

# KANSAS FARMER

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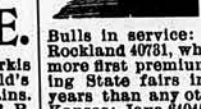
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## Agricultural Matters.

### FOODS—NUTRITIVE VALUE AND COST.

Excerpts from Farmers' Bulletin No. 23, United States Department of Agriculture, by Prof. W. O. Atwater.

### THE NUTRIMENT IN FOOD AND HOW IT IS USED IN THE BODY.

A quart of milk, three-quarters of a pound of moderately fat beef, sirloin of steak, for instance, and five ounces of wheat flour, all contain about the same amount of nutritive material; but we pay different prices for them, and they have different values for nutriment. The milk comes nearest to being perfect food. It contains all of the different kinds of nutritive materials that the body needs. Bread made from the wheat flour will support life. It contains all of the necessary ingredients for nourishment, but not in the proportions best adapted for ordinary use. A man might live on beef alone, but it would be a very one-sided and imperfect diet. But meat and bread together make the essentials of a healthful diet. Such are the facts of experience. The advancing science of later years explains them. This explanation takes into account, not simply quantities of meat and bread and milk and other materials which we eat, but also the nutritive ingredients or "nutrients" which they contain.

### CHEMICAL COMPOSITION OF FOOD MATERIALS—QUANTITIES OF NUTRIENTS.

Edible portion and refuse.—If the reader will take the pains to notice the next piece of beef that he has to carve for dinner he will observe, first of all, that along with the meat which is good to eat there is more or less of bone, which, except in so far as it may be used for soup, is of no value for food. If, however, the meat man has already cut out the bone, only the edible portion will be left. Beef, then, consists of edible portion and refuse. The same is true of fish, in which the bones and entrails and sometimes the skin are the refuse. In eggs there is a corresponding distinction between the shells and the so-called "meat." The inside of the potato and the wheat flour are the edible portion, and the skin and bran are the refuse of the potato and wheat.

If we weigh the whole meat, bone and all, to start with, and afterward weigh bone and meat separately, we can easily calculate the percentages of refuse and edible portion. The proportions of refuse are from 8 to 10 per cent. in a round of beef, about 14 per cent. in eggs, 18 per cent. in a leg of mutton, 40 per cent. in chicken, and 50 per cent. or more in some kinds of fish. In such food materials as milk, flour, and bread there is of course no refuse.

Water and nutrients.—Meat freed from bone, milk, and flour all contain more or less water. This can be dried out by heating, as is done in the chemical analysis of food materials. The proportions of water in different food materials vary greatly. Ordinary flour contains about 12½ per cent., or one-eighth. The fatter kinds of meat have from 15 to 50 per cent. of water and the leaner meats from 50 to 75 per cent. of water. One-third of the weight of bread and three-fourths of the weight of potatoes consist of water. The water in all these substances is precisely the same as any other water and has no more value for nutriment.

The material which remains in the edible portion of the food after removal of the water is called by chemists "water-free substance." It includes all of the actually nutritive ingredients or nutrients of the food. The nutrients are of several kinds. They are commonly divided into four classes called protein, fats, carbohydrates, and mineral matters. Water permeates all parts of the body and is indispensable for nourishment, but the water of the food is not transformed in the body as are the protein, fats, and carbohydrates, and it is not usually taken into account in estimates of nutritive value.

Protein.—Meat consists of lean and fat. Part of the fat is in large lumps, which can be easily separated from the lean. Indeed, we often cut out the fat of the meat which is served on our plates at the table and reject it. But a portion of the fat is in very fine particles diffused throughout the lean. Much of this finely divided fat is in particles so small as to be invisible to the naked eye, but it is possible to separate them very completely from the lean by processes of analysis common in the laboratory. After the water and the fat have been removed from the lean meat, the material which remains will contain a little mineral matter, which would be left as ash if it were burned; the rest consists chiefly of so-called protein compounds. The protein

is the chief nutritive constituent of fish and eggs as well as of lean meat. The albumen and casein of milk are also protein compounds. The gluten of wheat consists of protein compounds. These compounds occur in corn, beans, potatoes, and indeed all kinds of vegetable foods.

One trouble in speaking of these substances is that they are known by so many different names. The terms "nitrogenous compounds," "albuminoids," and "proteids" are often applied to them. The first term is very proper, because the protein compounds contain the element nitrogen, which is not found in the other classes of nutrients. The term "albuminoids" comes from albumen, a substance familiar to us in the white of egg, and is applied to the compounds which are similar to albumen. Some writers prefer the word "proteids" for substances of this class.

Along with the muscle the meat contains tendon and cartilage, which are familiarly called gristle. These materials and the ossein, or "animal matter" of bone, are very similar to gelatin (glue), and are changed to gelatin on heating with water. They are hence termed gelatinoids. The gelatinoids are the principal ingredients of tendon and similar tissues, while the albuminoids are the chief ingredients of muscle.

There is still another class of nitrogenous substance in meat, which, though small in quantity, are very interesting. They are known in the chemical laboratory as creatin, creatinin, carnin, etc., and are grouped together as "extractives," because they are extracted from flesh by water. They are the chief constituents of beef tea and most meat extracts.

The albuminoids and gelatinoids may be properly grouped together as proteids. It is customary to use the term protein to include albuminoids, gelatinoids, and extractives.

Fat.—Fat is familiar to us in meat, from which we get it in the form of tallow and lard; in milk, from which it is obtained as butter; and in the various vegetable oils, such as olive oil, cottonseed oil, and the oils of wheat and corn. Larger or smaller proportions of fat are found in most food materials.

Carbohydrates.—Potatoes, wheat, and corn contain large proportions of starch. Sugar cane and sorghum are rich in sugar. Starch and sugar are very similar in chemical composition and are called carbohydrates. Other carbohydrates are found in animals and plants, such as glycogen or "animal starch," which is found in the liver, and cellulose, which occurs in plants.

Ash.—The mineral matter, or ash, which is left behind when animal or vegetable matter is burned, consists of a variety of chemical compounds commonly called salts, and includes phosphates, sulphates, and chlorides of the metals, calcium, magnesium, potassium, and sodium. Calcium phosphate, or phosphate of lime is the chief mineral constituent of bone. Common salt is chloride of sodium.

These substances are separated from each other in the laboratory by various methods of analysis. The every-day handling of food materials also involves crude processes of analysis.

We let milk stand; the globules of fat rise in cream, still mingled, however, with water, protein, carbohydrates, and mineral salts. To separate the other ingredients from the fat, the cream is churned. The more perfect this separation—i. e., the more accurate the analysis—the better will be the butter. Put a little rennet into the skimmed milk and the casein, called in chemical language an albuminoid or protein compound, will be curdled and may be freed from the bulk of the water, sugar, and other ingredients by the cheese press. To separate milk sugar, a carbohydrate, from the whey is a simple matter. One may see it done by Swiss shepherds in their Alpine huts. But farmers find it more profitable to put it in the pigpen, the occupants of which are endowed with the happy faculty of transforming the sugar, starch, and other carbohydrates of their food into the fat of pork.

The farm boy who on cold winter mornings goes to the barn to feed the cattle, and solaces himself by taking grain from the wheat bin and chewing it into what he calls "wheat gum," makes, unknowingly, a rough sort of analysis of wheat. With the crushing of the grain and the action of saliva in his mouth the starch, sugar, and other carbohydrates are separated. Some of the fat, i. e., oil, is also removed, and finds its way with the carbohydrates into the stomach. The tenacious gluten, which contains the albuminoids or protein and constitutes what he calls the gum, is left. When, in the natural order of events, the cows are cared for and the gum is swallowed, its

albuminoids enter upon a round of transformation in the boy's body, in the course of which they are changed into other forms of protein, such as albumen of blood or myosin of muscle; or are consumed with the oil and sugar and starch to yield heat to keep his body warm and give him muscular strength for his work or play.

What has been said of the ingredients of food may be briefly recapitulated as follows:

Ordinary food materials, such as meat, fish, eggs, potatoes, wheat, etc., consist of—

Refuse.—As the bones of meat and fish, shells of shellfish, skin of potatoes, bran of wheat, etc.

Edible portion.—As the flesh of meat and fish, the white and yolk of eggs, wheat flour, etc. The edible portion consists of water and nutritive ingredients or nutrients.

The principal kinds of nutritive ingredients are protein, fats, carbohydrates, and mineral matters.

The water, refuse, and salt of salted meat and fish are called non-nutrients. In comparing the values of different food materials for nourishment they are left out of account.

### CLASSES OF NUTRIENTS.

The following are familiar examples of compounds of each of the four principal classes of nutrients:

PROTEIN.	Albuminoids, e. g., albumen (white of eggs); casein (curd of milk); myosin, the basis of muscle (lean meat); gluten of wheat, etc.
	Gelatinoids, e. g., collagen of tendons; ossein of bones; which yield gelatin or glue, etc.
FATS.	Meats and fish contain very small quantities of so-called "extractives." They include kreatin and allied compounds, and are the chief ingredients of beef-tea and meat-extract. They contain nitrogen, and hence are commonly classed with protein.
	Fats, e. g., fat of meat; fat (butter) of milk; olive oil; oil of corn, wheat, etc.
CARBOHYDRATES.	Carbohydrates, e. g., sugar, starch, cellulose (woody fiber), etc.
	Mineral matters, e. g., phosphate of lime, sodium chloride (common salt), etc.

(To be continued.)

### Pasturing Alfalfa.

By Geo. L. Clothier, Kansas Experiment Station.

Alfalfa, rationally handled, is one of the most paying crops that a farmer can cultivate. The greatest blessing of the human race often becomes the greatest curse because of the misuse of that blessing. The same rule applies in agriculture. The richest and most nutritious feed-stuff, or the most effective piece of labor-saving machinery, when put into the hands of a careless or ignorant person, may prove to be the financial ruin of the user. Alfalfa is no exception to this rule.

Indiscriminate pasturing of alfalfa is very apt to result disastrously to the farmer, in more ways than one. I believe it is generally conceded that horses and hogs may be allowed to run upon alfalfa with little danger of injury to the animals. It is claimed, however, by some liverymen that colts grown upon alfalfa do not have the constitutional endurance that characterize animals grown upon our wild grass pastures. T. E. Scott, of Ottawa county, says that nothing fattens up a horse so quickly as alfalfa pasture. J. E. Fitzgerald, of Cloud county, says that it is the finest pasture in the world for horses. R. C. Wilson, of WaKeeney, says: "I think you can grow colts one-third larger with alfalfa pasture than without." F. S. Curtis, of Solomon Rapids, says: "Alfalfa is the best pasture I ever put horses on."

On the contrary, alfalfa alone will not fatten hogs, though it may keep them in as good condition as is necessary for the thrifty growth of young animals. Corn, to provide sufficient carbohydrates, and green alfalfa in addition, furnish an excellent ration for fattening hogs. Pigs, when turned loose upon an alfalfa field, do not get a sufficiency of the tenderest and best morsels, unless they have a very wide area of frequently-mown meadow upon which to range.

In order that the plant may often send up its tender shoots, it is necessary to prune it frequently with the mowing machine. This is not practicable in a hog pasture. The animals, when pastured, usually are compelled to subsist largely upon the woody, ripened stems. The stomach of the pig is not adapted to the digestion of woody fiber. Hence the farmer frequently finds his pigs on the alfalfa pasture running down in flesh when they ought to be gaining. A better way is to sow an alfalfa field near the hog lot, where the green feed can be mown and fed to the pigs. The portion

## Faith in Hood's

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of the field first mown will quickly send up a succeeding crop, and will be ready for the mowing machine by the time the last of the first crop is harvested. For pig feed, alfalfa should not be allowed to blossom, and if cut at the right time, it will furnish six or seven crops during a single season. M. A. Wilson, of Atwood, the veteran alfalfa-grower of Rawlins county, says: "My experience is that in two years 100 head of hogs will kill out ten acres of alfalfa. I don't pasture it any more, but mow it and feed it to them green. Two acres will give better results by mowing and feeding than ten acres to let them pasture on it."

It is an undisputed fact that green alfalfa fed in unlimited quantities is liable to bloat and kill cattle and sheep. Hundreds of farmers, knowing this fact, persist in turning their stock upon their alfalfa fields at all times of the year and in all kinds of weather. The loss of a single animal in a season would probably amount to more than the wages of a man to haul out the feed to the cattle. Each animal could thus be limited and overfeeding need not occur. Animals that have been on the alfalfa pasture for months often suddenly bloat up and die, because of eating the green feed wet or frosted. The very richness of the feed, constituting its chief value, is the cause of the great and frequent losses from bloat.

Another great loss occasioned by the pasturing of alfalfa is the destruction of the plants. No other forage plant endures mowing so well as does alfalfa, but it will not stand continuous or close grazing. Horses bite it off too closely and cattle tramp off the buds from the sides of the crown. Sheep bite closer than horses and hogs root out the plants. In the fall or winter time, a hog will often root out a hole around an alfalfa plant, and then grasp the tap-root crosswise in his mouth and jerk the whole plant out of the ground. He will then proceed to chew up the tap-root.

A. L. Hollinger, of Pearl, Dickinson county, says that he pastures ten acres of upland alfalfa with 100 head of hogs the year round. With this treatment, the pasture is destroyed in three or four years, and a new field must be sown. A ten-acre field of alfalfa on Mr. Hollinger's farm, if mown and the crop fed out, as Mr. Wilson, quoted above, advises, would return a good rate of interest upon \$100 per acre, and would not need to be re-seeded in a lifetime. Getting a field seeded to alfalfa is no small task, and a ruthless destruction of a good stand seems to me to be reckless extravagance.

Alfalfa rightly handled is destined to be the greatest boon of all the gifts of the Creator to the Kansas farmer. Misused, it will almost certainly be a curse to plague the man who heedlessly violates the laws of nature.

Plenty of bedding will add much to the comfort of the stock.

Dr. Bull's Cough Syrup will positively cure croup. Many a home has been made desolate by the loss of a dear child which could have been saved by this great remedy.

Nervous Passenger—Captain, what would be the result if the steamer should strike an iceberg while we are plunging through this fog? Captain of Steamship—The iceberg would move along, madam, just as if nothing had happened.

The sewage of the city of Paris is now being used to irrigate an immense farm of nearly four square miles area. It has proved such a benefit to the land that farmers in the vicinity, who opposed it, are now anxious to arrange to receive sewage on their own farms.



## The Stock Interest.

### THOROUGHBRE'D STOCK SALES.

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

DECEMBER 8—Miles Bros., Poland-Chinas, Peabody, Kas.  
DECEMBER 15 AND 16—C. G. Comstock, Albany, Mo., Herefords, Kansas City, Mo.

### SELECTING THE BOAR.

By Prof. Thos. Shaw, in Ohio Farmer.

Selecting the boar is a matter of much importance in swine husbandry. It is not difficult to see why it is so. The influence of the boar is equal to the combined influence of all the females in the herd, on the supposition that their powers of transmission are just equal to his. But if they are not purely bred they will not have powers of transmission equal to those possessed by the boar. The influence, then, of the boar upon the progeny will be as much greater than the combined influence of the sows as his prepotency exceeds theirs. Think of it, farmers! a boar rightly chosen exerts a greater influence on the progeny than all the sows combined. Who, then, should ever be content with an inferior boar?

The important considerations in choosing a boar are such as relate to breeding, form, constitution, and masculinity. Other considerations may also be important, but if a boar can be secured good in these points and qualities, he is not likely to be lacking in all-important essentials. Parties differ as to the relative importance of these properties. But they are all-important, so much so that an animal lacking in any one of them is not really suitable for being placed at the head of a herd.

#### PURITY OF BLOOD.

Purity of blood is greatly important, so much so that the aim should be to secure it in every instance. Without it we cannot be quite sure that the properties which we seek will be transmitted, but with it we can be almost certain of the fact, if the right kind of pedigree is behind our selection. The right kind of pedigree does not necessarily mean a long pedigree, but a pedigree in which the immediate ancestors were good individuals and good breeders. I would rather have a sire with a pedigree of only five generations in which all the animals were noted for superior excellence, than a pedigree of a dozen generations but with no animal in it of more than ordinary merit. Grade sires should never be used when good thoroughbreds are accessible. I repeat it again, farmers, grade sires should never be used where good thoroughbreds are accessible. Do not shrink from purity of blood as though it were the embodiment of tenderness, for pure-breds should not be tender, where they have been properly reared.

#### FORM.

The form which the boar should have will of course be modified by the breed, but there are certain essentials of form which all boars should have, whatever the breed. They should be of strong build and yet without coarseness. The neck and body should be short for the breed, and the limbs inclining to short rather than long. These qualities are desirable for the reason, first, that they are associated with bodily vigor, and, second, that they indicate easy feeding. Compactness of form, or an approach to it, is always more important in the boar than in the sow. In the very long-bodied breeds, as, for instance, the Improved Yorkshire, it is very important, indeed, that close attention be given to choosing males from those types not unduly long in body. Good strong shoulders, much width of chest, good strong backs, deep sides and large quarters are all important, and good heart and flank girth are doubly important; nor should good width and chest girth be overlooked, as it is so intimately associated with constitution. And symmetry in a boar is important. Symmetry means a happy relation of all the different parts to one another. It is the opposite of undue development of one part of the body, followed by lack of development in some other part. A boar with uncommon development of the shoulder and weak loin is decidedly inferior to one possessed of good, medium development of shoulder, and good, medium development of loin, and so of all the other parts in their relation to one another.

#### CONSTITUTION.

Good constitution is of great importance in these days when pigs are so much confined, when they are fed so much corn and other forcing foods, and when they are pushed so rapidly to maturity. It is

relatively far more important than it was in those days of long ago, when from spring till fall the pigs roamed over pasture grounds to obtain food. The exercise thus necessitated would fortify and strengthen the constitutions of the weak, whereas the lack of exercise now tends much to debilitate the constitutions of the strong.

The idea has gained currency that pure-breds have within them the elements of weakness, and in too many instances there are good reasons for such a view. But there is no good reason why it should be so. There is nothing in the laws of breeding which would tend to make pure-breds less rugged than grades. If they are less rugged, and oftentimes they are, it is because the laws of breeding have not been observed. But it is greatly important that they should be observed, for it is simply disastrous when pure-bred males, with vitiated constitutions, are introduced into a herd. We cannot do without pure-bred males; we cannot maintain quality without them. But if, in securing certain important benefits in one direction, from using pure sires, we are to lose, as for instance in stamina, in another direction, then we might well hesitate to use them.

#### STAMINA.

So vitally important is this question of stamina to the well-being of our herds, that it cannot receive too much attention. The breeders of pure-breds should make it a prime consideration. They can secure it and maintain it in a marked degree if they use the means within their reach. Weakened stamina has arisen from lack of exercise, from forcing foods, from in-and-in breeding, and from breeding too early. These and other influences have tended to vitiate the constitution of pure-breds. But in every instance where indications of weakness exist the breeders should be careful to pass by such breeding herds when making their selections.

#### MASCULINITY.

The evidences of masculinity are strength of development in certain parts of the body, as, for instance, the head, neck, the shoulder, the bone, and the hair. Where these features are absent we have to look out for two things. The first of these is lack of constitution, and the second, or lack of prepotency. Even though the male should have large development, the lack of masculinity would be a serious lack.

#### MATURITY.

In choosing a boar we should not make haste to select too early. Many purchase sires while yet on the dam, and for the reason that they can get them more cheaply than at a later period. Yet it is impossible to tell exactly how the form will develop at a later period. Even the breeders of pure-breds for the shows are unable to tell this at so early an age. It would be better, therefore, to choose the sire at some period later than the weaning season.

#### AVOID INFERIORITY.

And care should be taken to avoid investing in an inferior pure-bred sire simply because he is a pure-bred. Here, probably, we find the greatest mistake of breeders of grades. They too often buy a pure-bred of less than average merit because he may be cheaply bought. They reason that if pure blood is a good thing it would be better to have some of it, though in an inferior form, than not to have any. But they overlook the fact that, when thus introduced, inferiority of form has greater power to reproduce itself because of the pure blood which it contains.

Inferior pure-breds should never be bought for any other purpose than for the block, and they should never be sold for any other purpose. If breeders were properly alive to their own interests they would not offer them for sale. They would unhesitatingly dispose of them for meat.

It is evident, therefore, that the choice of a sire is an all-important matter in swine rearing. Unless it receives due attention the results will not be such as they ought to be.

#### Salting Stock.

Editor Kansas Farmer:—The too common practice of salting stock once in a week or two, in summer, or sprinkling brine on their hay about as often in winter, is a custom which, as it seems to me, is about as unsatisfactory to the stock as it would be to the human family, if our cooks were to bring our steak and other food to the table with no seasoning with salt, except once in a week or two, and then salt it enough to make up for past shortage. Therefore I have adopted the plan of sprinkling weak brine on

their hay morning and evening, every day, and this I deem all the more important if the hay is very dusty, and all dry hay is more or less dusty.

My practice for about two years has been to use a lump of salt about the size of a small hen's egg in three gallons of water for eight head of grown stock, and they seem to be doing well. Yet I feel that there is danger of giving too much salt in that way, and should like to hear, through the Farmer, the opinion of some who have had more experience than myself.

C. A. SEXTON.

North Topeka, Kas.

#### Feeding Alfalfa to Hogs.

By H. P. Gumaer, Superintendent, Lakin, Kas., in Secretary Coburn's "Pork Production."

We began raising hogs in the fall of 1893, since which time we have had on hands from 500 to 1,000 head. They have always been raised on alfalfa pasture and alfalfa hay in winter, together with sorghum—this ration supplemented with a little corn or other grain.

We breed our sows to have pigs in February, March and the first half of April, so far as we can; then when the alfalfa is large enough for pasture the pigs will do to turn out. Pigs of this age are much sought after by eastern Kansas feeders in the fall, when from four to eight months old.

