand-picked, and they should be taken off with the stems attached to the fruit. If the apples are torn off the stems, the skin is ruptured, and decay is apt to set in.

The best receptacle in which to pick apples is the oak-split, swinging-bale, half-bushel basket. If fancy fruit is to be handled, it is worth while to pad these baskets with old grain sacks. A heavy wire, bent in the form of the letter S, enables the picker to hang the basket on a limb while it is being filled, and also to let it down by a strap out of the tree.

Picking ladders are usually needed on old trees. These should be long, and as light as possible. Step-ladders are sometimes used; they should always be of the three-legged variety.

Certain varieties of apples, as, for example, the Wealthy, have the bad habit of falling early from the trees. With such varieties picking has to be timed with reference to this bad habit. Fruit must be picked early enough to prevent its falling. Other varieties which hold on well, like the Baldwin and Spy, may be picked when they are at their best. There has been a good deal of argument as to just when an apple should be picked, but recent experiments show that apples which are ripe and fully colored keep better in storage than those which are picked earlier.

This matter of having apples fully grown, ripe and thoroughly colored is of so much importance that some growers who make a specialty of fancy fruit have adopted the practice of picking over the tree two or three times. Those apples which are mature and colored are taken off at each picking, while those which are yet green are left. These green apples increase in size rapidly, and take on the proper color eventually. The men who have tried this method say that it pays well.



Home-made fruit wagon for handling barrels.

In handling the fruit in the orchard, between the trees and the storage room, or, later, between the storage and the shipping station, some suitable wagon ought to be provided. A stone boat is sometimes used, and is not the worst thing that could be found, especially for short hauls and small loads. It is better, however, to have one of the low-down wagons, made especially for handling fruit. In the illustration one is shown as it was actually made up at home. Some sills were hung by strap-irons from the

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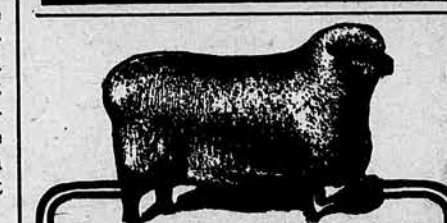
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are widely known in sheep circles as having a well-balanced experience. They will write from the practical side and tell how you can imitate their success. Chandler Bros., Iowa, and Richard Gibson, Ont., Can., will be only two of many to warn you of the pitfalls of sheep-raising and teach you successful methods.

The July issue of **Blooded Stock** will be exclusively given up to Duroc-Jersey Hogs. Don't miss a single issue. 25 cents a year.

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front and rear axles of a common wagon frame, and on these some boards were laid, making a floor for carrying the barrels. Handling barrels of apples in and out of the common high wagon is hard and expensive labor, and it is apt to damage the fruit.

#### GRADING THE FRUIT.

In nothing does the work of the experienced apple-seller differ more from that of the inexperienced man than in the grading of the fruit. All of our city markets have now reached a point where fruit can hardly be sold at any price unless it is carefully and uniformly graded and properly marked.

Apples should be graded into at least three lots, which we may call firsts, seconds and culls. Sometimes four grades are made, but the three here mentioned are the most usual. The first grade of fruit must be of good size, uniform in shape and color, free from blemishes and true to name. Second-grade fruit is smaller, not so well colored, but must be free from any serious blemishes. The National Apple-Shippers' Association has adopted a rule for determining first- and second-grade apples as follows:

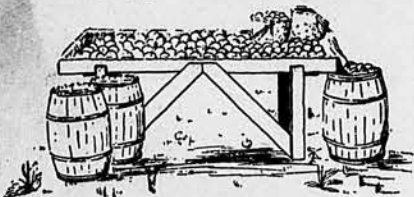
"The standard for size for No. 1 apples shall be not less than two and one-half inches in diameter, and shall include such varieties as Ben Davis, Wealthy, Twenty-Ounce, Baldwin, Greening and other varieties kindred in size. The standard for such varieties as Romanite, Russet, Winesap, Jonathan, Missouri Pippin and other varieties kindred in size shall not be less than two and one-quarter inches; and, further, No. 1 apples shall be at the time of picking practically free from the action of worms, defacement of surface or broken skin. They shall be hand-picked from the tree, a bright and normal color, and shapely in form. No. 2 apples shall be hand-picked from the tree; shall not be smaller than two and one-quarter inches in diameter; the skin must not be broken nor the apple bruised. This class must be faced and packed with as much care as No. 1 fruit."

The different grades are variously designated, sometimes as fancy, choice, select, prime, XXX, XX, etc., but these designations have no official standing. There is so much variation in the practice of packing that none of these marks has any distinctive meaning.

In grading and packing apples a sorting-table should be built, somewhat in the form as shown in the illustration. It should be large enough to hold at least three barrels of apples spread out at one time. At one end there should be an opening or spout heavily padded with gunny sacks. Through this opening apples may be guided and gently rolled into barrels. Some sorters prefer, however, to sort into baskets. The baskets are then emptied into barrels.

Considerable experience and natural good judgment are required to sort apples rapidly and accurately. The task is difficult, and highly important; the man assigned to it should be the best on the job.

In filling apple barrels, the work be-



Sorting table.

gins at what is really the top of the barrel. The head is put in and the barrel turned bottom side up on it. The first layer of fruit is put in by facing, stem downward, carefully on this inverted head. Good, well-colored specimens are selected as facers, but they should not give a misleading idea of the general contents of the barrel. Usually a second row of facers is put in, stems down, in the same way. The remainder of the barrel is filled in with loose apples. These are thoroughly shaken down three or four times during the process of filling. Finally the barrel is sometimes finished by facing the last row in the bottom

(that is on top as the barrel is filled). When the filling is complete, the barrel should be somewhat more than full. The fruit should stand up two or three inches above the chimes. This amount will be taken up in pressing the head or the bottom in place. The bottom is pressed in with a screw or lever press, is nailed in place, and the barrel is ready for the market.

#### APPLE BARRELS.

Customarily, the package for selling apples is the barrel. There are various forms of barrels in use in this country, the two most common ones being the hundred-quart barrel and the ninety-six quart barrel. The National Apple-Shippers' Association have adopted the barrel having the following dimensions: stave, 28½ inches; head, 17¼; circumference in the middle, 64 inches. This is the hundred-quart barrel. There seems to be a tendency at the present time to use more of the ninety-six quart barrels.

The barrel market, however, in the last few years has been a very difficult and unsatisfactory one. The prices have been abnormally high, and promise to be higher than ever this season. It seems probable now that good barrels can not be had anywhere for less than 40 cents each. Under these circumstances many poor barrels are being used. Flour-barrels are frequently employed, and are in great demand. Such barrels should always be very carefully cleaned out before being used. Clean, fresh, unused barrels are always better. When handling large crops of apples, it is doubtless the best practice to buy staves, hoops and heads in quantities, knocked down, and have the barrels made up on the farm by a cooper. At the present prices of barrel stock no great saving can be made in this way, but fresh, clean barrels are secured.

#### APPLE BOXES.

The high prices of apple-barrels, taken in connection with the changing conditions of our markets, have led to the extended use of boxes. We have experimented to a considerable extent in the Department of Horticulture at the Massachusetts Agricultural College in the use of boxes for apples. While we are not ready to say that boxes are better than barrels, in general we have found their use very satisfactory. Boxes should be used, however, only for strictly first-class fruit, and more especially for the early and soft-fleshed varieties. There is probably less margin of profit in handling standard winter fruit like the Baldwin in the smaller package.

Many kinds of boxes have been used and recommended. The bushel box is probably the best, under the present market conditions. These boxes are made up in a variety of styles. The one which seems to be the most attractive, and the one which we prefer, measures 10 by 11 by 20 inches inside. This gives a trifle over the standard bushel, and weighs about fifty pounds filled. The ends are seven-eighths-inch stuff, and the top, bottom and sides are one-fourth-inch stuff. These cost about \$15 a hundred.

In shipping fancy apples in boxes, we have found it desirable to wrap the fruit in papers. Any clean white paper will answer, but specially made tissue paper furnished by dealers for fruit-wrapping is the most satisfactory. The papers are cut 10 by 10 inches square.

#### COLD STORAGE.

The cold-storage business for apples has been rapidly developed in the last five years; it has also been greatly improved. The largest bulk of winter fruit now finds its way into the large city storage houses, from which it is marketed as wanted. Many of these storage companies accept apples for storage direct from the growers. The prices charged for storage are from 30 to 50 cents a barrel for the season; this allows the fruit to be taken out at any time up to May 1.

The keeping of fruit in what is called common storage has been considerably diminished on account of the improved cold-storage facilities. Quantities are still stored at home,

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however, in cellars or in houses constructed especially for the purpose. Such houses or fruit-rooms are cooled in some way, usually by control of the ventilation. Well-built fruit-houses of this type have proved very successful in the past; their value is proportionately less, however, as the city cold storage becomes cheaper and more efficient.

#### METHODS OF SELLING.

There are many different ways of selling apples; every man must judge from his own circumstances what method will be the most successful with him. This is a critical matter, and failure is common here. Too many men seem to think that because some one else succeeds by certain methods of marketing, those methods are universal applicable. This part of the subject should receive very careful study from the man who has apples to sell. The principal methods of selling may be briefly summarized as follows:

(1) Retailing in the Home Market.—Very often apples can be taken to the near-by village or city market in small lots, and sold from the growers' wagons at fair or even fancy prices. The growers who are running vegetable or milk wagons commonly find this method the best one. In all cases where it can be adopted it is to be recommended. The fruit is promptly sold, and the money is in hand; there is no trouble with transportation companies, commissionmen or other agents, and very often there is no expense for packages. Naturally this method is the best suited to the disposal of a miscellaneous collection of summer and fall apples, rather than to the sale of a large block of Baldwins or some other winter variety.

(2) On Trees.—It has been customary for some years in Western States for the growers to sell the crop on the trees. This practice has rapidly gained ground in Massachusetts. The buyer comes to the orchard, and either pays a lump sum for the entire crop, or else pays a stipulated price per barrel. In the latter case the price is, say, \$1.50 for the best grade and \$1 for the second grade, the grading being done by the buyer. This method has many advantages for the men who are not in close touch with apple markets, or who are not experienced in grading and packing fruit. It

relieves the grower immediately of the two great responsibilities—grading and selling.

(3) On Commission.—One of the best recognized methods of selling is that of shipping the fruit on commission. When the barrels or boxes are ready, they are put in the hands of commissionmen, usually in one of the large city markets. The commissionman sells them for what he can get, and returns the amount to the grower minus the commission and any charges for freight, cartage, storage, etc. There are many disadvantages to this system, and much fault has been found with it; but, on the whole, it is the best method for a large number of growers. If a reliable commission-house is selected, and if the shipper is careful and honest on his side of the transaction, good results may be expected. Most of the cursing against commissionmen comes from shippers who have tried to cheat them.

(4) On Joint Account.—This is a new method of selling, and not often adopted. According to this method, the grower turns over his fruit to the seller at picking time, receiving a stipulated amount in cash down. This is considerably less than the value of the fruit, say \$1 a barrel. The fruit is then held by the seller, and disposed of at his option. At the close of the season, when the fruit is all sold, the shipper and seller have a final settlement. From the gross amount of the sales there is deducted first the advance payment made to the shipper; then the storage, freight and other charges are subtracted; the balance is finally divided equally between the apple-grower and the apple-seller. In every instance which has come to our notice this method has worked very well.

"Life is made up, not of great sacrifices or duties, but of little things, in which smiles and kindnesses and small obligations, given habitually, are what win and preserve the heart and secure comfort."

\$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. No. 8.

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## Two Kinds of Insects Injurious to Trees.

ELBERT S. TUCKER, MUSEUM ASSISTANT  
IN SYSTEMATIC ENTOMOLOGY, UNIVERSITY OF KANSAS, LAWRENCE.

For some insect pests, effective remedies or preventives are known, while against others, man is almost helpless. Nature provides for the restriction of excessively productive kinds by means of natural enemies and weather conditions, factors without which the earth would soon become devastated; in fact all forms are more or less controlled in this manner which is especially fortunate in matters beyond the control of man. Through the agency of man himself, by the development of agriculture, special inducements are presented in orchards and fields and herds for the enemies of fruit, grain, of any kind of crop, or of animals, to find abundant food and range, while in a wild state of nature, without civilization, such species would scarcely be troublesome. In seeking protection under the change of conditions, a knowledge of the life histories of the common insects enables an observer to recognize which kinds are friends or foes, and thereby he may learn to favor the former and possibly combat the latter.

By no means are all insects to be feared as enemies, since some persons may so conclude because all they hear or read about are the injurious kind, for these, of course, are continually brought to notice. The benefits derived from a great part of insect life are scarcely considered by the average person; too often a friendly bug is killed outright as a baneful creature. To say that the greater number of species are helpful rather than baneful is well within reason, for nearly every injurious kind has at least three or four enemies of its own class. Numerous examples might be mentioned of wonderful service performed by busy little workers for the welfare of mankind. Even the countless little harmless creatures, so commonly detested and despised as a useless part of creation or as a nuisance in any form by people who seldom learn the facts of their lives, contribute no small share of the processes of nature in making the world habitable to other forms of life, and thus, though somewhat indirectly, to the advantage of man above all.

## THE FRUIT-TREE BARK-BEETLE.

(*Scolytus rugulosus*, Ratzeburg.)

"You will find a piece of wood in a separate bundle, with small black bugs imbedded in the wood. They kill my peach- and cherry-trees. What are they? How can I stop them from killing my trees?"

Lansing, Leavenworth County, Kans.,  
October 8, 1904.

A stick of infested cherry limb and sections of bark showed injury done by the fruit-tree bark-beetle, *Scolytus rugulosus*, of which several specimens were found in the package. These specimens belonged to the fall brood. The stick was placed under cover to await development of the spring brood which was first noticed April 12, though a few which had emerged before were found dead at this date. Appearance of the beetles continued until May 15. As the breeding of this insect is apparently continuous from one generation to another, through spring, summer and fall, the shortest time of a life cycle being four weeks, three if not more broods may develop in a year.

Circular No. 29, Bureau of Entomology, U. S. Department of Agriculture, treats of the fruit-tree bark-beetle in a condensed article by F. H. Chittenden, to whom due credit is given in reproducing references here:

"General Characteristics and Method of Work.—Orchard-trees are subject to the attack of a small boring insect the fruit-tree bark-beetle (*Scolytus rugulosus* Ratz.), its presence being manifested by what are called 'worm-holes,' minute round openings in the outer bark scarcely a sixteenth of an inch in diameter, accompanied by wilting of the leaves and shriveling of the bark, and, in the case of stone-fruit trees, by more or less copious exudations of gum. The first holes that appear are made by the pa-

rent beetles in entering the bark to deposit their eggs, but later, if no effort is made to check the insect's work, the bark will be found thickly 'peppered' with holes as though by fine bird-shot. These are the exit holes of beetles that have in their larval stage mined and developed under the bark. Holes are also made by the mature insects, probably chiefly males, in the latter days of a season

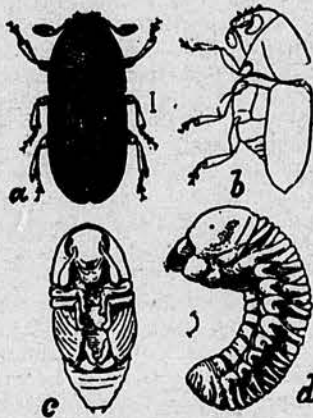


Fig. 1.—*Scolytus rugulosus*; a, beetle; b, same in profile; c, pupa; d, larva—all magnified about 10 times. (From Circular 29, Entomology, U. S. Department of Agriculture.)

after midsummer, evidently for no other purpose than for food. A piece of twig, showing exit holes in the bark and the galleries of the insects beneath it, is reproduced in Figure 2.

"The insect which causes this injury is a member of the Scolytidae, a family of cylindrical bar- and wood-boring beetles. The adult or beetle is shown at Figure 1, a. It is about one-tenth of an inch in length and three times as long as wide; uniform black in color, except the tips of the elytra or wing-covers and a portion of the legs, which are dull red. The punctation of the thorax and of the elytra are also illustrated, and at b the peculiar form of the short abdomen is shown. This insect is a European introduction and is sometimes known as the shot-borer, orchard scolytus, and fruit bark-beetle.

"In Europe the species first attracted attention by its occurrence on young apple-trees in 1834; in the United States it was noticed for the first time in 1877 through its injury to peach. Available data indicate that plum is more susceptible to attack than other trees, while peach, cherry, and apple are attacked about equally. Pear is also quite subject to infestation, and apricot, nectarine, quince, mountain ash and Junberry trees also harbor this species.

"Two important factors that have operated in the past have had a marked effect in increasing the numbers and consequent injury by this as

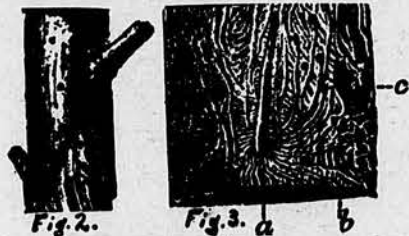


Fig. 2.—Work of *Scolytus rugulosus* in twig of apple—natural size.

Fig. 3.—Galleries of *Scolytus rugulosus* on twig under bark; a, main galleries; b, side or larval galleries; c, pupal cells—natural size (after Ratzeburg). (Both figures from Circular 29, Entomology, U. S. Department of Agriculture.)

well as other fruit-tree borers: (1) The introduction of other destructive insects and diseases into many of the districts which this insect inhabits, which has undoubtedly, by weakening the trees, afforded opportunities that would not otherwise have existed for the multiplication of these borers; (2) severe windstorms that often sweep through portions of the same region and which cause extensive destruction of fruit and other trees. The presence of the injured and dying trees that are permitted to remain is a standing menace to the culture of stone fruits, apples, and pears.

"One source of injury that is too often disregarded by the fruit-grower is in permitting trees to remain after they are badly injured and useless for any practical purpose except as firewood.

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Sectional View of Handle Showing Grelmer Wedge.

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"As a rule, only diseased trees or such as may already be suffering from the attacks of other insects are permanently injured, but apparently normal trees are also attacked and sometimes completely recover without assistance. Stone-fruit trees, especially peach, if in condition, exude such quantities of gum that the beetles are repelled and abandon their burrows without mining to any extent under the bark or depositing their eggs. As long as there is a vigorous flow of sap there is little danger of serious injury, but after frequent attempts to obtain lodgment the beetles may so 'bleed' a tree that, in course of time, they are able to attain their purpose, when the death of the tree is assured.

"Another form of injury is the destruction, at the beginning of spring, of small twigs together with the leaves which they bear. The beetles are also reported to destroy leaves by boring into the base of the buds at their axils.

"Injury, then, is mainly due to beetles of the first generation working upon the terminal twigs in spring and afterwards of later generations on the trunks and larger limbs of trees.

"In common with most diurnal species this insect is found more abundant on the exposed sunny side of living trees, which being drier would exude less sap, and for that reason be more available as food.

"Remedies.—Foremost among the requisites is clean-cultural practice; in fact, little of really substantial benefit can be accomplished without it. Brushwood and other remnants of orchards, as has already been shown, are too frequently left to serve as centers of infestation to sound trees. As soon as infested trees are seen to be actually dying, it is practically useless to do anything to save them. Trees may recover from slight attacks, and the fruit-grower must use judgment in discriminating between what will recuperate and what are beyond hope of recovery, and should cut out and burn the dying and dead growth as often as detected.

"For the perfect protection of one kind of fruit-tree all other kinds which are permanently injured must be destroyed. If, for any reason, such measure be neglected during the summer, the injured growth should at least be burned before the following spring, as

by such means all the hibernating insects will be destroyed.

"The beetles may be killed and much consequent damage prevented, if they are detected at the outset of attack, by touching lightly the infested spots, from which the gum or sap has begun to ooze, with a sponge saturated with kerosene, creosote oil, or turpentine, and fastened at the end of a stick of pole. After destroying the beetles in this manner upon a tree, it may be protected from further attack by paper wrappings; and, should it show signs of serious injury, this might be averted, if the tree be too dry, by frequent waterings where this can conveniently be done, to the base of the trunk."

Of several kinds of deterrent washes, whitewash is one that should not be overlooked. Instructions in regard to other remedies and trap methods are given in the circular referred to above, which should be obtained by every person concerned in dealing with the pest.

In response to question as to what treatment the inquirer had used in acting on the information sent him, he gave the following reply, dated May 18, 1905: "I would recommend cutting and burning if the bark is badly shriveled, but if detected in time, we can, I think, save many trees with but little work or expense, by touching lightly the infested spots, from which the gum or sap is oozing, with a small sponge saturated with turpentine. This simple remedy I have used and believe it to be a success."

THE BOX-ELDER PLANT-LOUSE.  
(*Chaitophorus negundinis*, Thomas.)

I send you a sample of the insect that works on the box-elder. Will you please advise me what to do?

Lawrence, Kans., April 22, 1905.

The specimens proved to be plant-lice, insects somewhat difficult to combat. Only contact poisons can be effectively used against them. Prof. F. H. Snow personally answered the inquiry and recommended spraying the infested parts of the tree with kerosene emulsion.

For purposes of identification, live specimens were furnished on request, accompanied with the following note, dated May 10: "I send you herein enclosed, as near as I could find, a complete family of the insects. They

(Continued on page 624.)



## The Stock Interest

### THOROUGHbred STOCK SALES

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

September 1, 1905—Poland-Chinas at Bennington, Kans., C. N. White.

October 18, 1905—Fancy Poland-Chinas at Osborne, Kansas, by E. A. Dawley, Waldo, Kans.

Oct. 24, 1905—Jno. W. Jones & Son, Delphos, Duroc-Jerseys.

February 15-17, 1906—Third Annual Sale of the Improved Stock Breeders Association of the Wheat Belt at Caldwell, Kans., Chas. M. Johnson, Sec'y.

Dec. 12 and 13, 1905—Imported and American Herefords. Armour-Funkhouser sale at Kansas City, Mo., J. H. Goodwin, Manager.

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.

February 21-23, 1906—Percherons, Shorthorns, Herefords and Poland-Chinas at Wichita, Kans. J. C. Robinson, Manager, Towanda, Kans.

### The Farmers' Hog.

READ BEFORE FARMERS' INSTITUTE, NEMAHA COUNTY, BY W. W. JONES.

Historians have prated and poets have sung, of man's noblest friend the horse, and of his staunch ally and faithful comrade the dog; but we shall attempt to say a few words in defense of that not-to-be-forgotten though less heroic friend of man, the humble hog.

One of the questions which naturally presents itself to our mind in thinking of the hog is, why does the farmer raise him? Think you that we are raising the hog for the sole purpose of having something to look at, or to keep us busy carrying feed and water for his benefit, two or three times every one of the 365 days in the year? We do not attempt to deny that a good hog in nice, sleek condition is an object of beauty. In fact, we are proud of him and are willing to do the work necessary to the growth and development of such an animal. But the hog business is one of the most important industries of the American farmer, because there is money in him.

We raise him to pay that doctor's bill incurred last spring in saving the life of some dear one. We raise him to provide for us the necessities of life. We raise him to pay for our homes and to educate our sons and daughters; and if you wish to know whether he does his duty, ask the hundreds and thousands of farmers who stay by the hog year in and year out, through high and low prices alike.

The Western farmer must have the hog on his farm. He can not get along without him. The profitable feeding of steers is almost impossible without hogs to follow. The hog is needed in the dairy section as a consumer of skim-milk and other wastes about the farm. The man who raises corn to sell at 20 to 40 cents a bushel, would better feed his surplus grain to hogs and realize from 40 cents to \$1 a bushel for his corn.

The farmer should have a common-sense hog, one that he can put in his feed-lot and depend upon to make him some money; and this is the kind of animal the breeder of pure-bred swine must produce if he wishes to sell his surplus to the farmer for breeding purposes.

The breeder of pure-bred swine realizes that it is the farmers' ideal of a hog that is finally accepted as good stuff, and to supply him with this kind of an animal is the end of all our efforts.

The farmer, as a rule, does not care whether his hog wears red, white or black hair, or whether his ears stick up or hang down. What he wants is a hog with a constitution; and any system of breeding that enfeebles the constitution is the kind of breeding he does not want in his herd. He wants his hog to be as immune from disease as possible, and to obtain this he must have the constitution, pigs that will fight for the best teat before they are three hours old and that will even steal if given have a chance. The farmer's hog must be a rustler, a greedy fellow, healthy, vigorous and growthy and as good a looker as is possible to obtain without losing any of the before-named important qualities.

Agricultural Experiment Stations have proven beyond a doubt that no man can afford to raise scrub hogs.

