

# KANSAS FARMER

FOR THE IMPROVEMENT

OF THE FARM AND HOME

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## Veterinary Science at Agricultural College

There are in Kansas a total of 6,138,890 head of domestic animals on the farm. To care for these animals there are in this state only 270 graduate veterinarians. This means that each of these veterinarians, if the work were divided equally between them, would have the care of the health of 22,733 farm animals.

The live stock industry of Kansas is one of the greatest in the state. The present value of these animals on the farm is \$225,47,080. The product each year is a large one, both in the flesh, milk and eggs which they yield, and in the manure which they leave for the preservation of the soil. Farm animals are becoming more valuable each year and the farmer has a big financial interest in their health and welfare. Under present conditions he may have access to the services of a skilled veterinarian in case of emergency though he is more frequently compelled to depend upon his own knowledge and experience.

The important facts that every farmer needs veterinary information and that some farmers desire to become practicing veterinarians, were of such moment that the Agricultural College at Manhattan began, years ago, to prepare to supply this demand. The Legislature granted an appropriation with which a splendid building has been erected and equipped. A veterinary college has been developed here that is second to none in the country. It is officered by men of exceptional ability and, while the department under its present management is a new one, and investigations of the kind necessary here require time, the results have more than justified the expenditure already made and the employment of the experts who are now working for our largest farm industry.

Recently, KANSAS FARMER gave a description of the methods pursued at the veterinary department of the State Agricultural College in the vaccination of hogs with anti-hog cholera serum. This information created so much interest and aroused the people of the state to the tremendous value of the work being done to such an extent that it became necessary to equip a serum laboratory for the manufacture and distribution of this, the first real preventive of this dreaded swine disease. Dr. F. S. Schoenleber is at the head of this great department and is also state veterinarian. He announces that during the year 1910 their facilities will allow them to produce something over 100,000 doses of anti-hog cholera serum for distribution throughout the state. As no legislative appropriation has been made to cover this work it is necessary to charge the cost price per dose, which is something like 1½ cents per cubic centimeter, or about 30 cents per head for a 100 pound shoat. The exact cost is not definitely determined as yet but the state of Michigan charges 40 cents per dose, Iowa charges 50 cents and Minnesota 40 cents.

This serum is prepared by injecting the virulent blood from a hog which is about to die with the cholera into one that has been made immune either by already having had the cholera in a natural way or by having been given it by injection. To produce enough virulent blood to hyper-immunize a 200 pound hog requires three or four pigs weighing about 40

### The Greatest Veterinary School in the Greatest Agricultural College.

pounds each. These must be given a severe form of the disease and must be ready to kill at or near a certain time as the blood must be used for this work within a few hours after it is drawn from the hog. When the diseased hog is ready he is covered with a sterilized cloth to prevent any dirt or germs from dropping into the vessel which collects the blood as it is drawn from the animal. The tail is shaved closely and thoroughly sterilized with a strong antiseptic before the hog is bled. When drawn from the animal the blood is immediately taken to the laboratory and defibrinated, leaving only the fluid part of the blood which is called the serum. To this serum is added a small amount of weak solution of carbolic acid, as a preservative.

Each hog is usually bled three times at intervals of seven days. If in condition he is then rehypermunized and again bled two or three times. In either case the hog is killed at the last bleeding and all of his

blood taken. The serum from all of these different collections of blood is mixed together in order to secure the right potency as the first drawings are generally too strong and the last ones too weak. Every particle of the serum is thoroughly tested before it is allowed to leave the laboratory. For this purpose several more pigs are used. Therefore, in order to secure 3,000 cubic centimeters of serum one 200 pound hog and 5 smaller pigs are necessary. When secured, this amount will vaccinate about 150 hogs so that for every six pigs sacrificed the lives of 150 are saved. This means one pig for every 25 saved, which is about 4 per cent, and this serves to explain the cost of the serum.

Dr. Schoenleber says that he is now prepared to send out about 1,200 doses per week but that these can only be sent to trained veterinarians. During a recent visit to the Doctor's laboratory the writer was shown four checks, amounting to \$350, which had

been sent by one man to the Doctor, with instructions to hold them until he could send their value in serum.

A new bulletin has just been issued by Dr. Schoenleber which fully describes the work of his department in the prevention of hog cholera. This is bulletin No. 163, and may be had by addressing the Experiment Station at Manhattan.