To get the best results from alfalfa pasture here in the Arkansas valley, it should be irrigated often, to keep it green and fresh, as the hogs like it much better and grow faster if the pasture is fresh all the time. When the irrigating is being done the hogs should not be allowed on the alfalfa, as the water softens the ground, the hogs work up the mud and get it mixed with the green growth, causing much damage to the pasture. We should have two or three pastures, so that while one is being watered the hogs can be removed to another. I have heard much said about raising good hogs on alfalfa alone, with no grain, but I have seen no good hogs so raised; I have known of a number of instances where the experiment has been tried, but always resulted in failure. I take it for granted that every person who raises hogs believes that the best are the cheapest, and I would say do not raise scrubs, but get the best sire you can find; have him a full-blooded Poland-China or Berkshire—whatever he is, have him the best of his kind, and the sows as good as possible. The better kinds grow as well in Kansas as anywhere on earth, and the scrub is as much a scrub in Kansas as anywhere.

The quantity of grain to be fed to hogs can best be suggested by giving our experience. We are now—August 1—feeding to 100 sows that are suckling pigs about two bushels of soaked shelled corn daily, and to 500 head of spring pigs ten bushels of the same each day. We feed twice a day—morning and evening. To fattening hogs we give it in troughs, and for the stockers it is scattered thinly on the ground, so that each pig will stand a chance of obtaining a share.

The idea of feeding hay to hogs is something which some of our Eastern friends will be loath to accept, but it is profitably done, nevertheless. We have wintered our hogs with as little corn as we use in summer, feeding our third cutting of alfalfa hay. The third crop of alfalfa is soft and retains nearly all the sap, as it is put up in the fall, when the weather is cool. The cool weather also admits of stacking it much greener than could be done in hot weather, as it is not as liable to heat. In order to have the hay most valuable for hogs it is necessary that it be put up in the best possible condition. With first-class hay less grain is needed. I am of the opinion that the first, second or third crops could be put up for hog hay by cutting when the plant is very young, just before it blooms, but for the reason above stated I think the third crop preferable. In putting up alfalfa hay for any purpose it should be raked as soon as possible after being cut, and allowed to cure in cocks, as all the leaves are retained in this way, while if allowed to dry before raking and shocking the leaves drop off, and we have only the stem, which is of little value, for hog feed especially. In feeding alfalfa hay to hogs they should have all they will eat, but it is not necessary to feed so much that it will be wasted, any more than it is necessary to feed corn or any other grain wastefully.

We have had some experience in feeding sorghum, and I think it possible to winter stock hogs on third-cutting alfalfa hay and good sorghum. To raise sorghum to make the best hog feed it is necessary to produce the largest possible percentage of sugar in the plant. One

One thousand styles and sizes.  
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difficulty with us is to learn just how and when to irrigate. Excessive watering has a tendency to lessen the saccharine matter, and the canes become dry, with too much woody fiber.

I suppose there are many Eastern farmers who can tell me much about raising sorghum, and between us there will be no contention, for I shall be glad to learn all I can on this subject. Our idea for raising sorghum for hog feed is to plant in rows, about June 1, cultivate well, so as to keep the weeds out, and irrigate just as it is beginning to head, if possible. This must be determined by local conditions, water supply, weather, etc. If the ground can be wet just before the planting is done, this will sometimes be sufficient watering to produce the crop. By planting as late as June 1 the same benefit may be obtained in curing as in the third crop of alfalfa hay, cool weather and other favorable conditions attendant in that season of the year—about September 15 to October 1, with us. In raising hogs, we are informed by many Eastern men that the one great question is that of health. I am somewhat informed on the good health of hogs, but very little on bad health or unhealthy conditions. One never gets fully informed on a subject until he is forced to face the conditions. We now have about 1,000 hogs on hand. During the year from May 1, 1897, to May 1, 1898, we have not lost one grown hog or shoat two months old or over. We feed no drugs of any kind, but simply provide clean water, plenty of alfalfa pasture, a little corn, and allow no strange hog on the ranch. The alfalfa hay and sorghum take the place of the alfalfa pasture in winter. Health may yet be a question with us. In Colorado, just west of us, they have had cholera, brought in by hogs shipped from Nebraska and other points; but while we have healthy conditions among our hogs now, it stands us in hand to use all precautions possible to prevent disease being brought in by hogs shipped from infected districts. Some may laugh at the idea, but laugh if you will. Just west of us, at Rocky Ford, Col., with conditions as favorable as our own in 1894, there was a lot of Nebraska hogs shipped in. These hogs were infected with cholera, and in less than two months there was hardly a hog left in the community (unless it be among the human family, and as to that we cannot state, as we are not acquainted with the people up there). Why we are so free from disease among our hogs I do not know. As cholera is among hogs so is blackleg among cattle. Every man has a theory, especially if troubled with either, and I suppose we will have to be satisfied with theories until the real cause is discovered; but we can all do our best to prevent the disease coming in.

When to sell, and where, are questions to be considered. Some of our neighbors prefer to sell as stockers. We have fattened ours mostly. Until the present time we have shipped to Kansas City and sold on that market. We contend that, having our sorghum and alfalfa, we can ship corn here from the corn-growing districts and compete with the Eastern feeder in fattening hogs, and so far the results have been very satisfactory. I think, however, we will ship to the Pueblo market hereafter, as we save freight and commission.

Since we began, a number of other persons have started into the business, and we have not heard of any of them being discouraged with the results. We of western Kansas must learn to study the lines of business to which our conditions are favorable, and there can



be no question but that it is stock farming almost exclusively—cattle and hogs. Thus we can make a success, if we raise the best.

If we fatten our hogs for the market, they should be removed from the pasture about thirty days before marketing, and fed exclusively on grain, if we wish to be honest, as alfalfa-fattened pork has a fishy taste; it is not best for one's conscience or the lasting good of the business to put anything not first quality on the market. We have followed the lines above indicated, and as a result we have several times topped the Kansas City market, and have never been more than 10 or 15 cents below the tops with our poorest stuff.

#### A Hereford Cattle Event.

If the Hereford cattle are to retain their present ascendancy, the Sunny Slope Hereford sale by Mrs. C. S. Cross, to be held at Kansas City, Wednesday, December 7, 1898, will be the greatest sale of the season, because the offering comprises the very pick of Sunny Slope Herefords under 4 years of age, besides the great show herd. No Hereford sale catalogue ever contained better pedigrees, and at the same time the animals have the individual excellence in every case in all respects equal to the pedigrees. Should these cattle, by reason of being forced upon the market because of the lamentable circumstances relating to the death of Mr. Cross, not sell well, the decline of good prices will date from this Hereford event and the entire Hereford breeding fraternity will necessarily have to share the loss of a decline in prices. The Farmer believes, however, that all who are interested in the continuation of the present condition of Hereford prosperity will, with characteristic enterprise, rally at this sale and help make of it the success that the high character of the offering merits, and thereby pay a final and fitting tribute to the breeder who has contributed so much to the attainment of the present high standard of Hereford achievement.

#### Comstock's Hereford Sale.

It may seem to some that we are repeating pointers concerning the merits of the 105 head—seventy bulls and thirty-five cows and heifers—that Mr. C. G. Comstock, of Albany, Gentry county, Missouri, will offer at public sale at Kansas City, yet after one has looked through a copy of the sale catalogue and noted the breeding therein given, any one interested in choicely-bred Herefords cannot refrain from making some additional mention of their worth as individuals. Especially is this true after the visitor at the farm has looked the offerings over. About 80 per cent. of the seventy bulls are nearing long yearlings, big, square, broad-backed, full rear quartered, wide, short-legged growthy fellows. These characteristics are reasonably to be expected, as the animals run on blue grass and clover pastures, have plenty of range and get just enough grain ration to keep them coming in good, thrifty condition. The writer believes that every white-face man will agree that the offering is a fitting representation of what a good beef animal ought to be and that it pays to breed the Hereford, even though they are not to the stable born nor groomed every day and dressed as if for daily show ring scrutiny of the beef breeding public. Keep in mind the date—Thursday and Friday, December 15 and 16, at Kansas City, Mo. W. P. BRUSH.

#### Public Records of Swine Pedigrees.

Swine breeders in the United States inaugurated the system of maintaining and publishing public records of swine pedigrees, and each breed of any prominence has had for many years its "herd books," wherein have been and are being recorded the ancestry of all the best thoroughbreds.

The names of these records, the number of volumes of each issued up to this time, and the total number of animals of each sex recorded therein, are as follows:

Central Poland-China Record.—Nineteen volumes; boars, 8,045; sows, 23,285.  
Standard Poland-China Record.—Twelve volumes; boars, 20,083; sows, 47,703.

Ohio Poland-China Record.—Twenty volumes; boars, 22,346; sows, 54,986.

American Poland-China Record.—Twenty volumes; boars, 22,800; sows, 62,850.

American Berkshire Record.—Seventeen volumes; boars, 16,840; sows, 31,020.

National Berkshire Record.—Four volumes; boars, 700; sows, 1,435.

American Chester White Record.—Seven volumes; boars, 2,607; sows, 4,190.

Standard Chester White Record.—Six volumes; boars, 3,786; sows, 4,693.  
National Duroc-Jersey Record.—Four volumes; boars, 1,925; sows, 4,300.  
American Duroc-Jersey Record.—Eight volumes; boars, 4,000; sows, 8,000.  
Victoria Record.—Two volumes; boars, 552; sows, 868.

#### Gossip About Stock.

Attention is called to the advertisement of sale to be held at Fort Scott, Kas., on December 17. The Poland-China Sale Association will offer sixty head of pure-bred swine. The stock will be drawn from the well-known herds of J. R. Young, of Richards, Mo.; J. M. Turley, Stotesbury, Mo.; B. R. Adamson, Fort Scott, Kas., and Grant Hornaday & Co., Fort Scott, Kas. These names are well known among swine breeders and are a guaranty that none but the best-bred animals will be offered for sale.

The Standard herd of Poland-Chinas, owned by William Maguire, Haven, Kas., is reported in fine shape, with a choice lot of one-year-old fall sows and spring gilts and males large enough for service. These were sired by Tecumseh Chief, he by Chief Tecumseh 2d, and their dams are of Wilkes, King Butler and Black U. S. strains. These sows and gilts will be bred or have been bred to Look Over Me, he by Look Me Over and his dam by Dandy Wilkes, which makes top breeding. Write for prices. These animals will be sold right. A personal inspection will show that the individuality is as good as the breeding.

The attention of our readers is called to the new advertisement of O. P. Updegraff on page 12. Owing to the fact that Mr. U. sold fifty brood sows last January, he will not hold his usual public sale, but is offering his surplus stock at private sale, at such low prices as will soon dispose of them. He has been a liberal buyer of the most fashionably bred and best individuals of both breeds and offers nothing but pure-breds of the most approved strains, and, as he says, at prices that will make buyers "big money." Owing to the close proximity of the farm to the city, it is easy of access to visitors, who are always welcome. There is no disease in his herd and he guarantees everything he ships. Write him.

The closing-out sale of Poland-China swine by Miles Bros., Peabody, Kas., on Thursday, December 8, is a sale of more than ordinary importance. The herd is not surpassed for uniformity and quality anywhere. This fact, in connection with the fact that buyers will have a chance to buy all the breeders that have made the high reputation of the herd, makes it an exceptional chance for breeders to be present for the purpose of strengthening their own herds. Miles' Look Me Over 18879 has been a phenomenal breeder, and the Chief I Know, Black U. S. and Chief Tecumseh 2d sows all have unusual quality. Look up the advertisement in this issue and get catalogue. Every animal catalogued has quality equal to the pedigree. Don't overlook this sale.

The Bothwell sale of Short-horns was held at Kansas City, November 22, under very adverse conditions. The severe storm which had raged throughout the central West kept many away who had intended and promised to attend. In spite of the fact that only a very few buyers were present, an average of \$106.76 was made on fifty-nine head, and many of these were bought for speculation at speculators' prices. Mr. Bothwell deserves much credit for the many way in which he continued to send the animals into the ring in the face of no competition and low prices. The highest price paid was \$300 for the roan two-year-old bull, Sharon Victor 5th, a son of Grand Victor 115752. He was bought by G. E. Ward, Hawarden, Iowa, who bought a large portion of the offering. Mr. Geo. Channon, of Hope, Kas., a Farmer advertiser, secured four, including the choice yearling bull, Rosamond Victor 12th, that will succeed Glendower at the head of Mr. Channon's herd, Glendower having recently been sold to Mr. Ross, of Alden, Kas. The principal buyers were Jno. Morris, T. J. Wornale, Wm. Hawkins, Ryan Bros., and G. E. Ward.

Dr. Bull's Cough Syrup has been in use for half a century. Some families have used it for three generations, and it is to-day the standard cough remedy of this country.

The Kansas Farmer has only a few copies of "The Future by the Past," by Mr. J. C. H. Swann, now deceased. It is considered an exceedingly valuable work by many, as Mr. Swann gave his life's work to weather and crop observations. Until the supply is exhausted, the Kansas Farmer will fill all orders at \$1, postpaid.

#### The Fruit-Tree Bark-Bee.

Press Bulletin Kansas Experiment Station.

Of the insects that have been introduced into this State during the past few years, none seem to be more destructive to stone-fruit trees than the fruit-tree bark-beetle, or shot-borer, as it is sometimes called, from its peculiar habit of riddling the bark of the trees with numerous small holes. The insect has been found in Riley, Bourbon and Allen counties, and without doubt is present in a large number of the other counties of the State. In Allen county it was very numerous, particularly in an orchard of cherry trees, which were suffering badly from the cherry scale (*Aspidiotus forbesi*).

The presence of the pest will probably be first shown by the wilting and falling of the leaves at an unseasonable time. A close examination of the tree, infested with the insect, will reveal numerous small holes in the bark, from which in the case of the stone-fruit trees, such as the plum, peach, cherry, etc., there is a considerable exudation of gum. To show how the insect may riddle a tree, a piece of bark less than an inch square, taken from an infested cherry tree, contained nineteen perforations about the size of a pin-head.

The insect that is the cause of the mischief is a small beetle about one-tenth of an inch in length by about one-third as wide. It is black in color with the exception of the wing covers and the lower part of the legs, which are reddish.

With the beginning of spring, the beetles appear and commence to bore small round holes through the bark to the sap wood, where they make a central burrow or brood chamber, on each side of which little pockets are made, in which eggs are deposited. As the larvae hatch from the eggs they commence to make burrows away from and at right angles to the brood chamber, which become larger as the larvae develop in size.

The larvae is a small grub about one-tenth of an inch in length. It is footless and white, with the exception of the head, which is brownish.

When the larva has attained its full growth it makes a slightly enlarged chamber, in which it pupates. Upon becoming an adult, the beetle makes its way out through small holes in the bark, and escapes. It takes about a month for the insect to go through its various stages, so that during the summer there may be several broods. Many of the beetles upon emerging will return and renew their attack upon the tree, thus increasing the damage that has already been done. In time the tree becomes completely girdled by the numerous channels, and dies.

Strong and vigorous fruit trees may resist for a time the attacks of the beetles through the exudation of the gum, which seems to be obnoxious to both the beetles and the larvae. But if the attacks are continued for a length of time, the tree may be so weakened that the flow of sap will not be strong enough to repel. In such a case it is not long before the fate of the tree is sealed, unless vigorous and prompt measures are taken for its protection.

To prevent loss from this insect, the tree should be kept in a healthy condition. The stronger the tree the better it can resist attack. Trees that are diseased or are suffering from the attacks of scales or other insects seem most subject to attack.

It is a good practice to remove and destroy all dead wood in the orchard, as it furnishes excellent breeding places for insects and is a source of danger to surrounding trees.

Badly infested trees should be cut and destroyed. In the early spring the trunks of trees liable to attack should be coated with an alkaline wash, consisting of soft soap reduced to the consistency of paint by adding washing soda dissolved in water. Enough carbolic acid should be added to give a strong repellent odor to the mixture. Apply the wash with a stiff brush. Several applications should be made during the spring and summer.

It is said that the following expedient will cure a horse of kicking: Put the animal into a narrow stall that has both sides thickly padded. Suspend a sack filled with hay or straw so that it will strike his heels, and let the horse and sack fight it out. Be sure to have things arranged so that the horse cannot hurt himself. The sack will be victorious every time, and in the end the horse will absolutely refuse to kick the sack or anything else.

There is no advantage in cribbing the corn with the shuck on.



#### "Beauty and Power."

The secret of a woman's power is in her complete womanliness, both physical and mental. This does not mean perfection of outline nor regularity of features. It does not mean wit, nor talents nor accomplishments. It means that physical attractiveness that comes from perfect bodily condition and the

bright, happy cheerfulness of disposition which only complete health can insure.

A woman with a bright eye, clear complexion, mantling color in the cheeks and buoyant elastic step and manner has a natural attractiveness that no artificial agency can counterfeit.

A woman who is afflicted with the mortifying misfortune of a dull, sallow, pimply complexion or that listless movement and attitude which provokes only disgust and revulsion in the opposite sex, ought to avail herself of the purifying, invigorating power of Dr. Pierce's Golden Medical Discovery, which makes a strong, healthy stomach and digestive organism; purifies the blood and imparts a natural stimulus to the excretory functions; insures healthy weight, clear skin, bright eyes and the animated manner and bearing of perfect health.

A lady living in West Virginia, Miss Anna Callow, of Kyger, Roane Co., writes: "It is with pleasure I write you after using a few bottles of Dr. Pierce's 'Favorite Prescription' and 'Golden Medical Discovery,' and I think them valuable medicines for female troubles and weaknesses. I could hardly go about my work I had such inward weakness and constant misery in the womb. It worried me so that I would give out in walking a short distance. I had a bad cough and my lungs hurt me all the time. I got very thin, my complexion was bad, and my eyes would get so heavy in the evening they seemed stiff in the lids. I could hardly move them. Many persons were alarmed about me, I looked so bad and had such a cough; they were afraid I would go into consumption. I felt so badly every day that I had no life about me. I used only five bottles in all. I shall ever speak in praise of your grand medicines. They are blessings to suffering females."

Another good thing to have in the house is a vial of Dr. Pierce's Pleasant Pellets. They cure biliousness and constipation and never gripe.

## B. & B.

### Holiday Helps for Nothing.

Great preparation for Christmas shopping—such as will interest every reader—large assortments of choice novel and useful gift goods at less prices.

Our big 250-page Illustrated Catalogue tells all about Neckwear, Hosiery, Jewelry, and Silver Novelties, Dolls, Toys, and hundreds of other goods adapted for the holidays. We'll mail a copy free, postpaid, soon as you send name and address.

Also, any or all of these:

- "Holiday Gloves,"
- "Christmas Handkerchiefs,"
- "Book News,"
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A 5-acre store—64 different departments—and a thoroughly organized mail-order system—determined with goods and prices to make your buying here so important from a style and money-saving point of view as will get us your preference—get it on plain, straightforward, convincing merit.

Silk for a waist, or a Dress Goods pattern will be appropriate for many. Get samples of the smart novelty Taffeta Silks, 65c. yard, and Dressy Dress Goods 50c., 65c., 85c. yard.

Plenty of time yet if you send now.

## BOGGS & BUHL,

Department G. G. Allegheny, Pa.

## FREE \$50.00 FREE

To the person sending us the best name for our new tooth powder. Each person sending us a name must also send 25 cents for a sample box of the powder. This offer is open till January 1, 1899. After the \$50 is awarded each one will be notified of the name selected and the name of the party who gets the \$50. Address

THE BELLEFONTE CO.,  
P. O. Box 676, Louisville, Ky.

3.65  
Genuine American  
WATCHES for examination  
FREE  
They are fully jeweled, nickel-plated, case beautifully engraved, hunting, stem wind a set, extra heavy 14k gold plated, but a lifetime a look like a genuine \$40 Solid Gold Watch. Sent by express C.O.D. \$3.65 and express charges. If not as expected return at our expense. No risk. If \$3.65 is sent with order then ship by registered mail prepaid and give handsome chain free. Write agents or ladies. Send 4c. in stamp for our 200 page illustrated jewelry catalogue. Royal Bargain House (Inc.) 334 Dearborn St., Chicago.



## The Apiary.

Conducted by A. H. DUFF, Larned, Kas., to whom inquiries relating to this department should be addressed.

### Care of Honey.

There is no limit to the time that honey will keep if not abused. Thoroughly sealed comb honey is usually in its highest state of perfection, and extracted honey is just the same, providing it has been sealed over before extracted, or left in the comb until it thoroughly ripens. Comb honey usually remains in liquid form, but in some instances it granulates in the comb, the same as extracted. It has been said that honey from alfalfa is more apt to granulate in the comb than almost any other, and this has been my experience. Granulation of extracted honey is no detriment to it, and is always proof of its purity. Adulterations, such as glucose, etc., never granulate, hence when you see honey on the market, especially during the winter season, that is in liquid form, you may look upon it with suspicion. Now, most people think it the reverse of this, and this is the principal reason that adulteration is practiced to such an extent. The bee journals and producers of honey generally, have done everything in their power to educate the masses in regard to this one fact, but progress seems slow. Comb honey has never yet been imitated by man. It has been published that comb honey is being manufactured by machinery, but it is not true. Comb honey may be adulterated by feeding bees cheap sirups, which they will store in the combs, but it can only be done through them.

Honey improves with age, and the older it is the finer the flavor. Extracted honey is much easier kept than comb, as the latter is liable to get soiled and must be kept in tight cases to exclude dust and insects. Extracted honey may be kept in any quantity, either in open or tight packages. Tin cans are mostly used, and a very convenient and cheap package is the common fruit can, which, having a large opening, will admit of removing the honey after granulation and using it in this form. Honey should always be kept in a dry place, and away from a cellar, except the same is very dry and well ventilated. Heat does not damage honey but tends to ripen and improve it, but dampness and darkness will not agree with it. Honey that remains in the combs for some time after being stored is always the best article when extracted, but more pounds are secured by taking it away as fast as well stored.

### Uniting Weak Colonies in Autumn.

Uniting should be done early and at the same time that feeding is done. It is well to always feed united colonies and thus start the queen to laying and the results will be some brood and young bees, which places the colony in good shape before winter. Without feeding, the queens will scarcely lay any at all and no bees will be reared during autumn. The best queens should be used when colonies are united, which may easily be done by removing the poorest ones. When thus uniting two or more colonies, and after selecting the queen we wish to retain, it is best to cage her in the hive for a few days, as her life is somewhat in danger by the strange bees. In some cases the bees will quarrel and a portion of them will be killed, but it is only exceptional and will scarcely pay to use means against it if proper methods are used.