Do not understand me to infer that you can not make money handling scrub stock. What I do mean is that if you are making money handling such, you can with the same amount of care and labor make much more by handling pure-breds or even high grades.

No man has any excuse for not having, at least, a pure-bred male at the head of his herd. In the selection of your herd-header, you should not be too easily pleased. He should have at least moderately heavy bone, a good, strong back, well arched, large heart girth and a good, vigorous constitution generally. Whether you want a long or short body depends mostly on your sows and the type of hog you wish to produce. The breeder of pure-bred swine can supply you with any color of hair you desire and a hog that for generations has been bred with his future usefulness to the farmer in mind.

You want a type of hogs that is reasonably prolific if you wish to raise your own stock; and to secure this you must have long-bodied sows, sows that can consume enough feed to produce a good-sized litter of well-developed pigs, and after having farrowed them, can raise them until they are able to care for themselves. If you wish to raise the standard of your herd, you must not raise pigs for breeding-purposes from young or immature sows.

I shall dwell but briefly on the feed and care of hogs as I believe every one interested in hog-raising is alive to the requirements of his hogship. We all realize that to make our hogs as immune from disease as possible, we must pay close attention to the sanitary conditions of our yards and buildings; that we must feed and water our hogs regularly, using good, clean, wholesome food; and in this land of king corn we must feed something in connection with it to offset the evil effects of this heat-producing feed on growing and breeding animals.

### The Percheron Horse.

BY W. A. ELDRIDGE, PERDUE UNIVERSITY, LAFAYETTE, IND.

(Prize paper in contest conducted by the Percheron Registry Association.)

In the little district of Perche, situated in the south of Normandy, in France, we find the native home of probably the most popular breed of draft-horses in the world to-day, the Percheron. This is a somewhat broken country with rather scant pastures and is watered by numerous springs and brooks, and is an ideal location for the development of such a noble breed of horses. Nature has favored it with nutritious herbage and a pure, dry and bracing air eminently favorable to horse-breeding. In this country agriculture has flourished for centuries. The farms of Perche are small and well managed.

It takes a great deal of labor to cultivate the fields of this broken region and the brood-mare is called upon for her share of the work. This is another condition that has led to the production of strong, rugged colts destined to some day carry on the commerce of the world.

The Perche farmer is the breeder of these horses and it is a well-known fact that the farm is the ideal place to produce those lusty, vigorous colts that will develop into good drafters. He takes pride in his horses, he loves them. It seems to come natural to him. He takes good care of the brood-mare; works her and feeds her carefully; and here lies one of the main factors that has brought the breed to the high degree of perfection which it holds to-day. When the colts are about 18 months old, he assigns to them some light work. They are hardy and soon become accustomed to it and enjoy it. They are abundantly fed and with this exercise they acquire a strong, healthy constitution.

The Percheron has been bred in this district for many centuries. In 732 when the French defeated the Saracens, they captured their horses and brought them to their country; and to these historic Arabian horses, so noted for their superior symmetry, qual-

ity and intelligence, the modern Percheron owes its origin. The use of these beautiful stallions on the native mares of Perche continued as late as 1820, when the two noted gray stallions, Godolphin and Gallipoli, were introduced in the stud stables at Pin, thus stamping their character, quality and endurance on the horses of the country with an indelible impress. These horses thrive in their new home, and with some admixture of the blood of the horses of Brittany, a type of horse was developed that was of the greatest utility combined with beauty, quality and style, a horse of more than ordinary strength and vigor which would enable him to do hard work. He had a splendid conformation and intelligence, was gentle and patient and possessed the inestimable quality of moving heavy loads at a rapid rate.

These horses were preeminently fitted for the mail-coach, express and omnibus service. All of the countries were anxious to possess them as they were the only race of horses that were practically faultless. So great was the demand that the French government had a hard time to prevent the sale of the excellent breeding stallions and mares. They established a stud stable at Bonneval and some of the best horses were bought and taken there. Prizes were offered at the department fairs and in this way the Percheron was rescued from what might have proven to be its complete extermination.

Up until 1883 there was no definite name for this breed. They were known by various names as Norman, Percheron, Percheron-Norman and French horses. This year the Societe Hippique Percheronne was established and the name Percheron was decided upon. The first volume of the American Stud Book was published in 1876 under the name of Percheron-Norman Stud Book. But after the adoption of the name Percheron by the French it was changed.

One of the most influential factors which has tended toward bringing the Percheron to its present high degree of perfection is the interest taken by the French government. For a long time the government has maintained stud stables in which were kept the very best stallions that could be found. They are let out to the farmer at a nominal fee, in that way encouraging them to breed good animals. The government does not stop here. It has established a system of inspection and license for all stallions which are to be used for breeding-purposes, and only animals of merit are permitted to enter stud service. Two classes are recognized, first the "Approved," which so long as they are kept in service receive an annual reward from the government of from \$75 to \$150. The second class is designed as "Authorized" stallions, which are commended for public patronage, but not considered of sufficient excellence to deserve a bounty. The law forbids the use of any stallion that has not been authorized by the government. The vast amount of good arising from this interest taken by the government can scarcely be estimated.

As the railroads began to take the place of the old mail-stage and omnibus, and speed became a matter of minor importance, the breeder gradually began to breed toward a heavier type. It was mainly due to this and to the fact that the constantly increasing trade of America demanded a heavier horse, that the breed merged into what is known as the modern type of Percheron weighing from 1900 to 2300 pounds. In this modern type we find a horse varying in color from white to black, but tending toward the dark color. He has an intelligent, attractive head with a short, thick and beautifully crested neck set on neat, well-placed shoulders, a short-legged, blocky type with a short, strong back and coupling and heavy quarters. He has a clean leg noted for its straightness and soundness, and feet of superior quality. Percherons, as a general thing, are very unsuceptible to foot ailments, side-bones, etc. They have the much-desired fast, straight walk and a clean, open, easy trot.

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## Caustic Balsam

A Safe, Speedy, and Positive Cure

The safest, Best BLISTER ever used. Takes the place of all liniments for mild or severe action. Removes all Bunches or Blemishes from Horses and Cattle. SUPERSEDES ALL CAUSTIC OILS. It is impossible to produce scar or blindness. Every bottle sold is warranted to give satisfaction. Price \$1.50 per bottle. Sold by druggists, or sent by express, charges paid, with full directions for its use. Send for descriptive circulars. THE LAWRENCE-WILLIAMS CO., Cleveland, O.

## Registered Herefords

Individual merit and choicest breeding. Dale Duplicate 2d at head of herd. Correspondence solicited. A. JOHNSON, Clearwater, Kans.

## Spring Creek Herd of POLAND-CHINA SWINE

Pigs by On and On and U. S. Model. 3 fall boars and a number of choice gilts, large, fancy and well bred. Perfection and Sunshine blood.

G. M. Hebbard, Route 2, Peck, Kansas

## PINK EYE CURE FOR HORSES AND CATTLE

Sure relief for Pink Eye, foreign irritating substances, clears the eyes of Horses and Cattle when quite milky. Sent prepaid for the price, \$1.

Address orders to W. O. THURSTON, Elmdale, Kansas.

## IMMUNE HOGS

Immune your pigs by feeding virus to the sow (costs 1 cent a pig) and have their barn cholera-proof. ONE MILLION successful tests. Indorsed by thousands of able veterinarians and scientists; satisfaction guaranteed in writing, backed by \$10,000 security. Agents wanted. ROBERT RIDGEWAY, Box K, Amboy, Ind.

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

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

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**Dipolene**

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A positive and thorough cure easily accomplished. Latest scientific treatment, inexpensive and harmless. **NO CURE, NO PAY.** Our method fully explained on receipt of postal.

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is a wonder—guaranteed to cure any case—money back if it fails. No cutting—no scar. Leaves the horse sound and smooth. Free Book tells all about it—a good book for any horse owner to have. Write for it.

**FLEMING BROS., Chemists,**  
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is a safe, sure, efficient non-offensive remedy for

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Indispensable in dairy and stable. Saves annoyance and irritation. Cows rest easy, digest and secrete their food better and produce more milk and butter. It makes milking easy and safe; protects teams. Will not gum the hair. Easily applied with sprayer, sponge or brush. Buy now; use before the animals run down. At dealers, Quart 40c; 1/2 gal. 60c; gal. \$1. Trial gallon direct express paid \$1. Don't take a substitute. Particulars free. Address,

**Moore Chem. & Mfg. Co.,**  
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1501 Genesee Street, Kansas City, Mo.



The modern Percheron is very popular with the American farmer because he is an easy keeper and an early maturer, is hardy and vigorous, but docile and sensible, strong, active and well adapted to all classes of farm work and city use. America had a preference for a black horse which has led to the production of darker colored horses; but, as is evidenced by some of the leading shows of the last season, there is a tendency to revert to the original color, the beautiful iron-gray. It is a good thing that this is true, for a minor point like color should never detract from the value of an otherwise good horse.

Is it any wonder that the progressive Americans import more of these stallions than of all the other draft-breeds combined. At the great World's Fair at St. Louis this year we found the Percheron superior to any other breed both in number and quality. Nor is the Percheron degenerating. Look at the magnificent record at the recent International Exposition where those great geldings were assembled to prove their rank. The Percherons won first in the heavy geldings, first, third, fourth and fifth in the light drafters, first in the light pairs, first in the light fours, and last but not least, when those flashy six-in-hand were displayed, the active Percheron geldings carried off the royal purple, the greatest honor that could be awarded to any drafter.

Thus ends a brief history of the interesting development of a breed of draft-horses which have wended their way into the industrial centers of nearly every nation on the globe. If all the horses through whose veins flow the blood of the noble Percheron were to-day taken from their toll, the wheels of industry and commerce in the world would be practically at a standstill. Millions of people are dependant on them for their very existence. Let this be an inspiration to the breeders of these magnificent horses and to the progressive American farmers, who, through the use of pure-bred Percheron sires supply the ever-increasing demand for high-priced geldings in the market centers of the world. Let the good work go on. Hold aloft the Percheron banner and let it forever stand as a monument to the untiring efforts of the patient farmer and breeder of the beautiful valley of Le Perche.

#### The American Royal Draft-Horse Classification.

The KANSAS FARMER has urged upon the gentlemen in charge of the American Royal the fact that it ought to be the greatest show of draft- and coach-horses in America if not in the world. It is a matter of satisfaction to know that the board of directors of the American Royal which met in Kansas City on May 18, has adopted the exact classification for Percheron stallions and mares that is now in use in the International Live-Stock Show at Chicago. In addition to this, they have adopted the same classification for Belgians that was made for Percherons. This, however, does not yet tell all the story. In addition to the large prizes offered by the American Royal on the International classification, there will be extra prizes for younger stock and for American-bred animals. Still further, it is understood that the Percheron Registry Company will give about \$1,000 in specials and it is hoped that the American Importers' and Horse-Breeders' Association will do the same. This will make the greatest premium list for these classes of horses in the United States if not in the world. This is the most complete classification for Percherons given in any show in America, and will undoubtedly result in bringing together the greatest string of horses ever seen on this continent. Following is a complete list of the classification and prizes offered in the draft and coach classes:

#### PERCHERONS.

- Class 1—Stallions 4 years old and over—\$80, \$50, \$40.
- Class 2—Stallions 3 years old and under 4—\$50, \$40, \$30.
- Class 3—Stallions 2 years old and under 3—\$40, \$30, \$20.
- Class 4—Stallions 1 year old and under 2—\$15, \$10, \$5.

- Class 5—Stallions under 1 year—\$10, \$6, \$4.
- Class 6—Four animals any age, get of one sire—\$75, \$50, \$35.
- Class 7—Two animals any age, produce of one dam—\$60, \$40, \$30.
- Class 8—Best American-bred stallion—\$25.
- Class 9—Best imported stallion—\$25.
- Class 10—Champion stallion any age—\$75. (Competition limited to first prize winners in classes 1, 2, 3, 4, 5, 8, and 9).
- Class 11—Mares 4 years old and over—\$25, \$15, \$10.
- Class 12—Mares 3 years old and under 4—\$25, \$15, \$10.
- Class 13—Mares 2 years old and under 3—\$15, \$10, \$5.
- Class 14—Mares 1 year and under 2—\$15, \$10, \$5.
- Class 15—Mares under 1 year—\$10, \$6, \$4.
- Class 16—Champion mare any age—\$50.
- Class 17—Stallion and four mares—\$25.
- Class 18—Champion group of four stallions—\$50.
- Class 19—Best stallion bred by exhibitor—\$25.
- Class 20—Best mare bred by exhibitor—\$25.

(Also Percheron Registry Company's specials.)

#### BELGIANS.

- Class 21—Stallions 4 years old and over—\$60, \$50, \$40.
- Class 22—Stallions 3 years old and under 4—\$50, \$40, \$30.
- Class 23—Stallions 2 years old and under 3—\$40, \$30, \$20.
- Class 24—Stallions 1 year old and under 2—\$15, \$10, \$5.
- Class 25—Stallions under 1 year—\$10, \$6, \$4.
- Class 26—Four animals any age, get of one sire—\$75, \$50, \$35.
- Class 27—Two animals any age, produce of one dam—\$60, \$40, \$30.
- Class 28—Best American-bred stallions—\$25.
- Class 29—Best imported stallions—\$25.
- Class 30—Champion stallion any age—\$75. (Competition limited to first prize winners in classes 21, 22, 23, 24, 25, 28, and 29).
- Class 31—Champion mare any age—\$50.
- Class 32—Stallion and four mares—\$25.
- Class 33—Champion group of four stallions—\$50.
- Class 34—Best stallion bred by exhibitor—\$25.
- Class 35—Best mare bred by exhibitor—\$25.

(Also Belgian Association's specials.)

#### SHIRES AND CLYDESDALES.

- Class 36—Stallions 4 years old and over—\$60, \$50, \$40.
- Class 37—Stallions 3 years old and under 4—\$50, \$40, \$30.
- Class 38—Stallions 2 years old and under 3—\$40, \$30, \$20.
- Class 39—Champion stallion any age—\$75. (Competition limited to first prize winners in classes 36, 37, and 38.)
- Class 40—Champion mare any age—\$50.

#### FRENCH COACHERS.

- Class 41—Stallions 4 years old and over—\$25, \$15, \$10.
- Class 42—Stallions 3 years old and under 4—\$25, \$15, \$10.
- Class 43—Stallions 2 years old and under 3—\$20, \$10, \$5.
- Class 44—Four animals any age, get of one sire—\$25, \$15, \$10.
- Class 45—Two animals any age, produce of one dam—\$25, \$15, \$10.
- Class 46—Champion stallion any age—\$50.

#### GERMAN COACHERS.

- Class 47—Stallions 4 years old and over—\$25, \$15, \$10.
- Class 48—Stallions 3 years old and under 4—\$25, \$15, \$10.
- Class 49—Stallions 2 years old and under 3—\$20, \$10, \$5.
- Class 50—Four animals any age, get of one sire—\$25, \$15, \$10.
- Class 51—Two animals any age, produce of one dam—\$25, \$15, \$10.
- Class 52—Champion stallion any age—\$50.

#### DRAFT HORSES IN HARNESS.


- Class 53—Single mare or gelding weighing over 1,750 pounds to cart—\$25, \$15, \$10.
- Class 54—Pair of horses weighing 3,000 to 3,500 pounds to wagon—\$50, \$40, \$30.
- Class 55—Three horses abreast to wagon—\$50, \$40, \$30.
- Class 56—Four-horse team, wheelers weighing 3,000 to 3,500 to wagon—\$100, \$75, \$50.
- Class 57—Six-horse team to wagon, wheelers weighing not less than 3,800 pounds and leaders not less than 3,500 pounds—\$150, \$100, \$50.

#### Shelter for Fattening Steers.

PRESS BULLETIN OF THE PENNSYLVANIA EXPERIMENT STATION.

In the fall of 1902, there was planned a series of experiments to test the comparative merits of indoor and outdoor feeding for fattening steers. These experiments have now extended through three seasons, upon practically the same plan. Twenty-four steers were divided into two lots as nearly equal as possible. One lot was fed in a large pen in the basement of the college barn, the other lot was fed in an open shed in a yard adjoining the barn. This shed was enclosed on the two ends and one side, leading the open side towards the southeast.

During the first season, the lot fed in the shed produced a slightly smaller gain and ate somewhat more food than the one fed in the barn. During the second season, the lot in the barn again produced a larger gain but ate more food than the lot outside. During the first season, it required one and one-fifth pounds more feed to produce a pound of gain in the outside lot than in the barn lot. During the second season, it required one and one-half pounds more feed to produce a pound of gain in the open shed than




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that it is far superior to anything known for scab, mange, lice, ticks, and other parasitic live stock troubles. We know it has no equal. We want you to know it by actual test at our expense. We also send free complete set of plans for home-made dipping vats. Trial gallon Carbolem Dip \$1.50, express prepaid. Enough to make 100 gallons ready to use. Dipping tanks at cost.

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**Node to measure. No liquid to spill. No string to rot.** Just a little pill to be placed under the skin by a single thrust of the instrument.

**An Injector Free with a Purchase of 100 Vaccinations.** For Sale by All Druggists. Literature Free—Write for it.

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## Improved Handy Herd Book FOR SWINE-BREEDERS

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DO YOU BREED PURE-BRED SWINE? Then most assuredly you are behind the times and losing time without this **PERFECT, SIMPLE, PRACTICAL, CONVENIENT Private Herd Book**, that almost of itself keeps a correct record of your breeding sales, etc.

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in the barn. During the third season, the two lots made practically the same gains, there being only one-half pound difference per steer and that in favor of the outside lot. The steers in the shed ate less feed during this season than the steers in the barn. During this season it required a quarter of a pound more feed to produce a pound of gain in the barn than outside.

During the first two seasons, the yard in which the open shed was located became very muddy from the tramping of the steers and on account of drainage from higher ground. Before the last season opened, a part of this yard was given a coat of cinders which allowed it to be kept drier than during the previous seasons. This may account in part at least for the better showing made by the outside lot during the last experiment.

From records kept during these experiments, it appears that the temperature has very little to do with the gains. The large gains were made quite as often during the colder periods as during the warmer ones. In many cases it seems that the cold acts as a stimulant which results in greater gains. Even the steers outside sometimes made their largest gains during the coldest weather. The indications are that it is much more important to keep steers dry than to keep them warm, and that whatever advantage barn-feeding may possess over outside feeding results not from the warmer but from the drier quarters.

### Goodhue

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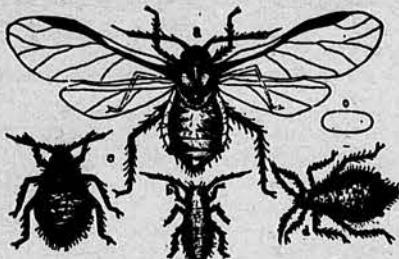


## Two Kinds of Insects Injurious to Trees.

(Continued from page 623.)

are found on the young growth, and wherever they are, the leaves are shriveled. We have another tree, about fifty yards away, which is never bothered by the pest. The insects multiply rapidly and are very hard to exterminate."

The fresh specimens were sent to Mr. C. E. Sanborn, at College Station, Texas, an expert in the study of these kind of insects, who reported: "The bugs which you sent on the host plant, box-elder (*Negundo aceroides*) is *Chaltophorus negundinis*, Thos. There



The Box-elder plant louse (*Chaltophorus negundinis*); a, winged viviparous female; b, young from viviparous female; c, viviparous apterous female; d, apterous oviparous or true female; e, egg—all enlarged. Original from drawings by T. A. Williams. (From report Nebraska State Board of Agriculture, 1888.)

were two syrphid-fly larvae with these lice, which indicates that the lice are being preyed upon by predaceous enemies to such an extent that they will soon be exterminated in that locality."

Professor L. Bruner has given a good account of this pest in report of Nebraska State Board of Agriculture for 1888, from which the following extracts are copied:

"Chief among the above-ground enemies of this class that work upon the box-elder trees in the State of Nebraska, is a species of plant-louse or aphid. It is a sap-sucker, and is known to entomologists and others by the name of the 'Box-elder plant-louse' (*Chaltophorus negundinis* Thos.) because of its infesting this particular tree.

"This louse, like those infesting various other trees and herbs, occurs in several forms, both winged and apterous. It is green—the color of the tender twigs and leaves upon which it attaches itself by means of its beak, which is used for extracting the juice or sap upon which it is nourished, from the tree.

Early in the spring, even before the tender leaves have made their appearance, the eggs that were deposited the previous fall, hatch, and the little fellows gather about the opening buds, where they wait patiently, and perhaps shivering, too, so as to be ready to attack the first green growth that appears. These little lice that come from the eggs are of the form known as agamous females, i. e., females which produce without the intervention directly of the opposite sex. These females are also viviparous; that is to say, their offspring are produced alive, which latter are also of a like nature. Just when the first winged specimens of this louse are to be found, we do not know. In the fall of the year, after the first frosts, and when most of the leaves have fallen, the true female, which is a wingless form, lays eggs. These latter are usually thrust into crevices of the bark, and between the bud and twig. By means of these eggs they are carried through the winter, and the continuance of the species is insured for the following year.

"Happily for us, these lice as well as others, have their natural enemies that usually keep their numbers within bounds. Were it not so, with favoring atmospheric conditions, their rapid mode of increase would very soon permit of their completely covering the trees—trunks, branches, limbs, twigs, and leaves. Should such be the case, the result to trees is evident. Among the enemies of this aphid are the 'lady-birds,' with their bright colored dresses, dotted with black, like calico gowns. Several kinds of these beetles occupy themselves, in both mature and larval stages, by feeding upon the lice. The 'lace-wings,' which are allies of the dragon-fly, also live almost

exclusively upon them. In addition to these a large number of 'sun-flies' (Syrphids) in their larval or maggot form live upon the lice. They are all predaceous in their nature, devouring them bodily, as a cat does a mouse. Aside from these predaceous enemies, there are certain others that destroy them in another way. These are very minute four-winged insects, belonging to the same order with the bees, wasps, and ants, viz., the Hymenoptera. These little Chalcids, for such is the name given to this group, are parasites in the true sense of the word. They sting their host, drop in an egg, and are away. This egg hatches and discloses a grub that bores into and lives upon the vitals of the victim, which latter dies when the uninvited guest has attained its growth and is ready to issue forth into the world of conquest on its own behalf. Of course these Chalcids are small—much smaller than the lice within the bodies of which they feed and mature.

"Sometimes, notwithstanding all that these natural enemies and parasites do toward keeping this insect in check, favoring circumstances arise that permit of its increase in numbers sufficient to materially injure the plants upon which it feeds. When such is the case, other and artificial means of warfare must be resorted to in order to prevent injury to vegetation.

"As a remedy at such a time, a couple of sprayings to the trees with strong soap-suds, or an emulsion of kerosene, will effectually rid them of the lice. The soap-suds is preferable, if it is sufficiently strong and rightly applied, because the kerosene is sure to leave a more or less disagreeable odor for a time."

## An Enterprising Railroad.

Some weeks ago it will be remembered that the KANSAS FARMER gave credit to the St. Joseph and Grand Island Railroad for its enterprise in sending out over the entire length of its lines, the first dairy special train on earth. We now desire to commend this company for another exhibition of enterprise, shown in the building and maintenance of their great sheep yards at Hanover, Kans. In answer to our request for information about the capacity and purposes of these yards, Mr. S. M. Adsit, general freight and passenger agent, of the St. Joseph and Grand Island road, gives the following facts:

The accommodations at Hanover were put in primarily for the feeding and caring for Western sheep in tran-

sit to Eastern markets. These sheep are those which have been on feed in Colorado during the winter months, coming originally from New Mexico, Wyoming, and Idaho. The plant has barn room for thirty double-deck cars of sheep, and outside room for twenty-five cars. During the season proper feeds are kept on hand and furnished in desired quantities at reasonable prices. Mr. G. B. Petrie, the manager in charge, is an experienced sheepman and holds his position simply by reason of his competency. In round numbers, 800 cars of sheep will have been cared for at these yards during the season just closing. This is an increase of something like three hundred cars over last season's business. In building this plant, yard capacity for fifteen cars of cattle were provided, and our records show that fifty cars of cattle have been taken care of there this season.

Hanover, Kans., is 128 miles west of St. Joseph, and 124 miles east of Grand Island, being, as you see, practically at the half-way point between Grand Island and St. Joseph. Hanover is a division point on the St. Joseph and Grand Island Railway, making it a convenient stopping place for a feeding arrangement of this sort, it being the stopping point for trains which start from Grand Island, and the starting point for St. Joseph trains (I mean freight trains, of course).

I am very sorry that I can not send you a photograph of these yards. I have refrained from replying to you, hoping to secure one, but have made a failure of it so far. I may be able to send you a photograph later.