Other important work that is now being conducted at the veterinary department of the College includes a new method of vaccination for poll evil and fistula. Dr. Schoenleber is deserving of an immense amount of credit for his discovery of the means of combatting these diseases which are both manifestations of the same affliction. Cases which do not yield to ordinary treatment are generally cured by what he calls autogenic vaccination which is similar, in a way, to human vaccination against small pox. The name comes from the method of preparation. A culture is made from the pus secured from the diseased animal. It is then heated and injected into the same animal. This method is used on all cases having suppurating diseases, including quitor, and seems to kill the germs on which the disease thrives.

Contagious abortion is receiving a great deal of attention at the hands of the experts of this department, though most of the work is done through the carbolic acid treatment. It seems that when once affected it does not generally pay to keep an animal as a breeder as even those which are cured of the disease will refuse to breed or else will fail to give the usual milk flow. Contagious abortion has the aspect of a constitutional disease and the treatment practiced here seems to be the best known although local treatment does not always win.

The corn stalk disease, or cerebritis, is also under investigation. The doctors in charge have found that they can produce blind staggers at will by feeding the germs which they have discovered. The old theory of poisoning by nitrate of potash has been abandoned, and the entire force is at work on the cultivation and power of this germ. Results are very promising in this field of investigation.

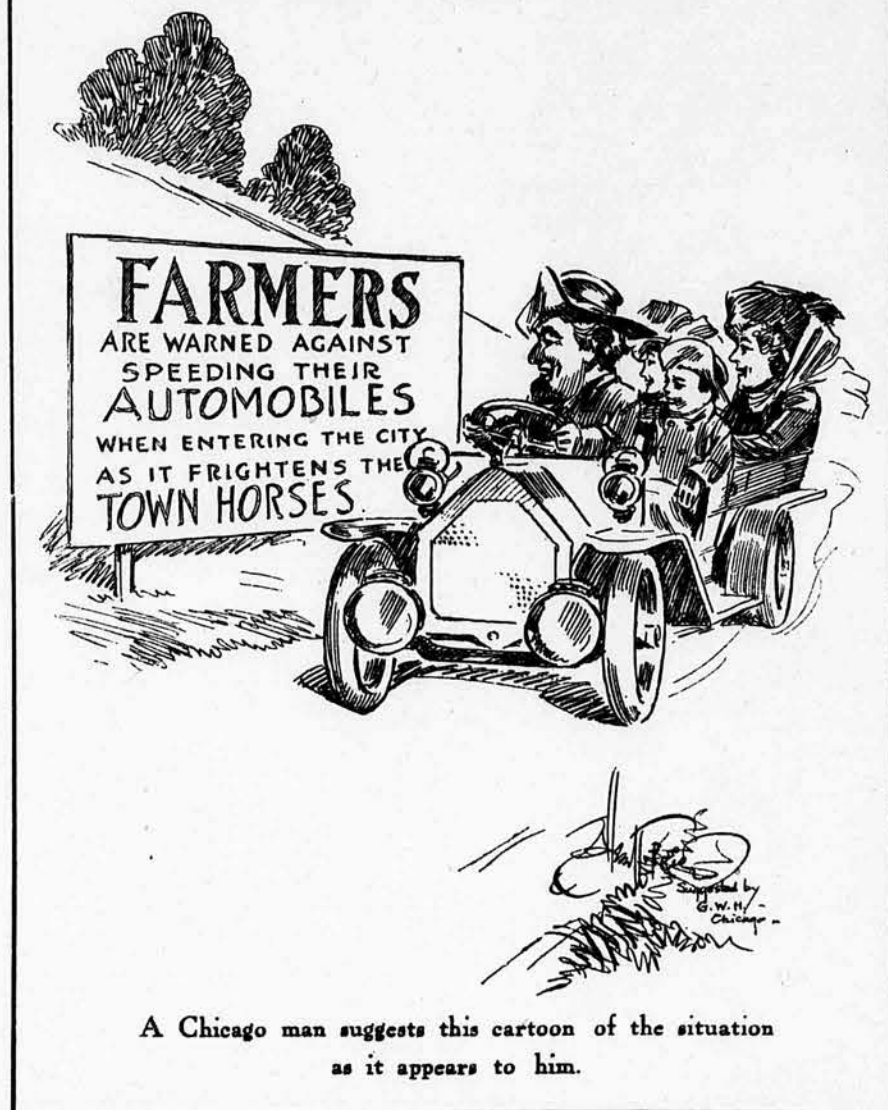
Tuberculosis among farm animals is being looked after carefully and the diseased animals of the state are being weeded out as rapidly as possible by means of the tuberculin test.