I have never had a single case of loss by uniting in the following manner: Some two or three days previous to uniting I remove all queens that I do not intend to use, and mark such hives as are to be put together by the same number. Late in the evening, and just as late as I can see to do the work, I place one hive directly on the other, making them two or three stories high, as the case may be. I do the work very carefully, so that the bees may not be aroused any more than can possibly be helped, and in this manner allow them to unite themselves at their convenience. I seldom cage the queens, except the queen is a very valuable one, and I have equally as good success with the queens as I have with the bees. I allow the hives to remain thus for two or three days, after which I remove all but the lower story or brood chamber, and follow by feeding the same for a few days. All weak stocks had better be united, for such will not winter so as to be of any profit the following spring, even if they survive the winter. Strong stocks in autumn is fully as important as strong stocks in spring, and indeed if we do not have them so in autumn we cannot have them so in spring. The

## Horse Owners! Use



## Caustic Balsam

A Safe Speedy and Positive Cure  
The Safest, Most BLISTER ever used. Takes the place of all liniments for mild or severe action. Removes all Bunches or Blotches from Horses and Cattle. SUPERSEDES ALL CAUTERY OR FIRING. Impossible to produce scar or blotch. 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.

greatest losses in wintering occur by colonies being in bad condition in autumn.

### Paint Talks--XI

WHAT PAINT MANUFACTURERS KNOW.

Paint manufacturers, like everybody else, are in business to make money. Money is made in the paint business by meeting the demand of the public, which demand includes convenience, beauty, economy and durability. The most successful paint manufacturers are those who have succeeded in meeting most fully all of these requirements and in convincing consumers that they have so met them.

In order to meet the public demand and to protect their trade, which is continually menaced by the enterprise of alert competitors, paint manufacturers must understand the properties of pigments, oils and vehicles, and must know how to meet successfully new requirements and new conditions. Hence every well-conducted paint factory is a vast chemical and physical laboratory, in which new facts are continually seized upon and embodied in the products of the house, even if they are not published to the world.

In the course of these investigations and tests, pursued incessantly for years, all paint manufacturers have discovered certain fundamental facts, which are now of common knowledge among them, and which are embodied by all of them in their better grades of paints. They all know the importance of pure linseed oil and realize that satisfactory paints cannot be made with any substitute for it. Consequently in all the better grades of paint only pure linseed oil is used, without alkalies or adulterants. They also know that the use of zinc white in a paint enables it to carry a higher percentage of oil and that its chemical stability permits it to be combined with many brilliant colors that are destroyed by other pigments; and they know that zinc white in a paint, besides giving brighter and more lasting tints than can be otherwise produced, preserves the less stable pigments from destruction, and thus adds to the durability of any paint of which it forms a part.

All of these facts, which are known to every paint manufacturer, are of the greatest value where the competition is great as in the paint trade, and upon them all successful high grade paints are based. Some manufacturers combine their zinc white and oil with white lead, others with barytes, others with sulphate of lime, others with whiting, and still others with combinations of these materials; but upon the pure oil and zinc white they rely for the prime essentials of beauty, economy, and durability, and all first-class combination paints embody these essentials.

Combination paints differ from one another in detail, and upon these differences the claims of their manufacturers for superiority are based; but all agree unanimously in the claim that any good combination paint is better in all respects than any "straight" paint that can be made.

It is for the consumer of paints to profit by the knowledge of these paint manufacturers, and when selecting paints, to see, first, that they bear the name of a reputable house, and second, that they contain zinc white, pure linseed oil, and the necessary dryers.

STANTON DUDLEY.

## HERE THIS IS IT.

Know by the sign



## ST. JACOBS OIL

CURES

Rheumatism, Neuralgia, Sotiaia,  
Lumbago, Sprains, Bruises,  
Soreness, Stiffness.

## Dairy School,

State Agricultural College,  
Manhattan, Kansas,

JANUARY 3 TO MARCH 25, 1899,

For creamery patrons and Private dairymen, offering thorough instruction in the selection, feeding, breeding and care of the dairy cow, and best methods of handling her products.

Tuition Free. Board and Books at Cost. For full particulars address PRES. THOS. E. WILL.

## Special Want Column.

"Wanted," "For Sale," "For Exchange," and small or special advertisements for short time, will be inserted in this column, without display, for 10 cents per line, of seven words or less, per week. Initials or a number counted as one word. Cash with the order. It will pay. Try it!  
SPECIAL.—Until further notice, orders from our subscribers will be received at 1 cent a word or 7 cents a line, cash with order. Stamps taken.

AMOS CRICKSHANK FOR SALE—Pure Crickshank bull, color red, recorded Vol. 33, page 6, No. 114247, calved May 23, 1892, sire Imported Royal Pirate 56492, dam Imported Vera, Vol. 31, page 198. Address Charles Lotholz, Eudora, Douglas Co., Kas.

COCKERELS—S. C. B. Leghorns, from 50c. up. A. P. Chacey, Elmont, Kas.

BLACK LANGSHANS EXCLUSIVELY—Parent stock score high and well mated. Young stock for sale. Cockerels \$1.00 each, trios \$2.50. Mrs. T. E. Whitlow, Morantown, Kas.

FOR SALE—Four extra choice Poland China gilts, farrowed April 27, weight 200 lbs.; sired by Duke of Weston 16974 S., dam Channon's Choice 3d 36264; \$10 each. J. H. Slemmer, Eureka, Kas.

WANTED, IMMEDIATELY—A live, energetic man to take charge of farm. One not afraid of work, and who understands the handling of cattle and hogs. Address Lock box 107, Station "A," Topeka, Kas.

BARGAINS IN DUROC-JERSEYS.—Five good males, ready for service. Sows and young Gilts bred, cheap next ten days; also pigs just weaned. All eligible to record. M. H. Alberty, Cherokee, Kas.

B. TURKEYS FOR SALE—Young toms, weigh from 20 to 22 lbs. Will sell cheap early. Write Earle Clemmons, Waldo, Kas.

LOCATED two miles from Kansas University, one from city of Lawrence, 40 acres No. 1 land, fair improvements, 9 acres bearing orchard, 2 never failing wells, herd registered Jersey cattle, 9 cows in milk (4 tested), 2 bulls of best breeding and 4 calves, separator, churn, printer, butter box and butter route in city; 1 male, 2 female Berkshire swine; team horses, harness, wagon, and all farm implements. All for sale for the price of the land alone. Albert McRill, Lawrence, Kas.

A BARGAIN FOR QUICK BUYERS—Pure Barred Rock cockerels, suitable for grading up farm flocks, at 60c., 75c., and early hatch \$1; also Bronze Turkeys. After December 1st birds for fancy trade with Theo. Hewes' score-card. Mrs. F. A. Hargrave, Richmond, Kas.

UNITARIAN LITERATURE—Sent free to any address on application to F. M. Wilder, Lawrence, Kas.

WANTED—Millet, Sorghum seed, Kafir corn (red and white), Alfalfa. Send samples, give quantity. Field seed orders solicited. Kansas City Grain and Seed Co., Kansas City, Mo.

WILL SELL—Or trade for Kansas land, one twenty-four horse power saw mill, with corn burrs, bolters and elevators attached. Address D. W. Auld, Sibley, Mo.

TO FARMERS—We are now writing contracts for tomatoes for 1899. Please come in at once and let us know how many acres you desire. The Bird Canning Co., foot of Monroe street, Topeka.

SHORT-HORN BULLS—Serviceable age, for sale. Address F. C. Kingsley, Dover, Kas.

HEREFORD CATTLE—Breeding stock for sale. Archibald cattle a specialty. Visitors welcome. J. C. Curry, proprietor "Greensacres Farm," Quenemo, Osage Co., Kas.

100 MERINO RAMS FOR SALE—Pure-bred American, Delaine and Rambouillet; also eight Shropshire rams from the Champion flock at the Omaha Exposition. Address E. D. King, Burlington, Kas.

WANTED—One Kansas Farmer agent in every locality to represent the paper regularly. Good inducements offered. Address Kansas Farmer Co., Topeka, Kas.

FOR SALE—A limited number of the last edition of Prof. J. C. H. Swain's great book, "The Future of the Past." Price \$1.00; postage paid until the supply is exhausted. Address Kansas Farmer Co., Topeka, Kas.

BARGAINS IN DUROC-JERSEY males. Five to eight months old. Two yearling males, cannot use longer. All recorded or eligible to record. Address M. H. Alberty, Cherokee, Kas.

FOR SALE—Five yearling boars. Also fine line of spring boars and gilts by Chief Editor 17995, Tecumseh Short-Stop 14750 and High Hadley 20292. Choice blood. Call or write. E. T. Warner, proprietor Franklin County Herd Poland-China Swine, Princeton, Kas.

FOR SALE—Pure-bred Polands and Berkshires from weanlings up, at very low prices. O. P. Updegraff, North Topeka, Kas.

POLAND-CHINA PIGS—Three dollars to five dollars each, eligible to record and choice breeding; no feed and must sell. M. C. Hemenway, Hope, Kas.

WANTED, AGENTS—We want an agent in every county in Kansas. Those acquainted with the farmers and threshers preferred. Liberal commission. For particulars, address The Victor Oil Co., Cleveland, Ohio.

BLOCKS OF THREE—Two new subscriptions for one year for \$2, and in addition, a renewal for one year free to any old subscriber who sends two new subscriptions and \$2 in one order. Kansas Farmer Co., Topeka, Kas.

ALFALFA SEED WANTED by F. Farteldes & Co. Lawrence, Kas. Correspond with them.

SHORT-HORNS FOR SALE—Forty-six cows and 8 heifers, Crickshank, Young Marys, Rose of Sharon and others; an extra lot. Nearly all were sired by that grand Crickshank, Royal Prince 103546. Six bulls ready for service, sired by Young Mary bull, Glendon 118971. Parties met by appointment. Theodore Saxon, 222 West Eighth St., Topeka, Kas.

DAIRY WAGON FOR SALE—Good two-horse covered dairy wagon, custom made. A. E. Jones, Topeka, Kas.

MACLEAN FARMERS SUPPLY CO., Kansas City, Mo. (Between Union Depot and Stock Yards.) Sell machinery and other supplies to farmers direct, saving the consumer middlemen's profits. Send now for 1898 Spring Price List.

WE WANT RELIABLE MEN in every locality at once to sell to farmers, threshermen and mills our high-grade lubricating oils, greases and specialties. Makes an excellent side line for farm implement dealers. We are manufacturers, and with our instructions an inexperienced man can become an expert oil salesman. Write at once for terms. Malone Oil Company, Cleveland, Ohio.

TO STOCKMEN—Feed Mills and Corn-Shellers used as samples and at fairs, special bargains. Write or see us. Sandwich Mfg. Co., 1205 Union avenue, Kansas City, Mo.

RICHLAND HERD.—I want to close out the entire herd of Poland-China sows and herd boars, including Kiever's 1st Model 18245 S., What's Wanted Jr. 2d 18534, and B's Black U. S. 18957. The breeding and quality of these boars ought to suit anybody. Come and inspect, the only way to get suited. F. W. Baker, Council Grove, Morris Co., Kas.

FOR SALE—Improved farm of 160 acres with irrigation plant. Unsettled estate. Box 662, Abilene, Kas.

FOR SALE—Grade Shropshire ram lambs, also fifty ewe lambs, at \$5, and 100 ewes at \$6 per head. Address E. W. Melville, Eudora, Kas.

BERKSHIRES—Choice bred sows by Imported Lord Comely, and boars ready for service. Wm. B. Sutton & Son, Kas.

FOR SALE OR TRADE—A Belgian stallion and Arabian jack. Write me. H. Harbaugh, Agenda, Republic Co., Kas.

BERDEN-ANGUS BULLS—Three individuals of serviceable ages; registered. Wm. B. Sutton & Son, Russell, Kas.

FOR SALE—Thirteen fine Poland-China boars. Call on or address H. W. McAfee, Topeka, Kas. (Farm three miles west of Kansas avenue.)

SINGLE COMB PURE WHITE LEGHORN COCKERELS for sale at \$1 each. A. F. Huntley, Paxico, Kas.

WRITE TO ALEX RICHTER—Hollywood, Kas. How to sub-irrigate a garden, etc., and cost of same. Send him the size or dimensions of your garden, and he will give full information.

COTTSWOLD RAMS FOR SALE—W. Guy McCandless, Cottonwood Falls, Kas.

WANTED TO EXCHANGE—The pure-bred Crickshank bull, My Lord 118563, bred by Col. Harris; sire Imp. Spartan Hero 77393; dam Imp. Lady of the Meadow (Vol. 30, p. 615). For a pure-bred Crickshank bull—can't use him any longer in my herd. H. W. McAfee, Topeka, Kas.

BLOSSOM HOUSE—Opposite Union depot, Kansas City, Mo., is the best place for the money, for meals or clean and comfortable lodging, when in Kansas City. We always stop at the Blossom and get our money's worth.

WE MAKE A GOOD FARMER'S SPRING WAGON, two lazy-acks and let-down end-gate, for \$55. Warranted. We will ship on approval to responsible parties. Kinley & Lannan, 424-426 Jackson street, Topeka, Kas.

## Highest Award.

Diploma and Medal were awarded Gem City Business College, Quincy, Illinois, at the great Omaha Exposition, for Best Exhibit of Penmanship, Course of Study, Students' Work, and Commercial Text Books. Beautiful 60-page Illustrated Catalogue will be mailed free. Winter term begins January 2, 1899. Address D. L. MUSSELMAN, Pres't, Gem City Business College, Quincy, Ill.

## THE STRAY LIST.

FOR WEEK ENDING NOVEMBER 17, 1898.

Wyandotte County—Leonard Daniels, Clerk. COW—Taken up by John Saxe, in Quindaro tp., (P. O. White Church), October 19, 1898, one black, fawn and white cow, dehorned, 7 years old; valued at \$10. Cowley County—S. J. Neer, Clerk.

STEER—Taken up by W. C. Lunnellson, in Ottert tp. (P. O. Cedar Vale), October 22, 1898, one three-year-old steer, pale red with white spots, (E) on right side; valued at \$30.

FOR WEEK ENDING NOVEMBER 24, 1898

Osborne County—F. A. Dawley, Clerk. HEIFER—Taken up by Hannah S. Applegate, in Jackson tp. (P. O. Cheyenne), October 27, 1898, one dark red heifer (yearling), no marks or brands; valued at \$15.

Cherokee County—S. W. Swinney, Clerk. MARE—Taken up by L. A. Johnson, in Spring Valley tp., (P. O. Angola), November 1, 1898, one bay mare, 15 hands high, star in forehead, left hind foot white, branded T on left shoulder, weight 750 pounds.

FOR WEEK ENDING DECEMBER 1, 1898

Morris County—M. J. Kimmel, Clerk. HEIFER—Taken up by Frank Fyfe, three-quarters mile northwest of Comiskey, November 1, 1898, one pale red heifer, 3 years old, "P. S." on left side, R. on left hip, right horn off; valued at \$15.

Labette County—E. H. Hughes, Clerk. MARE—Taken up by A. B. Whiteside, in Canada tp. (P. O. Angola), November 1, 1898, one bay mare, 15 hands high, star in forehead, left hind foot white, 12 years old, shod in front.

HORSE—By same, one brown horse, 15 hands high, star in forehead, shod in front, and about 7 years old; valued at \$40.

Wallace County—Olaf N. Thorene, Clerk. MARES—Taken up by Herry Fogelstrom, in Sharon Springs tp. (P. O. Sharon Springs), September 21, 1898, five bay and one gray mares, fair sized, all branded with diamond with perpendicular bar through center.

COLT—By same, one yearling horse colt, branded same as mares; appraised value of mares and colt \$50.

## KANSAS ECONOMY INCUBATOR.

This incubator is a home product and has been in successful operation for ten years. It is still made and sold in No. 1, or 800 egg size, by the inventor and manufacturer, Jacob Yost, Arkansas City, Kas. Send for circular.



## The Home Circle.

### ANDANTE.

Your fingers sweep the keys and then  
By river reach and iris fen  
The long dead days come back again.

Smile on me once again, and so  
Waft me on music soft and low  
Down the far fields of long ago.

Where lonely sunsets blow and fade  
For one whose haunted heart has strayed  
At evening to the upland glade,

Where he can hear the wild geese cry  
Across the solitary sky,  
And the cold sweeping winds go by

With broken words that laugh and weep,  
Like some one troubled in his sleep  
By visions of the calling deep.

Strange forest-girded lakes, whose moods  
Lie hidden in far solitudes  
Where no irreverent foot intrudes;

Black tossing rapids, through whose roar  
A vague great voice forevermore  
Goes echoing from shore to shore;

All phases of that wilderness  
Whose close communion used to bless  
My boyhood in its loneliness;

All these across my spirit's ken  
Swept by on waves of sound, and then—  
A sharp sweet chord—they fade again.

The wandering ghosts have found their  
tomb;  
And here, within this shadowed room,  
Your gold hair glitters through the gloom.  
—Independent.

### The Speed of a Ship.

"How do you ascertain the speed of a vessel?" is a question frequently addressed to naval men, and an explanation will, therefore, probably be of interest to many readers. There are several methods, the commonest and most ancient being by the use of the "log." This instrument consists of three parts—the logship, the line and the marks. The logship is a piece of wood about half an inch thick, and shaped like a quadrant, with a piece of lead let in round the circular edge to make it float perpendicularly in the water. It is slung by lines at each angle, the three lines being joined together about two feet from the logship. Two of the lines are securely fixed to the "ship," and the other has a bone peg at the end, which, being pushed into a hole in the ship, temporarily fastens it there. From the point of juncture of the three lines a sufficient length is measured, generally about one hundred feet, to take the logship well clear of the ship's wash. This is called a "stray line," and is marked with a piece of bunting. From the bunting is measured forty-seven feet three inches, and the line marked here with a piece of leather. Then another forty-seven feet three inches is measured off, and marked with two knots; then another space the same length and marked with three knots; and so on as far as seven knots. Half way between each batch of knots one single knot is made. The log line is then ready for use.

The space between the knots is found from the simple little rule-of-three sum: As 3,600 seconds (number of seconds in an hour), twenty-eight seconds (length of sandglass), 6,080 feet (number of feet in a nautical mile); length of line required—which works out to forty-seven feet three inches.

To use the log four persons are required; two men to hold the reel on which the line is wound; the quartermaster, to hold the glass; and the midshipman of the watch, to heave the log. The last-named puts the peg firmly in the logship, and then gathers three or four lines of coil in his hand, sufficient to admit of the logship being thrown well clear of the ship. He asks, "Clear glass, quartermaster?" "Clear glass, sir!" comes the reply, and overboard goes the logship and line, the reel rapidly revolving. Presently the midshipman feels the piece of bunting passing through his hand, and he gives the order, "Turn." The quartermaster turns the glass, and watches the sand, while the "reeler" holds the reel well over his head, so as to give the line fair play. When the sand has run out, "Stop!" cries the quartermaster. The midshipman grasps the line, assisted by the other reeler and looks for the nearest knot, finding a single one close to his hand. Then the line is hauled in, and four knots appear, which signify that the ship is going four and a half knots through the water. The jerk of the line draws the peg from the logship, which now floats on its flat side and is easily hauled in. When a ship is going over four knots, a 14-second glass is used, the speed being double that shown by the knots on the line.

Another method in use is the patent log. This is altogether mechanical, and consists of a long cylinder with clockwork inside it, and four fins on the outside; it is towed astern of the ship by a line made fast to a swivel in the head

of it. As it is dragged through the water the four fins make it revolve, actuating the clockwork inside, which registers on a series of dials the number of knots run. This log has to be hauled in every time one wants to read it. But there is another kind where the fan is towed stern, and the dial is a fixture in the ship. This is called a "cherub."

These logs are not always accurate, and are constantly verified when near land by cross-bearings. That is, the bearings of two well-known points are taken and the position so obtained is marked on the chart, the time of observation being noted, and the reading on the patent log. After an interval has elapsed, the position of the ship is again taken by cross-bearings, when the straight line joining the two places on the chart will show the direction of the course steered, and its length the distance run. A comparison with the readings by patent log will give the error of the machine.

To finish, here is a patent log yarn, as told by an old messmate. I give it in his own words: "When in the Crocodile in the Red sea, just after taking the reading one night at 8 o'clock, the quartermaster reported, 'Shark taken the patent log, sir!' I got another one over at once. At 9:30 next morning we stopped for half an hour. To amuse the ladies I tried for and caught a shark. On opening him we found our patent log, and," he added, gravely, "strange to say, it registered the same as the one in use. The line had jammed between his teeth, the fan working all the time he followed the ship. He had swum just 122 7-10 miles."—Navy and Army Illustrated.

### The Situation in China.

An American, long resident in Peking, who had opportunely for acquainting himself with the true sentiment of the ruling class in China at the present time, asserts, says Harper's Weekly, that the Chinese do not love Russia, but regard America as their natural ally, and prefer England to the sullen neighbor on



(After a drawing in Harper's Weekly. Copyright, 1898 by Harper & Brothers.)

FUANG HSU, EMPEROR OF CHINA  
FROM A SKETCH FROM LIFE

the north, from which quarter the kingdom's enemies have come from time immemorial. Li-Hung Chang and Prince Kung, the Prime Minister and substitute for Li in the latter's absence, have coquetted with Russia in order to bring England to the point—that is, a substantial guaranty of the integrity of China against Russian aggression, and no arrangement that has been entered into would be allowed to stand in the way of a favorable convention with the United States.

### Working Their Way.

It is a prevalent, though erroneous, idea that the days when one can "work his way" through college are over. Ways and means are just as plentiful to-day as they were twenty-five years ago, and the earnest student will find them. There is always a colony of such in Chicago, and a sort of Masonry exists among them, whereby a new-comer is looked after till he finds enough work to be independent. A young man has more opportunities than a woman, but there are places for the earnest woman, too.