William McIlwraith, an editor in Queensland, says in a letter to Secretary Coburn: "I am afraid I am not always so careful in quoting my authority as I might be, but on the whole I do you justice. In connection with this matter, let me tell you—a local writer on agricultural subjects made free use of your reports, and posed as an authority. He was an insurance agent when he began to inoculate the minds of agriculturists with the bacteria of Kansas ideas and experiences. He made a noise, his notions took hold of politicians and the other day he was appointed director of agriculture for one of our States at a salary of \$750 a year. I attribute his exaltation very largely to the good use he made of information derived from your reports."

If we live in the Spirit we shall be led by Him every day and every moment.—Andrew Murray.

## TWO OPEN LETTERS

### IMPORTANT TO MARRIED WOMEN

Mrs. Mary Dimmick of Washington tells how Lydia E. Pinkham's Vegetable Compound Made Her Well.

It is with great pleasure we publish the following letters, as they convincingly prove the claim we have so many times made in our columns that Mrs.



Pinkham, of Lynn, Mass., is fully qualified to give helpful advice to sick women. Read Mrs. Dimmick's letters.

#### Her first letter:

Dear Mrs. Pinkham:—  
"I have been a sufferer for the past eight years with a trouble which first originated from painful menstruation—the pains were excruciating, with inflammation and ulceration of the womb. The doctor says I must have an operation or I cannot live. I do not want to submit to an operation if I can possibly avoid it. Please help me."—Mrs. Mary Dimmick, Washington, D. C.

#### Her second letter:

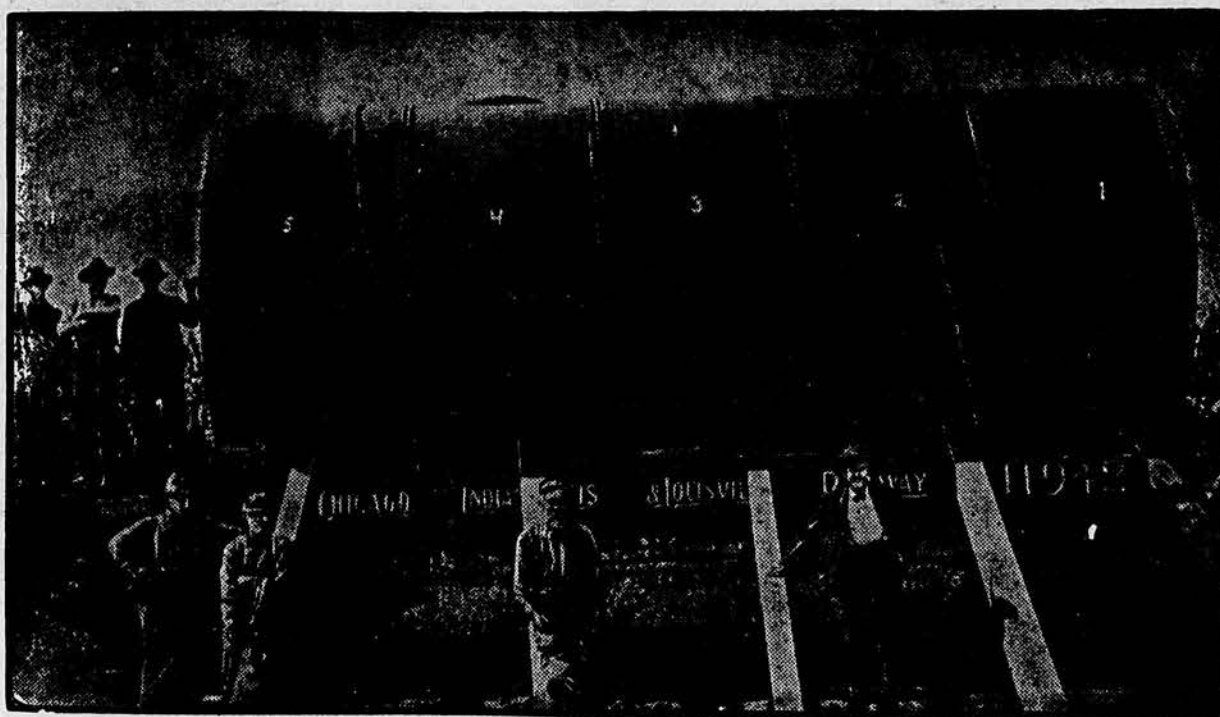
Dear Mrs. Pinkham:—  
"You will remember my condition when I last wrote you, and that the doctor said I must have an operation or I could not live. I received your kind letter and followed your advice very carefully and am now entirely well. As my case was so serious it seems a miracle that I am cured. I know that I owe not only my health but my life to Lydia E. Pinkham's Vegetable Compound and to your advice. I can walk miles without an ache or a pain, and I wish every suffering woman would read this letter and realize what you can do for them."—Mrs. Mary Dimmick, 59th and East Capitol Streets, Washington, D. C.

How easy it was for Mrs. Dimmick to write to Mrs. Pinkham at Lynn, Mass., and how little it cost her—a two-cent stamp. Yet how valuable was the reply! As Mrs. Dimmick says—it saved her life.

Mrs. Pinkham has on file thousands of just such letters as the above, and offers ailing women helpful advice.

### Fourth Term Jones' National School of Auctioneering and Oratory

Davenport, Iowa  
Opens July 24, 1905. All branches of the work taught. Write for a catalogue.  
CAREY M. JONES, Pres., Davenport, Iowa



PICTURE OF ONE OF THE GREAT OIL STILL—PHOTO MAY 25.—Manager Tucker writes as follows: "The above picture was taken just as the workmen at the refinery were unloading the second big still. This still is now on its brick foundation. Every day machinery is arriving. It is just a question of a few weeks until the Uncle Sam refinery at Cherryvale will be doing business. The company's first advertisements stated they would be refining oil in 120 days. Well, that is just what they will do; if anything, they will beat it possibly a week. Now we told you the truth about this and you will find that the balance of the development will not miss the mark far from where we state in this advertisement. Now, if you want stock in the greatest money maker in the Central West, one that will grow stronger year after year; one that will be a monument to Kansas pluck and a square deal in the oil fields, get busy quick and secure some of this stock before it is all sold, for this is about the last advertisement you will ever see of stock in this company at this price. The company has just what it advertises and is prepared to show you or any one else who will come down here and give us the chance. Better invest a thousand or so dollars before the stock gets up to three times the present price or to 25c per share."



## The Young Folks

CONDUCTED BY RUTH COWGILL.

### Ebb and Flow.

I walked beside the evening sea,  
And dreamed a dream that could not be;  
The waves that plunged along the shore  
Said only, "Dreamer, dream no more."

But still the legions charged the beach;  
And rang their battle cry like speech;  
But changed was the imperial strain:  
It murmured, "Dreamer, dream again!"

Homeward I turned from out the gloom,  
That sound I heard not in my room;  
But suddenly a sound, that stirred  
Within my very breast, I heard.

It was my heart, that like a sea  
Within my breast beat ceaselessly;  
But like the waves along the shore,  
It said "Dream on!" and "Dream no more!"

—George William Curtis.

### MY TRAMP CATS.

#### The Story of Unique Charity in Buffalo New York.

PHOEBE A. NAYLOR.

"Poor little beggar cat, hollow-eyed and gaunt  
Creeping down alleyways like a ghost of  
want."

A few years ago I read Ella Wheeler Wilcox's poem on cats and determined that in the future I would do all in my power to help these little four-footed waifs. During the last five years, I have been able to make some provision for, at least, fifty that otherwise would have suffered much misery.

The first little tramp cat we took in was very playful and engaging; we called him Dick. I had a pet alligator at that time, a little fellow, nicknamed "Ally," which used to walk round the rooms, close to the walls, looking for flies, while Dick followed him. Dicky soon learned that the alligator was very clumsy and slow in turning round; so, like a small boy, he took advantage of Ally's unwieldiness, by slapping him on his tail. By the time the alligator had turned around, the cat had jumped up in some safe place. Dick also jumped off chairs onto the alligator's back, and was off again before poor Ally could defend himself.

Despite his mischievous disposition, I succeeded in getting Dick a situation in a grocery store.

After that we moved into a house standing in a large yard. Very soon stray cats and kittens came looking for food and positions. I took them in singly, fed them judiciously and petted them until they were quite tame. Then I wrote to an evening paper, whose editor kindly allowed me to advertise gratis in "everybody's column" for homes for homeless cats. The next thing to do, after training the cat for a good home, was to word the advertisements to attract instant attention. One handsome little tortoise shell I described as being like a "tawny lion," and there were fourteen applicants for him during the next day.

During one week, last summer, three little kittens came to me. I made them nice beds in baskets in the rabbit's hutch out of doors. For some reason, which they never explained to me, they all showed a preference for one particular basket. When a kitten once secured that basket, it would not come out again for anything, for fear of losing its place. One kitten even went to bed before it was dark, to be the first to get into that basket. I obtained homes for all three of these kittens at once place, after inserting this advertisement:

"Three little thoughts of the Master Mind  
Look to their brothers of human kind;  
Give us a home, ere the winter snow  
Falls on three kittens with no place to go.

"We would be the best of cats,  
Love our masters, catch their rats;  
Don't you want a little friend?  
Then please come or quickly send."

The next day a gentleman sent a man with a basket for the three. He afterwards wrote me that the kittens were very contented. On several occasions I have found homeless cats injured on the streets. I took them at once to the humane society so that they could be speedily and humanely killed.

One cat, which I now own, was left

by people who moved away, to get her own living or starve, and most of the time she starved. When I first saw her, she was nothing but skin and bones. She was very timid, but I made friends with her and fed her outdoors—for it was summer time. One morning I heard her calling me with a most mournful miauling. I opened the door and found that she was carrying a very young kitten in her mouth. She let me take it—it was quite dead—but she kept her alert eyes fixed on my face. I think she thought I could bring it to life if I only would. I put the kitten in a basket, and when she seemed satisfied that it was being cared for, she went off again and brought a second kitten, and then a third. They were all dead and their necks were broken. A tomcat must have killed them, as a terrier kills a rat. I have twice seen it done.

When the cat turned her back, I put the three kits in a paper bag, then placed them in the ash barrel. But the poor mother found them during the night. We have three outside doors to our house and the next morning there was a dead kitten on each doorstep. The poor cat was determined I should give them a decent burial. This bereaved mother is very good to little stray kittens and helps me to make them presentable, by cleaning them nicely.

One day a little boy brought me a small black and white cat, saying, "You can have it! we don't want it any more." Its paws were terribly burned, or scalded, so I tied white vaselined rags around each paw. It looked like a wounded soldier as it trotted around. It had seven toes on each forepaw, so I called it Manytoes. I found a good home for it, as soon as its feet were healed, and several weeks later I went to see it. It knew me at once and tried to rub its nose against me; but, oh it had such a toper's breath, for the lady who owned it said she had been giving it warm whiskey and water, as it didn't seem very well!

Last summer, some boys built a shanty in a vacant lot adjoining our house and set up housekeeping. To make it very realistic they took in a little tramp cat. One day we overheard one of the boys say, "Now, Bill, you fetch the cat a plate of cabbage and meat." The cat, accustomed to a strenuous tramp diet simply stuffed himself, and looked like a bolster on legs. When the boys' vacation was ended, this cat secured a very desirable position as rat-catcher in a furniture store.—Good Housekeeping.

## For the Little Ones

### A Queer Boy.

He doesn't like study, it "weakens his eyes"  
But the "right sort" of book will insure  
a surprise.  
Let it be about Indians, Pirates, or Bears,  
And he's lost for the day to all mundane  
affairs;  
By sunlight or gaslight his vision is  
clear.

Now, isn't that queer?

At thought of an errand, he's "tired as a  
hound,"  
Very weary of life, and of "tramping  
around."  
But if there's a band or a circus in sight,  
He will follow it badly from morning till  
night.  
The showman will capture him, some  
day I fear—  
For he is so queer.

If there's work in the gardens, his head  
"aches to split,"  
And his back is so lame that he "can't  
dig a bit."  
But mention base-ball, and he's cured  
very soon;  
And he'll dig for a woodchuck the whole  
afternoon.  
Do you think he "plays 'possum"? He  
seems quite sincere;  
But—Isn't he queer!

—W. H. S., in November St. Nicholas.

### Grumble-boy and Smiley-boy.

In the Jones house there are two small boys, Johnnie Grumble-boy and Johnnie Smiley-boy; but no one ever saw both at once. At first they hardly realized, this little boy's father and mother and Aunt Emma, that there were two boys; but, when one morning a little chap came down to breakfast with a big frown on his face,

and blue eyes that were so cross that they looked nearly black, and when pleasant remarks from the family had no effect in making the boy look pleasant, they were obliged to make up their minds that a strange little boy had come to take the place of their pet. So they treated him with all the ceremony necessary with a stranger, and pretty soon he found himself feeling strange and queer.

But he wouldn't tell any one that he felt strange. Not a bit of it. He was not that kind of a boy. When he came down feeling that way, why, everything was wrong. The oatmeal was too salty, his milk didn't taste right, and his egg was boiled too hard; and he just didn't want to wear his old cap to kindergarten, it wasn't comfortable at all.

This sort of thing went on for some time, until Aunt Emma made up her mind that some remedy must be thought out. The mornings when Smiley Johnnie came down, there was the happiest little boy around the house all day, and home was a very different place from what it was on Grumble-boy's days.

So auntie thought and thought, and one day when Johnnie came down and it was the Grumble-boy Johnnie who climbed up to the seat beside father, he found a great change in the atmosphere of the family table. Usually when he came down looking frowning and sour, and complained about everything, the kind members of his family tried to persuade him by cheerfulness that things were not so far wrong as he thought them. But today it was different.

"This hominy is too hot," piped a small voice.

"It is entirely too hot," Aunt Emma agreed sulkily.

"Mine's burning my mouth," mother said sadly.

"Mine's simply scalding," growled father.

Grumble-boy looked up surprised, and for five minutes there wasn't a word said.

Then came the boiled egg and toast.

"My egg's too hard," growled Grumble-boy before he thought, just because he was in the habit of saying it when he felt cross.

"So's mine," wailed auntie.

"And mine," sobbed mother.

"Mine's like a rock, it's so hard," growled father.

Grumble-boy could hardly keep from smiling, it was all so like the good old story of Silverlocks and the three bears; but he'd come down stairs feeling cross, and it was his habit to stay cross.

And then the finish came when some lovely hot griddle-cakes were brought on. Grumble-boy wanted to complain just because he felt like it. So, after he'd poured maple syrup over his cake, he touched it with his fork and grumbled:

"These cakes are tough."

"I can hardly cut mine," wailed mother in a tearful voice.

Father started to cut his just then, and so did all the others, and at the same time father growled: "Shame to send such tough cakes to the table," and the cakes simply fell apart on their forks, and everybody burst into a roar of laughter.

After that, when by chance the Grumble-boy appeared at breakfast, it was enough for auntie to say: "Johnnie, are your cakes tough this morning?" to break the clouds and bring back sunshine.—Examiner.

He who is true to the best he knows to-day will know a better best to-morrow.—Charles Gordon Ames.

**\$12.25 to Niagara Falls and Return**  
via Nickel Plate Road, June 18, 19, and 20, with return limit of June 24, or by depositing ticket limit of July 14 may be obtained. Through vestibuled sleeping-cars. Three through daily trains. No excess fare charged on any train on the Nickel Plate Road. Meals served in Nickel Plate dining-cars, on American Club Meal Plan, ranging in price from 35 cents to \$1; also service a la carte. For further information, write John Y. Calahan, General Agent, 113 Adams St., Room 205, Chicago, Ill. Passenger Station at Chicago, corner Van Buren and La Salle Sts., on the Elevated Loop, Chicago City Ticket Office, 111 Adams St. and Auditorium Annex, No. 14.

# CROPS ARE SURE

NO CYCLONES. NO BLIZZARDS. NO DROUTHS. NO FLOODS.

### WE OFFER YOU

Mild climate, fertile soil, pure water, fine markets, good railroad facilities. We can furnish you IRRIGATED LANDS with PERPETUAL WATER RIGHT and interest in the canal works. No annual water rental—the water right goes with the land and an adequate supply is assured under supervision of the State.

### THESE LANDS AT \$10.50 PER ACRE.

We can furnish you improved irrigated lands, fenced, or seeded to alfalfa, or set to fruit, or COMPLETE RANCHES AT \$15 TO \$50 PER ACRE, according to the improvements. All these lands on easy payments.

### WE HAVE SEVERAL THOUSAND ACRES OF THESE LANDS

But they are going fast and will not last long on these terms. We have arranged to take out our customers on June 20, 1905, at special reduced railroad rates. We can also arrange for those who intend to visit the Exposition at Portland to stop over at Bliss, Idaho, without extra expense. Write us for particulars.

### THE BEST WAY TO DO

Form a party among your friends who want land and send one man to select and close the deals for the party. This will reduce the expenses of the party. Not more than 160 acres of our lands at Bliss, Idaho, will be sold to one man. The improved lands at Payette, Idaho, and in Matheur County, Oregon, can be sold in any quantity. Make your application and remit 50 cents per acre advance payment. We will send you our receipt for the amount and this receipt will be accepted as cash when you make your first regular payment at the company's offices there. In arranging for an excursion of this kind, livery rigs, etc., it is only fair that we have some guarantee that the men of our party really intend to buy land and are not taking advantage of us to make a pleasure trip or a trip on other business. This advance payment is not an additional cost to you but is simply your guarantee of good faith. We fill all applications as fast as received and the man who holds our receipt number 1 will get first choice of these lands, the man who holds number 2 will get second choice, and so on in order so long as the land lasts, but every man who holds our receipt will get good land as described above.

### YOUNG MAN, THIS IS YOUR CHANCE!

Get a piece of this land, start small and grow. Such chances as this are getting more rare every day and land will never be so cheap again. Why pay \$40 per acre for a farm and then take chances on getting a crop when one-third of that sum will buy a farm where RETURNS ARE SURE? There is nothing mysterious about irrigation. Any man who knows that a crop can be damaged by too much water as well as by too little can learn to irrigate successfully. No more special training is required than in running a self-binder or a hay press. Send for free circular giving full details and descriptions.

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 may enter. (Signed) H. B. Swanson, County Treasurer; J. P. Angle, Cashier National Bank; F. M. Johnson, President Belleville State Bank; R. B. Ward, Ex-State Senator; W. T. Dillon, Judge District Court; F. N. Woodward, Ex-County Clerk.

## Inland Empire Colonizing Company

Beecher & Beecher, Gen. Agts., Belleville, Kans.

P. O. Box F.



## The Home Circle

CONDUCTED BY RUTH COWGILL.

### Ingratitude.

Blow, blow thou winter wind,  
Thou art not so unkind  
As man's ingratitude;  
Thy tooth is not so keen,  
Because thou art not seen,  
Although thy breath be rude.  
Heigh, ho! Sing heigh, ho! unto the green  
holly;  
Most friendship is feigning, most loving  
mere folly!  
Then heigh, ho! the holly.  
This life is most jolly.

Freeze, freeze, thou bitter sky,  
Thou dost not bite so nigh  
As benefits forgot!  
Though thou the waters warp,  
Thy sting is not so sharp as friend re-  
membered not.  
Heigh, ho! sing heigh, ho! with the green  
holly;  
Most friendship is feigning, most love is  
mere folly!  
Then heigh, ho! the holly!  
This life is most jolly.

### The Peace Chamber.

FLORENCE SHAW KELLOGG.

"God gives us all some small, sweet  
way to set the world rejoicing."

No truth grows clearer to me as the  
years pass on in my invalid life than  
this, and I thank Him that it is so—  
that it is true not only to me but to  
every one. No matter how weak and  
helpless physically, no matter how se-  
cluded and quiet our life, or how close-  
ly the four walls of the sick-room may  
shut around us, there is always some  
way to serve Him, some work to do  
for our kind, something that shall  
help, though ever so little, to lift the  
great world sunward, and send the  
bright rays of hope to bless some  
heart that but for this, had been cold  
and desolate. It may be only a kind  
word spoken, a hand held out in pleas-  
ant greeting, or a whispered thought  
of love, but, for those who really try  
to find it, there is always something,  
and, oh! how the joy of it all comes  
back to gladden the heart of the  
giver! It is Love's blessed rule that  
the good we do to another comes back  
in richer, fuller measure of blessing  
to our own hearts.

I have learned, too, that

"In the storm and stress of things  
There's always, always something sings."

Some clear little note of helping  
sounding forever from the heart of  
the All Father to our hearts—some  
whisper of love and joy and peace;  
and, after the work and the waiting  
here is done, of the welcome home  
where sickness and suffering do not  
come.

Sometimes I think these things  
come clearer and sweeter to the in-  
valid, who sits apart from the noise  
and bustle of active life, than to any  
other. Like the Pilgrim, the invalid  
lies "in a large upper chamber whose  
windows open toward the sun-rising,  
and the name of that chamber is  
Peace." Because the windows always  
"open toward the sun-rising," the first  
glad rays of light shine in, like a heav-  
enly benediction, with its warmth and  
cheer and vigor, with the songs of the  
birds as they awake from sleep and  
greet the new day with gladness,  
with the soft humming of insects  
everywhere, and all the glad sounds  
of morning. Who has not felt the  
beauty and blessedness of this hour?  
If the name of the chamber is not  
"Peace" it must be the invalid's own  
fault, for surely the Father meant it  
to be so. I think He meant each one  
who lies apart at His bidding to feel  
all the strength and comfort and to  
keep all the peace some one—I know  
not who—has expressed in these little  
lines, the memory of which has so  
often helped me as I struggled up the  
"Hill Difficult" with the weight of pain  
pressing hard upon me. I give them  
that they may help others, even as  
they helped me:

"Not disabled from the service,  
No, nor absent from your post;  
You are doing gallant service  
Where the Master needs you most.  
It was noble to give battle  
While the world stood cheering on;  
It is nobler to be patient,  
Leaving half one's work undone.  
And the King counts up His heroes  
Where the desperate charge was led,  
But writes, 'My best Beloved,'  
Over the sick man's bed."

I am sure it takes greater faith and  
courage, and that of a finer, higher

quality, and shows as great heroism  
"to lie patient leaving half one's work  
undone" than it does to "give battle"  
against whatever is wrong, or to help  
whatever cause that most needs help-  
ing while the world stands "cheering  
on;" but, after all, does the invalid  
leave half her work undone? Is it  
not rather that she has done what was  
for her to do out in the great world  
and now is called to another place—  
to work in a more quiet way? We are  
all God's children—the weak ones as  
surely as the strong ones—and there  
is need and room for all; need for  
those who lie apart in the sick room  
as for those who stand strong and  
true in the front of battle, and God re-  
veals himself in love to each alike,  
and "appoints all the way that we  
go." Some hear His voice most sure-  
ly, most clearly when sickness has  
hushed the outer tumult. Then the  
words of truth come to the stillness  
within, and we learn all the joy of  
"Thy will be done"—all the peace of  
a glad obedience, and still

"With secret course which in loud storms  
annoy,  
Glides the swift current of an inner joy."

While His angels are with us in all  
the pain, helping us to bear all brave-  
ly and to keep a smiling front to the  
world. For us as truly as for the  
stronger, more active ones, the uni-  
verse is full of magnificent promise,  
if we will but lift our eyes to see it.  
It is the lifting of the eyes that is the  
first need and the real difficulty. We  
are so apt to be content with what is  
nearby and forget the larger, wider  
vision that brings such sure reward  
and blessing. This wide vision is an-  
other of the invalid's precious privi-  
leges.

The good general makes all his  
plans in quiet. As he sits apart in the  
deep places of thought he plans for all  
his men, and, as far as is given to the  
human mind, foresees actions and re-  
sults. He could not do this in the tur-  
moil of battle. Thus it is that those  
in the quiet places of life see and feel  
and plan as they could not under dif-  
ferent circumstances. Some one has  
said, "We are not thinking for our-  
selves, but for the world. With the  
shuttle of thought in the loom of mind  
we are weaving the multi-colored fab-  
ric of conditions." Some of the  
brightest and fairest, some of the  
strongest and truest of these threads  
come from the sick room where "the  
name of that chamber is Peace."