Under the new stallion law, Dr. Schoenleber and his assistants are busy examining the breeding stallions of the state for soundness. In his work he has seven expert assistants and 60 students who are taking the veterinary medical course of three years for the degree of doctor of veterinary science.

In giving the facts stated above no mention is made of the regular classroom work which is very heavy. Under present plans the veterinary science course will be lengthened to four years and Kansas will then have the honor of being able to offer the best course in this science that is offered by any college in the United States. In addition to the students who study in this department to qualify as veterinarians, all the students in the animal husbandry and dairy departments are given one term in anatomy, with dissecting and laboratory work. The new course will also pre-

(Continued on Page 29.)

### A Sign of the Times.



A Chicago man suggests this cartoon of the situation as it appears to him.

**Prof. Holden Sounds  
Warning To Farmers**

Corn growers are facing a crisis this year on account of the exceptionally severe and early frosts which impaired the seed corn.

If this frost-bitten seed is planted the yield will fall next year far below what it was last season.

If I could give but one order that would be carried out by every corn grower in the corn belt it would be, that every farmer make a thorough germination test of the seed corn intended for planting.

**Chappel Says Frost  
Injured Seed Corn**

HEAD OF IOWA CROP AND WEATHER SERVICE TELLS FACTS

Fifty per cent of the corn was hurt by frosts. This is the worst condition farmers in Iowa have been menaced with in a long period of years. The greatest danger is that farmers will persist in picking out fine looking ears that appear all right.

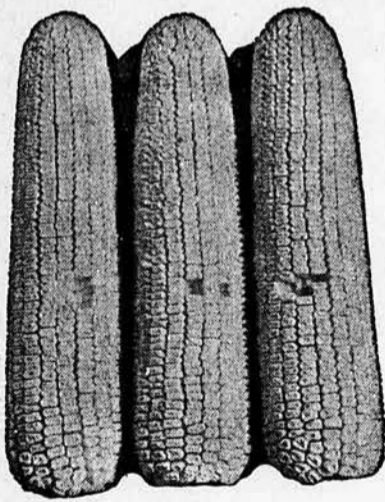
This corn is all right for feeding and other commercial purposes, but a farmer might as well plant a lot of lead bullets as frost-bitten corn.

The only sure way to insure success with next year's stand is to test every ear before using it for seed.

**Important Test Made  
At Ames College**

The matter of planting seed corn that looks good will cost farmers who follow this method thousands of dollars next season. In recent tests made a short time ago, three ears were selected that looked as near alike as possible. In making a germination test only one ear proved good quality, the other two failed to show any signs of life whatever.

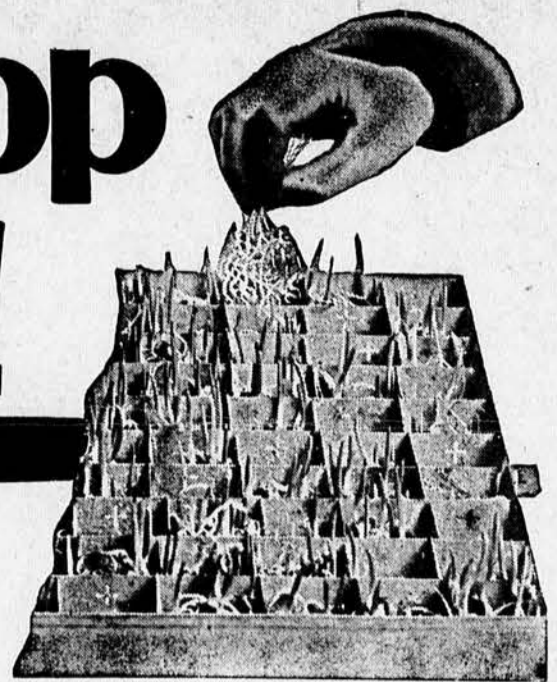
This proves positively that every ear of seed corn this year should be subjected to the most rigid germination tests.