The most coveted occupations are as correspondents of the city daily papers, but as comparatively few can be thus employed, the majority have to turn their hands to the next thing that comes to them. From twelve to fifteen teach night school. Several teach in the public schools in daytime and do their university work in afternoons and evenings to secure their degrees of D. D. and A. M. About a score carry daily papers, which pays them from \$2.50 to \$3.50 per week, but as this is not sufficient to meet all their expenses, they must do something

# GOLD DUST

## THE BEST WASHING POWDER

else beside, and they do it. About a dozen have lamp routes, which occupation pays \$20 to \$25 a month. This is not as easy work as some may imagine it to be. Still the hours are easier than they were a few years ago. A few are so fortunate as to find work in the evenings in the city library. Some attend lawns in the summer and furnaces in the winter, earning as much as \$5 and \$10 a week, by having several of each to care for. Some act as waiters at clubs and restaurants. Some solicit advertisements and some are book agents.

The divinity students pay their way after the first year by preaching in small towns near Chicago. Several employ their leisure hours in "tutoring" less brilliant students than themselves, making a fine income. Two young men made as high as \$1,200 in one year tutoring. One student is a member of a city orchestra, which pays him \$12 a week. A few are employed in the university postoffice, which pays about 20 cents an hour. A messenger system employs a number about two hours each daily, and some do clerical work for our professors, though here the ladies are given the preference.

As has been said, avenues for women are not so plentiful, yet there are a few. Several are teachers in the night schools of the city, and several are housekeepers for professors and small clubs of students. A number are doing clerical work, and a few do library work. Some work in the city telephone exchanges from 5 o'clock p. m. to 10 p. m. This last is extremely hard on the student, but with some it is that or do without the education, and so the former is chosen.

These "working" students are the best, as a rule. They stand highest in their classes, highest in all the athletic sports, consequently highest in the respect of their fellow students and the faculty. The first student to matriculate at the new university at Chicago was one of these earnest young men, who had his way to make. One of the associate professors, Dr. L., was a student at the old university who gained his education by all kinds of work. He had a "lamp route" for eight years. One of the finest American actors, who is billed to play in Chicago this winter, was one of these students.—Chicago Chronicle.

"Ladies and gentlemen," said an Irish manager to an audience of three, "as there is nobody here I'll dismiss you all. The performance of this night will not be performed, but will be repeated tomorrow evening."

Silent Partner—"What do you expect to do with all that rusty barbed wire fencing?" Hustling Merchant—"Oh, I don't know. There's going to be a demand for pieces of them Cuban trochas for relics after awhile, ain't there?"—Chicago Tribune.

Drying preparations simply develop dry catarrh; they dry up the secretions which adhere to the membrane and decompose, causing a far more serious trouble than the ordinary form of catarrh. Avoid all drying inhalants and use that which cleanses, soothes and heals. Ely's Cream Balm is such a remedy and will cure catarrh or cold in the head easily and pleasantly. A trial size will be mailed for 10 cents, large for 50 cents. All druggists keep it. Ely Brothers, 56 Warren Street, New York.

The Balm cures without pain, does not irritate or cause sneezing. It spreads itself over an irritated and angry surface, relieving immediately the painful inflammation.

Provided with Ely's Cream Balm you are armed against Nasal Catarrh.

### Story of a Waiter.

This is the story of a man who went into a store to buy a nickel spool of thread—he wanted nothing more. The floor man took him by the arm and directed him aright to where a blonde presided from morning until night. He bought the thread and settled with a sort of reckless dash and the blonde girl lifted up her voice and loudly called for "Cash." Then came a little short-haired girl, with beads about her neck, who took the thread to another clerk, who entered up the check; she then transferred it to a boy in uniform and cap, who took it to the basement for another clerk to wrap. Two hours later it came back, only to be rejected by the blonde girl, just because it wasn't marked "Inspected." Then for another hour it went from place to place, till at last the thread and purchaser were brought face to face. Grabbing it he hurried home and said to his wife: "Had I tried to spend a dollar they'd have kept me there for life."

Young Housekeeper, in a great hurry—Got any aiges? I want some worst kind. Grocery Clerk—We don't keep that kind, ma'am.

"You are the star of my life," said the rooster fervently. "Well," replied the hen, as she moved in the direction of the barn, "your star is about to set."

"I know I'm not as energetic as I might be. If I ever did distinguish myself I should be inclined to rest on my laurels." "Well, the man with a strong natural disposition to rest on his laurels seldom gets any."

As a train was about to leave Camp Wikoff the other day with a number of soldiers aboard, two young women entered the foremost car with a basket of fruit. One of the girls rushed up to the nearest uniformed passenger and said: "Won't you have some fruit? You have been such heroes we want to do something for you." "You are mistaken, miss; I belong neither to the Seventy-first nor to the Rough Riders," said the soldier. "I am only a regular, consequently not a hero." But he took some fruit.

### UNFADING COTTON DYES.

Special Fast Diamond Dyes For Cotton That Will Not Wash Out in Soapsuds.

It is absolutely impossible to get a fast and satisfactory color on cotton from the same dyes as are used for woolen goods, and for that reason Diamond Dyes have a specially prepared line of fast colors for cotton that will give perfect satisfaction. If you want to color cotton or mixed goods be sure to get the fast Diamond Dyes for cotton, as they will give colors that will not fade even by washing in strong soapsuds or exposure to sunlight. If any dealer tries to sell you the same dye to color cotton as he would sell you for coloring wool, do not accept it, as such dyes are unreliable, and in the majority of cases will ruin the material on which they are used.

There are some fifty different kinds of Diamond Dyes, so that you can get any color that you wish. By using them in different strengths, any desired shade can be made, and all the fashionable colors are readily gotten with these dyes.

To get a fast, rich, full black, use one of the Diamond Dye Fast Blacks. There are three different kinds, for wool, for cotton and mixed goods, and for silk and feathers. They color a rich, full black that cannot be distinguished from new goods.

Diamond Dyes are prepared specially for home use, with very simple directions, so that it is but little trouble or work to use them. A direction book will be sent free to any address. WELLS, RICHARDSON & Co., Burlington, Vt.

### Mothers! Mothers!! Mothers!!!

MRS. WINSLOW'S SOOTHING SYRUP has been used for over FIFTY YEARS by MILLIONS OF MOTHERS for their CHILDREN while TEething, with PERFECT SUCCESS. It SOOTHES THE CHILD, SOFTENS THE GUMS, ALLAYS ALL PAIN; CURES WIND COLIC, and is the best remedy for DIARRHEA. Sold by Druggists in every part of the world. Be sure and ask for "Mrs. Winslow's Soothing Syrup," and take no other kind. Twenty-five cents a bottle.



## The Young Folks.

### THE PASSING OF AUTUMN.

The wizard has woven his ancient scheme,  
A day and a starlit night;  
And the world is a shadowy-pencilled dream  
Of color, haze and light.

Like something an angel wrought, maybe,  
To answer a fairy's whim,  
A fold of ancient tapestry,  
A phantom rare and dim.

Silent and smooth as the crystal stone  
The rivers lie serene,  
And the fading hills are a jewelled throne  
For the Fall and the Mist, his Queen.

Slim as out of aerial seas,  
The elms and poplars fair  
Float like the dainty spirits of trees  
In the mellow, dream-like air.

Silvery soft by the forest side—  
Wine-red, yellow, rose—  
The wizard of Autumn, faint, blue-eyed—  
Swinging his censur, goes.—Scribner's.

Written for Kansas Farmer.

### YOUNG FOLKS IN THE OLD COUNTRY.

BY ANNA MARIE NELLIS.

NUMBER 49.

#### KJOBENHAVN.

We had been told that nearly all the merchants and hotel people of Denmark could speak German, and occasionally one could be found who would speak English, but our main dependence for information must be the German language, unless we would first learn the Danish. We had not the time to spare for learning the new tongue, to us, in the five or six days we should be in the country, so we decided that our Deutsch would answer our needs. We found the hotel to which we had been recommended, and undertook to interview the clerk for information as to the various points of interest for us to see in the city. I asked him, in correct German, to direct us. He stared at us a moment and then shook his head, thus intimating that he did not understand. I then tried a few Danish words I had "picked up," but they failed to bring us the desired information. I then turned to my brother and told him I feared we would not find any one to talk to, whereupon the clerk looked greatly pleased and said: "Say, are you Americans?" He then told us he had lived in America many years and had recently returned to Denmark to assist his uncle in the hotel. We had found just the person we needed, and he provided us with excellent rooms and gave us full directions about all points which would be apt to interest us.

Upon the advice of our new friend, we spent the remainder of the day in riding around the city to see the various parks and get acquainted with the general appearance of the place and learn something about the streets, which are very irregular, for apparently no two streets are parallel or at right angles.

Our first point visited was the Kongens Nytorv, which is a small but handsome park nearly in the center of the city, and from this park issue thirteen streets, extending in thirteen different directions, no two of which would form a straight line on opposite sides of the square.

The city is very prettily situated on two different islands in the Baltic sea. The oldest part is on the main island of Zealand and the new city, or Christianshavn, is located on the little island of Amager, separated from Zealand by an arm of the sea which makes a fine harbor for the great number of vessels from all civilized nations.

The next morning after our arrival we started early, on foot, to examine the public buildings of Copenhagen. We first went to Kongens Nytorv, which was but a few blocks from our hotel, and then to the round tower (Det Runde Taarn). This tower is 116 feet high, and was built in the reign of Christian IV., the favorite King of the Danes, who lived and died in the seventeenth century. It was used as an observatory for 200 years, and now is only visited as one of the places worth seeing in the city. The tower is ascended by a winding causeway of brick, which now is badly worn, showing the effects of the many thousand feet which have gone up and down in the past 300 years. On our way up, we passed several doors of heavy iron, which I imagined must mark the entrance to old-time dungeons, but I don't know. From the top of the tower we had a fine view of the city and harbor. Away in the distance, over the waters of the sea, we could discern a dark line, which the guide said was "Sverige" (Sweden).

While we were in the top of the tower a party of school children came up, accompanied by their teachers, and, contrary to the custom in German schools, the boys and girls were in the crowd promiscuously. They looked so clean and neat, and nine out of every ten were blonds, just like the Swedish type. They were jolly and handsome and unre-

strained but moderately quiet. The German school children always give one the impression of standing in terror and awe of their masters, while these were as happy as American school children would be on a holiday.

Again on the street level, we endeavored to find the next place on our list, but, after walking a long time, we found ourselves in the Kongens Nytorv, our starting point, and we were forced to go to our hotel for further instructions. Which of the thirteen streets should we take to get to our hotel? We thought we knew, and started, but after walking a half hour we found ourselves lost. We concluded the best thing for us to do would be to call a carriage and be driven to the point we were searching for. A carriage in Denmark is called "Vagn," which sounds like "wagon," and it is a wagon. The vagn driver could speak German and informed us we were on the opposite side of the park from our hotel. I always knew that thirteen was unlucky, and of the thirteen streets, we had taken the one that led us farthest away.

#### THORWALDSEN MUSEUM.

The city of Copenhagen is not very large and its architecture is not imposing. It seems to have nothing to show great age like Berlin and her beautiful old palaces; but in museums it is one of the foremost in the world. The Thorwaldsen museum is the most interesting and it was the first one we visited. With "Baedeker" in one hand and a map of the city in the other, we made a new start, and soon arrived at the main portal of a large square three-story stone building, which has a moderately imposing dome. This building and its contents are objects of much pride for the Danes and in it centers the history of Denmark's most gifted artist. I had read the name Thorwaldsen many times and had a vague idea as to who the gentleman was. I knew positively that he was born either in Africa or Europe, but on this visit to the museum I became intimately acquainted with the facts concerning the man who has been dead since March 24, 1844. I learned that he was born in neither Africa nor Europe, but somewhere on the Atlantic ocean, between Iceland and Denmark. His father was an Iclander and he named his boy, born at sea, Bartholomaeus, but he was always known as Bertel Thorwaldsen. He was taught his father's trade as a wood carver, but early in life showed a great talent for sculpture. He received many prizes for his work in Copenhagen and at 23 years of age was sent to Rome to study his art, and in that city he passed the greater part of his life, making only few visits to Denmark. He died in Copenhagen when 74 years old. I had seen a copy of his wonderful carving, called "The Risen Christ," in front of the mausoleum at Potsdam, and it had awakened a keen interest to know more about Denmark's talented sculptor. The museum is described in the guide-book as being "a somber-looking building in the shape of an Etruscan tomb."

I cannot attempt to describe the magnificent pieces here to be seen; room after room, occupying two floors, all filled with the most beautiful marbles of the great artist. His grave is in the center of the inner court or quadrangle, and here the greatest sculptor of modern times was laid to rest, after a long and busy life. His grave is most modest, no monument, only a rectangular marble slab covered with green ivy. He was a descendant of the ancient Kings of Zealand, but that was no impediment in his career.

We lingered for several hours in the interesting museum, for we knew many years would elapse before we could see the beautiful objects again.

From the museum we found our way to the "Church of Our Lady" (Vor Frue Kirke), the metropolitan church of Denmark. The church itself is quite plain and uninteresting as to outside appearance, but our principal object was to see the world-renowned works of Thorwaldsen contained therein. On either side of the interior of the church are the representations of the "Twelve Apostles" with a figure of "Christ" in the center. The entire group is known as Thorwaldsen's "Christ and the Twelve Apostles." In the center of the altar is the famous "Risen Christ," by the same sculptor. The figure is so life-like that the marble seems to speak. It is very beautiful, and very many travelers from all parts of the world look upon it every year, and bear away with them a nearer thought of our Savior than human lips can well express. In front of the altar is a kneeling angel, of striking beauty, holding a shell in outstretched arms; this is the baptismal font. In the two chapels at the side of the altar are reliefs of "The Baptism" and "The Last Supper."

The day was not one of special occasion, but the church was well filled with

visitors of various nationalities, who had come, as we did, to see the beautiful works of Thorwaldsen. I noticed Americans, English, Swedes, Germans, Russians, and one Frenchman, and it was interesting to hear them all speaking in so many different languages. I seemed to think that possibly the "gift of tongues" had been vouchsafed to this interesting church.

#### CHRISTIANSBORG PALACE.

The old sexton spoke German and he was very kind to give us information on every point we inquired about. He told us the nearest palace to be seen was a ruin, but he knew it would interest us. He walked out into the street to show us exactly where to go to find the Christiansborg Palace. We could not well have failed to find it, for, after walking one block, we saw the huge walls of what once must have been a magnificent royal home. We were informed that prior to 1794 it was one of the finest palaces in Europe, but in that year it was burned and only the walls left standing. One wing was restored and known as the new palace, in 1828, but never was occupied by the royal family. Instead of a dwelling it was used for other things; that is to say, the Danish Thing convened in it. The "Thing" in Denmark is the same as Parliament in England or Congress in America. Since the year 1168 several royal palaces have occupied this same location and have each in turn been destroyed by fire. In 1884 the New Palace was burned and now nothing but blackened walls remain. The walls, however, are huge, strong and really beautiful. One is permitted to roam through the open spaces which once were princely rooms. It is reported that the present King, Christian IX., will rebuild this palace, but as he is old and his income is only \$200,000 a year, I fear the work will not be completed very soon.

In one of the farther wings of the vast ruin are the royal stables, and this we found very interesting. We saw many handsome horses covered with pretty blankets; on each blanket was worked a crown and a big letter "C." The "C" stands for Christian—not to indicate their religious tendencies, but to denote that the horses belong to the King. Some of the royal coaches were quite handsome, but they were not so numerous as one might expect to find in a King's wagon house. The oldest one resembles the old stage-coach that Mr. Buffalo Bill has exhibited around the world, and it is 150 years old. The coaches for mourning are all covered with black cloth and heavily draped in sorrowful shades. Kings must mourn as common people do, and those same coaches have been used since we saw them, in the procession which followed the good old Queen Louise of Denmark to her grave two months ago. The "gala wagons" or parade coaches are trimmed in much red plush and gold. The old coach in which the present King rode on his wedding day with his bride is kept there as a relic. He was not a King then and I don't suppose he thought it possible that he ever should be King; in fact, he was quite poor but indirectly connected with the then royal family. Changes take place in Denmark as they are apt to do elsewhere; all the direct royal line died and the poor young Prince was chosen King and took the name "Christian IX." It is said that he and his good Queen Louise were devoted lovers during the whole of their long married life of over fifty years. When they were married she had to "keep house" for herself and husband, and their little girls had to sew their own dresses and wash dishes, just as well-brought-up American girls do. One daughter became the wife of the Czar of



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Russia, one the wife of the Prince of Wales, and one son is King of Greece. While the oldest son is, of course, the Prince of Denmark. All have large families, and Queen Louise was called the "Grandmother of all Europe."

A strong nation is made up of strong men and healthy women, and health and strength are given by Hood's Sarsaparilla, America's Greatest Medicine. Get only Hood's.

Hood's Pills are the only pills to take with Hood's Sarsaparilla. Easy and yet efficient.

A lady living in the country, who kept poultry, had, among others, some Andalusian fowls. One day she had one killed for dinner, which proved to be very tough. "Rachel," she said to her servant, an elderly woman, who had been with her for some time, "what fowl is this? It seems to be a very old one." "Well, mum," replied she, "it's one of them Antediluvians."

#### Catarrh Cannot be Cured

with LOCAL APPLICATIONS, as they cannot reach the seat of the disease. Catarrh is a blood or constitutional disease, and in order to cure it you must take internal remedies. Hall's Catarrh Cure is taken internally, and acts directly on the blood and mucous surfaces. Hall's Catarrh Cure is not a quack medicine. It was prescribed by one of the best physicians in this country for years, and is a regular prescription. It is composed of the best tonics known, combined with the best blood purifiers, acting directly on the mucous surfaces. The perfect combination of the two ingredients is what produces such wonderful results in curing Catarrh. Send for testimonials, free. F. J. CHENEY & CO., Props., Toledo, O.

Sold by druggists, price 75 cents.



Meat smoked in a few hours with KRAUSERS' LIQUID EXTRACT OF SMOKE. 1 Made from hickory wood. Cheaper, cleaner, sweeter, and surer than the old way. Send for circular. E. KRAUSER & BRO., Milton, Pa.

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Boys and Girls can get a Nickel-Plated Watch, also a Chain and Charm for selling 11-3 dozen Packages of Blaine at 10 cents each. Send your full address by return mail and we will forward the Blaine post-paid, and a large Premium List. No money need be paid.

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# KANSAS FARMER

ESTABLISHED IN 1863.

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Business cards or miscellaneous advertisements will be received from reliable advertisers at the rate of \$5.00 per line for one year.  
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To insure prompt publication of an advertisement, send cash with the order; however, monthly or quarterly payments may be arranged by parties who are well known to the publishers, or when acceptable references are given.  
All advertising intended for the current week, should reach this office not later than Monday.  
Every advertiser will receive a copy of the paper free during the publication of the advertisement.  
Address all orders—

KANSAS FARMER CO., Topeka Kas.

The forty-first annual meeting of the Missouri State Horticultural Society is to be held at Columbia, December 6, 7 and 8, 1898. Premiums will be given for fruits and flowers; rates will be made by the railroads; hotel charges will be \$1.50 per day; rooms will be provided free at the homes of the citizens for those who prefer. The program is devoted to the consideration of practical subjects by practical fruit-growers and gardeners.

Mr. Ed. Whitcomb, of Friend, Neb., President of the United States Bee-Keepers' Union, will make an address before the annual meeting of the State Board of Agriculture, in Topeka, during one of its sessions, the second week in January, on "Practical Lessons in Apiculture." Mr. Whitcomb has notified Secretary Coburn that he will be glad to confer with as many Kansas bee-keepers as possible while in Topeka, and will furnish any assistance he can toward the organization of a permanent State bee-keepers' association.

The "American Maize Propaganda" is preparing to have a great exhibit of the greatest of American cereals at the Paris Exposition. At a recent conference between the officers of the Propaganda and Commissioner Peck, preliminary arrangements were made for ample space for a corn palace. It was also decided to put in a corn oven, so that the people of Paris and the rest of the world may be treated to various dishes in which corn flour shall form a principal part. The matter is to be brought before Congress and State appropriations are suggested by the Propaganda.

The various railroads in Kansas, through Chairman B. D. Caldwell of the Western Passenger Association, have notified Secretary Coburn that an open round trip rate of a fare and one-third has been granted for the annual meeting of the State Board of Agriculture, to be held in Topeka during the second week of January. These rates will also be for the benefit of the State Swine Breeders' Association, the Improved Stock Breeders' Association, and the State Poultry Association and Show, which hold their annual meetings at Topeka in the same week. These rates will be open to everybody and no certificates or receipts will be necessary. Tickets will be on sale January 7 to 12 inclusive, and be good for return passage to and including January 16.

Various States which have experimented with the different sorts of agricultural boards, societies, etc., whose principal efforts and funds were put into maintaining an annual show or "agricultural horse trot," that eventually brought them to bankruptcy, in spite of tremendous appropriations of public money, have of late years been trying to reform by providing for State boards organized on the Kansas plan, with politics and pumpkin shows entirely shut out. Within the past six months Secretary Coburn has had requests from officials in Nebraska, South Dakota, Tennessee, Minnesota, and Oklahoma, for copies of the laws and any information pertaining to the organization and workings of the Kansas Board of Agriculture. The possibility of such an institution so

conducted, at modest expense, as to be practically useful and helpful in the every-day affairs of those who foot its bills, and kept wholly aloof from politics, seems to strike the people of other States as very much of a pleasing revelation.

### NEEDED REFORM.

The President of the State Temperance Union was advertised to speak on the above subject at the First United Presbyterian church of Topeka, last Sunday evening. Because President Gleed was suddenly called from the city, the Law and Order Committee of 200 was asked to provide speakers to take Mr. Gleed's place. Hon. F. H. Foster and E. B. Cowgill were drafted for the occasion.

Mr. Foster delivered a most instructive address, defining the present situation as to the enforcement of the prohibitory law with great clearness and conveying information, new to the audience, as to methods that are being pursued, and obstacles met. Being the head of the prosecution department of the Committee of 200, Mr. Foster is the highest authority as to the doings of this committee, which is composed of citizens who give their services and \$10 each, per year, in cash to promote the enforcement of the prohibitory law. It is regretted that no detailed report of Mr. Foster's address is obtainable.