All work well done is God's work, as  
all workers—be they weak or strong  
of body—are His. He appoints our  
place and gives us strength to do  
whatsoever He would ask of us. If  
there be something we would do and  
yet have not strength for, we may  
safely question if it be a part of  
His plan for us—nay more; we may  
know it is not our work, however it  
may seem; else would He give us the  
needed strength. Our duty and our  
strength are ever equal, our time and  
our opportunity the best that could be  
for us if we have walked by His guid-  
ance. When our plans fail, it is be-  
cause He has planned better for us.  
Pain and sickness, borne bravely and  
patiently, though they be ever so  
hard, ever so trying, may be changed  
to richest blessing and grandest op-  
portunity to tell of His love and  
peace. To walk with him in the dark  
is better than to go alone in the light  
of worldly pleasures. "Whatsoever  
He saith unto you do it," whatsoever  
He bids thee bear it. Let "patience  
have her perfect work" while you lie  
in the Chamber of Peace—whose win-  
dows "open toward the sun-rising." It  
is Love that holds you; Love that  
plans for you; a love so great and  
wise it can make no mis-  
takes nor do any wrong to any one.  
Trust this love with a complete trust—  
and be happy.

As a sort of an "Amen" to the  
above, I have clipped the following,  
which seems indeed to have been writ-  
ten from some such "Peace Cham-  
bers" as Mrs. Kellogg describes:

A little story-poem tells of an eager  
throng of youth setting out in a race.  
One among them excelled all the others  
in courage, strength, and grace,  
and gave early promise of winning.  
The way was long and hard, and the



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goal far away, but still this favorite  
held his place in the lead:

"But ah, what folly! see he stops  
To raise a fallen child,  
To place it out of danger's way,  
With kiss and warning mild.

A fainting comrade claims his care—  
Once more he turns aside;  
Then stays his strong young steps to be  
A feeble woman's guide.

"And so, wherever duty calls,  
Or sorrow, or distress,  
He leaves his chosen path, to aid,  
To comfort, and to bless."

So at last, when the race is over  
and the victors are crowned, some with  
fame's laurels, some with love's flow-  
ers, some with gold circlets on their  
brows all unknown, unheeded, with  
empty hands and uncrowned head  
stands this, the real winner of the  
race. Earth had no crown for him,  
but on his face shines heaven's serene  
and holy light.—J. R. Miller, D. D.

To be honest, to be kind, to earn  
a little, to spend less; to make upon  
the whole a family happier by his  
presence; to renounce where that  
shall be necessary and not to be em-  
bittered; to keep a few friends, but  
these without capitulation; above all  
on the same grim conditions to keep  
friends with himself—here is a task  
for all that a man has of fortitude and  
delicacy.—Robert Louis Stevenson.

O God, our Heavenly Father, whose  
gift is length of days, help us to make  
the noblest use of mind and body in  
our advancing years. According to  
our strength apportion Thou our work.  
As Thou hast pardoned our trans-  
gressions, sift the ingatherings of our  
memory that evil may grow dim and  
good may shine forth clearly. We  
bless Thee for Thy gifts and especially  
for Thy presence and the love of  
friends in heaven and earth. Grant  
us new ties of friendship, new oppor-  
tunities of service, joy in the growth  
and happiness of children, sympathy  
with those who bear the burdens of  
the world, clear thought and quiet  
faith. Teach us to bear our infirm-  
ities with cheerful patience. Keep us  
from narrow pride in outgrown ways,  
blind eyes that will not see the good  
of change, impatient judgments of the  
methods and experiments of others.  
Let Thy peace rule our spirits through  
all the trial of our waning powers.  
Take from us all fear of death and all  
despair or undue love of life, that with  
glad hearts at rest in Thee we may  
await Thy will concerning us, through  
Jesus Christ our Lord. Amen.—Se-  
lected.

### A HAPPY DAY RECIPE.

A heart full of thankfulness,  
A thimbleful of care;  
A soul of simple hopefulness,  
An early morning prayer;  
A smile to greet the morning with,  
A kind word as the key  
To open the door and greet the day,  
Whatever it brings to thee,  
A patient trust in Providence,  
To sweeten all the way;  
All these, combined with thoughtfulness,  
Will make a happy day

—Selected.

### Russia and Japan in America.

In the present crisis in the far East,  
it is interesting to know something of  
Russian and Japanese representatives  
here in America. The American Re-  
view of Reviews for June gives a  
glimpse of each of them which fur-  
nishes an especially good opportunity  
for comparing them. Of Count Cassini,  
the Russian ambassador, it says:

"Dignified, but frank and genial,  
with the enthusiasm of a boy, Count  
Cassini is perhaps a perfect represen-  
tative of the charming gentleman and  
suave diplomat with which Russia is  
so richly blessed among her states-  
men. Probably no foreign minister,  
not even the Spanish minister during  
our war with Spain, had a position re-  
quiring so much delicacy, tact, and  
genuine diplomatic gifts as Count Cas-  
sini at the time of the Kishinev dis-  
turbances and since the beginning of  
the war between Japan and Russia. It  
must be admitted that he has sus-  
tained his position with dignity and  
ability, loyalty to his own government,  
and satisfaction to that to which he is  
accredited. Count Cassini is a born  
aristocrat, and a staunch supporter of  
the autocratic regime. In spite of this,  
however, and while it may be difficult  
for him to fully sympathize with the  
present Liberal movement in the em-  
pire, he is frank to admit that many  
reforms are necessary, and, moreover,  
maintains that the imperial govern-  
ment is fully alive to the necessity for  
such reforms. But with a people like  
the Russians, he points out, so diverse  
in race, and, in the main, so untrained  
in educational and political matters, it  
is necessary to go very slowly. Real  
reforms will be brought about as the  
government is able to elaborate them  
and put them into execution. A begin-  
ning has been made in the very im-  
portant matter of greater facilities for  
the exercise of that religious tolera-  
tion which has always been the prin-  
ciple of the Russian state.

"Count Cassini is proud of having  
contributed to the bringing about of a  
better understanding between Ameri-  
cans and Russians." He believes that  
if the Russian people and the condi-  
tions of life in the Russian Empire  
were made more intelligible to Amer-  
icans, there would be greater sym-  
pathy between the two peoples. How-  
ever, he firmly believes that a clear  
understanding of Russia and the Rus-  
sians is becoming more and more  
widespread in this country.

"The Japanese minister to the Unit-  
ed States is as different a personage  
as one might find. The career and ex-  
perience of Mr. Togoro Takahira em-  
braces most of the varied changes in  
modern Japanese history. In his ear-  
ly youth he felt keenly and deeply the  
ancient feudal life of Samurai and Sho-  
gun, and when Japan abandoned the  
old order and set her face toward the  
new, he swung into and developed  
with the new national life. Mr. Tak-



ahira is a fine example of the diplomat and gentleman of the Far East. His culture and training are many-sided—he is learned in Chinese philosophy and literature, he is a thorough scholar in the intricate literature of his own country, and he speaks and writes fluently in several European languages.

Mr. Takahira is not of the titled class—he has risen from the ranks. Entering the imperial diplomatic service in 1876, after a thorough education at the Japanese capital, he was appointed attaché to the Japanese Legation in Washington, becoming Secretary of that Legation in 1881. Two years later, he was appointed Secretary of the Foreign Office. Later, he held a number of important posts, including those of charge d'affaires in Korea (1885), Consul-General at New York (1891), Minister Resident to Holland (1892), Minister to Italy (1894), Minister to Austria (1896), Vice-Minister for Foreign Affairs (1899), and Minister to the United States (1900).

"The Japanese Minister is a man of middle age, of a strong, well-built frame, but broken somewhat from his experience of last winter, when he was operated on for appendicitis. Tactful and diplomatic, a dignified diplomat through and through, Mr. Takahira has creditably represented Japanese interests throughout the present difficult period of the war. He has only courteous expressions of appreciation for the admirable qualities of the Russian people, whom he understands thoroughly. He does not look for peace in the near future, but says that Japan is quite ready and prepared to continue the conflict as long as may be necessary. As to the possibility which has been suggested of a Russo-Japanese alliance after peace has been concluded, Mr. Takahira declares this can never be. The Japanese people, he points out, have been educated politically, along Anglo-Saxon lines, and it would be very difficult to change this national bent. A Franco-Russian alliance might be possible, but a Russo-Japanese alliance never."

## Club Department

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

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#### Our Club Roll.

Mutual Improvement Club, Carbondale, Osage County (1896).  
Give and Get Good Club, Berryton, Shawnee County (1902).  
Women's Literary Club, Osborne, Osborne County (1902).  
Women's Club, Logan, Phillips County (1902).  
Domestic Science Club, Osage, Osage County (1898).  
Ladies' Crescent Club, Tully, Rawlins County (1902).  
Ladies' Social Society No. 1, Minneapolis, Ottawa County (1898).  
Chalfont Club, Highland Park, Shawnee County, (1902).  
Cultus Club, Phillipsburg, Phillips County (1902).  
Literature Club, Ford, Ford County (1908).  
Sabbath Club, Mission Center, Shawnee County, Route 2, (1899).  
Star Valley Women's Club, Iola, Allen County (1902).  
West Side Forestry Club, Topeka, Shawnee County, Route 8, (1903).  
Fortnight Club, Grant Township, Reno County (1903).  
Progressive Society, Rosalia, Butler County (1903).  
Pleasant Hour Club, Wakarusa Township, Douglas County (1899).  
The Lady Farmers' Institute, Marysville, Marshall County (1902).  
Women's Country Club, Anthony, Harper County.  
Taka Embroidery Club, Madison, Greenwood County (1902).  
Mutual Improvement Club, Vermillion, Marshall County (1903).  
Pleasant Reading Club, Cawker City, Mitchell County (1903).  
Cosmos Club, Russell, Kans.  
[All communications for the Club Department should be directed to Miss Ruth Cowgill, Editor Club Department.]

### MISCELLANEOUS PROGRAM.

#### An Afternoon With Shakespeare.

Roll-call—Quotations from Shakespeare.

I. What is known of Shakespeare's life?

II. Macbeth—a sketch of the play with brief study of the principal characters.

III. Shakespeare's best-known women.

IV. The Tempest—with special regard to Shakespeare's use of the supernatural.

I once heard an artist remark that Shakespeare was like the old master-

pieces in art, because one must know him well to appreciate his greatness. At first sight, we are most conscious of what seem to us defects, details that shock our modern sense, crudeness of expression, etc. Intimacy with the master mind enables us to think with it, seeing the marvelous beauty and grandeur and depth of its thought, and, viewing the uncouthness at its true value, an unimportant detail.

It is strange that of this king of English literature, as Carlyle names him, there is so little known. The most that can be learned is gathered from inferences drawn from his writings. That he lived deeply and loved and enjoyed and suffered, of this we have assurance. The writer of the first paper will find the brief facts of his biography in any history of English literature or encyclopedia. She must put her imagination and sympathy to work to make what she has to tell interesting and valuable. Intuition teaches many things not discernible to the naked eye.

The second topic explains itself. If preferred, Hamlet may be taken, or any other of his tragedies. The characters in these tragedies are wonderfully drawn.

Shakespeare has many notable female characters. Portia, Ophelia, Desdemona, Juliet, Cordelia, Lady Macbeth, and so on almost ad infinitum, each portrayed with the magical truth of genius.

The Tempest, one of the most beautiful of the plays, is given as a study of Shakespeare's later work. It is very different from the tragedy and the comedy of his earlier years. There is a finish, and a delicate lightness most charming. Ariel, Caliban, and all the spirits at Prospero's command, sometimes called personifications of the powers of the air and earth, will make a very interesting study.

### THE INTERNATIONAL SUNDAY-SCHOOL LESSON.

(Copyright, Davis W. Clark.)  
Second Quarter.—Lesson XII.—Rev. 22:1-11.  
June 18, 1905.

#### The Heavenly Home.


As the Bible stands apart from other books, Revelation stands apart from the rest of the Bible. It is singular, difficult, mysterious. It has been called the cross of crosses of commentators. One instantly loses himself in a labyrinth of variant interpretations. It seems best not to attempt to make direct verbal applications of the contents to events past, current or future. On the whole, from the mistakes of the past, it is eminently the wise course to declare the book a prophetic-poetic chain of allegories—an album of vivid pictures—the whole intent of which is to create, feed, and shelter hope of the ultimate and practically universal dominion of the goods, in spite of transitory reverses and lapses.

Under the material emblem of a city, adorned and beautified, the spiritual betterment of humanity seems to be shadowed. The plan and fashion of the city is from heaven. The ideas of right human living are Divine. As these ideals are realized, and in the proportion that they are realized, God lives with and in men. In the ratio of righteousness (right living) tears are dried. Wrong living (sin) is the sole cause of painful death, sorrow, and crying.

In this apocalyptic city John sees no temple. A temple is a reminder of an absent Deity. God's presence makes a material structure in His honor unnecessary. Yet this presence need not be external and additional to the moral and spiritual qualities evolved in the souls of men. To use Tolstol's phrase, "Where love is, there God is."

In this renewed earth, sun and moon will not be quenched; but the unearthly radiance of right living will outshine them. Whole nations, with their rulers, will keep walking in this light, which never shone on land or sea. This good life is not difficult of access. It requires no toilsome pilgrimage. It is at hand. It is like a four-square city, with ever-open gates on every side. He who makes right living hard and laborious is aside from the description of the revelator.

Some one suggests that the change



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Kansas Farmer. Louisville, Ky.

of figure is significant. It is no longer a mere paradise or garden. Now it is a city of God on earth, statelier and more glorious, but at the same time a result of human cooperation with the Divine. Man building after God's plans and specifications.

This is the holy dream of the thousand happy years, the millennial reign, which has been the solace and inspiration of the saints in all ages—an indefinitely long period, in which there shall be substantially universal righteousness (right living) and its concomitants, universal peace and universal joy.

Here, however, is no statistical condition, no fixity. Here is rest; but it is the rest attendant upon a steady, unwearied advancement. There is an infinite progression. First in apprehension of the riches, both of the wisdom and knowledge of God. Then in goodness, until the fruits of the Spirit appear and come to perfection. Finally in serviceableness, until the Master's rule of life becomes the disciple's—"Not to be ministered unto, but to minister and give."

#### The Teacher's Lantern.

Current views of the life of heaven are far too rigid; congregations never breaking up and Sabbaths never ending. It seems best to think of the heavenly life as like one lived in this world, when it shall have been reno-

vated by the advent of the millennial kingdom. We shall just be and do and live and love in an absolutely natural and human way.

In the ultimate analysis, the New Jerusalem is, after all, not a city at all; but a people, renewed and adorned with gifts, grace and usefulness. The jeweled walls, golden streets, river, tree, and all, are material emblems of the moral and spiritual qualities of a redeemed humanity.

Mathematical computations of the time of the advent of the millennial kingdom are the "great lost labor, that chronic malady of apocalyptic exegesis."

Accessibility is a characteristic of the New Jerusalem. Many gates, many trees, river flowing through the midst. City easy to enter, and contents always near at hand.

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## UNION PACIFIC

AND CONNECTIONS

TO THE

## LEWIS & CLARK EXPOSITION

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



### THE FARMERS' COOPERATIVE SHIPPING ASSOCIATION.

(Continued from page 619.)

The profits of the first year were distributed to the stockholders who had sold it grain, in proportion to the amount of grain they had sold to the association. This left the treasury as short of operating capital at the beginning of the second as at the beginning of the first year.

The second year's business seems to have been fairly successful until the great decline in the price of May wheat caught the elevators with nearly 200,000 bushels of wheat, according to reports. A fall of 23 cents per bushel in six days consumed profits and capital with great rapidity.

It is understood that the association will continue in business. Manager Hoffman reported its stock worth 70 to 75 per cent. Some plan for raising money is probably being sought. All of the old directors except two were reelected.

Should the next year's business prove profitable, the association will demonstrate the possibility of successfully conducting a large cooperative enterprise whose branches and whose stockholders are widely scattered. Should even moderate losses accrue during the next year a monument will have to be erected at the grave of another cooperative effort.

The mistakes of this organization seem to have been few. A prudent business firm doing a business needing a quarter of a million capital and having less than half that amount would have left most of the first year's profit in the working capital instead of dividing it among either stockholders or patrons. The second mistake consisted in holding grain in the elevators instead of forwarding it immediately to market. True, a considerable portion of the first year's profit was made on the rise in the price of grain. True, the prospect for a great corner and consequent artificial rise in wheat this spring had a roseate appearance. But speculation in grain is exceedingly hazardous and its allurements should always be resisted by cooperative associations.

### SHORTHORNS AS MILKERS.

EDITOR KANSAS FARMER:—Can you tell me what strain of Shorthorns are milkers, and where I can get them? I have been told that it was the Bates family, also, that it was the Flora family.

G. H. RHODES.

Cowley County.

At the present time it would be hard to give an answer that would be of much benefit to the inquirer. On account of the many changes that have been made in Shorthorn breeding, the dairy or milking character has been neglected, and the beef-producing character specifically developed. In England, the home of the Shorthorn, most all breeders took great pride in the milking-quality of their herds. The cows had splendid udders and much more milk than their lusty and growthy calves could take, many cows giving as much as two gallons of milk after the calf had taken its fill. This surplus was made into butter or sold and made a handsome side-profit from the herd and farm.

The introduction of special dairy breeds into this country has had the tendency to lessen attention to the dairy quality of the Shorthorn cow.

In the early history of the Shorthorn breed the dairy quality was specially developed. The milking quality of the cow depended more on the breeder than on the special family to which the cow belonged, many breeders making special efforts to develop the dairy character of their herds, while others permitted that important quality to become dormant by neglect.

The Bates Shorthorn cattle were regarded as the standard dairy cattle in this country, and many families became noted for their fine udders and the large quantities of milk given with its large content of butter-fat.

Some of the most noted strains or families of milkers were the Princess, tracing to Imported Lady Sale 2d by Earl of Chatham (10176); Imported Belina by Barmpton (54); the Lady

Bates family, tracing to Imported Filbert by 2d Cleveland Lad (3408). The Waterloo family were extra fine milkers. This family, owned and bred by the late Col. H. N. Vail, developed some wonderful milkers, many of his cows giving a two-gallon pailfull of milk after the calf had taken its fill. The Mrs. Mott family were as a class fine milkers, though regarded as unfashionable by some breeders. Other families might be named, but the fact is that the Shorthorn families have been inter-bred so that a family name does not count for much.

The only safe way for our correspondent to adopt is to buy the animal that shows the dairy quality well and strongly developed. Breed to a sire whose dam was a fine and heavy milk-er. Do not allow the calves to run with their dams; milk the heifers with their first calves as long as any milk can be obtained from them; and our correspondent will soon have a herd of Shorthorn cattle that will be fine milkers and great beef-producers. He should recollect that it is much safer for a beginner to buy developed cows than to buy heifers.

### OIL-BURNER PROGRESS.

Readers of the KANSAS FARMER continue their interest in the prospect of using oil for fuel. Coal-operators admit that should a satisfactory burner be placed upon the market, there will have to be a marked reduction in the prices of coal. The writer went, last Monday, to see an oil-burner in operation in a cooking-stove. The oil was turned on through two valves. One admitted a thread-like stream while the other admitted drops. A lighted match was thrown in and the fire was quickly burning. With a hooked poker the ashes in the burner were stirred and the fire was increased. Within five minutes the stove was hot. There was no smell until the burner was opened to show a feature of its construction. The fire continued for about half an hour after the feed of oil was shut off.

The problem of an efficient burner appears to be solved. Its application to a stove made for the use of oil is very simple. The inventors are now busy with the problem of adapting the burner for use in the great variety of stoves now in use. If stove fronts were all alike, this would be easy. But there are thousands of patterns of fronts. It is necessary that the burner be so fitted to the front that all of the air that enters the stove shall pass through the burner. No doubt the competent designer of the Midland foundry will be able to meet the requirements by turning out a complete oil-burning stove, but his ambition is to supply, at low cost, a burner that may be readily placed in any stove. He will probably succeed.

### A FOREIGN MARKET FOR AMERICAN MEATS.

Secretary J. H. Gwinn of the National Live-Stock Association asks the aid of every live-stock interest in securing the opening of foreign markets for American meat-products. He says:

"Believing still that the law of supply and demand affect the price of our stock, and realizing that the closing of foreign markets to our meat-products is costing the stock industry of this country \$100,000,000 a year, the executive officers of the National Live-Stock Association are putting forth every effort to remedy the same.

"We are endeavoring to concentrate and crystallize this sentiment, and to bring to bear on Congress at the coming session a pressure so strong that our prayers will be heard.

"President Roosevelt is with us, and the National Association of Manufacturers passed a resolution at their recent session in Atlanta, Ga., unanimously in favor of reciprocal relations with foreign countries, thus giving much added strength to our forces, and we want the moral and financial support of every stock industry in this country.

"This is one of the most important questions before the stock-raiser today, no matter what phase of the busi-

ness he may be in; and in order to realize success we must have your support. Will you give it to us?"

### HARVEST HANDS WANTED.

EDITOR KANSAS FARMER:—It is probable that there will be quite a number of harvest hands needed here. Does not the State have an information or employment bureau for that purpose?

I shall need two or three men and almost every header man near here will need as many or more. There is very little help here. I will be glad of any information you may be able to give me.

M. O. HENSLEY,

Phillips County.

Address Kansas Free Employment Bureau, Topeka, Kans., for information. The State maintains this bureau for the benefit of farmers needing help and to assist hands in finding positions.

### THE STOCK-BREEDERS' ANNUAL.

The Stock-Breeders' Annual for 1905 is a volume of 150 pages and is by far the largest and best publication that was ever issued by the Kansas Improved Stock-Breeders' Association. The volume contains a full report of the proceedings of the fifteenth annual meeting, with the papers read and discussions had. These papers are of immense value to every man, woman and child who is interested in live stock, and the book should be in the hands of every breeder in the State.

As usual, the Breeders' Directory contains the names of all the members arranged alphabetically, by counties and by breeds. The membership is the largest of any association of its kind in the world and contains the names of breeders as follows: Aberdeen-Angus 36, Galloways 17, Herefords 124, Holstein-Friesians 4, Jerseys 6, Polled-Durhams 10, Red Polls 23, Shorthorns 238, Berkshires 36, Chester Whites 14, Duroc-Jerseys 85, Poland-Chinas 253, Yorkshires 3, Tamworths 2, Clydesdales 1, Cleveland Bays 1, Coachers 2, Drafters 2, Percherons 36, Saddlers 10, Standard-breds 32, Jacks 5, Angoras 8, Hampshire Downs 1, Merinos 4, Oxford Downs 1, Rambouilletts 2, Shropshires 14, Poultry 59, Miscellaneous 24.

Owing to the fact that no funds were granted to the association by the last Legislature for publication and distribution of its reports, the sum of 10 cents will be charged for postage on this publication. Address Secretary H. A. Heath, Topeka, Kans.

### GIVE US THE PARCELS POST.

A deficit of about 15 million dollars in the Postoffice Department will have accumulated for the fiscal year ending June 30. The major portion of this deficit is said to result from the extension of the rural free delivery system. It is expected that as the system is further extended the annual deficit will be increased. The hope is expressed that the increasing use of the mails where free delivery has been longest established will eventually reduce the excess of receipts over expenditures for this service.

No notice seems to be taken of the fact that a reduction of the postage on parcels would result in so great use of the mails for the transmission of small packages as to immediately place the service on a self-sustaining basis.

Rates on these small packages are maintained so high as to be almost prohibitive out of consideration for the express companies which now enjoy almost a monopoly of this kind of transmission and out of consideration for the merchants in the small towns who would have to reduce their profits if the mails would carry packages from the mail order houses at rates such as would give the business to the postal service and would yield revenue enough to extinguish the deficit.

How long will the people continue to pay extravagant rates to express companies for a service for which they provide Government facilities and require that these Government facilities be only partially used to the end that the express companies may bleed

the people? There ought to be about a \$15,000,000 demand for the enactment of a reasonable parcels-post law in this country.

### FARM HANDS IN ILLINOIS.

The farm-hand problem is doubtless an interesting one in Illinois. A report just published by the Illinois State Board of Agriculture shows the average wages paid in each county for the season of 1905. In the Northern division of the State the average wages per month are, with board, \$25; without board, \$33. In two counties—Henry and La Salle—the average wages are \$27 with board and \$35 without board. In Carroll County the figures are \$26 and \$37, showing a difference of \$11 per month on account of board. In the central division wages are lower than in the Northern, the averages being \$21 with board and \$27 without board. Wages are still lower in the Southern division, viz., \$18 with and \$24 without board. The lowest wages in the State are paid in Saline County, viz., \$13 with and \$20 without board.

In only eight of the counties is the supply of laborers equal to the demand. Strangely enough, Saline, with wages at \$13 and \$20, is one of the eight. Carroll County with high wages, \$26 and \$37, has only 72 per cent of the hands she needs.