**Kansas Farmer Warns Farmers  
that Poor Seed Is Expensive**

High quality in seed commands a corresponding price and it should. Cheap seed always means inferior powers of germination and a mixture of weed seeds and dirt. A recent test showed that clover seed which cost \$5.20 per bushel contained 25.78 per cent of weed seed and 26.16 per cent of dirt, sticks and gravel. There was only 48.06 per cent of clover seed but of this only 18.26 per cent germinated. This means that the farmer who bought this cheap seed actually paid at the rate of nearly \$29 per bushel for good seed. Another case where the seed cost \$15 per bushel showed only .09 per cent of weed seed and 1.08 per cent of dirt, sticks and gravel. In this sample there was 98.93 per cent of clover seed, 95.86 per cent of which germinated. The man who bought the \$15 seed only paid about one-half as much as did the man who bought the \$5.20 seed.

# Corn Crop Failure!



**That's What the Greatest Corn  
Experts Predict the Coming Season**

**for the Farmer Who Does Not Test His Seed Corn Before Planting**

This prediction is not exaggerated. You, your neighbor, in fact every corn grower in the corn belt is facing a crisis this year and will be compelled to solve one of the most important problems of a life time.

It's a problem that means much to you, either a good healthy corn crop next year, or corn crop failure, great financial loss, wasted time and labor. The outcome all depends upon the matter of testing and selecting your seed corn.

Prof Holden says: "Early frost damaged seed corn and is poorer in quality than any he has seen in the seven years that he has been in Iowa."

Dr. Chappel, of the Iowa Weather and Crop Service, says: "Fifty per cent of the seed corn this year will not grow."

Other corn experts say the same. You know it to be true. What are you going to do about it? Will you wait until planting time and then trust to luck on getting good seed corn, or will you take the safe, sure road to success by testing your seed corn now? It's time to decide.

## Holden's Ideal Seed Corn Tester Is the Simplest, Safest Way to Test Your Seed Corn and Prevent Crop Failure

You may be the best judge of seed corn in the world; you may be able to pick a perfect ear from among a thousand; but when it comes to picking out an ear possessing the right germinating qualities, the greatest experts in the world will fail.

The simplest, quickest and surest way to do this important work is with Holden's Ideal Seed Corn Tester. It insures the right quality seed and means from 15 to 30 bushels more corn to every acre. That's worth while.

Figure it out yourself. Take the average ear of corn and it contains about 1,000 kernels. Each kernel planted should produce a stalk, each stalk an ear. A dead ear planted means the loss of 1,000 ears, or 12½ bushels. Just think what that means.

Can you still question the importance of testing seed corn? Will you continue planting and raising corn in a haphazard way? Will you continue to be satisfied with a small crop when by a few hours' work and a few dollars invested in Holden's Ideal Seed Corn Tester you can make your corn crop certain and insure the greatest possible return for your time and labor.

Holden's Ideal Tester is the greatest invention of its kind in the world. It has been tried and tested in every manner, shape, and form. The results have proven that it is the simplest, quickest and surest way to determine the germinating qualities of seed corn.

Hundreds already in use. Every farmer who has one says it's great. Those who have seen it work won't be without one. You need one and after trying you would not part with it for ten times its cost if you could not get another.

**Holden's Ideal Tester  
Made in Four Sizes**

No. 1, of which picture is shown, is a five-bushel tester; tests 400 ears at one time and is just what the ordinary corn grower needs.

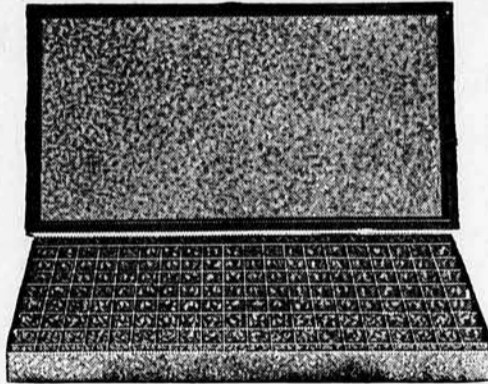
No 2 is a five-bushel cabinet tester, especially made for the man who wants to do his testing in barn or seed house.

No 3 is ten-bushel cabinet tester for the man who plants a large corn crop.