At the close of Mr. Foster's address, the following remarks were submitted by Mr. Cowgill:

A brilliant United States Senator from Kansas once found it necessary to deny that he had said: "In Kansas we have reached a happy solution of the liquor question. The temperance people have the law, which seems to be what they want, and the toper has his drink, which is what he wants. All are satisfied and everybody happy." Whether or not the Senator said this, it has never been true in the broad sense since our prohibitory legislation went into effect. And yet there has been, and is now, too much truth in it. By a Herculean effort, by the sacrifice of time and political indolence, by doing our duty as citizens we got the law. We went further, and insisted on putting its machinery in motion, and then proclaimed to all the world our success. We had banished the saloon from all but a few places in Kansas and were doing valiant battle in these. Mr. Foster's remarks have shown that a change has come and that the machinery of reform needs again to be put into motion.

An American humorist has said that there is only one good place to have a boil and that place is on the other fellow. It would be pleasant if I could say to you to-night that only the other fellows need reforming, and that we, who are gathered within these sacred walls, are not to be mentioned as in need of reforming. I once listened to a discussion of the financial question by and between two neighbors. Finally the neighbor who appeared to be getting the worst of the argument, said, with great emphasis: "I don't know anything about this financial question and I don't believe anybody else does." Now that argument was a clincher, and I am going to use one just like it here and now. It shall be in the form of a confession: "I need reforming and I believe everybody else does."

"What," you say, "do you come over to this United Presbyterian church to talk about needed reforms and to tell us that we, descendants of Scotch reformers, need reforming ourselves, and you come with the confession that you, yourself, are not what you ought to be?"

Wait a moment, my friend of Caledonian descent if not accent. My ancestors came from no great distance from your borders, and, being of the seventh generation in this country, I am not sure but that this small distance has become obliterated in the perspective of time, and I shall claim all the rights accorded to a Scotchman in talking to you. Let us carry the confession a little further and see wherein I, with you, need reforming.

Do I drink? Don't know the taste of whisky and don't mean to learn it.

Do I chew? Tried it when a boy, and while suffering that awful nausea, down by the haystack, resolved that tobacco should never more pass my lips.

Do I swear? Never swore an oath in my life.

Do I countenance those who sell liquor? I should be untrue to seven or more generations of Quaker ancestry if I did.

Do I help to enforce the law against the joints? I am a member of the Executive committee of the Committee of 200.

Do I vote for temperance candidates? I disregard party lines to place my vote where I think it will best promote the cause of temperance.

These questions would probably be

truthfully answered as I have answered them by nine of every ten in this audience. Where, then, do you and I need reforming? Let us ask one more question.

Do I attend the caucuses and primaries of my political party and exert my influence in all the preliminary processes of placing candidates for office before the people?

I have lived in Topeka for more than seven years and in that time have not been to a caucus, nor voted at a primary, nor taken part in any of the preliminary proceedings of my political party.

Is not that an awful confession for an American citizen to make?

Is the same not true of you? and you? and you? and you?

We complain that officers do not enforce the prohibitory law as they ought. And yet we leave the selection of two persons for each important office, for one of whom we must vote if we vote at all—we leave this selection to persons not so anxious as we to have the laws enforced, and to people who want them violated with impunity, and to people who make money by dealing out liquid damnation to sons of loving parents.

Perhaps I have put the case a little too strongly. Perhaps your devotion to your party is such that you trust its judgment implicitly, and vote the straight ticket, knowing that your party is always right, and that temperance, being a subsidiary question, should not, in your opinion, be allowed to interfere with a man's fidelity to his party. Perhaps you are that much better than your speaker.

Yes, we are all statesmen and politicians. But, if a poll were taken of this audience, how large a piece of paper would it take to enroll the names of all the men and women who use their influence at the elementary sources of party action? We are all partisans. We ought all to be partisans. Our government is a government whose machinery is selected by parties. It is not a perfect way, but none better has yet been devised. We are partisans, but the small boy's description of his father's religion too nearly fits our partisanship. The new minister asked the small boy if his father belonged to church. "Yeth, thir; he's a Methodist, but he don't work much at his trade," said the small boy. I leave it to Bishop Vincent if that Methodist did not need reforming. You and I are partisans, but we don't work much at our trade. I leave it to you if every one of us does not need reforming?

What is the machinery of politics? The most superficial citizen knows only, that, at the proper time, tickets are provided labelled with party names and containing lists of the contending candidates for the several offices to be filled. The superficial citizen takes a ticket into the voting booth and marks a cross opposite the names he wishes to vote for, folds the ticket, hands it to a judge of the election, and goes his way, rejoicing in having discharged one of the high duties of the American citizen.

The citizen who is less superficial realizes that the names on those tickets were selected either in conventions or by primary elections conducted by the political parties as organized and legally recognized bodies.

The citizen who looks still deeper finds that the selection of names to go before the primary or the convention was made in caucuses—assemblages not recognized in law and not responsible to any tribunal for their methods of procedure. The caucus may be called the elementary source of political action.

Did you ever attend a primary?

Perhaps you looked in once and saw that it was being managed by some red-faced, strong-breathed, swearing individuals, and perhaps you decided that it was no place for a respectable man and church member like yourself. How came those fellows to be managing the primary of your party? Why, they were selected by a caucus. Did you ever attend such a caucus? More than likely you were not notified and knew nothing about when or where it was held. But if you did find out about it and did go, more than likely you entered a room full of tobacco smoke, possibly a case of beer partly emptied, and some fellows trying hard to get themselves outside of the balance of it.

Who called the caucus? Somebody who wanted an office got some friend to call it; or some one who didn't believe in a rigid enforcement of "crank legislation" got a few of the "boys" together to have a social time and lay out the work of the party.

You didn't care to stay. I didn't go. Deacon J. was spending the evening with his family. Mr. S. and wife were visiting a sick neighbor. It was prayer meeting night and if W. went out at all—but he didn't, he sent his wife to prayer meeting—if he went out at all he ought to go to prayer meeting. And so we all

left the inception of the choice of officers and the construction of policies to the smoky crowd.

Ladies, do you blame the man who looked into the caucus for coming away? Would you want your son, who is such a noble young man, to stay there?

When the notorious Boss Tweed was found out he coolly asked: "What are you going to do about it?" What are we going to do about this matter? There is not much satisfaction, and perhaps little justice, in railing at officers for non-performance of duty under the law, when, in order to become officers, possibly in order to become even recognized candidates, they had first to make terms with a caucus controlled by those who have a financial interest in the violation of the law.

But, my friends, law-loving, home-loving people have as much right and as good opportunities to hold caucuses and to control primaries as have law-breakers and loose characters. We are more numerous than those that are against us. But, like the small boy's father, we don't work much at our trade. If, under some unusual impetus, we hold a great meeting, we are never certain that we can hold another.

We do not study politics. We need reforming.

But why make so much fuss about the election of officers? What difference does it make to you and to me who holds the offices?

Officers are charged with the execution of our laws. Citizens' support is important, but the command of the battle against lawlessness is vested in our officers. Their selection, their nomination, should not be left to the enemy.

The United States won a great victory over the Spanish squadron at Manila bay. Do you suppose the submarine navy which resulted from that battle would have been composed of Spanish ships if the United States had allowed Spain to nominate two candidates, one of whom we must place in charge of our squadron instead of Dewey? Or if Spain had limited our choice of commanders before Santiago bay to Weyler and Blanco, would Cervera's fleet have gone to the bottom of the sea?

If we are to have the prohibitory law honestly and efficiently enforced, we must not leave the nomination of candidates to those whose interests or inclinations would be subserved by placing this law at the bottom of the sea.

To make the case a little more concrete, let us look at what is just ahead of us—the spring election. Now, don't turn away and say: "Just listen at the man! talking about the spring election before we have got over being tired on account of the fall election!" Do you not know that if the farmer had not plowed his land for the 1899 wheat crop before he had rested from the labors of the 1898 harvest, there would be no harvest to gladden him next June? It is time now to caucus. It is time to select our leaders. It is time to take hold of the machinery of politics. It is time to change our lethargy into activity. It is time to impress upon all candidates the fact that we are an element to be reckoned with. It is time that we establish the practice of being always there when public interests are to be considered. It is time that we redeem the caucus and the primary from disreputable control. It is time for united effort, for fidelity to the cause and to one another. Constant dropping will wear the hardest granite. Our constant attention to every stage of political duty will make the lukewarm officer zealous in the enforcement of the law. Our united and persistent work will eliminate the beer influence from our politics, will eliminate the Committee of 200 by placing in positions of trust those who need not to be spurred to do their duty.

### Publishers' Paragraphs.

McBeth & Kinnison, the well-known grain and seed merchants of Garden City, Kas., have sent a new advertisement of their business. While they deal in all kinds of field and garden seeds, they make a specialty of pure alfalfa seed. Notice their advertisement, and if you are in need of alfalfa or any other garden seeds you will run no risk in sending them your order.

"The Aquaria," a new book by Chas. N. Page, Des Moines, Iowa, author "Feathered Pets," is the most complete book on the subject ever published in America and the only one ever offered at a popular price. It fully illustrates and describes all the best breeds of fancy fish for the aquarium; contains complete instructions for the care of gold fish, curing their diseases, making home-made aquariums and fountains, breeding fishes profitably, etc., so plainly stated that any one can succeed.

The condition of the stock must largely determine the amount of the rations.



## OUR NEW POSSESSIONS.

The Peace Commissioners of the United States and Spain have finally agreed upon the substantial features of the treaty which will doubtless go into history as the "Treaty of Paris." The independence of Cuba is conceded by Spain. Porto Rico and the Philippine islands are to be ceded to the United States.

The first great contention was as to the Spanish debt, for which the revenues of Cuba had been pledged. The Commissioners of the United States declined to have this country made responsible for any debt, not excepting that incurred in making permanent improvements in Cuba. They further refused, on the part of the United States, to make Cuba pay any debt.

There was almost no contention about Porto Rico. General Miles had, in a few days, so nearly completed the conquest of the island that there was left little to talk about except the alacrity with which the Dons should get out.

Then came the great question of the Philippines. Ten months ago it would have been difficult to convince a quarter of the people of the United States that this country should take the Philippines, even with a great royalty thrown in. The spirit of conquest—otherwise called expansion—has grown so rapidly within the last four months that the President believes himself backed by a majority of the people of the country in cancelling all claims against Spain on account of the war, paying that country \$20,000,000 and assuming responsibility for the government and protection of the whole 1,200 islands and their 8,000,000 people.

It is suggested that all of these countries, not excluding Cuba, will be placed under military government for at least a year, and that by the expiration of this time we will have discovered what further steps should be taken.

The tariff policy, as to the Philippines, under military government, will presumably be left to the executive. It is hinted that this will be what has been termed the "open door" policy. This is explained to mean equal opportunities for all nations to trade in the Philippines. A revenue tariff will be imposed on all imports, so as to raise the money necessary to defray the expenses of governing the islands. But this tariff is to be levied against commerce with the United States as well as other nations.

The "open door" policy is received with great satisfaction by European nations. Whether it will become a permanent policy will depend upon the disposition of Congress after the expiration of the brief term of military government. The question will easily become a political one. The sugar and rice producers of the United States will favor any policy which imposes a tariff upon sugar and rice from the new acquisitions. The voice of the great mass of consumers is not likely to be heard with much emphasis in this matter. On the other hand, manufacturers of cotton and woolen fabrics and of implements, producers of bread-stuffs, meats, etc., all who are feeling the need of larger markets, will be interested in lowering the tariff between this country and those newly acquired.

It has been suggested that the markets of these new possessions will be good trading stock, and that, in the opening of the markets of China by nations operating in the East, we may be able to dicker for a portion of the Chinese pudding in exchange for a slice of the Philippine plum.

Of how much value all of these considerations may be to the every-day American citizen, it is not possible now to determine. That they will furnish abundant subjects for political oratory in future campaigns is easily seen.

But it is difficult to resist the impression, which is imposed by a review of the events of the present year as they appear in the panorama of modern history, that the hand of Destiny or Providence, the march of human progress as it plods up the path of the ages, is displacing the inferior by the superior civilization; is displacing the weaker by the stronger race of men.

Could we look into the future of our new possessions, should we, in three or four hundred years from the date of Anglo-Saxon possession of these lands, see their present occupants, with their semi-barbarism, dwindling away, broken races like the American Indians of today, their lands possessed and improved by the stronger and nobler race? Very likely we should.

Very few people in the State realize the amount of material stored away in the Kansas University museum at Lawrence, some of which has attracted attention both at home and abroad. In paleontology, the collection of cretaceous vertebrates is only excelled in number in one institution (Yale University) in the

United States, and in excellency of individual specimens, it is unexcelled. The collection of fossil leaves from the Dakota sandstone of the central part of the State is very complete, there being no better outside of the national museum at Washington. The collection of carboniferous plants is also very complete and has attracted some attention, although no original work has been done on them up to the present time. In zoology and entomology the collections are very extensive, the collection of North American mammals, mounted by Prof. Dyche, having been awarded the medal at the World's Columbian Exposition at Chicago in 1893. The collection of beetles is the best in any educational institution in this country, and the collection of butterflies is very excellent. At the present time the exhibit rooms in Snow hall are full to overflowing, many of the best zoological specimens being stored away on this account.

## REPORT ON GRAPES.

By A. H. Buckman, before Shawnee County Horticultural Society.

In Shawnee county the season has not been an ideal one for the grape grower. During the spring and growing season there was too much rain, with more than our usual amount of damp, murky weather. Mildew or fungus flourished; black rot, as a consequence, followed, destroying, I believe, 33 per cent., or one-third of our grape crop. And where our vineyard was of old standard kinds, Concord and Wordens, a greater per cent. was worthless or of no profit. A short crop gives greater demand and prices, with a full proportional amount of extra labor to prepare the same for market. We realized about \$50 per acre on vines of four years' growth; this paid us as well or better than the average work done on the farm.

This has been a good season for the novice, or even the old-timer, to learn the habits and requirements of different kinds of grapes. The present season may be an exception to many that will follow. If our Wordens and Concord had been Moore's Early, our wallet would have been in better shape at the end of the grape harvest, with much less labor in gathering and marketing. About the time Moore's Earlys are gone they are wanted. They are put on the market before ripe or at their best. This is done year after year, and the result is our grape consumers are ignorant of their good qualities when well grown and ripened.

My task to-day is to report on grapes. Forty kinds have fruited this season for us, ten have not yet borne fruit. I will endeavor to tell how some have behaved the present season, and will commence in the order of ripening.

Early Ohio—Was our first grape to ripen, this year the 10th of August, last year the 31st of July. All are six to ten days later than in 1897. Black, medium-sized berry and bunch, quality poor, one-half rotted.

Green Mountain—A few days later; a splendid little white grape; good in quality, clear of rot, vine a medium grower.

Moore's Early—The present season has given the best returns for labor expended of any of our vines; very little rot, and has been a good bearer; needs a good, rich soil.

Early Victor—Ripens unevenly, quality not the best, hangs onto the vine, and in a dry fall makes a fairly good raisin.

Telegraph—Black, medium size, solid bunch; shells off badly when overripe; inclined to overbear, then ripens unevenly; clear of rot, good grape, but unpopular for a market grape.

Moore's Diamond—Our best white grape; large, handsome, solid bunch and good-sized berry; quality good, very little rot.

Brighton—Red, large, handsome bunch, good-sized berry, quality best, always wanted, some rot. It needs pollinizing, as its own bloom is not perfect.

Wilder—Nearly black, large bunch and berry, quality good to best; very little rot. No grape has satisfied us better this season.

Barry—Black, very large berry and bunch, quality good, late in ripening; improves in bearing and in other respects as vine gets older.

Herbert—Is so near like the Barry, except more mildew or rot this season, that they can go in the same basket.

The last four kinds are said to be tender and need winter protection. Ours have gone through the last three winters without injury, although we lay down a part of ours.

Black Eagle—So black they shine, extremely large bunch, large berry, perfect bunch; to a lover of grapes is a sight worth seeing; quality best; 50 per cent. rotted this season, bloom not perfect, strong grower, tender, a good grape for the novice to experiment with.

Woodruff—Red, good, no rot, large

berry, small bunch, quality good when well ripened; will be wanted.

Worden—Seventy per cent. rotted.

Concord—Forty per cent. rotted.

Delaware—Almost a failure this season; foliage fell early and fruit failed to ripen where too much wood was left in trimming and crowded in the rows.

Catawba—The same as Delaware.

Wyoming—Red, good crop, clear of rot, quality similar to large-sized sugar-coated pills.

Moyer—Similar to Wyoming Red, except rotted badly; foxy, and is without one good quality.

Niagara—Nearly all rotted this season and was of no value.

Eton—Black, very large, quality poor, rotted badly; of no value.

Golden Pocklington—Quality is only medium, except for culinary purposes; vines need sprouting and bunches need thinning out on the vines; requires good rich soil.

Goethe—Light red or pink, quality equal to the best for the table; late in ripening, good bearer, some rot. We give ours winter protection.

Agawam and Salem—Nearly all rotted, not a sound bunch left.

Martha, Francis B. Hays and Mason's Seedling—Are all similar; white or light yellow; very foxy; not wanted in market except by a person who learned to eat the old fox grape when little.

Creveling—Has done no good for us; seems deficient in root.

Blood—A wild, rampant grower, small grape from Texas, nearly all seed, good for a very dark jelly.

Iona—Quality good, bears well; vine lacks strength.

Triumph and Lady Washington—Are similar, white or light yellow, good-sized berry, very large bunches, and of good quality, especially the Triumph; tender and need winter protection. Both are worthy the amateur's skill.

Elvira—White, small, knotty, little bunches; no market except for culinary purposes.

Etta—I believe an improvement on its parent, the Elvira; larger bunch and berry. It ripens late. It and the old Isabella froze on the vines this season.

Amber Queen—Dark amber color, quality first-class, bloom not perfect, lack pollen, bunch and berry medium.

Croton—White, long, straggling bunch, small berry, quality not tested, as ours have never ripened a perfect bunch. Leaves fall early. Fruits either sun-burn or rot.

Massasoit—Light red, medium-sized bunch and berry, quality good, not profitable. Leaves fall early, some rot.

Union Village—Nearly black, bunch large, berry largest of all our grapes, quality only medium, fair bearer.

Of this list my preferences are: Red, four kinds, Woodruff, Brighton, Goethe and Delaware; white, three kinds, Green Mountain, Moore's Diamond and Golden Pocklington; black, four kinds, Moore's Early, Concord, Wilder and Barry.

The practical question is, "Will it pay to raise grapes, and, if so, anything but a few black kinds?" I believe it does and will continue to pay. If I did not think so would be disgusted and quit.

We retail our fancy or best grapes. Very often mixed kinds in the same basket. Red, white and black are kinds to suit individual taste. Brightons, Diamonds and Wilders, as a sample, constitute a mixture hard to beat.

The present season the bulk of our stock was handled by commission men of this city. It appears to me that commission men do not want to bother with many extra kinds. They can handle to better advantage what has already established a reputation.

## Excursions to the Agricultural College and Station.

It is the plan of the college, if railroad co-operation can be secured, to have at least one excursion, and perhaps several, from different parts of the State, next spring, by which farmers can come and visit the college and Experiment Station and learn what these institutions are doing.

The pamphlet bulletins of the Experiment Station are sent to all farmers who desire them. By means of the press bulletins, with the help of the newspapers, useful information from the Experiment Station is still more widely scattered. Farmers who have read these publications will be interested in seeing the station itself. Talk up the matter through the winter and let it be known that a large company from your county will take advantage of the excursion.

In the Philippines the windows of the houses of the better class, the villas in the suburbs and the country mansions are made of oyster shells—those wonderful, transparent, pearl-like shells of the Oriental seas which admit light, but

## To Any College Without Cost

A little book for young women and for young men; an explanation of the plan by which young men and girls may obtain college, university or conservatory training without its costing them a penny, and the stories of some of those who have already done so. Free to any address.

The Curtis Publishing Company  
Philadelphia, Pa.

not the glare of the sun, illuminating the interior with the soft radiance of a cathedral. A great window filled with these sprays of pearl shows the color of ten thousand rainbows.

## Farm Notes for December.

The brood sow should have strong, tough bones.

Market all stock now as soon as properly finished to sell well.

It is well to be thoroughly prepared for cold storms at this season.

Do not allow the teams to stand over night with muddy feet and legs.

Warm quarters are cheaper than feed in maintaining animal heat in winter.

Put an extra covering on the vegetable and fruit pits as soon as the ground freezes.

If early broilers are wanted, the incubators should be started the first of this month.

By providing plenty of feed troughs and racks a considerable saving of feed may be made.

Excessive fat is of no advantage in a hog. Sell as soon as a good marketable condition is secured.

Run out furrows in the low places in the wheat fields and meadows before the ground freezes too hard.

Fall pigs, calves and colts need warm, dry quarters if they are kept growing as they should during the winter.

Stock when on dry feed alone requires plenty of water. See that it is supplied conveniently and that it is not too cold.

Animal heat must come from the food and any treatment that tends to chill the system increases the amount of food necessary.

This is the month for settling up. Make an invoice of what you have and what you owe, and see how you stand financially.

Look over the past season's work and see where the mistakes have been made, so that in planning the next season's work they may be avoided.

A little care in providing walks around the yard where needed will not only add much to the comfort of getting around in muddy weather but will lessen the work of the wife in keeping the house clean.

N. J. SHEPHERD.  
Eldon, Mo.

The Commissioner of Pensions reports that the total number of pensioners now on the rolls is 1,040,356. This is the first time that the total has been above a million names. There were nearly 64,000 original claims granted last year, and about 4,000 restorations to the list. The disbursements during the fiscal year 1898 amounted to \$144,651,879.

The term "quarter," used in warfare, originated from an agreement anciently made between the Dutch and Spaniards, that the ransom of a soldier taken in action should be a quarter of his pay. Probably it meant to "grant conditions." In this sense the expression was commonly used at one time. As a modern warlike term, to give quarter means that the prisoners of war should be sent to the rear of the army and there lodged and fed by the captors until exchanged or released on the termination of hostilities.