### SOME CROP VARIATIONS IN ILLINOIS.

Some persons have complained that Kansas is freakish in the matter of crop production. "If," they say, "we could only be sure of uniform yields like Illinois, farming would not be so much like gambling." But, Illinois farming has its variations. Thus, in 1880 that State produced 56,508,309 bushels of wheat. In 1885 the yield was 8,299,243 bushels, a little over one-seventh as much as five years earlier. Last year the crop was 20,177,390 bushels. Of this last crop, May 1 found in farmers' hands only 2,981,241 bushels. Wouldn't Kansas think she was treading dangerously near to the verge of starvation if she had on hands only about three million bushels of wheat?

The Illinois corn crop is also subject to fluctuation. In 1902 the State produced 320,977,301 bushels of corn. In 1887 the yield was 129,537,603 bushels. In 1879 it was 305,913,227.

It is scarcely worth while to migrate from Kansas to Illinois to get steady yields.

### BLOCKS OF TWO.

The regular subscription price of the KANSAS FARMER is one dollar a year. That it is worth the money is attested by the fact that thousands have for many years been paying the price and found it profitable. But the publishers have determined to make it possible to receive the paper at half price. While the subscription price will remain at one dollar per year, every old subscriber is authorized to send his own renewal for one year and one new subscriber 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.

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### "The Fat of the Land."

Chas. W. Merriam, proprietor of the Alysedale herd of Shorthorns, Topeka, who has a personal acquaintance with the author of "The Fat of the Land," recently published by MacMillan & Company, sends the KANSAS FARMER the following:

"I wish to call your readers' attention to one of the most charming books on intensive farming (written by the late Dr. John W. Strueter, Upper Cross Farm, Lake Forest, Ill.),



This book is called "The Fat of the Land, A Story of An American Farm." It costs \$1.50 per volume, but is cheap at \$5.00 for the information it contains. It can be purchased at almost any Topeka book-store. It would do every farmer in Kansas a whole lot of good and also give him and his family real pleasure to read it.

Yours truly,  
CHAS. W. MERRIAM."

#### Kansas Crops.

The Kansas State Board of Agriculture has issued a press bulletin giving the condition of all the growing crops on Monday, June 5. The investigation, especially as to the wheat and corn, has been one of the most searching ever made and the showing by it may be accepted as an accurate portrayal by counties of the situations as they now exist throughout the State. It reveals that in some respects, as for example its coolness, the spring has been abnormal, and the behavior of the soil and some of the crops planted quite unusual and inexplicable.

**Winter Wheat.**—Following the superb promise that obtained up to say April 15, there has been in a majority of the wheat-fields, and much of this, too, where weather and soil seemed more than ordinarily favorable, a feeble growth of straw and a failure to vigorously stool, for which there has been no satisfactory explanation. In some localities timely moisture was lacking, while in others there was at the same period too much, and later many fields previously too dry have been water-logged. One field may present a bright prospect while another almost adjacent, in the best of situations, with conditions for prosperity in every way as good, is scarcely worth the reaping. The color has not been right, the straw is spindling, and the heads are short and small. The causes suggested for the unsatisfactory developments are various, but chiefest among them are a lessened constitutional vitality in the seed, indifferently prepared seedbeds, ill-timed sowing, and dry weather at seeding time or later; yet two months ago the results were not manifest to any such degree as to forecast the present checkered situation.

However, in connection with this is to be reported latterly a month of unusually favorable, moist wheat weather. This has undoubtedly done much to assure plumpness and size of the berry, and give a quality to compensate in a considerable degree for lack of the quantity which was promised by the earlier outlook. Since the report of April 8, when the condition for the State was 95.4, there has been a falling away of 18.3 per cent.

The foregoing by no means applies in all ways to all the 105 counties, or to all the large wheat-yielding counties, for there are numerous splendid exceptions; nor does it argue that Kansas is not on the eve of garnering an aggregate of wheat greater than any other State at her best has demonstrated ability to produce, yet notably smaller than seemed entirely possible or probable sixty days earlier.

A noticeable feature of the reports of correspondents is the frequent reference to the desirability of rotation, basing the recommendation on the belief that the poor conditions in some fields are largely due to long-continued wheat-growing without change. There is notable lack of promise in fields that had previously grown Kafir-corn, and where sowing was done on last year's wheat stubble, and whatever damage by Hessian flies is reported is confined almost entirely to stubble-sown fields. In several counties hail is reported to have wrought damage, to such extent in Pawnee, for instance, that 10 per cent of the total area sown was plowed up. In some counties where a succession of heavy rains have fallen, rust is referred to, but nowhere in all the hundreds of reports is there a single allusion to the presence of that ancient enemy of the wheat-growers, the malodorous chinch-bug.

Using the 1905 acreage returns of the assessors for the 89 counties thus

officially reported and the correspondents' estimates for the remaining 66 counties, the total winter-wheat area for the State sown last fall approximated 5,828,948 acres, or an area practically the same as that sown for the 1904 crop. The area plowed up is now estimated to be 422,985 acres, as against 194,000 acres reported April 8. Deducting the area plowed up, the total area for the State likely to be harvested reaches 5,405,963 acres, and its average condition is 77.1 per cent. Twenty-five counties having 60 per cent of the State's wheat area report an average condition on the whole of 72, as against 94 April 8, a decline of 22 per cent.

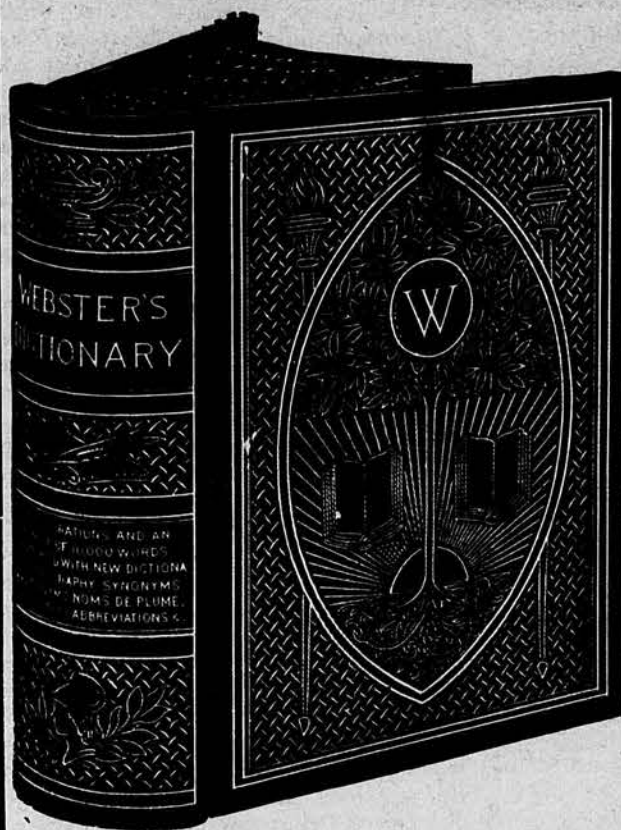
The growers' statements indicate that the general harvesting will begin in the counties bordering Oklahoma about Monday, June 19.

**Corn.**—Corn in the main was planted late; its development and cultivation have been slow-paced, while weeds have suffered few hindrances until within the past ten days, when a campaign of extermination has been and is now being incessantly and successfully waged with all the forces available. Recent warmth and sunshine have stimulated growth, and corn conditions are improving. The 1904 area was 6,494,158 acres and this year's area shows an increase approximately of 750,000 acres, or 11 per cent. Considerable replanting has been done. The thirty-nine counties that have already sent in their assessors' returns show a net increase of 10 per cent in corn acreage. In counties where conditions were least favorable for wheat, especially at the time of seeding, the areas devoted to corn this spring are largely increased. For instance, Harper reports 50 per cent more corn acreage; Sumner 57 per cent; Rush 23; Russell 43; and Ellis 17 per cent. Thirty-seven counties report a condition for corn of 90 or more, and the average for the State is 86.

The following shows by counties the acreage of winter wheat likely to be harvested, its present condition, and the condition of the growing corn:

Counties	Acres	Wheat		Corn condition
		Condition June 5	Condition April 8	
Allen	15,093	90	90	90
Anderson	6,482	98	98	100
Atchison	19,401	90	94	98
Barber	67,534	56	97	93
Barton	259,825	75	84	92
Bourbon	8,280	83	100	99
Brown	30,365	84	93	86
Butler	15,421	78	90	82
Chase	5,002	98	100	88
Chautauque	7,972	87	100	80
Cherokee	36,350	78	92	60
Cheyenne	15,332	95	100	80
Clark	15,556	95	94	83
Clay	62,957	79	95	83
Cloud	73,073	78	99	84
Coffey	13,340	97	91	93
Comanche	23,587	68	95	77
Cowley	59,831	74	91	80
Crawford	29,704	81	96	79
Decatur	79,553	97	105	88
Dickinson	91,901	87	100	83
Doniphan	27,821	81	95	88
Douglas	22,014	94	100	95
Edwards	123,657	84	100	83
Elk	8,559	93	97	91
Ellis	131,140	60	90	78
Ellsworth	110,803	72	97	82
Flinney	9,361	95	105	80
Ford	73,619	88	101	88
Franklin	5,798	95	100	94
Geary	15,825	88	97	88
Gove	41,421	86	105	80
Graham	58,469	80	97	75
Gray	15,945	100	100	85
Greeley	4	95	100	80
Greenwood	2,053	84	95	93
Hamilton	210	100	100	100
Harper	125,533	58	75	90
Harvey	79,531	76	100	87
Haskell	3,731	100	100	95
Hodgeman	36,477	93	100	92
Jackson	5,215	88	105	84
Jefferson	14,272	89	99	84
Jewell	44,457	82	101	90
Johnson	29,429	92	97	84
Kearny	559	90	100	90
Kingman	113,823	78	93	93
Kiowa	58,631	78	98	93
Labette	33,234	68	84	61
Lane	42,452	72	100	78
Leavenworth	34,390	91	92	84
Lincoln	95,577	79	96	82
Linn	5,524	83	82	100
Logan	16,325	100	100	89
Lyon	6,848	96	100	86
Marion	80,071	81	95	86
Marshall	35,731	88	93	91
McPherson	182,937	72	96	86
Meade	24,136	91	100	79
Miami	13,638	91	95	96
Mitchell	113,909	80	100	95
Montgomery	33,888	85	94	72
Morris	4,672	80	90	84
Morton	735	96	90	78
Nemaha	5,723	88	100	85
Neosho	20,999	91	99	90
Ness	105,444	87	103	80
Norton	71,597	100	100	91
Osage	5,539	91	90	90
Osborne	100,405	77	100	88
Ottawa	87,493	75	96	91
Pawnee	159,433	78	100	77
Phillips	71,905	73	100	82
Pottawatomie	8,610	87	94	84
Pratt	139,896	65	100	92
Rawlins	89,230	100	98	78
Reno	201,668	74	96	92
Republic	28,999	79	98	80
Rice	156,882	78	100	86
Riley	7,468	86	100	86
Rooks	105,997	89	82	87
Rush	132,446	59	85	85
Russell	125,078	61	89	82

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Saline	111,693	84	98	84
Scott	10,364	88	95	86
Sedgwick	131,770	78	90	85
Seward	1,490	100	100	90
Shawnee	5,112	90	95	76
Sheridan	61,064	93	97	78
Sherman	5,205	96	95	93
Smith	57,970	79	100	86
Stafford	187,389	68	100	86
Stanton	100	95	100	98
Stevens	203,117	57	62	90
Sumner	55,346	100	105	90
Thomas	69,599	80	95	90
Trego	9,661	92	95	85
Wabunsee	384	88	90	85
Wallace	48,920	75	94	84
Washington	14,877	90	90	75
Wichita	12,701	96	92	87
Wilson	1,987	100	96	95
Woodson	9,481	90	100	80
Wyandotte				

**Other Crops.**—Oats 76.5; spring wheat 90; sorghum 87.2; potatoes 98.2; broom-corn 91; flax 85; rye 88; barley 88; castor beans 89; tame grasses 91; apples 65.5; peaches 30; grapes 71; cherries 65.

**Alfalfa and Pastures.**—First crop of alfalfa was light but of superior quality. Pastures in excellent condition.

#### Eastern Colorado Farming.

**EDITOR KANSAS FARMER:**—In reply to F. W. Goldbeck's letter in your paper of June 8, 1905, we are just across the Kansas line in Kiowa County, Colorado, where a young man can get a homestead of 320 acres that will grow two crops of alfalfa each year with no irrigation. Wheat and cane are sure crops. Under the Campbell system of farming this land bears as well as Eastern Kansas. Those who cultivate their crops have not experienced failure during the past twelve years. Horses live twelve months of the year with no other feed but the prairie-grass and grow to be 1,200-pounders in three years.

H. GAMBLE.

Kiowa County, Colorado.

#### Interests All the Family.

**EDITOR KANSAS FARMER:**—I notice in your issue of May 25 a letter from Mr. W. C. Mead, of Cowley County, in which he praises the KANSAS FARMER, but says that he would like it better if it contained more general news and fewer stories. While I, like Mr. Mead, am interested in any oil news, inasmuch as there are several oil fields being developed in this part of the country, and am also interested in any news of a general nature, yet I wish to beg you not to cut out any of the stories, in order to make room for any more news of a general nature. Quite a number of years ago I wanted to subscribe for the KANSAS FARMER but my wife objected on the grounds that it was nearly all farm news and contained but little of interest to women

and children; but now my wife and the children are nearly as much interested in it as I am myself. Your stories are good, clean reading and generally interesting, and your advertising columns are clean and free from disgusting advertisements. Also, while I do not get much time to read them, I consider the addition of the Sunday School lessons to your columns a great improvement. Your paper is all right and getting better every day. Give us all the information you can of a general nature but don't cut out anything. I know that I am several months behind with my subscription but don't stop my paper. I will send you a dollar just as soon as I can dig it up.

Elk County. GEO. W. SMITH.

Some years ago an enterprising American entomologist had sent to him for examination a few specimens of the gypsy moth, and he accidentally allowed some half dozen to escape. These increased and multiplied to such an alarming fashion that the moths spread over a certain locality, in which they wrought considerable damage. It has cost the State of Massachusetts quite \$500,000 in an attempt to suppress them; and it is estimated that it will take another \$125,000 per annum to keep them from traveling outside the area which they at present devastate.

A Russian timber dealer has discovered a valuable mine of oak. It is in a river of South Russia, in layers three or four feet deep, scattered over 150 square miles, and its most striking feature is its variety of colors, supposed to be due to the variegated soil of the river bottom. No fewer than twelve shades of pink, blue, yellow and brown have been noted, each log having its own uniform shade. The logs taken out have ranged from forty to two hundred feet in length and from fifteen to twenty inches in diameter, and it is estimated that more than 150,000, averaging seventy feet, remain.

The telephone system of New York is the largest in the world. The first of the year there were 154,934 telephones in use in the city, and Chicago has only 90,000.

The official figures show that there are 17,000,000 children in Russia between the ages of six and sixteen who are not getting the benefit of an education.



## In the Dairy

### Feeding Flaxseed Meal.

How much flaxseed meal can you feed to a horse at one time without other feed with safety? I feed one handful? Can I feed more? I feed one handful to sow with pigs. Is that all right? F. R. MONLINGER.

Franklin County.

The amount of flaxseed that a horse can stand depends upon the individual and upon the work that he is doing. The amount that is safe to feed ranges from one pound to two pounds per ration. The quantity that you are giving your horse is probably right to put him in a laxative condition.

The following rations are for a brood sow, weighing 250 pounds, having oil-meal in combination:

Daily ration for a brood sow weighing 250 pounds.

Feeding stuffs.	Dry matter.	Pro.	Carb.	Fat.
Alfalfa hay, 2 lbs.	1.83	.23	.79	.02
Corn, 1 1/2 lbs.	1.34	.12	1.02	.06
Wheat shorts, 2 lbs.	1.76	.24	1.00	.07
Oil-meal, 1/4 lb.	.22	.07	.10	.005
Total, daily	5.15	.66	2.91	.155
Nutritive ratio, 1:5.0.				
Standard ration	5.50	.63	3.87	.10
Nutritive ratio, 1:6.5.				

The following is a ration for fattening hogs, weighing 200 pounds, for the first period. Increase the corn somewhat or the wheat shorts toward the end of the second period.

Daily ration for fattening hog weighing 200 pounds.

Feeding stuffs.	Dry matter.	Pro.	Carb.	Fat.
Corn, 5 lbs.	4.46	.395	3.24	.215
Wheat shorts, 3 lbs.	2.65	.366	1.50	.114
Oil-meal 1/4 lb.	.22	.07	.10	.005
Total daily ration, 8 1/4 lbs.	7.33	.831	4.94	.334
Nutritive ratio, 1:5.7.				
Standard ration	7.20	.90	5.00	.14
Nutritive ratio, 1:5.9.				

O. ERF.

### Churning Butter.

EDITOR KANSAS FARMER:—Since the weather is warm it takes from one to two hours to churn the butter, while in winter it did not take so long. Why is this? Some of the cows are fresh, others were fresh in the winter and are giving a fair flow of milk; only one is an old milker and is giving about a quart at a milking. Would this have anything to do with it? F. R. MONINGER.

Franklin County.

I advise you to skim your cream until it tests from 30 to 35 per cent of butter-fat. Be sure to sterilize all utensils thoroughly to prevent any abnormal fermentation. This can be

done with boiling water. Ripen the cream until it has the desired flavor, which is approximately .5 of one per cent of acidity, and churn the same at 58 degrees Fahrenheit. Pure Cream without taint and of this consistency should churn in at least 30 to 40 minutes.

The period of lactation of a cow has something to do with the churning. As the period of lactation advances, the fat globules are smaller in size and it will require longer time to churn cream into butter. The age of the cow makes no difference.

### The Way to Feed Clover.

EDITOR KANSAS FARMER:—In what way can I feed red clover as a soiling crop to cows and avoid bloating?

I also want to feed cane later in the season. How would I feed that and prevent bloating? C. F. KINKAD.

Shawnee County.

Feed clover to cows little by little in connection with some dry roughage, gradually increasing the ration of clover until cows have become used to it. Even then it is dangerous unless some dry roughage is fed before the clover is given. The best preventive for bloating known at the present time is to induce cattle to eat some dry roughage before feeding green clover. The same principle holds true in pasturing cows on clover. Clover-bloat is not so serious as alfalfa-bloat. If cows should once become bloated on clover, the best remedy is to tap them with a trocha or canula. This remedy does not apply to alfalfa-bloat.

O. ERF.

### Testing Cream for Butter-Fat.

EDITOR KANSAS FARMER:—Does the amount of fluid used in testing cream effect the quantity of butter-fat? Will sweet cream give a higher per cent than sour cream. Please give information about testing cream to get the largest per cent of butter-fat.

Can the man behind the test-bottle make his machine test to suit himself? J. E. NORMAN.

Greenwood County.

The term "fluid," which you use in your letter, I presume has reference to the acid. A greater or less amount of acid than is required has an influence on the butter-fat. If a greater amount is used, it chars or blackens the butter-fat. If too little is used, some casein will be incorporated in the butter-fat and it will not show up clear. This indistinctness makes it impossible to read the fat. In either case, if more or less acid is used than the normal amount, the butter-fat will not show up clear in the neck of the test-bottle and the test should not be read. There is no difference in the quantity of butter-fat in sweet and sour cream. If properly operated, the Babcock test will reveal all the butter-fat in the cream under normal conditions. When all the fat does not rise in the neck of the test-bottle, the chief difficulty is due to the insufficient centrifugal force applied on the test-bottle. In other words, the machine in which the bottles are revolved is not revolved long enough or fast enough. In every case should the machine be operated at least five minutes under full speed, as indicated on each individual machine for the first run, and two minutes for the second run. One can juggle with the Babcock test the same as with weight, but each man who has any cows should have a tester, just as he has a scale, to determine for himself whether he is receiving his due reward. O. ERF.

### Feeding Questions.

EDITOR KANSAS FARMER:—In what proportion should I feed Kafir-corn-meal, alfalfa, and sorghum-hay so as to get the best results from milch cows? F. M. B.

Butler County.

We find for a cow giving 15 pounds of milk daily, 6 pounds of alfalfa, 12 pounds of sorghum-fodder, and 7 pounds of Kafir-corn-meal to be a good ratio. For a cow giving 20 pounds of milk daily, 10 pounds of alfalfa, 10

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pounds of sorghum hay, and 8 pounds of Kafir-corn-meal; and for a cow giving 30 pounds of milk daily or more, about 12 or 13 pounds of alfalfa, 10 or 12 pounds of sorghum-hay, and 9 or 10 pounds of Kafir-corn-meal. However, we find slightly better results if we substitute two or three pounds of the Kafir-corn-meal with 3 or 4 pounds of bran. Bran tends to keep the animal in a laxative condition.

O. ERF.

### Experimenting with Dairy Cows.

Excerpts from Bulletin No. 125, Kansas Experiment Station, by D. H. Otis.

(Continued.)

Variations from Cows Being in Heat.—Two cows from the College herd came into heat on the same day. Their yield and test of milk is as follows (see table XLV):

TABLE XLV.—Variations in quantity and quality with cows in heat.

	Time.	Cow No. 62.		Cow No. 67.	
		Yield	Test	Yield	Test
		lbs.	per ct.	lbs.	per ct.
First day...	A. M.	13.5	2.1	3.1	2.0
	P. M.	11.8	4.9	11.8	4.3
Second day.	A. M.	13.4	3.2	8.3	5.0
	P. M.	12.2	3.6	7.8	4.4

During the first half of June, cow No. 62 gave nearly thirty pounds of milk per day, with an average test of 3.2 per cent. No. 67 gave twenty pounds of milk per day, with an average test of 4 per cent. Cow No. 67 shows a greater variation both in yield and test than cow No. 62. A peculiar variation is shown on the morning of the first day, in the very low yield and at the same time a very low test.

Other Influences That May Affect the Test.—Any excitement or rough treatment, like the chasing by dogs, the squealing of pigs near the cows, driving cows long distances, flies, de-horning, or even a sudden change of feed or weather, a change of milkers, time of milking, length of intervals between milkings, rapidity of milking, a change in milking one teat at a time, the use of milking tubes, sickness or feverish condition of the system, or sympathetic feeling for other cows in distress, may cause temporary changes in both the quantity and quality of the milk.

Changes in the weather are liable to cause a change in the percentage of butter-fat. On February 3, 1899, the Manhattan creamery received milk which according to usual calculations would make 288 pounds of butter, but when the cream was separated it yielded only 227 pounds, or nearly twenty-one per cent less than the usual run. The cause was ascribed to the cold weather and two days of snow.

These various experiences show that there are a variety of influences that may affect the test, and doubtless all the influences are not yet known. We find cows varying in test when there is no apparent reason, and the man who has not studied these problems will feel that there are reasons aside from the cow that caused a variation in this test.

Variations Due to Skimming Cream.—Not infrequently the breakfast table makes demands upon the cream which has risen to the top of the milk-can which has been set aside for the creamery or skimming station, and many think that a small quantity

taken from these cans will make no difference in their test at the end of the month. A pint or even a quart from a can just once might not change the test very much, but when the practice is kept up each day the effect is bound to be apparent. A careful test along this line was made by this Station. For five evenings the milk was taken; one-half pint, one pint and one quart was taken from as many forty-quart cans, by skimming with a quart cup. The cream was taken in the morning, after the milk had set in cold water all night, the test of the whole milk having been taken the evening before. Table XLVI gives the results obtained in this test.

TABLE XLVI.—Effect of removing small quantities of cream before sending milk to creamery.

lbs. per can.	Test of whole milk.	Test after one-half pint cream was taken away.	Test after one pint cream was taken away.	Test after one quart cream was taken away.	Test after one pint cream was taken away.	Test after one quart cream was taken away.
87	4.0	3.6	3.4	3.2	1.53	2.18
87	4.1	4.0	3.7	3.5	1.07	1.65
57	4.1	4.0	3.7	3.1	1.13	2.70
57	4.1	3.9	3.3	3.0	2.09	2.98
51	4.0	3.9	3.7	2.9	0.93	3.03

The table shows that there is a considerable reduction in the average test of the milk by the taking of the cream. The taking of the cream from the top of the can means that we get the very richest portion, one-third of which is usually pure butter-fat.

(To be Continued.)

## Grange Department

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

All communications for this department should be addressed to Mrs. Kittie J. McCracken, Station B, Topeka, Kans.

The Kansas Farmer is the official paper of the Kansas State Grange.

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### Woman's Work in the Grange.

CARRIE SMITH BEAUREGARD, MASTER BORDER GRANGE, WOONSOCKET, R. I., IN GRANGE BULLETIN.