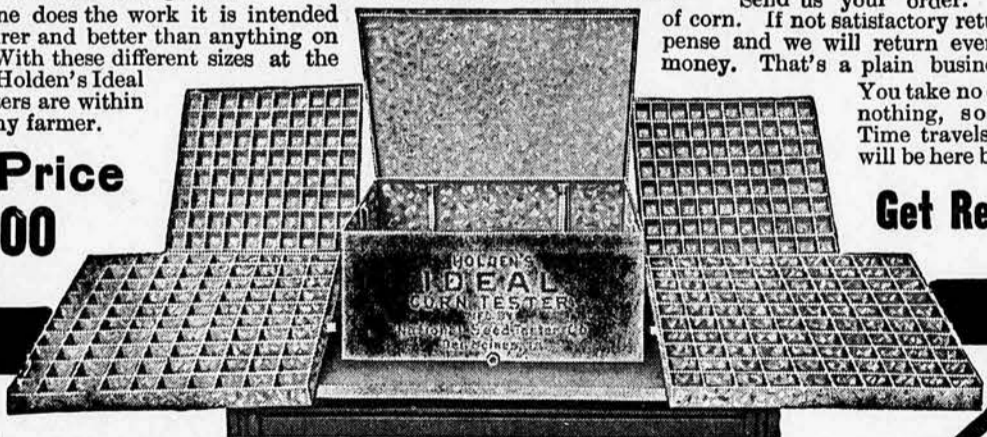
No 4, picture herewith, 2½-bushel capacity, is for the small corn grower.

Each machine does the work it is intended for quicker, surer and better than anything on the market. With these different sizes at the low prices for Holden's Ideal Seed Corn Testers are within the reach of any farmer.

**No 1, Price  
\$10.00**



No. 4, 2½-Bushel Capacity, \$5.00



**Try Holden's Ideal  
Corn Tester  
FREE**

That's a fair and square offer. That's the easiest way to convince you that Holden's Ideal Tester is what we claim. That's the quickest way to overcome any doubt that may exist in your mind. Write today for catalogue. Select the machine you want. Send us your order. Test a batch of corn. If not satisfactory return it at our expense and we will return every cent of your money. That's a plain business proposition.

You take no chance, you risk nothing, so don't delay. Time travels fast. Planting will be here before you know.

**Get Ready Now**

**Cut Out Coupon. Mail it Today. Get Our FREE Catalogue and Trial Offer Proposition.**

The catalogue tells all about it; shows the different sizes of Holden's Ideal Tester that we manufacture. The FREE TRIAL offer is the best ever made.

If you have already seen these Testers at the corn shows, and like many other farmers, don't want to bother about catalog, but want a machine immediately, send remittance of \$5.00 for No. 4 machine, or \$10.00 for No. 1, and we'll ship either of the two immediately on receipt of remittance and order. You'll save time doing this and take no risk, because we are a reliable and responsible concern and guarantee to refund your money if the Tester you receive is not satisfactory.

If you want references, write to Iowa Trust and Savings Bank, Wallaces' Farmer, Homestead, Successful Farming, Register and Farmer, or any other business house in Des Moines.

Send orders and remittances to

**NATIONAL SEED TESTER CO., 1182 Walnut St., Des Moines, Iowa**

**National Seed Tester Co., 1182 Walnut St., Des Moines, Ia.**  
Gentlemen—Kindly send me your Free Catalogue and Free Trial Proposition on Holden's Ideal Corn Tester.  
Name \_\_\_\_\_  
Town \_\_\_\_\_  
State \_\_\_\_\_

# THE WILD TURKEY

America's Greatest Indigenous Fowl

JOHN BARRETT

Director Bureau of American Republics

The turkey is the one truly American bird and Benjamin Franklin wished to select it as the national emblem for the United States. The far-famed eagle represents its species as simply a first cousin in the Western Hemisphere, but the agulla family has occupied the whole earth from time immemorial. The eagle was indicative of the advances of the Roman Empire. It was known in China for ages. Today it graces the standards of Russia, of Germany, and of several other great world powers. It is seen in the Far East as well as in the United States. The turkey, however, is indigenous to America. It was a favorite fowl among the aboriginal Indian inhabitants of the new continent. It grew and thrived over all the immense areas adapted to maize or Indian corn; like corn, the turkey was discovered by the earliest European adventurers and settlers and by them proudly sent home as trophies of the chase. Since then the turkey, following Indian corn which it so dearly loves as food, has been carried to all the corners of the earth, to embellish the farm and to add another factor to the many contributed for man's enjoyment by America.