## Horticulture.

### IS HORTICULTURE WORTHY GREATER STATE ENCOURAGEMENT?

By Wm. H. Barnes, Secretary of Kansas State Horticultural Society, read before Shawnee County Horticultural Society.

A few years ago, while yet the school geographies taught that this was the Great American Desert, and while we yet read of the Indian with awe, and considered him only as a savage determined to cover his gun stock with notches each of which meant one white soul gone to its Maker, while the deer, the buffalo and the howling coyote still roved freely over the prairies, came the hardy pioneer, the man who as long as he had plenty of ammunition for his trusty rifle was independent of his fellows. He could live on turkey, prairie chicken, venison and buffalo beef. He found these prairies covered with grass, and along some of the larger streams he found a narrow fringe of timber. He and his fellows chose out the sheltered bottoms, built log cabins, and roughly farmed their lands. They soon learned that instead of a "desert" it was a garden they had found. Their plowing checked the annual prairie fires and caused the timber belts to widen and thicken, increased the wild blackberries, raspberries and nuts; and they were happily disappointed in the Great American Desert.

Children grew up in these homes, and the immediate wants of these families being abundantly satisfied, they soon began to desire some of the luxuries, and art improvements; and with an eye to beauty, shade and comfort, nut and shade trees were planted, or left and protected where nature had well placed them. Soon an "Appletree Johnny" appeared with his few seedling trees and was succeeded by the more pretentious nursery agent, who prided himself on the wonderful (?) quality of his budded and grafted fruit. Gradually orchards were planted, flanked by berry patches and an improved vegetable garden. Soon towns sprang up and street shade trees and lawns followed naturally. Let us take a look at Kansas in 1850. We see the seemingly endless sea of grass dotted by droves of buffalo. The only thing in sight that seems natural, west of an eastern fringe, is a wagon train going for gold. Shut your eyes for forty-eight years. Now open them and look again. What do you now see? Farm houses too numerous to count, each flanked with an orchard annually red with ripening fruit, miles of green hedges, acres of cultivated groves, hundreds of cities and towns each with its miles and miles of shade trees and acres of closely shaven lawns dotted with shrubbery and flowers. The red man, the buffalo, the pioneer, where are they? Gone! gone! gone! We see the church spires by hundreds and note the thousands of school houses, high schools and colleges, each embowed in trees.

Who did all this? Nature? No! American taste, perseverance and love of the beautiful has caused these trees to grow. Some came to our State and filled their pockets with the gains of cattle fed on the wild grasses, or by growing grain, and have passed on. These prairies relapse into their former wild state after a few years, even from the plow and harrow and grain field; but the fruit trees and groves live on after the hand that planted them has moldered to dust. To whom does our State owe all this beauty of foliage, of ripening fruit, of luscious berry, or appetite-satisfying culinary vegetables? To the horticulturists! Nearly every agriculturist is a horticulturist. If he is not, let us pity him. It is the horticultural taste of our people that makes our State, our homes attractive. Take away the work of the horticulturist and the State would not sell for one year's taxes. Who would live in it at all? By horticulture I mean the culture of fruits, vegetables and flowers, whether for utility or pleasure. As side issues or branches horticulture also claims the lawns, groves and shade trees. Can any one estimate the value of these things? An apple tree costing 5 cents, properly planted and cared for, is worth \$10 at ten years of age. A grove of catalpa trees, containing 3,000 trees per acre, costing say \$4 per 1,000, will in ten years cut 6,000 fence posts, worth, over and above labor, 5 cents each, or \$300 per acre. A cabbage seed is worth a minute fraction of a cent, yet it may produce a cabbage worth 10 cents. Whence comes this added value? It is all in growth, and the growth is caused by the horticulturist working intelligently hand in hand with nature. It is the result of the "know how." Our tables require

over \$15,000,000 worth of horticultural products per year, and we ship \$5,000,000 worth more, making a total of \$20,000,000 for horticulture in the State. Of the \$15,000,000 worth on our tables, we should, but do not, grow 80 per cent. We garden too much over the line! Let us go up and look over into Colorado, Iowa and Minnesota and we see big fields of potatoes growing for Kansas. Kansas people sell corn for 15 cents a bushel and pay the growers for these potatoes from 50 to 75 cents a bushel. And these growers say, as they smile inwardly, "Why don't those foolish Kansans learn to grow their own potatoes?" Look over into Iowa, Indiana, Illinois, Maine and Maryland and see the crowds of boys and girls hurrying to the canneries; see the farmers urging their horses along to those same canneries, with wagons loaded with peas, beans, pumpkins, peaches, tomatoes and sweet corn, and watch the carters loading the canned and boxed goods on the cars labelled "KANSAS." Did you hear one remark, "Why don't those foolish Kansans raise their own tomatoes and corn?" and then another, "Those Kansas folks buy any kind of truck if it only comes in on the cars."

My friends, if the fruits, vegetables, shrubs, fruit trees, shade trees, pot and border plants which our climate and soil will grow, and which we purchase from "over the line," were all put in one field, how large would it be? I venture the assertion that it would contain over 150,000 acres, and possibly 200,000 acres. Again, we want our citizens to find employment, and yet this acreage—our garden over the line—must employ at least 25,000 people a whole or part of the year. And we pay their wages. Add to this the cost of transportation. And "Jones (that's me) pays the freight." Many people think goods from Europe are improved in flavor by crossing the salt sea. I fear many of our citizens think railroad smoke improves horticultural products. Why not throw away foolish pride and vanity and take pleasure in having the butcher deliver Kansas meats, the baker deliver bread from Kansas flour, the grocer deliver fruits and vegetables grown on Kansas soil? Let us glory in it, and pity our vain neighbor who prides himself on always having "the best," foolishly judging that best which was produced abroad. Why not appreciate our climate, our soil, our State, our home? You find a worm in a Kansas apple and condemn all Kansas apples.

My friend, do you know that in Arizona, New Mexico and some other places they pride themselves on having no worms or bugs? Let me tell you that where there are no worms there is little fruit. The more plentiful the fruit the more plentiful the worms, and the more plentiful the worms the surer you are that you are in a fruit country. Will a woman feed her child hay or cockle-burs? Neither will the parent moth or beetle lay her eggs unless she knows her young will find proper nourishment. Thus it is plain that with the extension of cultivated fruits, fruit-eating and fruit-tree-eating insects increase. Spraying has become a fixture. Reports coming from different parts of our State complain of codling moth, canker worms, tent caterpillars, bud moth, handmaid moth, apple curculio, plum curculio, fall web worm, garden web worm, root louse, maple worm, bark louse, grasshoppers and other insects in large numbers. Some States in the Union appropriate large sums for the prevention and destruction of insects. Does Kansas spend any money in that way? Not a dime! The State Horticultural Society is a missionary society, and as all missionary societies have enemies, so has it. And as the enemies of the missionaries and their work are not those that are identified with it, so it is with us. Nature knows no political, religious or sectional bias. An ignorant colored man may grow finer watermelons than an educated white man. Apples grow as red, and turnips as solid for a Universalist as for a Presbyterian. Flowers bloom as freely for a Democrat, a Populist, or maybe an anarchist, as for a Republican or a Prohibitionist; and yet in our State some citizens would like to place the agricultural and horticultural societies on a political basis, and open both up to the spoils system. Some even object to their receiving any State aid unless so placed.

As before remarked, such people are not with the Horticultural Society and know little of its far-reaching benefits. For many years it received State aid, yet seemed to do little towards maintaining the standard of excellence or push our horticulture demands. Since coming to the State house it has become a department worthy of the name. It has reached out to aid struggling horticulturists in every possible way, and has thus brought upon itself a work of constantly increasing magnitude. The Secretary gives his entire working hours to it, and knowing

its power of expansion, asked the late Legislature to appropriate money for a clerk and stenographer. This they refused to do. Here I would remark that if the work progresses as it has of late, the horticulturists of the State must ask for an assistant as well as for a clerk and stenographer of the next Legislature, or the work will lag and fall backward. We must progress or we retrograde. We cannot stand still. The satisfying of one want only discloses another. By act of the Executive Council we, on the 29th of August, moved into a room of large dimensions, which will enable the society to accomplish more and better work with less confusion.

Demands are made from many counties for personal visits and instruction; many of these must be refused for lack of time and funds. Others are visited at their own expense, which causes dissatisfaction. The Legislature should provide a much larger traveling fund. With sufficient office assistance and a fair traveling fund the Secretary could and would visit many counties in the State, addressing words of hope, encouragement and instruction, looking up insects, fungi and diseases and publishing preventives. Yes, the State could and should do more to encourage horticulture. It should offer premiums for new and improved fruits, and new and improved methods of culture. It should encourage horticultural exhibitions and if possible pass a few laws giving better protection to trees and plants while growing, and in the interests of the horticulturists while his products are in transit or in the hands of consignees. I know of no business that admits of so much cheating and rascality as that of produce commission. There should be a law governing the actions of men in that line and some kind of bonds to protect consignors. There are no better reasons for a national bank to put up bonds than for a produce commission dealer. I have in my own experience had dealings with commission men who did not understand even the rudiments of bookkeeping, and several who could not properly write an ordinary business letter. They all knew how to take out the commission (and as much more as they dare). They are seldom prosecuted even when notoriously dishonest. Blacklisting in their case should be legal, and the names of dishonest commission firms published under a warning, and they driven out of business. Yes, let our Legislature awaken to the fact that horticulture is the most important industry in the State; and has done more for the State than any other industry; and if they are wise our law-givers will do for it all that it requires, wisely finding out its requirements by consulting the horticulturists. Horticulture brings to the State beauty, comfort, wealth and settlers, and to our citizens health, wealth, comfort, beauty, pleasure, cooling shade, luscious fruits, healthful vegetables and lovely flowers.

Allow me to digress a little and add that a cattleman may not add a dollar to the permanent wealth of the State, and yet he has a costly live stock commission at his call. With each car he receives a free ticket to and from destination, and a costly Board of Railroad Commissioners stands ready to defend his rights, and yet a car-load of fruit or vegetables is usually worth as much as three or four cars of cattle and the railroad is allowed to charge double first class freight, and the shipper must pay fare or stay at home, while his more valuable and far more perishable freight is at the mercy of the trainmen, and in danger of delay as it passes each and every side track. The cattle or grain man, to whom all bow, may be leaving the State with all his wealth, while the fruit-grower must leave the trees and bushes on which his valuable freight grew. I have paid \$117 to the railroad company for bringing in a car-load of boxes, and crates to Kansas, and then paid from 1 to 5 cents a pound on these same boxes when they went away again, a total of not less than \$500 for freight on the wood alone. which is something cattlemen do not require. Grain growers possibly pay freight on a few sacks. With proper State encouragement our "garden over the line" will grow less and less and our home



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products more varied and improved in quality and quantity. I will close with the words uttered by Attorney General Boyle at a meeting of the Executive Council: "I believe we can make no more profitable use of State money than to aid the State Horticultural Society." And you know he was right.

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Take Laxative Bromo Quinine Tablets. All druggists refund the money if it fails to cure. 25c. The genuine has L. B. Q. on each tablet.

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Jessup Tree Protectors.

Absolute protection from rabbits; keeps off borers and bark-lice and prevents sun-scalds; is indestructible and cheap. Write for circulars and prices.

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Double motion, immense capacity, easy draft, enclosed gear, runs in oil which absorbs friction and wear. Big advantage over all others. Ask for particulars.

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**Reliable Incubator & Brooder Co. Box 62, Quincy, Ill.**



## In the Dairy.

Conducted by D. H. OTIS, Assistant in Dairying, Kansas Experiment Station, Manhattan, Kas., to whom all correspondence with this department should be addressed.

### President O. F. Armstrong's Address.

Before the Kansas State Dairy Association, Topeka, Kas., November 16, 1898.

Members of the Kansas State Dairy Association, Ladies and Gentlemen:—After having listened to the hearty welcome extended to us by our Governor, I am inclined to congratulate myself, and you, that we are here.

I feel even more deeply the honor you have conferred upon me by electing me your President. That honor was unsought and the responsibility is assumed with trepidation. Avoiding all formalities and the technicalities of parliamentary usage, I will perform my duties to the best of my ability, and I know you will render me proper assistance, that we may accomplish the purpose of this meeting. That we shall have a good time here is unquestioned, but whether or not it will be a profitable time for us and the interests we represent depends upon the use we make of our opportunities.

We have an excellent program before us. I hope you will encourage those who have prepared papers for us, by your presence and close attention. So, and so only, can we make this meeting interesting and conducive to the object of this association. Many have come with valuable information obtained during the past year, which will be expressed for the good of all.

The development of Kansas dairy interests requires a crusade of education and intelligent co-operation of all concerned. While there is need of continued education among our creamery proprietors, managers and butter-workers, the burden of work to be done is in educating the farmers and dairymen. We cannot expect those patrons who realize only \$12 to \$15 per annum from each cow to continue in business unless we can teach them how to make their cows more profitable. In this connection, I most heartily commend the work that is being done by the Kansas State Agricultural College, and I suggest that each member of this association use his best endeavor to have the Legislature make ample appropriation for that institution, that it may hold more institutes and give a broader circulation to its bulletins. Our local papers could also extend their field of usefulness by devoting a column to the interests of the dairy.

Before closing, I wish to call your attention again to the fact that Kansas is the only prominent dairy State without proper laws regulating the manufacture and sale of oleomargarine. We have a Legislative committee, but if you expect them to accomplish anything you must give them encouragement and support. Two years ago our measure passed the Senate almost unanimously, and as there has been no change in that body we know that they are with us. The work to be done now is with our newly-elected Representatives. I urge each member of this association to use his influence with such legislators as he may be acquainted with to secure the passage of the bill which will be prepared by our Legislative committee.

### Notes From the Agricultural College Dairy.

The college dairy has just tested a sample of skim-milk and a sample of butter-milk from a family in town, that kept one cow for family use. The extra milk was set in crocks and skimmed when a thick layer of cream formed on top. As there was but a small quantity of cream, it was churned with an egg-beater. The Babcock test showed the skim-milk to contain 1 per cent. butter fat, equal to a loss of 1.17 pounds of butter for every 100 pounds skim-milk; and the butter-milk 5.7 per cent. butter fat, equal to a loss of 6.7 pounds of butter for every 100 pounds butter-milk.

Mr. J. A. Conover, special student in dairying, also secured samples of skim-milk and butter-milk from a family in town, and found a still greater loss in the skim-milk, but less in the butter-milk, the skim-milk showing 1.2 per cent. and the butter milk 1.3 per cent. This makes a loss of 1.41 pounds butter for every 100 pounds skim-milk and 1.52 pounds butter for every 100 pounds butter-milk.

These figures do not show any great loss to the families mentioned, because the total weight of skim-milk and butter-milk is so small, but they are of interest in that they show the immense loss that would occur where such practices are followed on a larger scale. In creameries the loss in skim-milk is usually reduced to a mere trace and in the butter-milk to .1 or .2 of 1 per cent.

### Prize-Winners at the Kansas State Dairy Association.

#### BUTTER.

First—Kansas Creamery Company, Oskaloosa station, score 97.

Second—Meriden Creamery Company, McLouth station, score 96½.

Third—Cawker Creamery, Cawker City, score 96½.

All butter-makers scoring 90 per cent. receive a diploma. Out of 130 tubs of butter one scored 97, one 96½, one 96¼, one 96, one 95¾, eight 95½, twenty-three 95, nine 94½, nine 94, three 93½, nine 93, eight 92½, eleven 92, seven 91½, five 91, twelve 90½, twelve 90, four 89½, three 89, and two 88.

#### CREAMERYMEN'S CLASS.

First—C. F. Pressey, Cawker City.

Second—C. F. Armstrong, of Clyde, and W. F. Jensen, of Beloit, were tied.

#### PATRONS' CLASS.

First—T. E. Borman, Navarre.

Second and third prizes were put together and the money equally divided between G. W. Priest, of Meriden, Mr. Hollis, of Clyde, and G. W. Stewart, of Talmage.

#### BUTTER-MAKERS' CLASS.

First—J. E. Musser, Enterprise.

Second—P. G. Hoffman.

Best paper by a Kansas creameryman—A. Jensen, Manhattan.

#### CHEESE.

First—Whiting Cheese Company, Whiting, score 95½.

Second—C. B. Merry, Nortonville, score 95.

All cheese-makers scoring 90 per cent. or over receive a diploma. Out of nine entries of cheese, one scored 95½, one 95, one 94, one 93, one 90, one 85, one 82½, one 79, and one 76½.

### An Interesting Experiment in Keeping Butter.

Under date of November 17, 1898, the New York Farmer gives an account of a very interesting and valuable experiment in keeping butter in cold storage. Several years ago there was considerable discussion as to the effect refrigeration had on the quality of butter, and there seemed to be a prevalent opinion that if butter was subjected to a temperature much below freezing it would be seriously injured. Prof. H. M. Cottrell, at that time Superintendent of Ellerslie stock farm, assisted in an experiment to find out the facts, and in October, 1892, furnished "four small packages of butter (five pounds each), two made from ripened cream, in the usual way, and two from sweet cream, unsalted." These were placed with what is now known as the Merchants Refrigerating Company. One box of the ripened and one box of the sweet cream butter were placed in a refrigerating room where the temperature was kept day and night at the freezing point. The other two boxes were kept at a temperature considerably below freezing, averaging about 12°, or 20° below freezing.

All through the six years the tryer was occasionally put into this butter, but nothing was given out to the public until May 7, 1897, when Maj. Henry E. Alvord, Chief of Dairy Division, Washington, D. C., in a letter to the editor of the New York Farmer, reported as follows:

"I examined these boxes of butter with care, and with much interest. Two of them had been so often opened and tested that it was difficult to test them with a tryer without getting butter that had been previously exposed to the air. The other two, being one of each kind, had been examined only a few times and these received our special attention. The butter was frozen, having been kept at a temperature of 10° to 20° F., but upon allowing samples to be exposed long enough to raise the temperature to 40° to 50° the butter was found to be perfectly sound and sweet. I should have known it was not fresh butter and it lacked attractive flavor, but it was nevertheless good butter, and the possibility of keeping in this way for such a long period was well demonstrated."

On November 9, 1898, E. G. Fowler, editor of the New York Farmer, examined the butter and expressed himself in the following language:

"To begin, the salted butter from the ripened cream, so far as taste could tell, was sweet and pure as the day when it was made and packed, in 1892. The grain was unchanged, but we think the butter, which was from pure-blood Guernseys, and was uncolored, had grown just the least possible shade lighter. But there was one perceptible change which was detrimental, its flavor was partially gone, perhaps largely gone would better express it, but we could have even in that stage eaten it on our bread with pleasure, had we had the bread and been hungry. "The unsalted butter from the sweet cream was as perfectly preserved as the

first, but, like it, had depreciated in flavor and aroma. As this type of butter has these qualities less strongly than the other, this change would be more easily noted. But it was still good butter so far as any one could tell by taste and vision."

This experiment has been watched with a great deal of interest by merchants who deal in butter and by dairymen and creamerymen. It shows beyond the possibility of a doubt that butter can be kept for a reasonable period of time and that freezing and keeping it frozen does not seriously injure its qualities.

### Treatment of the Cow After Calving.

After the cow has recovered from calving, the feed should be gradually increased until the full limit of profitable feeding is reached, and the cow should be pushed to her utmost possible limits for the first three months. It will often pay to give the cow for the first three months after calving more feed than will produce butter at the lowest rate, e. g., if a cow on a certain amount of feed will produce a pound of butter for 7 cents for the feed, it may pay to increase the feed 25 per cent., to 50 per cent., or even to double it, though this increase brings the cost of butter up to 8 or 10 cents per pound for feed, if a good increase in yield is obtained, because a high yield during the first months after calving brings an increase through all the months of the milking period, and a cow that is pushed at the beginning of her year will give a good flow longer than one not so treated.

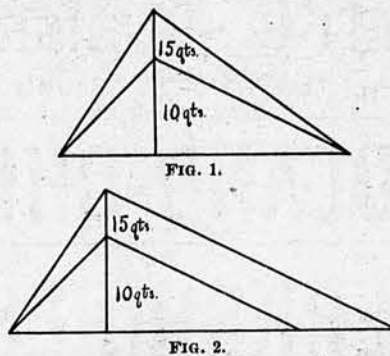


Fig. I shows the gain obtained by pushing the cow to a high yield the first three months, even though the milking period is not extended.

Fig. II shows the gain from forcing while the cow is fresh, and also the usual gain which this method gives in extending the milking period.

When other work is pressing, the dairyman is sometimes tempted to let the fresh cow go with the ordinary care and feed until the rush is over, expecting to make up for his neglect by good treatment when he is less hurried. He cannot afford to do this, for if a cow starts with a low or moderate milk yield, no amount of care or feed afterward will succeed in securing her best yield.

Cows will give, and do give, milk without any of these careful attentions. A cow will give milk if little attention is paid to drying her up and no cooling and loosening feeds are given before calving. Cows calve every winter without shelter or care, with ice-water only to drink, and with no care given to their udders, and yet they give milk. But the best yields and most profitable returns can be obtained only by careful attention to every one of these details, and neglect of any one of them frequently cuts down the yield 25 per cent. for the year. It is the neglect of many and sometimes all of these details in caring for the cow that makes the average cow yield less than one-third of that produced by the good dairy cow properly handled.

After the cow has passed the point of greatest flow the feed should be gradually reduced, feeding to produce yield at most profit. Care should be taken to keep her in moderate flesh, and the ration slowly changed until, during the last month of milking, it is similar to that recommended to be fed before calving.—From Kansas Experiment Station Bulletin 81.

### Bulletin Notice.

The Experiment Station of the Kansas State Agricultural College has this

## CREAM SEPARATORS

De Laval "Alpha" and "Baby" Separators.

First—Best—Cheapest. All Styles—Sizes. PRICES \$50 TO \$800.

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week finished mailing Bulletin No. 81, on the "Care and Feed of the Dairy Cow." Any one not receiving this bulletin, who desires it, should apply at once to the Secretary of the Kansas Experiment Station, Manhattan, Kas.