For me to speak upon "Woman's Work in the Grange" places me somewhat in the position of the city fellow who hired out to work on the farm. The farmer gave him a milk-pail and stool, and told him to go out and milk the cows. About an hour afterwards the man returned, without any milk. The farmer said to him, "Why, you don't seem to have accomplished much. What is the trouble?" "Well," replied the man, "I've been trying for the last hour to make that cow sit down on that stool, and she won't; and I don't know how to begin."

Now I don't know how to begin when we speak of woman's work in the Grange. Were we to substitute the word home, or farm, in place of Grange, it would be easier to distinguish between woman's work and man's work, for the old saying applies with its full meaning, "Man works from sun to sun, but woman's work is never done."

Ever since Eve joined together fig leaves to make herself and Adam garments wherewith they might be clothed, woman's work has been an important factor in the world. Yet, as far as Grange work is concerned, I am unable to draw any distinction between woman's work and man's work. The principles of our Order demand that each perform his duties, both in the Grange and in the work of life, in a faithful and diligent manner. Woman's heart beats responsive to

the same inspiration that prompts man to noble deeds, and while she realizes the fact that she can not equal man in physical strength, her moral, social and mental faculties are equal to and, as Priscilla Prim says, "I do believe that the sexes were made always equal, with woman a little more so than man."

This, perhaps, is true in Grange work when we consider the fact that woman has an equal standing with man, and is assigned positions equally responsible. Yet there are positions in the Grange which men can not fill. Among the prominent deities which we learn of in the study of mythology, Pomona, Ceres and Flora were given the feminine form and worshiped by the ancients as goddesses presiding over fruits, cereals and flowers.

We are told that the founders of the Grange placed women in these positions to show their respect for her and their regard for agriculture. Do we, in return, magnify our positions? Do we not too often look upon these stations as of minor importance and simply repair to our allotted stations at the sound of the gavel, little realizing that there is need for good, honest work, and unless we make use of our faculties for some good purpose we are not properly promulgating the principles and purposes which the founders of the Grange intended we should? As the goddess of fruits, do we ever stop to think that there are other fruits, aside from the apple or pear; that the fruits of good deeds, which, sown in our homes, in our social circle, or in our every-day walks of life, will bring us a hundredfold?

Selected to personate Flora, we are instructed to use our influence to promote the cultivation of flowers, which are emblems of love and charity. Do we, by kind words and deeds, dispense charity as the founders of the Grange intended we should?

One of the pleasant features of the Grange is that it interests woman in something outside the immediate home, without taking her from the companionship of her family, and at the same time educates her to make a better housekeeper. It is here she learns how to make home attractive, which should be the foremost aim of every woman. Here she becomes acquainted with others, and a spirit of confidence and enterprise is engendered which must in some future day bring good fruit. The Grange affords opportunities for raising the social and intellectual conditions of farmers' wives and of inculcating ideas of equal rights. It affords the country wife a change from her round of routine work and an opportunity to mix with her fellows in free and frequent intercourse, and to look upon the world of action, and it gives her the right and power to debate questions touching upon her welfare. The value of a disciplined man in war is great. A disciplined woman is equally as great in housework. The many questions that are discussed in Grange rooms are leading to thought and study, and the practical lessons it teaches have the power to raise woman from the most humble walk in life to positions of influence and power. Although many women of cities are doubtless as hard-worked as farmers' wives, still there are elements which enter into their work and life which are lacking in the routine of the farmhouse. The ties of sympathy and the sense of companionship will carry one comfortably through what would be a burden if borne alone. The women of the farmhouse are fast gaining in these respects through "woman's work in the Grange."

### TOPICS FOR JUNE.

- 1.—Should the Grange, or members of the Grange, attempt to organize a co-operative packing-plant? If so, what would be the capital stock, location, etc., and how should we proceed to institute the organization?
- 2.—Should each subordinate grange be visited once or twice a year by some officer of the State Grange who would review the work, report the general condition of the order, answer such questions as the members might

In the selection of a cream separator you should be guided by three essentials: 1—simplicity and durability of construction; 2—ease and economy of operation; 3—ability to skim close and produce a heavy, high per cent cream; 4—ease of cleaning. All these essentials are combined in highest degree in

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desire to ask, etc.? How should each officer be compensated?

Topic No. 1 has been before the granges at intervals for several years. We hear much of cooperation in business affairs and the benefits accruing therefrom. While a discussion may not bring any practical results, if the subject is intelligently presented, discussion may prove an interesting development of certain phases of business methods.

Topic No. 2 will, no doubt, receive the indorsement of those granges which take it up for consideration. There might ensue a "rattling among the dry bones" of the indifferent, a fermenting which would make for a forward movement.

From Ohio comes the report that a series of visits and lectures are being conducted among the granges by an ex-official of the National Grange, which seems to be inspiring and helpful to timid and inactive granges. We have long felt that a series of missionary labors among our Kansas granges was needed. By all means give this subject a thorough airing.

### Grange Notes.

Pomona Grange meeting held in Topeka, June 3, was fairly well attended. Muddy Creek, Indian Creek, Berryton, and Oak Granges were represented. The next meeting will be held with Oak Grange, September 6. This will be an all-day meeting. Oak Grange has a "baker's dozen" on hand to initiate.

## INTERESTING TO WOMEN



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BLACK MINORCAS—Biggest layers of biggest eggs. Eggs for hatching, \$1.50 per 15. Also at same price, eggs from choice mating of Light Brahmas, Partridge Cochins, Buff Orpingtons, Barred and Buff Plymouth Rocks, White and Silver Laced Wyandottes, Rhode Island Reds, Rose and Single Comb White and Brown Leghorns, American Dominiques, Pit Games, Houdans, White Crested Black Polish, White Crested White Polish, Buff Cochins Bantams. James C. Jones, Leavenworth, Kans.

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.

FOR SALE—Two male Scotch collies, nearly full grown. Eligible to registry, strong in the blood of Metchley Wonder. Price, \$10 each. Geo. W. Maffet, Lawrence, Kans.

TO GIVE AWAY—50 Buff Orpingtons and 50 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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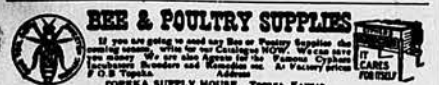
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Rose Comb R. I. Reds and Buff Orpington eggs balance of season \$1 per 15. Some stock for sale. Prices reasonable. J. W. Swartz, Americus, Kans.

## Golden Wyandottes

Winners at Topeka Poultry Show, January 1905, 2, 3 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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## The Poultry Yard

CONDUCTED BY THOMAS OWEN.

## Roup and Cholera.

EDITOR KANSAS FARMER:—What is good for roup in chickens? I have lost a number? What is good for chicken cholera?

JOHN C. D. VAHSOLTZ.

Dickinson County.

The most common disease in the poultry-yard, and the one which puzzles the beginner the most is roup. Genuine roup is deadly. But two-thirds of the cases presented are not roup, but rather some symptom leading up to it.

Dr. Sanborn, in his book "Farm Poultry Doctor," says: "The word roup is probably derived from croup, an inflammatory disease of the larynx and trachea in the human biped." Roup is a purulent catarrhal affection of the air-passages.

There are a number of excuses for the presence of roup, prominent among which are close air, extreme variations of temperature between day and night, damp houses, draughts, improper food and filthy water.

Dr. Sanborn also says it is a contagious disease, and large numbers have been lost from the thoughtless introduction of a roup bird into a healthy flock. Overfeeding, or underfeeding, stagnant water—anything in food or drink that lowers the vitality of the fowl—are factors that sometimes end in roup. A damp location of house, a leaky roof or cracks that admit air draughts often lead to catarrh or roup, says the doctor. A hen-house that is cleaned out semi-occasionally, especially if damp, is a good breeding-place for catarrhal diseases. In-breeding (the closer the more danger) weakens the vitality so that catarrh too often finds a ready victim.

While roup is one of the worst diseases that can enter the poultry-yard, yet at the same time beginners are apt to become alarmed when there is little need of it. Watery eyes, sneezing distemper, swelled face, canker in the mouth, heavy breathing, and rattling in the throat are the ailments that are easily cured. Too often they are classed as roup, which is not a fact, although they are symptoms which, if neglected will lead to roup. Treat these symptoms and remove the causes as we have enumerated and you will never have to battle with roup.

Watery eyes, sneezing and distemper can be checked by giving a one-grain quinine pill each night for three nights and a half dozen drops of aconite to every pint of drinking water.

Kerosene in the drinking water—say, a good tablespoonful to a gallon of water, is also good for colds, the only objection to its use being that it is so distasteful to the poultry that they will do without water rather than take the dose. We prefer the use of aconite, as mentioned above. Aconite being a deadly poison, care must be taken in handling it, and, also in giving the dose. Do not give more than twelve drops in a quart of water.

We have found, in twenty years' experience with poultry, that where we watch and treat the above ailments, we do not have roup. Before we thoroughly understood the nature of the disease, we lost heavily every fall, but for fully ten years we have been able to keep the dreaded disease at bay. Thorough understanding, a careful watching, and prompt treatment of the slight ailments will prevent much trouble and loss in this direction.

We doubt if ever a case of roup was cured. It is possible that the birds apparently recovered, but the truth is, that when roup once takes hold of a bird there will ever remain germs of the disease.

Never breed a bird that has been "cured" of roup.

The very best remedy for the genuine disease that we have ever found is a block of wood and a good sharp hatchet.

The roup scare in the poultry-yard is

"cholera." There are more cases of cholera reported than really exist. Indigestion and lice kill the majority of these fowls, and cholera gets the blame.

In cases of indigestion the fowls are sluggish, appetite poor, the droppings scant and unhealthy and the crop soft. Indigestion is caused by lack of sharp grit, injudicious use of grain and a debilitated system.

Give a good family liver-pill each night for three nights in succession; feed chopped onions, and in severe cases add ten drops of nitric acid to a quart of drinking water.

Cholera is of miasmatic origin, epidemic and very contagious. The principal causes are overcrowding, bad sanitary management and unwholesome or irregular food. Of all diseases cholera is the least understood, as many of the symptoms given are also identified with other troubles, like indigestion, enteritis, etc. The external symptoms of a cholera patient are a dejected, sleepy, droopy appearance. The bird does not plume itself and has a great thirst; it has a slow, staggering walk, and gapes frequently. At times the bird falls down from weakness. The comb and wattles become pale at times, and then dark. The droppings are at first either of a greenish color or like "sulphur and water," and afterward they become thin and frothy. Prostration comes on, and the crop fills with mucous and wind; the food does not digest; there is heavy and quick breathing; the eyes close, and in a few hours the fowl is dead. A post-mortem of the fowl will find the gizzard filled with dried food, sometimes with a greenish matter, and the crop inflated with sour mucous and food. The liver is enlarged and flabby, and so tender that it can be readily mashed in the hand, is generally split open and in every case much congested. The crop and intestines are inflamed, and the latter are filled with greenish matter. The heart is also sometimes enlarged.

If you should be so unfortunate as to have the real cholera in your flocks, apply the "roup remedy" we give give above—viz., the block and hatchet.

The most cholera-scares come from the sections where corn is almost the sole diet. This continual feeding of corn produces indigestion, and the fowls at the same time being more or less worried with lice, die in a suspicious manner.

## Diseased Fowls.

EDITOR KANSAS FARMER:—I have two chickens which have a peculiar malady; one seems to have a leg out of joint at the knee. She could not walk or stand at all, and I pulled it in place and she was all right for a while, and then the same trouble returned. I tried the same remedy, but it was of no avail. Her knee is swollen, and there are small pimples which look like dry poison.

The other hen, a Rhode Island Red, which I would hate to lose, is unable to get upon the roost or to stay there. She puts her head back and stares upward and then falls backwards. She has eaten very little of late. Please tell me through your paper what disease they have and what remedies I should use. J. I. A.

Lindsborg.  
We should judge that your fowls are troubled with rheumatism caused by dampness, and the best remedy is to rub the affected parts with a good liniment; Mustang Liniment is a valuable kind to use.

## Poultry Notes.

The great majority of diseases are due to bad management, bad housing, including cold, damp and ill-ventilated houses, overfeeding, rich feeding, impure water and want of exercise.

Now that the chicks are growing, it is well to see that they are not

## POULTRY SUPPLIES

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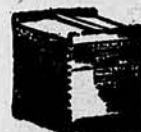
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crowded in their quarters. What might have been room enough for them six weeks ago is far too small now. The quarters should be enlarged in accordance with the growth of the chicks, otherwise they will be stunted in their growth.

Now that warm weather has come, it is necessary to provide shade for the chickens, for the young ones as well as the old, and in the shaded places should their feed be given them, otherwise they will lie in the shade all day and refuse to come out in the sun to be fed. Their drinking-water should be in a cool place and replenished with fresh, cool water two or three times a day.

### WEEKLY WEATHER CROP BULLETIN

Weekly weather crop bulletin for the Kansas Weather Service, for the week ending June 13, 1905, prepared by T. B. Jennings, Station Director:

#### GENERAL CONDITIONS.

The week has been warm with much sunshine and but few showers. The heaviest showers occurred in the extreme northern and southern counties, with little or no rain in the central counties.

#### RESULTS.

##### EASTERN DIVISION.

Wheat harvest is progressing in the southern counties and is beginning in the central; wheat is in good condition except that the Hessian fly is damaging it in Brown County, while in Doniphan some fields are good and others are not. Corn is doing finely; it has been well cleaned and has made a rapid growth. Oats are well headed and are filling well, but generally the straw is short. Prairie-grass is good, but in some of the northeastern counties the pastures are drying up. Clover is being cut, yielding a fair crop. Timothy will be a short crop. The first crop of alfalfa is generally in the barn, or stack, and the second crop is growing rapidly. Early potatoes are abundant and of good quality. Apples are dropping badly in Bourbon, and a failure in Doniphan, but are promising in other counties. Grapes are doing well and raspberries are ripening. Flax is doing well in Coffey County.

Atchison.—High winds and lack of moisture during past week injurious to all vegetation; strawberries and potatoes suffered especially from dry weather; wheat nearly ripe in some fields; clover-haying begun but crop is short; timothy will be a light crop on account of

hay; strawberries about gone; cherries ripe but scarce.

Jefferson.—Good week for farmwork; corn doing well and prospects improving; cultivation progressing well; wheat ripening and doing well; oats headed and filling well; first crop of alfalfa in barn; clover ready to cut; pastures good and stock doing well; raspberries ready to pick; early potatoes ready for use.

Johnson.—Warm, dry weather; corn making rapid growth; too dry for pastures, meadows and potatoes; peas, beans and potatoes large enough to use; strawberries about gone; clover-haying commenced; good prospect for grapes.

Linn.—Weather conditions favorable for wheat; corn cultivation progressing well and this crop is in the very good condition; wheat harvest will begin in about eight days.

Lyon.—Wheat promises very good yield; corn and hay growing well.

Marshall.—Good crop of alfalfa; corn is backward and condition of small grain is not so good as formerly; grass is not doing well; gardens and potatoes need rain; stock doing very well although growth of grass has not been as good as last year.

Montgomery.—Corn growing well and cultivation progressing; wheat harvest in progress with prospect of good yield.

Osage.—Wheat and oats doing well; corn cultivation progressing and prospect good.

Pottawatomie.—Corn in fine condition and cultivation progressing; wheat harvest commenced and grade and yield good; oats heading short; potatoes need rain.

Riley.—Good week for growth of corn and wheat; wheat harvest will begin in another week; fair crop of apples; rain would be beneficial to all crops.

Shawnee.—Warm, dry week with much wind; rain needed; corn growing well generally although stand was injured in places by last heavy rain; light crop of cherries; early potatoes injured.

Wabaunsee.—Fine growing week for corn; wheat in very good condition and harvest will begin next week; cattle in pasture doing well; some complaint of dry weather.

##### MIDDLE DIVISION.

Wheat harvest is progressing in some of the southern counties and it is expected will begin this week in the central counties.

Wheat generally is in good condition but needs rain in several counties; it is not in good condition in Barber, and damaged by the fly in Cloud. Spelt is very good in Harper County. Corn generally has been well cleaned, is in good condition and has grown rapidly. Oats are improving, the straw has been short but most of it has made good growth this week, and the crop is heading. The first crop of alfalfa is mostly in the stack now and the second crop is ready to be cut in several counties and is being cut in Butler County. Grass and pasture are good. Potatoes need rain, otherwise they are in good condition. Apples are dropping in Barton. Cherries are abundant in the southern counties but are a light crop in the Smokey Hill river counties. Barley is ripening. Cattle are fattening.

Barber.—Wheat-crop will be ready to cut in about ten days but outlook is poor; first crop of alfalfa in stack; corn growing well; good crop of early potatoes on market; rain needed for good growth of crops.

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localities; corn growing fast and being cultivated and this crop is in fair condition; first crop of alfalfa in stack; light yield; second crop of alfalfa has good start; gardens and pastures doing well; forage crops about all planted; early potatoes on market; fair crop of cherries; oats and spelt promise fair yield but are short; wheat in the dough stage and will be ready to harvest next week.

Reno.—Rain needed; wheat beginning to turn and looks well; rye ripening; oats look fairly well; corn growing well and cultivation progressing rapidly; second crop of alfalfa beginning to bloom.

Republic.—Corn beginning to grow well and most of it has been cultivated once or disked; alfalfa looking well since first cutting; potatoes nearly ready for market.

Rooks.—Wheat maturing well; corn making fine growth and shows good stand; barley doing well; oats in fair condition; first crop of alfalfa cut; potatoes doing well; pastures good and cattle fattening.

Rush.—Growth of wheat retarded by warm, dry weather during week; needs rain badly and is heading very short; some fields good but the general prospect is poor; corn making better growth; cherries ripening.

Russell.—Wheat, potatoes and forage crops need rain; corn doing well and cultivation progressing; second crop of alfalfa ready to cut.

Saline.—Warm, dry week favorable to farm crops and work; wheat harvest will begin next week; corn growing well; cherries ripe but crop is light.

Sedgewick.—Wheat prospect not so good except in northern portion of county where the crop is said to be in better condition; harvest begun in southern portion of county and will be general next week; oats very promising; are growing fast and much is heading; corn in fine condition; garden products of all kinds plentiful and of good quality.

Sumner.—Good week for cultivating crops; late wheat filled and soft wheat ripe; second crop of alfalfa beginning to bloom and ready to cut in some localities; potatoes nearly ripe.

Washington.—Good week for farmwork; wheat heading well but short and thin on the ground; oats heading but short; corn beginning to grow; potatoes looking well and in bloom; too dry and warm for good growth of garden products.

##### WESTERN DIVISION.

Wheat is about all headed now; it is filling well in Finney County but is spotted in Lane, and is firing some in Ness County, while in Sheridan rust has damaged some. Spring wheat is quite promising in Lane County. Corn is in good condition, has grown rapidly and been well cleaned. Range-grass is beginning to cure on the ground in Ness County. Alfalfa-cutting is progressing and a good crop is being saved. A good acreage of sugar-beets has been planted in Finney County and the crop is doing well. Potatoes are abundant but need rain. Barley is headed and is filling well. Cane, millet, and Kafir-corn are doing well. Cattle are in good condition.

Decatur.—Corn making rapid growth and cultivation progressing well; corn shows fairly good stand; wheat about all headed; alfalfa-cutting in progress.

Finney.—Sugar-beets doing well and much Mexican labor employed in beet fields; wheat filling well.

Lane.—Barley filling fairly well; wheat needs rain and at best will be very spotted; spring wheat promising; alfalfa-cutting in progress and crop good.

Ness.—Feed-planting finished; early sown cane and millet looking well; new potatoes plentiful but would be benefited by more rain; gardens showing effect of high winds; cattle doing well; some wheat firing and would fill better with more rain; range-grass beginning to cure; corn making good growth and is being plowed second time.

Norton.—Some alfalfa being cut; Kafir-corn and cane coming up and show good stand.

Sheridan.—Good growing week and crops of all kinds improved; weed-killing progressing in corn-fields; late sown wheat somewhat damaged by rust; alfalfa being cut; good crop.

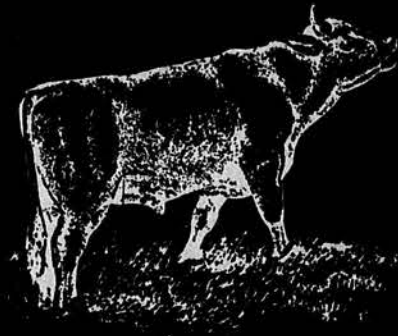
Thomas.—Wheat suffering on account of deficient rain; barley all headed; corn making good growth; all crops, however, need rain.

Trego.—Favorable weather conditions for all crops.

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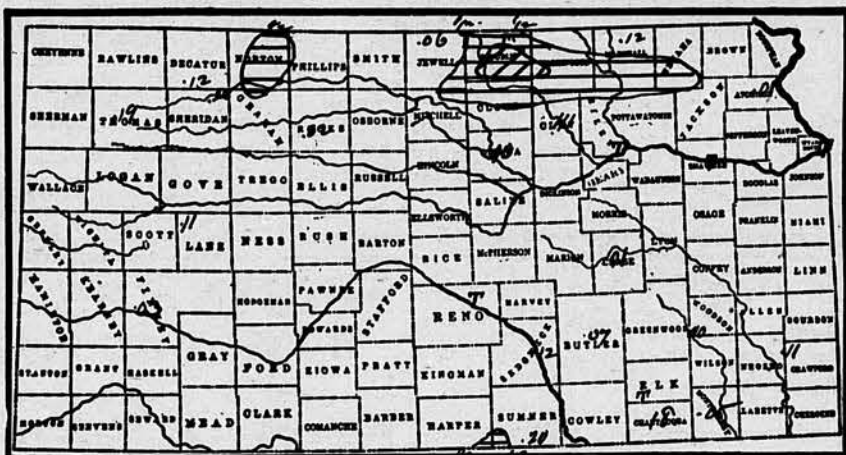
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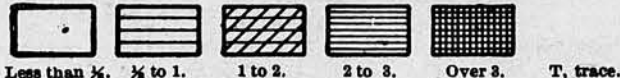
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Rainfall for Week Ending June 10, 1905.



SCALE IN INCHES:



short straw; oats heading; straw quite short. Bourbon.—Corn doing well; wheat in good condition; apples dropping badly; cherries doing well but crop will be small; all small berries in good condition; timothy will be short; hay in good condition; clover doing fairly well; potatoes doing well; gardens look well.

Brown.—Corn made good growth; wheat damaged by Hessian fly which appeared this week; pastures and meadows becoming dry and crops of all kinds need rain very much; strawberries and cherries about all picked; gardens look well.

Chase.—Corn doing well; gardens need rain; cattle in pastures; fruits promising; first crop of alfalfa in stack, except where acreage is large; wheat and all other small grains in dough stage; early potatoes and peas large enough for use.

Chautauqua.—Wheat harvest nearly finished and crop has been good; corn doing well; alfalfa now in good condition; first crop badly injured.

Coffey.—Fine growing weather; corn doing well and most of it clear of weeds; oats and flax doing well; wheat harvest commenced on the 7th; rain needed in northwestern portion of county.

Crawford.—Good week for cultivation and growth of corn; oats headed and doing well; wheat filling well and beginning to ripen; pastures good and stock doing well; clover ready to cut, but short; cherries ripe but promise poor crop; potatoes doing very well.

Doniphan.—Wheat doing well although in some fields it is not a promising good crop; harvest will begin next week and crop will be better than was expected; apples not doing well; grapes promise well; oats short and light crop expected; corn backward and in poor condition.

Douglas.—All crops in good condition although rain would be beneficial; wheat will soon be ready to cut.

Elk.—Good week for farmwork; corn growing fast and cultivation progressing; wheat harvest will commence next week.

Franklin.—Crops doing well although rain would be beneficial.

Greenwood.—Warm, dry weather and vegetation needing rain; corn making good growth; alfalfa doing well; good weather for

Barton.—Wheat ripening; first crop of alfalfa in stack; plenty of garden vegetables in market; potatoes doing well and will soon be ready for use; apples dropping and crop will be short; cherries ripe and abundant.

Butler.—Corn growing fast; second crop of alfalfa being cut; wheat harvest will begin in about ten days and outlook well; grass in good condition; oats doing well, but short.

Clay.—Wheat prospect continues good and harvesting will begin next week if weather continues warm; corn growing rapidly and cultivation has progressed well; oats in good condition; home-grown cherries and strawberries in market.

Cloud.—Some improvement in condition of wheat but still in poor condition; fly reported in many localities; corn growing rapidly; alfalfa in good condition and some cut during first part of week.

Cowley.—Good growing week; corn doing well; oats improving; wheat not so good as expected; good, plump berry but short in head and thin on ground; pastures good.

Dickinson.—Crops beginning to show need of rain but no damage is apparent thus far; corn looking well and cultivation progressing rapidly; early potatoes seem to be dying and gardens are needing rain; cherries scarce.