In early colonial days turkeys were numerous in Massachusetts, coming about the houses of the settlers in large flocks. It was well known throughout New England, Maryland, Virginia, the Carolinas, and Florida, and in the last-named states it is still found as a native wild fowl. Otherwise there is great danger of total extermination which has elsewhere been the result of indiscriminate slaughter east of the Hudson River.

The appellation "turkey" has been abused by mistaken etymology. A fanciful explanation would derive it from the (East) Indian toka, which takes the form in Hebrew of tukki, the peacock. As the Jews in south Europe were acquainted with this related fowl, it is assumed that they naturally applied the word to the turkey when it was introduced into Spain, which thereafter bore the name wherever it made its home. Such a roundabout origin is unnecessary, however. The bird was called turkey because it was supposed to come from Turkey. In that country it was called an Egyptian hen; elsewhere it sometimes had another geographic title. This was simply in accordance with the habit so very general in the sixteenth century. New and strange things were continually being presented to an ignorant public; knowledge spread slowly, whereas superstition was deep and hearsay taken at its asserted value. The markets of north Europe received this fowl as coming from south Europe, directly or indirectly from Turkey. In France on the other hand, it was called dindon, or, in the feminine, dinde, as if it were the fowl d'Inde—from India. English and German have so many words of analogous derivation that there should be no further dispute about the meaning in this case.

The wild turkey of America is without doubt the progenitor of all the relatives of this fowl the world over. Whether there was a variety, the original of the present domestic turkey, indigenous to the West India Islands, will probably never be satisfactorily settled. It is a supposition favored by many scientists. But it is a generally accepted view, irrespective of this detail, that all turkeys have descended in some way or other from the three forms known today as the North American, the Mexican, and the Honduras (Ocellated) varieties. There is a so-called turkey found in the forest regions of South America, especially Peru, but this bird is in reality not a turkey at all, although resembling it in some ways, so that the hunter after wild game is satisfied. For the ornithologist, however, it belongs to another family. Scientists are well agreed, therefore, that the turkey resides in the southern continent only as an immigrant, and that his native home, probably not far from that of primitive maize or Indian corn, must be sought somewhere north of the Isthmus of Panama.

The Mexican turkey, wild throughout that Republic, is called *Meleagris mexicana*; it is short in shank, the feathers of its body are metallic black shaded only slightly with bronze, while all its feathers are tipped with white. This appears to be the species

first taken to Spain and other European countries. It is thought that the white markings of its plumage appear in the variety of domestic turkey known as the Narragansett.

The Honduras turkey is called scientifically *Meleagris ocellata*, and is today scattered well over most of Central America. The bird is extremely wild, and has a freer flight than its cousins of the North. It is the most beautiful in coloring of all the family. The head and neck are naked, the caruncles on them differing from those of others resident in less tropical regions, and no breast tuft is present. The ground color of the plumage is a beautiful bronze-green, banded with gold-bronze, blue, and red, with some bands of brilliant black. This bird can not be bred successfully nor domesticated away from its native heath, and even there it is more a wild bird in captivity than a sober inhabitant of the farm. It gets the Latinized termination of its name because of the large and sharply defined spots characteristic of the longer feathers, giving them a fanciful resemblance to eyes. The same marking is more strikingly illustrated on the tail of the peacock.

The North American turkey, *Meleagris americana*, is the original species of the eastern United States. Its

Black and the White are the smallest. The White seems, however, to have become a popular variety of late years, and has therefore increased in size until it now occupies the third place among many breeders.

The turkey has not been long under domestication, and consequently suffers from some unfortunate habits incident to captivity. Even as a home bird it loves freedom, and for healthy development demands a wide area over which to wander in search of food. It suffers under confinement, and should not be compelled to live within the narrow boundary of a suburban farm. It must have space, with fields in which to wander and trees in which to roost. It will not seek the shelter of a house, such as is necessary for the domestic hen, except in the severest weather, but sits aloft on the branches, free and independent like its American progenitors. Neither can the turkey be inbred, but must always have fresh blood from a different stock if the offspring is to develop the highest type of fowl, both in the sense of appearance and of market value. In reality, the close relationship of the modern turkey with its aboriginal ancestry is proven by the fact that the domestic bird has been known to mate with its wild and migrating cousin, to the decided im-

provement of its kind, as well as the profit of the farmer.