### Dirt in Milk.

The college dairy secured samples of milk from persons that were engaged more or less in the dairy business and placed these in long narrow glass tubes. After being allowed to stand for several hours these tubes were examined and notes taken on the amount of dirt that settled to the bottom. Considerable difference was found, some samples being almost free from visible dirt, while others had so much that it formed an irregular ring along the lower outer edge of the tube. While this test is a good one to detect solid particles of dirt in the milk, it is by no means conclusive, as where milk is handled in an uncleanly manner more or less dirt becomes dissolved in the milk and cannot be separated out. This goes to illustrate the importance of the utmost cleanliness in handling milk. We object strongly to milk being adulterated with water, but this is not to be compared with adulterating it with dirt.

### Differences in Cows and Cow Owners.

During the summer of 1898 the college dairy made an investigation of the patrons of the Meriden creamery to ascertain the income they were realizing per cow for milk sold to the creamery. The poorest herd averages \$7.54 annually per cow and the best one \$42.09, making a difference of \$34.55 per cow. Taking the poorest five herds, the average per cow is \$9.44, and for the best five \$33.74, a difference of \$24.30, or 257 per cent. Where records have been kept it has been found that it takes from \$20 to \$30 to pay for keeping a cow. It will thus be seen that, as far as milk is concerned, the cows from the poorest herds are running their owners into debt, the only redeeming feature being the value of the calf produced. These figures illustrate very clearly the need and likewise the possibility of materially increasing the income from the dairy cow.

### Cold Barns and Ice-Water for Dairy Cows.

The investigation made by the Kansas Experiment Station of the creamery business of the Meriden creamery revealed the fact that there was one man who sheltered his cows in winter by two wire fences, another by a wood lot, and still others by wind-breaks. Out of 82 patrons, there were eighteen, or 22 per cent., who compelled their cows to drink ice-water from a creek or pond in winter. When we stop to think that the dairy cow, unlike the steer, has a thin hide, with little or no fat beneath the skin and a poor surface circulation, we can understand one of the reasons why the yield of some herds is so low. The dairy cow is a very sensitive animal, and when she is forced to use her food to keep up animal heat and then stand shivering while taking her fill on ice-water, she certainly cannot be expected to make a very good showing at the milk pail. Few people realize the loss sustained from cold barns. In an experiment carried on in England, it was found that with a herd of thirty cows the profit was £3, or about \$15 per week more when the temperature of the barn was kept at 63° than when at 52°. At this rate it would not take long for a herd of good dairy cows to pay for a barn. The barn should be tight enough so that the animal heat from the cows will always keep the manure from freezing. D. H. O.



### The Improved U. S. Cream Separators.

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Are more substantially made and are superior in all points to all others.

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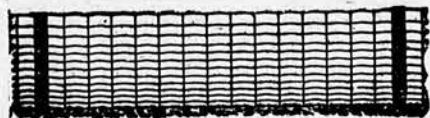
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**Administrators' Sale of Real Estate.**

Pursuant to the will of the late David R. Youngs, I offer at private sale all the real estate belonging to his estate, as follows:

1. The "Home Place," w. hf. of nw. qr. sec. 26, and e. hf. of ne. qr. sec. 27, t. 12, r. 15, 160 acres. Contains good house, barn and sheds, outhouses, corrals, wells and cisterns, wagon scales, three orchards, and all appurtenances constituting a first-class farm. About 130 acres plow land, 12 acres clover, 5 acres alfalfa, remainder pasture land, timber land and creek, all well and conveniently fenced. Price, \$3,000. Terms, one-third cash, one-third in two years and balance on long time. Interest on deferred payments 7 per cent. per annum, secured by mortgage.

2. Also the e. hf. of nw. qr. of said sec. 26, 80 acres. About 40 acres first-class plow land and about 40 acres hay land. Well and separately fenced. Price, \$3,200. Terms same as above.

3. Also about 101 acres of pasture land in one body, well fenced and well watered, being nw. qr. of ne. qr. f. l. and sw. qr. of ne. qr. f. l. of said sec. 27, and about 34 acres off the east side of the nw. qr. f. l. of said sec. 27. Price, \$20 per acre. Terms same as above.

4. Also about 101 acres of good prairie hay land, being w. hf. of nw. qr. f. l. of said sec. 27, and about 34 acres off the west side of the e. hf. of nw. qr. f. l. of said sec. 27. Price, \$25 per acre. Terms same as above.

5. All of the above described land lying contiguous and constituting one large and complete farm and situated about seven miles southwest of Topeka near the Burlingame road, will be sold together for \$15,000, on the same terms already stated.

6. Also 42 acres in se. qr. of sec. 9, t. 12, r. 15, near Six Mile creek. Mostly first-class plow land; well fenced. Small house and some other improvements. Price, \$1,250. Terms same as above.

For further information write or call on the undersigned at his office, Bank of Topeka building, Topeka, Kas.

CHAS. F. SPENCER,  
Administrator, with will annexed, of said estate.

**Publication Notice.**

Case No. 19727.

In District Court in and for the county of Shawnee, State of Kansas.

W. H. Wilson,

vs.

Iro L. Wilson.

To the above named defendant, Iro L. Wilson: You are hereby notified that the plaintiff, W. H. Wilson, has, on the 4th day of November, 1898, filed his petition in the District court of Shawnee county, State of Kansas, against you, praying for a decree of divorce from you, and unless you answer or demur by the 21st day of December, 1898, his petition will be taken as true and judgment rendered accordingly.

THOMAS ARCHER,  
Plaintiff's Attorney.  
Attest: E. M. COCKRELL,  
Clerk District Court.

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Free hotel accommodations to all parties from a distance. It will pay breeders desiring first-class stuff to come to this sale.

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**..PUBLIC SALE OF..****Grandview Herefords,**

AT THE STOCK YARDS PAVILION, KANSAS CITY, MO.,

December 15 and 16, '98.

Seventy bulls and thirty-five cows and heifers will be sold. These animals are of particularly desirable ages, are of the leading Hereford families, and are selected with care with the view of making an offering that will maintain the reputation of the Grandview herd. The bulls are large, smooth, grass-grown, fleshy animals, and three-fourths of them will be over seventeen months old at the time of sale. The heifers will either all be bred or old enough to breed at that time. Catalogues now ready.

COL. S. A. SAWYER, COL. J. W. JUDY,  
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**GRAND CLOSING OUT SALE**

HIGH-CLASS POLAND-CHINAS.

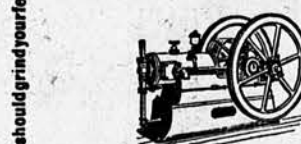
THURSDAY, DECEMBER 8, 1898, AT PEABODY, KANSAS.

In order to close out a partnership, we have concluded to close out our entire herd of registered Poland-China swine, which we believe is by all odds the best and most top quality offering of Poland-Chinas both as to breeding and individual excellence made this season. The herd boars, Miles' Look Me Over 18879 and Lambing's Best, besides thirteen serviceable yearling boars; also What's Wanted Jr., Wren's Medium, Chief I Know, Look Me Over, Black U. S., Chief Tecumseh 2d sows and gilts—sixty head in all. Write for catalogue to Will sell at private sale one Spanish and one Mammoth Jack, both extra good sires.

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and have a "Charter" Gasoline Engine to do it with; also All Other Work.



Charter Gas Engine Co., Box K, Sterling, Ill.

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Half the Cost—with the  
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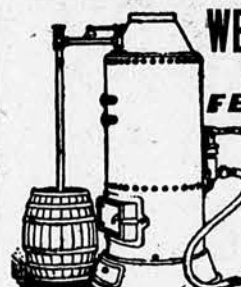
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STRICTLY FIRST-CLASS.



Guaranteed to grind more corn and cob, shelled corn and all small grains in a given time, and please you better than any other sweep mill of same size.

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We manufacture the **CELERY CITY FEED COOKER**

and sell direct to the farmer and stock raiser at the same price the dealer has to pay. We Save You Dealers' Profit. The Feed Cooker will double the nutritive value of grain and fodder. Send for circulars.

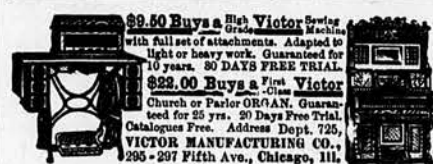
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Box 4, Kalamazoo, Mich.

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Self-acting, Best Governed, Acknowledged to be the most powerful and durable made. We have everything the farmer needs in this line. **Towers, Tanks and Pumps.** **Outlets, Grinders, Shellers, etc.**

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For Weak Lungs, Weak Throats, Weak Bodies.

The Health Resorts of New Mexico and Arizona

are unrivaled. Pure, dry air; an equable temperature, the right altitude, constant sunshine.

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## MARKET REPORTS.

## Kansas City Live Stock.

Kansas City, Nov. 28.—Cattle—Receipts since Saturday, 10,459; calves, 292; shipped Saturday, 9,245 cattle, 142 calves. The market was weak. The following are representative sales:

No.	Ave. Price	No.	Ave. Price
3.....	1,493 \$4.80	44.....	1,183 \$4.65
12.....	1,343 4.55	59.....	1,234 4.30
40.....	1,137 4.10	8.....	1,096 4.10
10.....	1,420 4.35		

## WESTERN STEERS.

15.....	1,155 \$4.40	14.....	1,207 \$4.10
23.....	1,129 4.00	23.....	804 3.75
22.....	933 3.55	33 Tex.....	743 3.25
4.....	1,052 3.00	1.....	1,063 3.00

## NATIVE HEIFERS.

23.....	837 \$3.95	3.....	826 \$3.85
1.....	568 3.85	27.....	963 3.63
8.....	1,175 3.50	4.....	1,097 3.35
18.....	1,033 3.25	18.....	996 3.25

## NATIVE COWS.

2.....	1,190 \$3.25	2.....	900 \$3.00
1.....	1,120 2.75	2.....	1,115 2.65
1.....	890 2.40	3.....	946 2.35
1.....	550 2.25	2.....	910 2.00

## NATIVE STOCKERS.

4.....	470 \$4.25	2.....	700 \$3.30
69.....	790 3.30	5.....	638 3.05
1.....	603 3.00		

Hogs—Receipts since Saturday, 11,183; shipped Saturday, none. The market was 2½ to 10c lower. The following are representative sales:

65.....	276 \$3.35	72.....	294 \$3.35	4.....	380 \$3.35
61.....	270 3.32½	55.....	285 3.30	73.....	367 3.30
47.....	300 3.30	74.....	268 3.31	14.....	304 3.30
63.....	337 3.30	68.....	248 3.30	56.....	304 3.27½
62.....	255 3.27½	75.....	228 3.27½	67.....	329 3.27½
31.....	317 3.27½	64.....	226 3.25	75.....	249 3.25
81.....	247 3.25	74.....	276 3.25	81.....	248 3.25
95.....	221 3.23½	85.....	215 3.22½	84.....	240 3.22½
81.....	240 3.22½	4.....	205 3.22½	61.....	193 3.22½
91.....	209 3.20	88.....	190 3.20	88.....	208 3.20
71.....	243 3.20	80.....	217 3.21	79.....	179 3.20
84.....	211 3.20	104.....	113 3.20	57.....	179 3.17½
83.....	192 3.17½	87.....	177 3.17½	2.....	290 3.15
89.....	166 3.12½	43.....	183 3.12½	122.....	160 3.10
87.....	132 3.10	44.....	196 3.10	101.....	155 3.05
90.....	151 3.05	1.....	481 3.00	97.....	163 3.00
27.....	111 2.95	108.....	93 2.90	46.....	121 2.90
104.....	130 2.90	8.....	108 2.85	46.....	96 2.75

Sheep—Receipts since Saturday, 3,109; shipped Saturday, none. The market was weak to 10c lower. The following are representative sales:

60 lambs.....	68 \$4.65	251 T. weth.....	82 \$4.00
250 T. weth.....	81 4.00	54 nat. sh.....	94 3.90
50 sw.....	101 3.85	250 T. clip fd.....	92 3.50
30 sw.....	75 3.00	176 Ar. gs. o.....	87 2.50

## St. Louis Live Stock.

St. Louis, Nov. 28.—Cattle—Receipts, 3,500; market steady to strong; beef steers, \$4.00@5.25; light steers, \$3.00@4.40; stockers and feeders, \$2.50@4.40; cows and heifers, \$2.00@4.35; Texas and Indian steers, \$3.00@4.25; cows and heifers, \$2.25@3.40.

Hogs—Receipts, 11,000; market 10c lower; yorkers, \$3.10@3.25; packers, \$3.20@3.30; butchers, \$3.25@3.40.

Sheep—Receipts, 1,000; market steady; native muttons, \$3.50@4.25; lambs, \$4.00@5.40.

## Chicago Live Stock.

Chicago, Nov. 28.—Cattle—Receipts, 17,000; best steady, others weak to 10c lower; beefs, \$4.10@5.70; cows and heifers, \$2.00@4.65; Texas steers, \$3.10@4.25; westerns, \$3.60@4.40; stockers and feeders, \$3.00@4.50.

Hogs—Receipts, 72,000; market rather slow; mostly 10c lower; light, \$3.10@3.35; mixed, \$3.10@3.40; heavy, \$3.10@3.45; rough, \$3.10@3.20; yorkers, \$3.30@3.55.

Sheep—Receipts, 21,000; market steady to 10c lower; natives, \$2.60@4.65; westerns, \$2.90@4.35; lambs, \$4.00@5.70.

## Chicago Grain and Provisions.

	Nov. 28	Opened	High'st	Low'st	Closing
Wht—Nov.....	66	66½	66½	66½	66½
Dec.....	66	66½	66½	66½	66½
May.....	66½	66½	66½	66½	66½
Corn—Nov.....	32½	33½	33½	33½	33½
Dec.....	32½	33½	33½	33½	33½
May.....	34	34½	34½	34½	34½
Oats—Nov.....	25½	26½	26½	26½	26½
Dec.....	25½	26½	26½	26½	26½
May.....	26½	26½	26½	26½	26½
Pork—Dec.....	7 70	7 81	7 90	7 80	7 80
Jan.....	9 00	9 02½	9 07½	9 02½	9 02½
May.....	9 20	9 22½	9 17½	9 22½	9 22½
Lard—Dec.....	4 80	4 82½	4 77½	4 82½	4 82½
Jan.....	4 91	4 95	4 90	4 95	4 95
May.....	5 05	5 10	5 05	5 10	5 10
Ribs—Dec.....	4 42½	4 42½	4 42½	4 42½	4 42½
Jan.....	4 50	4 55	4 50	4 55	4 55
May.....	4 67½	4 67½	4 65	4 67½	4 67½

## Kansas City Grain.

Kansas City, Nov. 28.—Wheat—Receipts here to-day were 170 cars; a week ago, 337 cars; a year ago, 258 cars. Sales by sample on track: Hard, No. 1, 62c; No. 2 hard, 60c@62c; No. 3 hard, 57½c@61½c; No. 4 hard, 51½c@59c; rejected hard, 49½c@55½c. Soft, No. 2, 67c; No. 3 red, 62c@64c; No. 4 red, 58½c@61c; rejected, 49½c@50½c.

Corn—Receipts here to-day were 29 cars; a week ago, 43 cars; a year ago, 182 cars. Sales by sample on track: Mixed, No. 2, 31½c; No. 3 mixed, 31c@31½c; No. 4 mixed, nominally 30c; no grade, nominally 29c. White, No. 2, nominally 32c; No. 3 white, nominally 31c; No. 4 white, nominally 30c@31½c.

Oats—Receipts here to-day were 6 cars; a week ago, 13 cars; a year ago, 12 cars. Sales by sample on track: Mixed, No. 2, 27½c; No. 3 mixed, 26c; No. 4 mixed, nominally 25c. White, No. 2, 23½c@29c; No. 3 white, nominally 27c@27½c; No. 4 white, nominally 26½c.

Rye—No. 2, 48c@48½c; No. 3, 46½c; No. 4, nominally 46c.

Hay—Receipts here to-day were 71 cars; a week ago, 66 cars; a year ago, 63 cars. Quotations are: Choice prairie, \$7.00; No. 1, \$6.50@6.75. Timothy, choice, \$7.00. Clover, \$6.00@6.50. Alfalfa, \$7.00.

## Kansas City Produce.

Kansas City, Nov. 28.—Eggs—Strictly fresh, 20c per doz.

Butter—Extra fancy separator, 21c; firsts, 18c; seconds, 15c; dairy, fancy, 16c; country roll, 12c@14c; store packed, 11c; packing stock, 9c@11c.

Poultry—Hens, 6½c; springs, 7c; roosters, old 15c each; young roosters, 20c; ducks, 6c; geese, 6c; turkeys, 8c; pigeons, 50c per doz.

Apples—Home grown, 2.50 3.00 per bbl.

Vegetables—Navy beans, \$1.35 per bu. Lima beans, 4½c per lb. Onions, red globe, 45c@55c per bu.; white globe, \$1.00 per bu. Cabbage,

home grown, 40c@50c per doz. Celery, 15c@45c per doz. Pumpkins, \$1 per doz. Squash, 75c per doz. Turnips, home grown, 15c@25c per bu. Potatoes—Home grown, 25c per bu.

## RIDGEVIEW FARM HERD OF BERKSHIRES

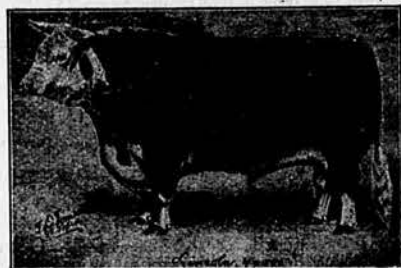
Young boars old enough for service, also sows and gilts bred and unbred for sale. Sired by 2d Seven Oaks, Col. Mills 45718, Prince Majestic 46800 and others. Write for prices, or come and inspect stock.

MANWARING BROS., Lawrence, Kas.

## ITALIAN BEES.

Bred from queens imported from Italy. Full colonies; two, three and four frame nucleus shipped anywhere and safe arrival guaranteed. We ship bees any time from March to November. Queens, hives and supplies generally.

A. H. DUFF, Larned, Kas.



## SPRING VALLEY HEREFORDS.

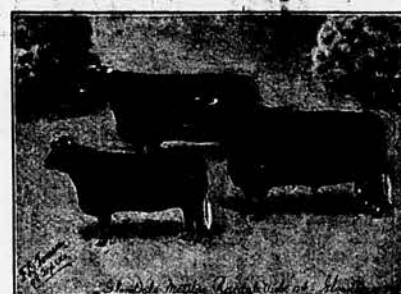
Lincoln 47095 by Beau Real and Klondyke 42001, at the head of the herd. Young stock of fine quality and extra breeding for sale. Personal inspection invited.

ALBERT DILLON, Hope, Kas.



## CEDAR HILL FARM.

Seventy head richly-bred Short-horns. The leading families represented. Golden Knight 108083 and Baron Ury 2412470 in service. Twelve young bulls of serviceable age for sale. Also 100 head high-grade bulls, 100 high-grade heifers and fifty head yearling heifers. 100 well-bred roadster horses. Address C. W. TAYLOR, Pearl, Dickinson Co., Kas.



## GLENDALE SHORT-HORNS, Ottawa, Kas.

Leading Scotch and Scotch-topped American families compose the herd, headed by the Cruickshank bulls, Glendon 113370, by Ambassador, dam Galanthus, and Scotland's Charm 127264, by Imp. Lavender Lad, dam by Imp. Baron Cruickshank. Young bulls for sale.

C. F. WOLF & SON, Proprietors.

## ELDER LAWN HERD SHORT-HORNS.



THE Harris bred bull, GALLANT KNIGHT 124466, a son of Gallahad, out of 8th Linwood Golden Drop, heads herd. Females by the Cruickshank bulls, Imp. Thistle Top 33876, Earl of Gloster 74523, etc. Size, color, constitution and feeding qualities the standard. A few good cows for sale now.

Address T. K. TOMSON & SONS, DOVER, KANSAS.



## SHORT-HORN CATTLE.

I have combined with my herd the Chambers Short horns and have the very best blood lines of the Bates and Cruickshank families. Herd headed by Baron Flower 114353 and Kirklevington Duke of Shannon Hill 126104. The Cruickshank Ambassador 110811 lately in service.

Best of shipping facilities on the A. T. & S. F. and two branches of Mo. Pac. Rys. Parties met by appointment. B. W. GOWDY, Garnett, Kas.

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## SUCCESS WITH ALFALFA

is certain if you sow our Alfalfa Seed. We also sell choice qualities of Cane and Millet Seeds, Kaffir and Jerusalem Corn, etc. All crop '98. Our book, "How to Sow Alfalfa," free. McBETH & KINNISON, Garden City, Kas.

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Poland-China gilts sired by Wren 17172, Eberley's Model 2354, and Duke of Weston 16974, 1898 farrow. If you want a choice young animal, send for one of these—\$6 to \$10. I guarantee satisfaction on this kind.

J. W. HIGGINS, JR., HOPE, KANSAS.

## PURE-BRED HEREFORDS

FOR SALE. THIRTY-FIVE HEAD OF BULLS AND HEIFERS.

They are extra good ones. Prices as low as any responsible breeder. Farm adjoins the city, Address H. L. LEIBFRIED, Emporia, Kas.

## Nelson &amp; Doyle

Room 220, Stock Yards Exchange Building, KANSAS CITY, MO.,

Have for sale at all times, singly or in car lots... Registered Herefords and Short-horns. Cross-bred Hereford, Short-horns and grades of other breeds. Bulls and females of all ages

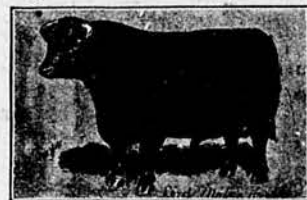
Stock on Sale at Stock Yards Sale Barn, Also at Farm Adjoining City.

N. B.—We have secured the services of John Gosling, well and favorably known as a practical and expert judge of beef cattle, who will in the future assist us in this branch of our business.

## VALLEY GROVE SHORT-HORNS.

## THE SCOTCH BRED BULLS

Lord Mayor 112727 and Laird of Linwood 127149 HEAD OF THE HERD.