Ellsworth.—Crops doing well generally.

Harper.—Wheat ripening fast and harvesting of soft wheat begun; hard wheat will be ready to cut by the 15th; oats lengthening and promise fair crop; spelt in very good condition; corn growing rapidly but is weedy and needs rain.

Jewell.—All crops doing well, but beginning to need rain; potatoes in good condition; pastures good.

Kingman.—Wheat and oats ripening fast; wheat straw short but grain promises to be heavy; corn doing well; potatoes have good quality.

McPherson.—Wheat filling well but rain is needed; corn making good growth; early wheat and barley ready to cut; alfalfa and potatoes needing rain.

Marion.—Corn needing rain; wheat and oats doing well; first crop of alfalfa cut and in stack, with good yield; fair crop of early potatoes.

Ottawa.—Wheat and oats promise fair crop although the prospect is not good in some



## Miscellany

### Conserving Soil Moisture.

A. D. COLLIVER, AGRICULTURAL EXPERIMENT STATION.

If enough rain falls on the land during the year to produce a crop, the only question remaining is to catch and hold this moisture in the soil until the crop can use it. The greater part, if not all the wasted water that the crop could use is lost by evaporation from the surface, the capillary attraction keeping this surface water supplied from the stores below. If the capillary action is destroyed, and the water kept from reaching the surface, the evaporation will be reduced to a minimum. The mulch is the practical means of stopping capillary action, and the soil-mulch is to be relied upon.

An implement that does the work of a plow, or turns the soil—pulverizes it and returns it again to its place—will make the best soil-mulch.

Late fall plowing prepares the ground for holding water, the rough surface catching the snow and allowing late fall and early spring rains a better chance to soak into the ground. A loose surface will keep the ground warmer than a hard, compact one, and for this reason late fall plowing is beneficial in orchards and fruit-gardens, when there is danger of perennials freezing out or winter-killing.

Early spring plowing is also a means of conserving soil-moisture, and is especially beneficial to such crops as corn or potatoes. In addition to allowing more water to soak into the earth, the spring plowing will facilitate the formation of available plant-food, especially of nitrates, and destroy a crop of weeds; also, the soil-moisture and plant-food will be induced to accumulate at the surface where they are needed.

By plowing in early fall, after a spring crop is removed, a crop of weeds is killed and the ground prepared to soak up fall rains, and an abundance of plant-food will be ready when the fall grain is sown.

It is often the case that plowing can not be accomplished in time to conserve the soil-moisture, and under such circumstances working the land with an implement that produces a lighter mulch is beneficial; such as the spike-tooth, the disk, or the Acme harrows. Such light cultivation will often serve the purpose until the plowing can be accomplished.

The frequency of cultivation is an important matter; as too few, as well as too frequent cultivations, are not for the best. The spring is the time for frequent cultivations, since at this time large amounts of plant-food should be made available, and the soil-mulch is often destroyed by rains, and must be renewed, both of which are accomplished by cultivation. As the season advances, the cultivations should be fewer as well as shallower, for the ideal treatment, as there are so many surface roots which deep tillage destroys, as well as exposing new surfaces to be dried out and causes unnecessary loss of moisture when most needed. A possible exception that should be mentioned is in "laying by" corn. It is often best to give this crop a deep mulch, as it will last longer, and conserve more soil-moisture than a shallow mulch; and by rather deep cultivation of corn the last time, enough moisture will as a rule be saved, to more than compensate for the root pruning. This method is advised because, in practice, when the corn is once "laid by," if the surface mulch be destroyed, it is not usually renewed.

Subsoiling to help conserve the soil-moisture must be practiced with caution. Only in the sub-humid regions can this method of soil-culture be practiced to any extent. Subsoiling increases the water-holding capacity of the soil and places the water in a more available form. One of the greatest dangers from subsoiling is puddling the soil, and for this reason it is better to use the subsoiler in the fall rather than in the spring, as the

lower soil is as a rule dryer in the fall than in the spring. A good growth of alfalfa or clover-roots through the subsoil answers the same purpose as the subsoil plow and is a sure and safe method of loosening up the subsoil.

### Burnt Cobs for Hogs.

Burnt corn-cobs, if you have no charcoal, mixed with some wood-ashes and a very little salt kept where the hogs can get it, is one of the best regulators that hogs can be given to keep them in healthy condition. As to the manner of burning these cobs, one breeder says to dig a hole in the ground five feet deep, one foot in diameter at the bottom and five feet at the top, using this hole as a charcoal pit. Into this pit place some combustible matter and ignite. To this gradually add dry corn-cobs until the pit is full. After the flames have thoroughly penetrated these cobs, place over the pit a sheet-iron cover so as to exclude the air. If there are any crevices around the edge these should be covered with soil. In the course of ten or twelve hours the charcoal will be ready for use. This charcoal may be fed alone to hogs or mixed in the following way: Six bushels of corn-cob charcoal, eight pounds of salt, two quarts of air-slacked lime and one bushel of wood-ashes. The charcoal should be broken up fine and these substances thoroughly mixed together. One writer adds to this mixture one and one-quarter pounds of copperas, which he dissolves in hot water, afterward sprinkling this over the mixture. The mixture may then be fed to hogs at certain intervals, or, what is better, it may be placed where the hogs may have free access to it at all times.—Indiana Farmer.

### Messrs. Crouch & Sons' World's Fair Honors.

The German Government, through the Commissioner of Agriculture, recognizing the services of Messrs. J. Crouch & Son, LaFayette, Ind., in the magnificent show of German coach-horses at the World's Fair last year at St. Louis, and the great prestige and popularity this show has given to the German coach-horses, with the increased demand for the American trade, has granted to them a special prize of honor, never before accorded to any foreigner—the handsome bronze statue of the noted stallion Apis, at the head of the royal stud. We publish the following official notification:

"Berlin, Germany, April 18, 1905.

"Messrs. J. Crouch & Son, LaFayette, Ind.

"Gentlemen:—In acknowledgement of your services rendered at the World's Fair, at St. Louis, Mo., in the department entitled German Coach, I beg to inform you that the Ministers of Agriculture, Messrs. Crownland and Forest, have granted you a prize of honor in the form of a bronze statue of the 6-year-old stallion Apis, stallion in the royal main stud at Trakehmen and at the same time I beg to inform you that this statue has been forwarded to you by the General Minister.

"Yours truly,

"HEINRICH F. ALBERT."

Messrs. Crouch & Son have received the elegant bronze statue. It will be accorded the place of honor in the handsome office in the new barn just being completed, the finest barn in the State.

### Don't Grow Old.

"Don't imagine you must become stoop-shouldered because you are growing old," said a well-known physician to a friend. "Old people do not stoop because they are old, but they get old because they stoop. The stiffening of the tissues, which is the sign and accompaniment of age, is warded off by exercise. Self-indulgence in eating and in drinking and in lazy ways is the sure road to senility.

"I have often been surprised and gratified to find that regulated movements of the neck and upper truncal muscles, employed for the purpose of accomplishing something else, resulted in a conspicuous improvement in hearing, in vision, in cerebration



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By W. J. SPILLMAN

Agrostologist, U. S. Department of Agriculture

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and as a consequence, in betterment of cerebral circulation, also in sleep. Persons who habitually maintain an erect position in standing or sitting are stronger than those who slouch. A person who stoops and allows the shoulders to sag down and forward and the ribs to fall back toward the spine shortens the anteroposterior diameter of the thorax anywhere from two to five inches. The lungs, heart, great vessels and other important structures in the thorax cannot live, move and have their proper being under such circumstances."

Wherefore, the proper thing for persons who are not so young as once they were is to brace up, dress young and feel young. Sitting "hunched up" over a fire won't do.—Exchange.

### Gossip About Stock.

R. F. Norton, the Duroc-Jersey breeder of Clay Center, Kans., writes: "I have now fifty of the finest spring pigs I ever raised. Six sows farrowed 66 pigs. I am offering them at a bargain to make more room for older and younger Duroc beauties. This offering includes blood of champions of two world's fairs. I will make no fall sale, so you have the assurance that the best are not being kept for that. The first who comes gets first choice. I will divide the extra expense of a sale with my patrons."

G. M. Hebbard, of Peck, Kans., has some choice Poland-China gilts of late fall farrow that are particularly fancy that he is offering the trade at very reasonable prices; also 3 boars of the same litters. Three of these choice fellows have recently been sold to head pure-bred herds and those remaining are of equal merit. The spring pigs by U. S. Model, one of the smoothest large boars it has ever been our pleasure to see, are very promising and the On and Op pigs are what you would expect from their breeding, and are being priced by Mr. Hebbard at their value.

Note the Hereford card of August Johnson starting in this issue, and write him about the choice young bull he is offering the trade at present. There are several well-bred, thrifty fellows that should

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## Stray List

Week Ending June 1.

Russell County—F. J. Smith, Clerk.  
HORSE—Taken up by F. O. Mitchell, in Lincoln tp. (P. O. Russell), April 29, 1905, on dark-bay horse, unintelligible brand on left shoulder; valued at \$30.

Sumner County—C. B. Macdonald, Clerk.  
FILLIES—Taken up by J. H. Harrison, in Caldwell tp., April 21, 1905, one black filly, valued at \$20; also one bay filly, 3 legs white; valued at \$30.

be doing service in Kansas herds. One especially good 17-months-old bull should find a home at the head of a good registered herd. At the price these bulls are being offered it behooves our readers to get in correspondence with Mr. Johnson at once. Besides, those old enough for



present use there are now suckling a grand lot of youngsters by Keep On 29th that are above the average in quantity and will be heard from in the future.

J. M. Young, breeder of Duroc-Jersey swine and improved poultry at Plainville, Kans., has a lot of Durocs for sale that are bred right. The Plainville herd is headed by King of Kansas 22223 by improver 2d, the hog that at a recent sale brought \$300 for one-half interest. Mr. Young has a lot of his pigs for sale now as well as those of other ramblers. Among the sows in the herd are Daisy M., a very large sow who is a great breeder of snow hogs. Her number is 3204 and it will be a matter of satisfaction to get pigs descended from her. Mr. Young now has some top-notchers with which to fill orders. Send in your orders at once and get the best.

G. E. Avery, owner of the Oakwood Aberdeen-Angus herd, route 2, Riley, Kans., is in luck. He has just bought an Erica herd bull sired by Black Bird Baron of Acadie 50188, dam Mona Mac 29683 by Eric McCreary 2d 74057. It is thought that there is no better bred bull in the herd book than this splendid new herd bull of Avery's. He is very popularly bred and is a splendid individual. One enthusiast describes him as being "as wide as a wagon and so low that he could not roll a keg of nails under him." With the cows already on the Oakwood farm and this bull at the head, something great in Aberdeen-Angus cattle may be expected in that locality in the near future.

C. M. White, Bennington, Kans., has announced a bred-sow and gilt sale of Poland-China hogs for September 1. These are a selected lot—the tops of Mr. White's last year's crop of pigs and a number of choice ones from some of the noted herds of the State. Among the latter are gilts from the \$335 sow sold by Thompson Bros., Marysville, Kans., last year. These will all be bred to Mr. White's new herd boar, Confidential. This is a Missouri-bred hog and winner of fourth prize in class at the World's Fair. Mr. White thinks he is one of the best Poland-China boars in Kansas. Watch the Farmer columns for further particulars and remember the place and date—Bennington, Kans., September 1.

The Improved Stock-Breeders' Association of the Wheat Belt will hold a three-days' sale of registered stock at Arkansas City, November 16, 17, and 18, 1905; and their third annual sale will be held at Caldwell, February 15, 16, and 17, 1906. A Kansas Farmer representative visited Chas. M. Johnston, secretary of the association, who was busy getting his second crop of alfalfa in the barns. The breeders of this association are in a favored locality for the production of pure-bred stock, where this, the greatest of all forage crops, grows luxuriantly without irrigation. Just think of two crops already harvested and the third crop trying to see how quickly it can mature! The 130 members of the association are endeavoring to make the most of the combination of pure-bred stock, alfalfa, and the excellent climate of Southern Kansas and Oklahoma.

The largest and finest horse publication that has ever come to this office is that issued by the horse department of the Hartman Stock Farm of Columbus, Ohio. This is a magnificent example of the printers' art and is a book of 200 pages of splendid illustrations and highly valuable historical reading matter. The cost of issuing this book must have been something enormous, but Manager James A. Lawrence says they are willing to bear this expense in their disinterested efforts to advance the horse interests of the country. He has decided, however, that interested parties who may desire copies of this splendid book may have the same for 75c each with 17c for postage, or a total of 92c. This is probably less than one-fourth of what the book cost, but to the lover of good horses it will be found to be very cheap. Address Jas. A. Lawrence, Manager, Station C, Columbus, Ohio.

#### Nitroline.

The Nitroline Manufacturing Company, of St. Louis, has lately opened a branch house at the corner of Lake and Illinois Avenue, South St. Joseph, Mo., for the better accommodation of their numerous patrons. Nitroline has been on the market but a few years, but has made a wonderful record as a swine dip and remedy. The company is now issuing a little booklet giving instructions about the treatment and care of swine, calves, poultry, etc., together with numerous testimonials and references from some of the best-known breeders of the United States. Nitroline seems to be the perfection of dips and when used in connection with the specifics manufactured by this company entirely does away with all dread of swine plague, cholera and other diseases. The little booklet is worth having if for no other reason than to read what such men as Wallace Estill, Estill, Mo.; A. J. Lovejoy, Roscoe, Ill.; David Rankin, Tarkio, Mo.; and others of the best-known breeders and feeders in the United States have to say about this wonderful dip and the results obtained by its use. Notice their handsome advertisement on the last page of this issue and write for information about the most economical dip manufactured.

#### Business Education Free.

Elsewhere in this issue will be found an advertisement of Draughon's Practical Business College, St. Louis, Kansas City, Fort Scott, and elsewhere, offering 135 scholarships free under a special misspelled word contest. See advertisement elsewhere.

#### No Complaint in Four Years.

Clarence, Mo., January 10, 1905. The Lawrence-Williams Co., Cleveland, O. I sell GOMBAULT'S CAUSTIC BALSAM and lots of it, too. I do not hesitate to guarantee CAUSTIC BALSAM to do everything it is guaranteed to do, for once used, they use it altogether, and I have never heard any complaint in four years past. M. H. SCRUTCHFIELD.

## The Markets

### Kansas City Grain Market.

The best samples of wheat were in better demand than for several days past and there was a fair movement of low grades. Prices were unchanged to 1c higher. The railroads reported 64 cars of wheat received, compared with 74 cars a week ago and 61 cars a year ago. Sales of car lots by sample on track, Kansas City: Hard wheat—No. 2, 2 cars 97½c, 1 car 97c, 1 car 96½c, nominally 95½c; No. 3 hard, 6 cars 95c, 5 cars 94c, 6 cars 93c, 2 cars 92c, 2 cars 91c, 1 car 90c, 1 car 89c, nominally 89½c; No. 4 hard, 1 car 83c, 2 cars 91c, 2 cars 90c, 1 car 89c, 1 car 88c, 2 cars 86½c, 2 cars 86c, 2 cars 85c, 1 car 84½c, 2 cars 84c, 2 cars 83c, 2 cars 82c, 1 car 80c, nominally 77½c; Rejected hard, nominally 55½c; 1 car special 93c. Live weevily hard, 2 cars 89c, 1 car 82½c. Soft wheat—No. 2 red, nominally 96½c; No. 3 red, 1 car 95c, nominally 90½c; No. 4 red, 1 car 85c, 1 car 83c, 1 car 82c, nominally 72½c; Rejected red, nominally 55½c; Spring wheat—No. 3, 1 car white 90c; No. 4, 1 car white 70c.

Corn sold readily and at steady to ¼c higher prices, with most of the advance for the No. 2 corn. Receipts were moderate. The railroads reported 75 cars of corn received, compared with 89 cars a week ago and 15 cars a year ago. Sales of car lots by sample on track, Kansas City: Mixed corn—No. 2, 3 cars yellow 49½c, 7 cars 49½c, 8 cars 49½c, 2 cars 49½c; No. 3, 2 cars yellow 49½c, 1 car 49½c, 3 cars 49½c, 2 cars 49½c, 11 cars 49c; No. 4, 1 car 49c, 1 car 48½c, 11 cars 48c, 3 cars 47½c. White corn—No. 2, 1 car 50½c, 5 cars 50c; No. 3, 1 car 50½c, nominally 50½c; No. 4, 1 car 48c.

At ½c lower prices oats were in good demand. Elevators were the principal buyers. Receipts were moderate. The railroads reported 25 cars of oats received, compared with 28 cars a week ago and 8 cars a year ago. Sales of car lots by sample on track, Kansas City: Mixed oats—No. 2, 2 cars 29½c, 1 car 29½c, 6 cars color 29½c, 3 cars 29½c, 3 cars 29c; No. 3, nominally 28½c. White oats—No. 2, 1 car 31½c, 2 cars 31½c, 6 cars 31c, 6 cars 30½c, 5 cars color 30½c, 1 car poor 30c; No. 3, 1 car 30½c, 1 car 30c, 1 car 29½c.

Rye—No. 2, nominally 65½c; No. 3, 1 car 50½c, nominally 50½c. Corn-chop—Nominally 93c in 100-lb sacks. Timothy—Nominally \$2.55 per 100 lbs. Flaxseed—Nominally \$1.19. Bran—Nominally 74½c. Shorts—Nominally 79½c. Millet—Nominally \$1.05 per cwt. Red clover and alfalfa—\$9.15 per 100 lbs.

Cane-seed—Nominally \$1.10. Kafir-corn—Nominally 75½c per 100 lbs. 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, \$28 per ton. Castor beans—\$1.35 per bushel in car lots. Barley—No. 3, 1 car 42c.

### Kansas City Live-Stock Market.

Kansas City, Mo., Monday, June 12, 1905. The heavy run of cattle, inaugurated last Monday, continued throughout the week, resulting in a loss on all kinds, ranging from 15¢ to 35¢, with some of the grass quarantine steers 50c lower. The main source of the supply was Indian Territory, Oklahoma and Texas, that is, quarantine cattle, and as all of this class of cattle must go to the killers, regardless of flesh, the buyers for the packers had all the advantage, and dictated their terms.

The cattle run to-day is quite a relief from the excessive supplies of last week, at 8,000 head, moderate elsewhere. Market is steady to-day, possibly some higher for strictly dry-lot cattle. Traders here look for a good market on prime steers, but the medium and grassy kinds will probably not do as well. The usual summer decline on these is already well under way, the loss of 25¢ to 35c on medium and common killing cattle last week being a good start. Heavy cows sold better than other she stuff last week, losing only 10¢ to 20c, good heifers and yearlings about a quarter lower, veals remained steady. Stocker and feeder prices did not change much during the week, common ones sinking a little lower, but the market closed the week with better prospects than at close of previous week. Top steers sold at \$6.70 last week, top to-day \$5.60, bulk of steers \$4.55 to \$5.50, heifers \$3.75 to \$5.00, cows \$3.25 to \$4.50, veals \$4.50 to \$5.50, bulls \$2.50 to \$4.50, feeders \$3.75 to \$4.65, stockers \$3.25 to \$4.40.

Hog markets fluctuated very mildly all of last week, a net advance of 1c in average price of all kinds for the week testifying to this. Favorite top for the week was \$5.35 on several days, and that is the top to-day. More hogs sold at \$5.32½ to-day than at all other prices together. Not as many heavy weights are coming, and they are shaded slightly by purchasers, mediums and light weights selling together at the top. Receipts at all the markets increased 20 per cent last week over same week last year, but demand was large.

Sheep markets ruled strong all last week, and prices are 15¢ to 25c higher to-day. Receipts are falling off, as the Southern movement is nearing its end, and there is no other source of large supply just now. More natives are appearing, but lambs are scarce. Ewes bring \$4.25 to \$4.60, wethers \$4.75 to \$5, clipped lambs \$5.75 to \$6, spring lambs a quarter lower, at \$6.25 to \$6.75. No stock or feeding sheep to speak of are coming now. J. A. RICKART.

### South St. Joseph Live-Stock Market.

South St. Joseph, Mo., June 12, 1905. While local receipts were considerably in excess of the supply of last Monday, receipts at the five leading markets only aggregated 38,500, as compared with 51,800 for the corresponding day last week. The big reduction in the number in sight was beneficial to the beefs good enough to sell at \$5 and upwards, as they were taken readily at prices strong to 10c higher

## Special Want 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.

### CATTLE.

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

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

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

FOR SALE—Seventeen registered Angus bulls, 10 to 20 months old; also a number of cows and heifers at reasonable prices. Will sell my herd bull. Address A. L. Wynkoop, Bendona, Kans.

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

FOUR GOOD HEREFORD BULLS, 15 to 20 months old, at reduced prices if taken at once; also a few younger ones. A. Johnson, Clearwater, Kans.

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

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

### 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 18th 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.

DUROC-JERSEY PIGS—125 head, both sexes. Four brood sow lines of breeding. Sires, Red Chief I Am, Red Banker and Van's Perfection. N. B. Sawyer, Cherryvale, Kans.

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 sealer. Territory given. J. W. Adams, 741 Tennessee, Lawrence, Kans.

AGENTS WANTED Sell 61 bottle Sarsaparilla for 50c; best seller; 200 per cent profit. Write today for terms. F. K. Greene, 115 Lake St., Chicago

than the close of last week, but on the kinds selling under \$5 prices were generally steady, but there was a better tone to the trade which was manifest by the increased activity of this class. Some good fat heavy steers sold up to \$5.70, while quite a few lots of fair to good medium export and dressed-beef grades sold from \$5.10 to \$5.45. The supply of good to choice steers was considerably of a disappointment to the trade, as buyers' orders were large enough to have absorbed many more than were available. The supply of butcher stock was not very extensive to-day, and desirable cows and heifers were especially scarce. Owing to the unfavorable conditions prevailing elsewhere, sellers were not able to put any strength into the market, but a comparatively early clearance was made at prices fully steady with the lower close of last week. The common to fair grassers and canners did not move freely. Bologna and butcher bulls, and good export kinds were rather slow but fully steady and veals showed no change. There was a nominal number of fresh arrivals of stock and feeding cattle and the demand was very good at last week's closing prices. The call is for good to choice yearlings and calves and good cows, and liberal receipts would no doubt find ready sale, as the country demand is about sufficient to keep the stocker division pretty well cleared, and regular dealers are free buyers of all fresh offerings. The market on young country cows and stock heifers continues dull at last week's low range of prices and stock bulls are meeting with fair inquiry and show little if any change from a week ago. There were a few loads of fair to good steers in the quarantine division to-day and they met an active demand at prices fully steady with last week, fair to pretty good kinds selling at \$3.35 to \$5.55. A few fair cows and veals which were included in the shipment also sold quickly at steady prices. The demand for Southern cattle on this market is very strong and the good prices prevailing should attract heavier shipments. The hog market shows little variation from a week ago although receipts have been exceptionally heavy for this season of the year. To-day trade ruled steady to strong with prices ranging from \$5.27½ to \$5.32½, bulk selling at \$5.30 to \$5.32½. Buyers are making very little distinction between the light and heavy offerings or between the poor or the good to choice qualities, but this should not encourage shippers in the country to not make the usual distinction between grades, for almost any time the spread is liable to widen, and it is quite probable that many country dealers will be caught napping. The demand here continues very strong, and although over 48,000 hogs were received last week, a great many more could have sold to advantage. The demand of sheep is rather light for Monday, and prices show strong to 15¢ to 25c higher than a week ago. Colorado Mexican woolled lambs sold at \$7.10; Colorado shorn lambs sold at \$6.20. The demand for sheep is strong at prices ranging from \$3.75 to \$5.95. WARRICK.

### FARMS AND RANCHES.

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 out-buildings, 100 acres cultivated, \$4,500, 516 acres, well improved with buildings, 40 acres alfalfa, 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 & Studebaker.

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

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—Farm; 360 acres; 160 cultivation, balance fine timber; new 6-room house, cribs, granary, sheds, barn and outbuildings; 3 wells, living water, orchard, on public road, 100 miles from St. Louis. Also 567-acre farm, improvements poor, about 200 acres under plow, finest stock farm in state, 3 miles from live railway town. For particulars call or address J. B. Dunkerley, 4745 Hammett Place, St. Louis, Mo.

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, alfalfa, shade and fruit trees. Farm can be divided. Price, \$15 per acre. Call on or address the owner, Box 192, Wakarusa, Kans.

BARGAINS in good grain, stock and alfalfa farms. J. C. Burnett, Emporia, Kans.