The young of the turkey are called "poults," and they are as tender as bantam chicks. They must be nursed with care far out of proportion to the freedom they require when they begin to look after themselves. Probably to bring to maturity young turkeys in the wild state demanded even greater care, but the female is prolific, and, moreover, if she is deprived of her season's first brood, will frequently begin bravely again to lay the eggs and sit the second time for another family. Besides the enemy in the air, poults are exposed to hostile parasites and infectious microbes in the soil, and should be provided, therefore, with such clean and natural ground as they would find in natural conditions. They are at first helpless, almost senseless, little creatures, unable to feed themselves, often running around with open mouths as if they had no instinct for scratching for their food from the earth beneath. If the mother does not attend to them, it is sometimes necessary to stuff the food down their little throats, until they have acquired wisdom by practical experience. This is all a matter of ornithological technique, however, and can be found well discussed in farmers' bulletins of many agricultural departments and societies.

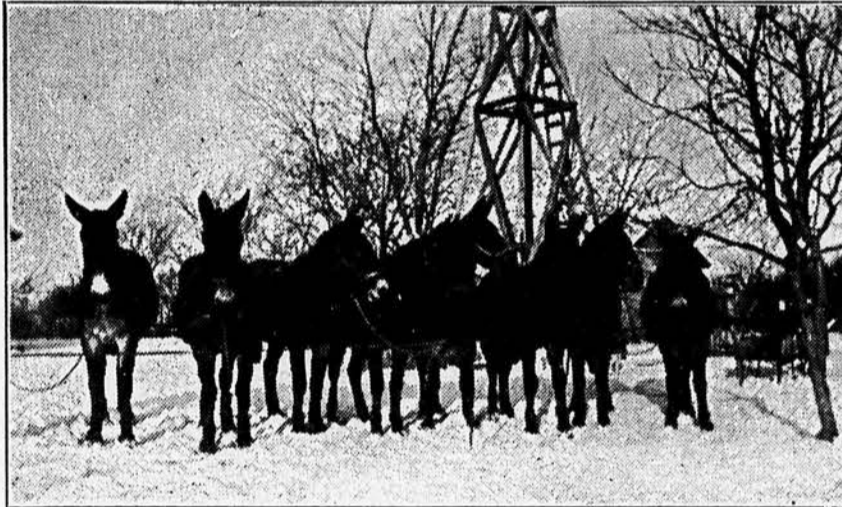
How did the turkey make his way around the world? He was transferred; that is to say, carried by the

hand of man from one country another and encouraged to propagate in an alien land, because he added one more delicacy to tickle the human appetite. Differing from fauna or flora that spread to the ends of the earth by the forces of nature, turkeys, like maize, would never have departed from their aboriginal habitat had it not been for human energy and desire. It is a slow bird, deliberate both in beginning flight and in the choice of its alighting. Interesting tales are told of the early days of turkey shooting along the banks of the Mississippi. How great flocks of the turkey used to gather for hours before the passage in the trees on the bank, scanning the opposite shore and gobbling about it to themselves as if they were to cross an unknown ocean. Finally they started, but lurched ahead, with the heaviness of a leaky galleon, and plunged exhausted into the swampy undergrowth at the river's edge. Here the hunter or perhaps some beast of prey would be lurking in concealment for the poor turkeys, who proved easy victims to their wily foe. Such sluggish migrants could never cross the Gulf of Mexico or the wider Atlantic Ocean by themselves. No; they were carried to Europe by the earliest discoverers as trophies from the New World.

Cortes mentions the turkey in one of his famous letters about 1518. He carried specimens of the bird to Spain in 1520, where they immediately became popular and were bred as a triumphant addition to the larder. It then became known as *pavos*, his cousin, the more pretentious peacock, being distinguished by the term *pavo real*—the fowl of kings. The turkey was a long time reaching France, for the first bird eaten there, mentioned in history at any rate, was served at the wedding of Charles IX and Elizabeth of Austria, June 27, 1570. This portion of the feast was supplied from Boston, Massachusetts, at that time an unknown settlement somewhere in the American wilderness. It seems to be admitted that the bird was introduced into England in 1524, where he soon became domesticated and assumed such local names as the Black Norfolk and Large Cambridge. It is an interesting fact that these descendants of the parent stock were carried back again across the Atlantic to New England, where, crossed with the original turkey already there, they began the breed that has spread from one end of the country to the other. In Europe they have become a permanent institution. Germany and France recognize the fowl as an indispensable factor in any holiday feast; in Spain, especially during Christmas time, the markets are alive with the Castilian vociferations of the bargainers and unavailing protests of the victims about to suffer from the results. In Madrid some of the principal streets are crowded with troops of these birds driven in from the country farms, while the Plaza Mayor, once the scene of the autos de fe of the inquisition, now is the center of a more innocent function, for in this square almost all the turkeys of the capital are offered for sale. The purchaser selects his live bird, which is then transported to the owner's home and butchered to make a Christmas holiday.