LORD MAYOR was by the Baron Victor bull Baron Lavender 2d, out of Imp. Lady of the Meadow and is one of the greatest breeding bulls of the age. Laird of Linwood was by Gallahad out of 11th Linwood Golden Drop. Lord Mayor heifers bred to Laird of Linwood for sale. Also breed Shetland ponies. Inspection invited. Correspondence solicited. A few young bulls sired by Lord Mayor for sale.

Address T. P. BABST, PROP., DOVER, SHAWNEE CO., KAS.

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## Blackleg Vaccine

Write for new and complete pamphlet containing official indorsements and testimonials covering three years' successful use in the United States.

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EACH PACKET OF OUR GENUINE VACCINE BEARS OUR TRADE MARK

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—ARE THE— FINEST EQUIPPED, MOST MODERN IN CONSTRUCTION AND AFFORD THE BEST FACILITIES

For the handling of Live Stock of any in the World.

## THE KANSAS CITY MARKET

Owing to its Central Location, its Immense Railroad System and its Financial Resources, offers greater advantages than any other in the Trans-Mississippi Territory. It is the Largest Stocker and Feeder Market in the World, while its great packing house and export trade make it a reliable cash market for the sale of Cattle, Hogs, and Sheep, where shippers are sure to receive the highest returns for their consignments.

	Cattle and Calves.	Hogs.	Sheep.
Official Receipts for 1897 .....	1,921,962	3,350,796	1,134,236
Sold in Kansas City 1897 .....	1,847,673	3,348,556	1,048,233

C. F. MORSE, E. E. RICHARDSON, H. P. CHILD, EUGENE RUST, Vice Pres. and Gen. Mgr. Secy. and Treas. Asst. Gen. Mgr. Traffic Manager.

Cows' Teats Sore? Advice Free. MOORE BROS., V.S., Albany, N.Y.

PATENT secured or money all returned. Search free. Collamer & Co. 124 F St., Wash. D.C.

BED-WETTING CURED. Sample FREE. Dr. F. E. May, Bloomington, Ill.



## The Poultry Yard

Conducted by C. B. TUTTLE, Excelsior Farm, Topeka, Kas., to whom all inquiries should be addressed. We cordially invite our readers to consult us on any point pertaining to the poultry industry on which they may desire fuller information, especially as to the diseases and their symptoms which poultry is heir to, and thus assist in making this one of the most interesting and beneficial departments of the Kansas Farmer. All replies through this column are free. In writing be as explicit as possible, and if in regard to diseases, give symptoms in full, treatment, if any, to date, manner of caring for the flock, etc. Full name and postoffice address must be given in each instance to secure recognition.

### KANSAS STATE POULTRY ASSOCIATION.

President, A. M. Story, Manhattan.  
Secretary, J. W. F. Hughes, Topeka.

Poultry Show—At Topeka, January 9 to 14, 1899. C. H. Rhedes, judge.

### POULTRY-RAISING BY FARMERS.

In years past it has been the general understanding that no profit could be made by keeping poultry. It was commonly supposed that the feed and care necessary to support a flock of hens were of more value than the eggs they could be made to produce. This, no doubt, was true, considering the manner in which poultry used to be kept. Years ago poultry culture had no assistance from science; it had no literature or means whereby its wants and necessities could be studied. What would be the condition of agriculture to-day without the assistance of science or an agricultural literature? And it is this that has so prejudiced the farmers against poultry raising for profit, and caused so many of them to consider that this industry, which really ought to be one of the leading farm pursuits, is only of minor importance.

Regarding poultry in this light, the farmer tolerates hens only as a sort of necessary evil. They are shamefully neglected and abused by him; they are allowed to shift for themselves without a thought being given to their comfort or welfare; there is no place of shelter from the winds or storms provided for them; if the south side of a tree is warmer than the north side they are at liberty to choose the warmer side as a roosting place; while if they are fortunate enough to gain access to the out-buildings, they content themselves with the racks and wheels of the farm vehicles therein as a night's resting-place. They are allowed to feed where they can and when they can; to go thirsty, or drink from the drainage of the barnyard. With such treatment as this, is it surprising that the hens fail to prove themselves a source of profit, or that the impression has become so general among farmers that there is no money to be made out of poultry raising?

It has been and is being proven every day that poultry will pay more profit on the capital invested in it than any other class of farm stock. But in order that it shall do this it must receive the proper kind of care and attention. One of the principal reasons why farmers do not make poultry raising a success is that they pay no attention to the kind of fowls they keep.

Most farmers look upon a hen as a hen, one as good as another, without regard to the size, breed, egg-producing or other qualities which make it profitable. Now, if the farmer would investigate the matter, and would make a few practical experiments, he would find that there is just as much difference in the different breeds of fowls, and in different individual specimens of the same breed, as regards profitableness, as there is in the different breeds and specimens of cattle and sheep.

As the Jersey and Holstein excel in milk-giving qualities, and the Short-horn and Hereford as beef-making breeds, so, too, would he find that the Leghorns, Langshans and Hamburgs excel in egg-production, while Dorkings, Cochins, Plymouth Rocks and Wyandottes excel in poultry for the market; and by selecting one of the general-purpose breeds such as the Plymouth Rocks or Wyandottes he could combine egg production with meat production, and make the raising of poultry doubly profitable.

As has been stated at various times in these columns, it is not indispensably necessary that the farmer should keep thorough- or standard-bred fowls in order to be successful with them. Yet, the writer fully believes that a greater measure of success can be attained by the use of standard-bred fowls than by using scrubs or crosses, provided proper care is given them. Let him place a male bird of one of the standard-bred varieties among his flock of fowls, and breed from him, each year selecting as dams only the most prolific females, weeding out all sickly and deformed

specimens. In a few years, if this course is faithfully followed, he will have a flock, which so far as profitableness is concerned, for egg production and meat, will be the equal of any flock of standard-bred fowls. However, in this course, he would miss one source of considerable revenue, that of selling eggs for hatching.

Again, where the fowls kept are standard-breds, it is almost certain that there will be more interest taken in caring for them, and of course the more interest taken in them, the greater will be the success, and this in connection with the fancy prices for a setting of eggs or a promising cockerel, which can now and then be obtained, would seem to make it worth while to discard the mongrel in favor of the more attractive standard-bred fowl.

Another serious obstacle to success is that the farmer allows his fowls to breed too closely. Year after year they are allowed to go without the infusion of any fresh blood, and the results from this are disastrous in the extreme.

Where the flock is in this condition nearly all their eggs prove to be infertile, and the few chickens that are hatched are such weak, sickly specimens that they are nearly certain to die before reaching maturity. Those that do live are stunted in size, lay but few eggs, are predisposed to disease, and when sick they seldom recover.

Most poultrymen agree that there should be a change of blood as often as once in two or three years. This is best effected by placing a healthy unrelated cockerel among the flock. As some farmers may be situated so they can dispose of dressed poultry to better advantage than eggs, or vice versa, it may be well for them to understand that the plastic quality of the domestic fowl is very great. That is, they can be very readily molded into whatever condition is desired if care is taken to mate them properly.

If very prolific fowls are desired, the best layers only should be selected for the breeding pen each year, and each year the number of inferior layers will grow correspondingly less. If market fowls are desired, select as breeders only the short-legged, stocky specimens, and in a short time the entire flock will assume this desired quality. In nothing is this quality more pronounced than in the domestic fowl, and the farmer, by using proper care in mating them, can in a very short time, change the entire characteristics of his flock in whatever direction he may desire.

### Poultry-Raising for Profit.

The most profitable plan upon which to run a poultry farm is to have the combination of eggs, broilers and roasters. Egg production should be the main question, and broiler raising an important adjunct—the roaster branch naturally coming in disposing of the hens before the second moult. Hatching the pullets during the months of April or May, and keeping them growing so they come into laying by fall, thus securing winter layers, is the only way by which to get a generous supply of eggs during the winter months. But there are other matters that must also be attended to. If neglected, even the proper hatches will not be able to do their duty. First of all, the houses must be warmly constructed, and kept bright and cheerful. Not only is it necessary to have good walls and durable roofs, but the window panes must be kept clean to allow a cheerful light to enter. Each house should be accompanied with a scratching pen, the front of which can be shielded by a muslin door. During inclement weather, the fowls will be kept in doors, and when the days are bright they can be left outside on their runs by fastening back the doors. The floors of the pens must be littered, and among this litter grain should be broadcasted. This will induce exercise. It is natural for a hen to scratch, and she will not neglect her duty when given a chance. The breakfast must be light. It would consist of a mash, and only enough given to partially satisfy a craving appetite. If the hens are allowed all they will eat at the morning meal, they are apt to be lazy the rest of the day, or, at least, until hunger pinches again. No man ever made money out of lazy hens. When given a light breakfast, the fowls, not satisfied, will at once begin scratching for more food, and this exercising is what makes the blood tingle in the veins, and fortifies the system for laying. Much has been said about egg foods. It is money thrown away to buy them. Ground grain, to which is added a good condition powder, will make the best and cheapest egg food that can be used. The

# Escaped Death.

Unusual Experience Granted Le Roy Bowen—Given up to Die by Four Doctors Because of a Serious Complication of Diseases—How He Saved Himself.

From the Enterprise, Mapleton, Minn.

To escape death after being given up by four doctors, and bidden good-bye to family and friends, is an experience not granted every man. Yet it happened to Mr. Le Roy Bowen, of Decorah township, Blue Earth Co., Minn.

Mr. Bowen is a farmer, but formerly resided in Mapleton, where he was clerk and city marshal for a number of years. He is a well-known member of the Masonic fraternity and is of sterling honesty and uprightness of character.

His story is of the greatest interest. He said:

"I was suddenly taken sick in the spring of 1895. The doctor was summoned. He pronounced my case one of gravel and said the pain was caused by the passage of a stone from the kidneys to the bladder. I doctored with him for three months, but was not benefited. Once a week I would have a bad spell of two or three days duration, during which I suffered untold agony.

"Finally I went to Mankato and consulted a specialist. He stated that I did not have gravel, but thought it was rheumatism of the stomach. I continued to visit him until the end of August. Then I became completely bedridden and sent for another doctor. He called my complaint inflammation of the bowels and treated me for that.

"The doctor laid my case before the faculty of Rush Medical College, Chicago, and it was decided that I had neuralgia of the stomach. I was treated for that until December, but continued to grow worse. Then the doctor said, 'I can't do you any good. All the help I know for you is an operation.' 'Very well,' I replied, 'go on and operate, if that is left for me.'

"The appointed time came; the four doc-

tors present examined me for two hours, then they retired and consulted for the same length of time. They concluded that they did not know what ailed me. The head physician asked permission to 'cut,' as he expressed it, 'and find out.' I asked how big a place he wanted to cut. He said 'he thought four inches far enough.' I did not want any such hide-and-seek game played with me, so the operation did not occur. I continued under the doctor's care, but my case was considered hopeless. I made my will, balanced my accounts and made every preparation for death.

"Day after day was passed in intense agony. As a last resort I told my hired man to get a box of Dr. Williams' Pink Pills for Pale People. I had read considerable about them and thought I would try them. Immediately after beginning the use of these pills I commenced to feel better and in two weeks I was out of bed and around, thanks to Dr. Williams' Pink Pills for Pale People."

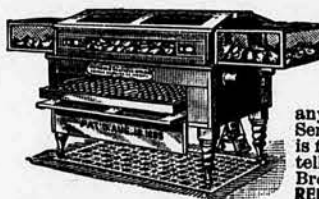
I hereby certify the above statement is true, to the best of my knowledge and belief.

LE ROY BOWEN.

Witnesses: J. A. Biddeason, Mrs. Le Roy Bowen.

Mr. Bowen's post office address is Beauford, Minn. He will gladly answer any inquiries to those enclosing stamp for reply.

It was nature's own remedy that accomplished this cure caused by impure blood for Dr. Williams' Pink Pills for Pale People are composed of vegetable remedies that exercise a powerful influence in purifying and enriching the blood. Many diseases long supposed to be incurable have succumbed to the potent influence of these pills. This universal remedy is sold by all druggists.



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to get it; how to mate, breed, feed and market poultry. Cuts and plans for building poultry houses and cost of same. These and many other things together with CYPHERS INCUBATOR which is sent freight paid to every purchaser is contained in our Poultry Guide. 2 Sent for 10 cts. The Cyphers Inc. Co. Box 84 Wayland, N.Y.

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**THE WASTE**  
of feeding your grain whole would more than pay your taxes. All ground grain is sure to be digested when eaten by animals. **STAR GRINDERS** Grind all grains singly or mixed. Near corn, dry, damp, frozen. Can't choke. Circulars of Sweep & Steam mills free. Write for them at once. STATE MFG. CO. 16 Depot St. New Lexington, O.

**"ELI" STEEL CASE BELT POWER PRESS**  
with patent self feeder and automatic block placer. No more crushed arms, hands or feet. 33x30 in. feed opening. Automatic condensing feed hopper. Strong, fast, durable and long lived. Catalogue Free. Write for what you want. COLLINS PLOW CO., 1120 Hampshire St., QUINCY, ILL.

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Anybody that can drive a nail or handle a hammer can build The Chandler Fence. Any kind of wire may be used. You save all the money you would expend in an expensive fence machine and have a better, handsomer fence in the end. Look at the cut. "That stay will stay." No twisting, straining or breaking. The secret is in the lock which absolutely holds the stay. It makes the cheapest good wire fence known. WE WANT AGENTS in every locality. We give exclusive territory to right men. Write for terms and territory. Agents make money. Sample and catalogue free. CHANDLER FENCE CO., 11 S. Howard St., Baltimore, Md.



powder, likewise, keeps the birds in prime health, an essential to egg production.

It is a serious mistake to overcrowd the flocks. There is no point of economy in it. When pressed for room, fowls are apt to get into the vices of feather-pulling, egg-eating, etc., to say nothing about the increase of lice and the introduction of disease. The houses must be roomy, ten square feet per fowl being about the proper allowance. The runs or yards should also be large. One hundred or more feet in length, the width of the pen, makes a run in which from fifteen to twenty-five fowls can be kept, and grass growing the entire season. There is very little profit in a hen after she is two years of age. The cream is in the pullets, and the two-year-olds come next. The best plan is to kill off each August all that have passed their first moult. Then they bring a good price as roasting fowl, being in good condition for that purpose. Too much money is lost by wintering "dead" stock—or stock that will not lay before spring. There should be a profit in each row kept. In broiler-raising the four most necessary implements of success are proper houses, reliable incubators, safe brooders, and good eggs. Without them the business will be a failure. The three secrets in raising broilers are warmth, fresh air and exercise. The proper houses are warm, well ventilated, free from dampness and rat-proof. Reliable incubators are those that are properly supplied with such contrivances as will insure a regularity of heat, easy means of affording moisture and ventilation, and which need not be tampered with every hour of the day or night. Safe brooders maintain the proper warmth, and are so constructed that the little orphans can find the same comfort under them as with the care of the natural hen. Good eggs mean fresh eggs, laid by hardy and vigorous stock, and which give a good percentage of fertility. But such cannot be brought up, as a rule, here, there, and everywhere. They must be raised at home. The most successful men in business there are those who keep their own breeding stock. Judge Drevenstedt believes in selling eggs when prices are high, and turning them into broilers when the figures are on a decline. It is a good plan, but we vary it somewhat. During April and May we want to run the incubators full capacity, so as to have a good choice of laying pullets for next winter's laying; the culls to go as broilers. At the same time we believe in sparing enough eggs for every hen that becomes broody. Nothing is gained by breaking up broody hens. They need a rest, and while taking it, why not put them to some use? This year we tried the experiment of breaking up broodies and found that the most we could expect of them was a week or two of laying and then broodiness again.—Farm Poultry.

The Saline County Poultry, Pigeon and Pet Stock Association will hold their fourth annual exhibition at Salfna, Kas., December 12-19, 1898. W. B. Hathaway, of Madison, O., will do the judging. Write the Secretary, W. C. Sherrill, Salina, Kas., for premium list.

#### Coming Poultry Shows.

Kansas State Poultry Association.—J. W. F. Hughes, Secretary. At Topeka, January 9 to 14, 1899. C. H. Rhodes, judge. Garden City Poultry and Pet Stock Association.—A. S. Parson, Secretary. Garden City, Kas. Show December 27-30, 1898. John C. Snyder, judge. Abilene Poultry and Pet Stock Association.—Roy O. Shadinger, Secretary. Abilene, Kas. Second annual exhibit at Abilene, January 25-28, 1899. Theo. Sternberg, judge. Butler County Poultry and Pet Stock Association.—C. H. Pattison, Secretary and Treasurer. El Dorado, Kas. Second annual exhibit at El Dorado, Kas., December 20-23, 1898. C. H. Rhodes, judge. Topeka Fanciers' Association.—L. V. Marks, Secretary. Topeka. Exhibit January 9-14, 1899, in connection with State show. Mitchell County Poultry Association.—A. Whitney, Beloit, Kas., Secretary. Beloit, Kas., December 6-10, 1898. C. H. Rhodes, judge. Smith County Poultry Association.—S. C. Stevens, Smith Center, Kas., Secretary. Smith Center, December 12-13, 1898. C. H. Rhodes, judge. Arkansas Valley Poultry Association.—Mrs. H. P. Swerdfefer, Wichita, Kas., Secretary. Wichita, Kas., December 13-15, 1898. C. H. Rhodes, judge. Garfield County Poultry Association.—A. F. Rusmiser, Enid, Okla., Secretary. Enid, Okla., December 24-25, 1898. C. H. Rhodes, judge. Chase County Poultry Association.—C. M. Rose, Cottonwood Falls, Kas., Secretary. Cottonwood Falls, December 27, 1898, to January 1, 1899. C. H. Rhodes, judge. Rooks County Poultry Association.—N. N. Neher, Stockton, Kas., Secretary. Stockton, Kas., January 2-5, 1899. C. H. Rhodes, judge. Glasco Poultry Association.—M. E. Potts, Glasco, Kas., Secretary. Glasco, Kas., January 6-7, 1899. C. H. Rhodes, judge. Central Oklahoma Poultry Association.—H. F. Stephenson, Kingfisher, Okla., Secretary. Kingfisher, Okla., January 16-21, 1899. C. H. Rhodes, judge.

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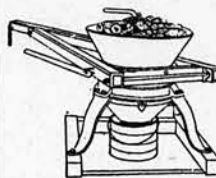
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Its Farm Products this year include 150,000,000 bushels of corn, 60,000,000 bushels of wheat and millions upon millions of dollars in value of other grains, fruits, vegetables, etc.

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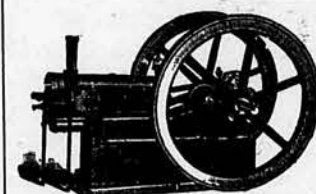


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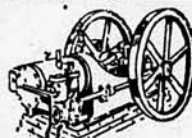


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No Coal or wood - Little water - Just what every farmer and stockman should have for pumping water for both stock and irrigating purposes. - grinding feed, cutting fodder - running corn huskers, cider mills, wood saws, cream separators, churns, cotton gins etc., etc. Inexpensive to operate. Reasonable in price. address **Creamery Package Mfg. Co.** Kansas City, Mo.



Latest Improved Triple Geared Cob and Grain Grinder. A Powerful Two Horse Machine. Grinding Rings go four times around to one turn of team; grinds at a rapid rate. Has been thoroughly tested and proves to have no equal in any respect. Sold direct to farmer. **T. L. PHILLIPS, MFR.** AURORA, ILL. WRITE FOR TERMS, ETC.



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— OF —

## REGISTERED HEREFORD CATTLE

TO BE HELD AT KANSAS CITY STOCK YARDS, KANSAS CITY, MO.,

ON WEDNESDAY, DECEMBER 7, 1898,

at which time I will offer

### 100 HEAD OF BULLS AND HEIFERS

of the Highest Quality and Most Fashionable Breeding.

The sale will include all of my Omaha Show Herd excepting my imported breeding bull, Keep On.

In 1899 I expect to show only a calf herd, as I will have about sixty calves sired by Wild Tom and the bulls that I imported last year, out of which I shall make a selection to show as a young herd.

There will be sold a son of Beau Real, 3 years old (a half brother of Wild Tom), and at least four young Beau Real cows, including Beau Real's Maid, the well-known show cow. Beau Real died on my farm, and I am the only breeder that can offer any of his younger get. Included in the sale will be Diana, the yearling heifer, winner of first at five State fairs in 1897, and first in class and first over all beef breeds at Omaha this year; Climax 4th, winner of many prizes as a bull calf and yearling; Miss Grove 2d, second in class and second over all beef breeds at Omaha, the only time shown. I will also sell Climax 60942, himself a show winner and the sire of many good ones, including Climax 4th and Miss Grove 2d. I am offering the very best of the young males and females that I own, believing that as I have the same sires and dams, I can produce just as good ones another year.

A fact that has not been fully emphasized is that there is a multitude of cattle of cheap quality and but few really good ones. Those farmers and range men who have in the past bought pure-bred animals to keep in their herds are the ones who are reaping the benefit of the present good prices for good cattle. As an illustration, Mr. R. Walsh, who for many years kept up his supply of pure-bred bulls, sold at public sale in Kansas City in October 400 spring heifer range calves at \$37 per head.

At my spring sale I received the highest average of recent years for one, five, ten, twenty, thirty, forty, fifty, sixty, seventy, eighty, ninety and one hundred head. I do not say this as giving any idea as to what the present cattle will average, but only to emphasize the two facts that my cattle are of the very highest quality, and more especially that this present offering will consist of animals equally as good in quality and breeding.

I do not expect any fancy prices, but do feel that breeders will pay fair value for superior quality. I have put into the sale animals to fill the desires of all. There are aged bulls, young bulls and bull calves, cows that have calves at foot, heifers bred and unbred, and heifer calves.

I will be very glad indeed to see present all those who have been corresponding with me this fall, and expect all those who attended my sale last spring to come again and bring their friends.

If you have not received a catalogue, send for one to

## MRS. C. S. CROSS, • Emporia, Kas.