FOR SALE OR EXCHANGE—Land, merchandise and city property. Let me know what you want to buy or sell or trade. A. S. Quisenberry, Marion, Kans.

FIFTY farms in Southern Kansas, from \$15 to \$70 per acre; can suit you in grain, stock or fruit farms. I have farms in Oklahoma, 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 908, Wichita, Kans.

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

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

## Sumner County Farms

Call on or write to C. L. Stewart, Wellington, Kansas for a list of Sumner County Farms.

## FARM LOANS

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

DAVIS, WELLCOME & CO., Stormont Bldg., 107 West 6th, Topeka, Kas.

## 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 Brokerage Co., Topeka, Kans.

### SCOTCH COLLIES.

FOR SALE—A registered Scotch Collie Shepherd dog, well trained for sheep or cattle and a good watch dog; also two female puppies of the best of breeding. Jacob Funck, Route 4, Des Moines, Iowa

FOR SALE—Two litters of Scotch Collie pups and a few older dogs. All stock registered or eligible for registration. Burr Fleming, Kinsey, Kans.

FOR SALE—Pure-bred Scotch Collies; forty head pure-bred Shropshire ewes; registered Guernsey bulls. G. C. Wheeler, Mgr. Perkin's Farm, Harlem, Mo.

### SEEDS AND PLANTS.

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—Spelts, 60c bu. f. o. 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, Abilene, Kans.

### MISCELLANEOUS.

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, 408 S 7th Street, Rocky Ford, Colo.

WANTED—Men and teams to break prairie. Will rent the land or sell it on easy payments. Address, W. W. Cook, Russell, Kans.

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

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



## Miscellany

### Why Farmers Should Use Acetylene.

EDITOR KANSAS FARMER:—Farmers should find advantage in the use of acetylene, a gas, for the same general reasons that lead practically all residents of large towns to use city gas to the exclusion of kerosene and gasoline. These reasons are, convenience and superiority of lighting. When all classes, from laborers to millionaires, employ illuminating gas where available, is not that strong evidence to the general desirability of such lighting? Now, acetylene, the latest arrival among illuminants, possesses certain remarkable qualities which destines it to the chief place as a light for farmers, just as gas now has such wide use in towns.

A leading quality is the marked simplicity of acetylene production. The gas is generated ready for use by combining only two materials. One of these, strange to say, is water. The other is a product of the electric furnace, known as calcium carbide, the ingredients of which are lime and carbon.

Such simplicity in the production of a superior illuminant is almost beyond belief. When it was first announced some eleven years ago, the fact was as startling to manufacturers of city gas, which is the product of a complicated system, as it will be, I assume, to some present readers. Friends of this gas never tire of quoting Professor Vivian Lewes of Greenwich, England, recognized as the world's greatest gas expert, and prominently identified with coal-gas interests, regarding his first contact with the simple process of acetylene production. He said, "I shall never forget the impression made upon my mind when, in the autumn of 1894, I first generated acetylene by the action of water upon calcium carbide. There was something almost uncanny in the development of this wonderful gas from the simple contact of the carbide with water."

It is this simplicity, coupled with economy and the superiority of the light, which explains the secret why every house-owner can turn gas-maker and provide the beautiful, safe, convenient and modern illuminant in abundance for his own needs. The question of whether one resides on a farm, or in a village, or on a boat, for that matter, cuts no figure; the small amount of carbide needed is as easily transported as pieces of coal. Water is available everywhere. The actual labor of generating the gas is considerably less than that of caring for and filling the kerosene lamps.

Acetylene is made in a metal generator, which receives its ingredients in separate compartments, and which then acts automatically. Whether one or a dozen burners are attached, gas production goes on to meet only the exact demand at the tips. The care required is to supply the generator with carbide at intervals of a few days or a week or more, according to lights used, and to remove the residuum which follows generation.

The acetylene system in its usual form, like city gas, depends on conveying the gas by pipe to the points needed. While farmers unfamiliar with pipe-conveyed illuminants, might at first object to this, yet, as the advantages are weighed, all objections are sure to cease. Gas from pipes appeals strongly to the housekeeper. This is because there is no longer the daily nuisance of cleaning, filling, and otherwise attending portable oil lamps. In order to have light at any point, it is only necessary to turn a key and touch a match. Again, closing the key extinguishes the flame. That is all there is to it. No dirt, no grease, no odor, no dust, no danger, while the light is greatly superior.

Acetylene has been amply tested. To-day in the United States, there are in use nearly 100,000 acetylene generators in which the pipe-system of delivery is employed, with the greatest satisfaction. These generators, with rare exceptions, are outside of towns, thou-

sands of them being on farms and ranches. In many cases generators have been in constant service since first installed from three to seven years ago.

It must not be thought that acetylene is unadapted to use by means of table-lamps. Progress in the development of such lamps, however, has hardly advanced to the same extent as that of the larger house-generators, but the successful table acetylene lamp is now available.

I said that similar reasons to those which have made the use of gas in cities all but exclusive, should cause a like general use of acetylene in farming sections. That statement should be made stronger. Acetylene, in quality and general character, is as much in advance of city gas, as the mower to-day is ahead of that of fifty years ago. To state the case as standing 12 to 1 in favor of acetylene is putting it mildly. This ratio is suggested for a definite reason. Acetylene stands alone among illuminating gases in having a definite chemical composition; its symbol  $C^2 H^2$ , speaks for superiority. It is a fact recognized by all gasmen that acetylene possesses the highest purity and the greatest illuminating power known to gases. To produce a given candle power but 1-10 to 1-15 the bulk of acetylene is needed as compared with city, gasoline and other gases. This is because acetylene is a pure lighting element, while others consist of an essential lighting element plus about twelve times the bulk of crude and deleterious substances.

The difference in purity is easily proven. You step into a store where different burner tips are sold and ask for a 24-candle acetylene tip, also inquiring what its consumption is. The salesman will respond by handing you a half-foot burner. That means that the aperture in the burner is of a size to permit the passage of one-half cubic foot of gas per hour. Now ask whether he handles other gas tips, and if so what size is required for a 16-candle power light, which is standard. He will tell you a 5-foot burner. That is to say, the tip furnished in the case of all the bulky gases requires an aperture which will pass five cubic feet of gas per hour. The comparison, one-half foot to five feet, is conclusive.

In economy acetylene about equals kerosene. In some places it costs less than kerosene. Where city gas costs above \$1 per thousand cubic feet, acetylene is cheaper.

Another indication of quality is that, unlike city gas or "gasoline gas," acetylene requires no mantles. As every one knows, mantles are fragile, expensive things that can be shattered by a breath, or by the jar of a door.

Again, unlike those of "gasoline gas," acetylene generators are positively automatic. The others require the added expense and bother of some kind of power attachment. This is because the material is produced by pumping air over a surface of gasoline to carry the gasoline to the burners. No farmer can want a light that requires a windmill or engine attached. He might as well jump to costly, mechanical electric lighting and be done with it.

Acetylene's superior lighting quality is proven by the simplest of tests. Under acetylene rays, as any one can see, all colors and tints stand forth at their true value precisely as in sunlight. No other artificial illuminant can meet that test. Artists and lithographers handle paints and estimate color values by acetylene at night. Even yellow tints can be distinguished from white, something not possible with other lights. To read by acetylene is like reading by daylight in its ease to the eyes. The eye-glass men are not apt to recommend acetylene.

The question of acetylene's safety naturally comes up. It might be disposed of in a word by saying that from the first, insurance underwriters have been favorable to the gas. This is due to the remarkable absence of fire loss where acetylene is employed, as compared with other illuminants. Of course a properly constructed generator is required. Calcium carbide is as incombustible as iron. The fact that acetylene is made automatically

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We offer for sale 350,000 acres of the finest irrigated lands in all the world  
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in 10 annual installments, interest at 6% per annum. To the small farmer these lands offer exceptional opportunities. Irrigation means CROP INSURANCE and 50 per cent larger crops. Winter Wheat and Alfalfa give tremendous yields, and small grains do equally as well. Vegetables and small fruits are grown in great abundance. These lands are all within easy access of the railroad, and give the farmer the benefit of world's markets. For maps, printed matter, etc., address

**C. A. MACRATH, Land Commissioner**  
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**or OSLER, HAMMOND & NANTON**  
WINNIPEG, MANITOBA

We also own and offer for sale 650,000 acres of excellent Farming and Ranching lands, in tracts of 160 to 50,000 acres at \$6.00 per acre on same terms as above.

## EXTREMELY



## LOW RATES

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## SEEDS

as used, shows that at most only a small amount of gas is present at any time. It differs in this respect from kerosene where usually about a quart of the stuff is present in a lamp. The acetylene generator is kept in an out-building where lights are absent, and where children, dogs and cats find no attraction, hence hazard of explosion in the main is done away with. How different is kerosene or gasoline. Here, as every one knows, the highly inflammable stuff is present in bulk in the living rooms, and accidents occur every day through the breaking of lamps or through flame following the wick

back into the bowl, causing explosion. The result is the burning stuff is scattered, causing the most favorable conditions imaginable for a fierce fire, often fatal to life. To this acetylene affords no possible parallel.

The purity of this new gas, acetylene, has another great value. It is that the substance is practically free from poisonous properties, such as found in coal-gas, and which in the latter cause many deaths by asphyxiation. No instance of asphyxiation by acetylene is on record.

**ELIAS A. LONG,**  
Editor Acetylene Journal, Chicago.



## The Veterinarian

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

**Paralysis of Pigs.**—I have two pigs that have lost control of the hind parts. Have been this way for three weeks. I have used turpentine on the backs, but without any good resulting. They seem to be healthy; are fed milk with a very little corn. They are eight weeks old. H. L. H. Troy, Kans.

**Answer.**—I would judge that the cause of the pigs' trouble comes from too much corn; better feed them on slop and more milk. Overfeeding oftentimes brings on the thumps.

**Lump on Cow's Face.**—My 5-year-old cow has a lump on her cheek about the size of a man's fist. It started about a year and a half ago in the form of an abscess. There is now a hard lump, and a new opening, with a slight discharge. H. Sharon Springs, Kans.

**Answer.**—I would suggest that you open freely the lump on your cow's face, and remove it, and then find out whether or not she has a diseased tooth; if so, it may have to be pulled. If I can advise you further, let me hear from you again.

**Blindness.**—A 3-year-old colt was struck with the halter of another horse. He bled for a night and half a day, losing about 4 gallons of blood, and leaving him very weak. I thought at first that he had been kicked, but discovered the puncture on the nose. He is recovered somewhat from the weakness and eats some, but seems to be blind. Is it permanent? A. B. Hill City, Kans.

**Answer.**—I would advise you to poultice the horse's eye with hot water, changing the poultice as often as it gets cold. It may take days before you will see much improvement. I would not think your horse permanently injured just from the bleeding.

**Ailing Hogs.**—I have lost fourteen pigs in a little over a week. They are unable to help themselves, lay around, quit eating and die in a few days. What shall I do for them? E. E. G. Peabody, Kans.

**Answer.**—The symptoms you give of your hogs would indicate that the trouble came from feeding too much corn. If you have been feeding considerable corn, would advise shutting off on the corn entirely, and give slop made of bran and water, and milk if you have it. If you have not been feeding too much corn, write me again, telling how the pigs appear after death when you have opened them, and any additional symptoms while they are living. It might help in discovering the cause of the trouble.

**Puff on Horse's Hock.**—I have a fine yearling colt that has a puff on inside of hock joint; it is on inside of leg in front of hock joint. She is not lame. But the puff is getting larger all the time. T. B. T. Bethel, Kans.

**Answer.**—You had better apply to the horse's hock the following liniment: Tincture of iodine, 4 ounces; compound soap liniment, 4 ounces; oil of turpentine, 4 ounces; ether, 4 ounces. Rub daily until sore, then withhold for a few days and begin again.

**Lumps on Hogs.**—What is the treatment for lumps on hogs after castration? A SUBSCRIBER.

**Answer.**—The swelling on your hogs should be removed. They will never get any better until the operation is performed. The trouble was caused by improper castration, either by dirty hands, instruments or water used in cleansing the wound.

**Rabies.**—I had a dog that commenced to act strangely a week ago. It bit a calf twice, and would leave home and fight other dogs. It also bit

two horses on the hind legs as I was bringing the team in. The calf that was first bitten began to act strangely; refused to drink and would bawl often. I kept the calf shut up for ten days and killed it; it seemed to have sore throat and slobbered. What was the trouble? F. C. Gymsum, Kans.

**Answer.**—Your dog had rabies. The disease in people is known as hydrophobia. After he bit the calf the calf had rabies. You may find that other calves and other dogs that he has bitten will contract the disease. There is no cure for the animals, the people about them should be careful that they don't get bitten. C. L. BARNES.

### Kansas' Great Progress.

Bold as the statement appears, it may be made with every confidence in ability to demonstrate the truthfulness of it, that in no part of the civilized world has human progress been so marked, within the last quarter of the last century, as in the State of Kansas, one of the United States of America. With rejoicing it is to be noted, moreover, that this development has been due, not to vast deposits of mineral wealth, but to the climatic conditions, the cultivable character of the soil, and the enterprise and determination of the people by whom the country has been occupied.

The eminence attained by Kansas may well be the envy of other states, and stimulate the desire on the part of their occupants to use the means and methods by which it has been attained. These are freely indicated in the "Fourteenth Biennial Report of the Kansas State Board of Agriculture" for the years 1903 and 1904, a copy of which has just reached us. It contains information relative to the farm and farm home, and their betterment, with departments especially devoted to potatoes and their production; modern dairying; railroads and their relation to agriculture; breeding, improvement, rearing and care of various live stock; sugar-beets in Kansas; inexpensive road-making; Kansas at the World's Fair in 1904; and agricultural statistics for the last twenty years.

The success of Kansas at the World's Fair was all the more creditable that it was achieved in the face of great obstacles. The State, it must be remembered, suffered two years in succession from disastrous floods. These affected the yield of cereals, yet that of wheat in 1903 was record-breaking, and that of 1904 above the average. As Kansas possesses the largest apple orchard in the world, and stands third in the list of States in number of fruit-trees planted and growing, it is not to be wondered at that she received recognition from the judges, even though the fruit was not as good as usual, owing to the excessive rainfall. Mr. Coburn is to be complimented on the admirable articles which he has combined in this biennial report, and the precise and voluminous character of the statistics.—From the Morning Bulletin, Rockhampton, Queensland, Australia.

Suffering becomes beautiful when any one bears great calamities with cheerfulness, not through insensibility, but through greatness of mind.—Aristotle.

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 Road 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 30, 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 dining-cars, on American 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 238, Chicago. No. 7.

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If you are contemplating a trip East, the attached coupon will bring you complete information about rates, routes and train service.

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**COUNTY SEAT HERD DUROC-JERSEY SWINE.**  
Geo. Briggs & Son, Clay Center, Neb.  
Young stock for sale.

**DUROC-JERSEYS**—Large-boned and long-bodied kind. A fine lot of fall pigs (either sex) for sale. Prices reasonable.  
E. S. COWEE, R. F. D. 2, Scranton, Kans.

**MAPLE AVENUE HERD** **J. U. HOWE,**  
Wichita, Kansas  
Farm two miles west of city on Maple Avenue  
**Duroc-Jerseys**

**DUROCS** Spring pigs, sired by five leading males, either sex or pairs after weaning. Bred sows for fall litters.  
John Schowalter, Cook, Nebr.

**FAIRVIEW HERD DUROC-JERSEYS**  
Now numbers 150; all head for our two sales, October 25, 1904, and January 31, 1905.  
J. B. DAVIS, Fairview, Brown Co., Kans.

**THE OLD RELIABLE KLONDYKE HERD.**  
Duroc-Jersey Swine, Shorthorn Cattle and B. P. Rocks. FOR SALE—Two September 27, 1904 males. Eggs 75 cents per 15; or \$4 per 100.  
Newton Bros., Whiting, Kansas.

**GOLDEN RULE STOCK FARM**  
LEON CARTER MGR., Asherville, Kans.  
Gilt-edged Duroc-Jersey Swine.

**THE FAMOUS EANCY HERD**  
Registered Duroc-Jersey swine. A few choice gilts and two fall boars for sale.  
JNO. W. JONES & SON, R. R. 3, Delphos, Kans.

**Wheatland Farm Herd**  
**DUROC-JERSEYS**  
For Sale—Fall gilts, tried brood sows, bred and open and spring pigs of either sex.  
GEO. G. WILEY & SON, South Haven, Kans.

**FOR SALE**  
75 head of pedigree Duroc-Jersey spring pigs, boars or sows, no akin, good color, well built, very cheap, order now from  
CHAS. DORR, Route 6, Osage City, Kans.

**ORCHARD HILL HERD**  
**OF DUROC-JERSEYS**  
Gilts all sold. A few excellent males left yet.  
R. F. NORTON, - Clay Center, Kans.

**DUROC-JERSEY HOGS.**  
All stock registered. Pigs for sale weighing 150 to 200 pounds, both sexes. Will have sows for early farrowing at \$20 each. Spring males and gilts, \$10 to \$15. Address  
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**PLAINVILLE HERD**  
**DUROC-JERSEYS**  
For sale, an extra fine lot of young boars large enough for service. Bronze turkeys, Barred Plymouth Rocks and Brown Leghorn chickens for sale.  
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**DUROC-JERSEYS**  
A few Gold Dust gilts of the big-boned, hardy variety and out of large litters bred for April farrow.  
BUCHANAN STOCK FARM, Sedalia, Mo.

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Prize 17790 and Red Rover 27665 at head of herd. Young boars and bred and open gilts for sale.  
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Phone 591 G.

**Rose Lawn Herd Duroc-Jerseys**  
Five good males at special prices to close out. Spring pigs in pairs, trios four, five and sixes not akin. Can ship on Santa Fe, Missouri Pacific, Union Pacific or Rock Island.  
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Kansas Herd of Poland-Chinas. W. R. C. Leghorn eggs. F. P. Maguire, Hutchinson, Kans.

**FOR SALE** Poland-China Hogs, Holstein-Friesian Cattle, either sex. Best strains represented. H. N. HOLDEMAN, Rural Route No. 2, Girard, Kansas.

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Eight choice young boars, bred and open gilts, good size and finish; first draft for \$20; take choice of young. WM. KNOX, SOUTH HAVEN, KANS.

**Elm Grove Stock Farm Poland-Chinas.**  
Herd headed by Nonpareil 86105A. Sweepstakes boar at Missouri State Fair, 1904. Can spare a few choice sows bred for May and June farrow.  
F. A. DAWLEY, Waldo, Kans.

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Model Tecumseh 64183, American Royal (S) 80788, and Best Perfection 81507 at head of herd. Write us your wants.  
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**MAPLE VALLEY STOCK FARM**  
Pure-bred Poland-Chinas from leading strains. Visitors welcome and correspondence solicited. Satisfaction guaranteed. C. P. Brown, R. 2, Whiting, Kans.

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For Sale—June gilts, sired by Corwin's Model. This stock is first-class. Weight from 150 to 200 pounds. Prices quoted on application.  
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Some fancy pigs for sale sired by On and On and Chief Perfection 2nd and Corrector. Inspection and correspondence invited. Phone Line 8.  
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Empire Chief 30379, heading champion herd and winner in class at Iowa and Nebraska State Fairs. He is of great size and finish. Sire Chief Tecumseh 3d and out of Columbia 2d. The combination that produced so many State fair champions. A grand lot of sows bred to him; and summer boars for sale at reduced rates. Try me for quality and prices.  
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I have about twenty boars ready for use and twenty-five sows bred, and some unbred, and a large number of good pigs, both breeds.  
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Choice young boars of April and May farrow sired by Beauty's Extension, for sale. Also bred sows and gilts, all with good colors, bone, fancy head and ears. The head boar, Beauty's Extension 27966, for sale. Some snaps here. Visitors welcome. Mention Kansas Farmer and write for prices.

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For Sale, at bargain prices, from now till January 1, 1905, four boars ready for service, sired by Sherman's Corrector, a half brother to Corrector 2d, the reserve champion at the St. Louis Exposition, and out of up-to-date bred sows. Also a bunch of boars equally as well bred, sired by six good herd boars, and out of matured sows.

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**Scotch Collie Dogs.**  
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My sows are sired by Elma's Prince 84778, and Berryton Duke 72946. Boar at head of herd, Jurist Topper 76277. Wm. McADAM, Netawaka, Kan.

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Boars of July and August, '04, farrow for sale, sired by Forest King 72688. Orders booked for spring pigs.

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Fancy heads, strong bone and all-around good ones. Bargains at \$15 to \$25 to close quick.  
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I have purchased the great S. B. Wright herd, of California—some of the best in America, and the best sows and boars I could find in Canada, and have some fine young boars by several different herd boars. Can furnish fresh blood of high quality.  
Eight pure Collie pups, cheap.  
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Pacific Duke 55691, the 1,000 pound champion show and breeding boar from herd of S. B. Wright, Santa Rosa, Cal., bred by N. H. Gentry; Model Princess 60184, by Halle 60125, sweepstakes Pan-American sow; Stumpy Lady 63499 by Combination 56028, sweepstakes Kansas City and Chicago 1902. Lee's Model Princess 62614, the \$180 daughter of Governor Lee 47971; Lady Lee 90th 55085, the \$180 daughter of Lord Premier 56001, and other "Blue-Bloods." Sows bred to 3 grand boars and young stock for sale.

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Ready for sale, consisting of 50 fall and spring gilts, that can be bred to any one of the three different herd boars, Mark Hanna, Red Stock Jolly, and a fine herd boar from Illinois. Also 40 young boars for sale for spring farrow.

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A few fine bulls ready for buyers. Aged cows will be sold cheap. Two jacks for sale or exchange for good Percheron stallion or mare.  
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Young bulls ready for service. Queen Mother, Favorite, and Gratitude families. Some choice 2-year-old Queen Mother bulls, at attractive prices.  
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**THE SUNFLOWER HERD PURE-BRED**  
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Herd headed by HALE LAD 30645. Herd numbers 250 head, the largest herd bred by owner in America. Stock for sale at all times.  
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**Plainville Shorthorn Herd**

Headed by Prince Lucifer 188685  
A pure Scotch bull.  
Stock for sale at all times.  
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**D. P. NORTON'S SHORTHORNS.** |  
Dunlap, Morris County, Kansas.

**Breeder of Pure-bred Shorthorn Cattle.**  
Herd bull, Imported British Lion 12692. Bull and heifer calves at \$50.

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Herd headed by Baron Goldsmith 224633 by The Baron 121327; females bred to him and choice young bulls for sale.  
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**CRUICKSHANK HERD BULL.**  
Sirey 849 of Vol. 40, Rose of Sharon blood, Norwood Barrington Duchess 654 Vol. 50, Bates blood. Pure-bred unregistered bulls for sale.  
OSCAR DUEHN, Clements, Kans.

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The Imported Missle bull, Aylesbury Duke 159763 and the Cruickshank bull, Lord Thistle 129960, in service. A few bred yearling heifers by Imp. Aylesbury Duke are now offered for sale. These heifers are in calf to my Cruickshank bull, Lord Thistle.

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**GLENWOOD HERDS**  
**Shorthorns and Poland-Chinas**

Grand array of Scotch herd bulls. Victor of Wildwood 126054, Prince Pavana 216307, Happy Knight by Gallant Knight 124468, and Charm Bearer. Good bulls and females always for sale. Show material. Visitors welcome.

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Forty miles south of Kansas City.

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Headed by the great Cruickshank bull, Prince Consort 187008, sired by Imported Prince of Perth 153879, and out of own sister of Lavender Viscount 124755

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Sired by such bulls as Lord Mayor, Mayor Valentine, and Proud Knight.

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Have a choice lot of young bulls, Scotch and Scotch-topped. About twenty are now ready for light and heavy service. Get prices and description. Sired by Baron Ury 21 124970, Sundowner's Boy 127587, and Bold Knight 179054.

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**FOR SALE**—Young bulls, cows and heifers. Come and see them. Telephone via Dover. Telegraph station Willard. Address

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Telegraph Station Valencia, Kans.

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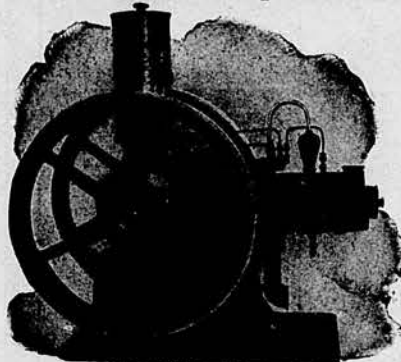
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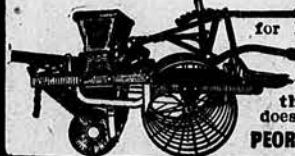
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