This noble fowl seems destined, therefore, to serve the appetites of man rather than to be an emblem uplifted on the banner of a race. Perhaps, after all, it is as worthy a function. His place is assured in the markets of the world. Time was when he could be bought for 10 cents, alive and gobbling. Five years ago the price of a bird ranged from 8 to 20 cents a pound, dressed, but the demand increases more rapidly than the supply, so that today he brings, dead, as much as that a pound, bones, feathers, and all. The census of 1896 reported a turkey supply in the United States of about 12,000,000, while as that of 1900 showed only 6,500,000, the apparent decrease being due to the fact, as the Department of Agriculture sapiently discovered, that in the former year all birds and poults, all eggs in the nest as well as those expected, were enumerated. In the latter year only actual birds of three months or more were admitted to the count. Assuming a normal growth of

(Continued on Page 21.)



"The Mule Patch," owned by A. J. Pottorf of the class of 1899 and Mrs. Lucy Cottrell Pottorf, class of 1898 of the Kansas State Agricultural College. Mr. and Mrs. Pottorf live on their farm near Riley, Kan., and are the owners of an automobile as well as the excellent motive power shown in the picture. The great Missouri mule has nothing "on" the Kansas variety.

colors are black, beautifully shaded with a rich bronze, the breast plumage being dark bronze, illuminated with a lustrous finish of coppery gold. All this emblazons the plumage with a distinctive brightness, and in the ray of the sun the burnished appearance comes out with striking brilliancy. The full-grown, healthy bird is a beautiful picture of bronze, black, copper, and gold.

Other varieties known in the barnyard, and even recognized among dealers as having distinctive markings, are in reality only highly developed fowls with preserved peculiarities. The crested turkey has a top-knot resembling the top-knot on the Polish family among chickens. In the latter family, however, the skull has an unusual formation natural to this breed, but which with turkeys and ducks is an unnatural, that is, an anomalous growth. The white turkey is also only a developed breed. No benefit, consequently, can be derived from unnecessary subdivisions of the three great originals. As the growing of turkeys improved the stock, so the hardy American bird of the aborigines has become the prize fowl of today.

In the United States six standard varieties are recognized and grown. These are called the Bronze, Narragansett, Buff, Slate, White, and Black. The chief differences are in size and color of plumage. The Bronze and Narragansett are the largest, the Buff and Slate are the medium, and the

Black and the White are the smallest.

The young of the turkey are called "poults," and they are as tender as bantam chicks. They must be nursed with care far out of proportion to the freedom they require when they begin to look after themselves. Probably to bring to maturity young turkeys in the wild state demanded even greater care, but the female is prolific, and, moreover, if she is deprived of her season's first brood, will frequently begin bravely again to lay the eggs and sit the second time for another family. Besides the enemy in the air, poults are exposed to hostile parasites and infectious microbes in the soil, and should be provided, therefore, with such clean and natural ground as they would find in natural conditions. They are at first helpless, almost senseless, little creatures, unable to feed themselves, often running around with open mouths as if they had no instinct for scratching for their food from the earth beneath. If the mother does not attend to them, it is sometimes necessary to stuff the food down their little throats, until they have acquired wisdom by practical experience. This is all a matter of ornithological technique, however, and can be found well discussed in farmers' bulletins of many agricultural departments and societies.

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# KANSAS FARMER

## EDITORIAL



You are careful to see that your dog does not roam around at night. How about your boy?

Out in Kansas they have coined a new word, "hyper-immune." This means more than "immune." You couldn't get the germ of an influenza or a disease into such a character. Question—What seedsman do you consider "hyper-immune?"—Rural New Yorker.

Moral: Buy your seeds of reliable seedsmen and pay them for quality.

About March 1 Prof. R. J. Kinzer will go to Brandon, Canada, to act as a judge of live stock at a live stock exposition and fair. This is not the first time Professor Kinzer has acted in this capacity and it is indeed an honor to the College and to Professor Kinzer to be selected to fill this important place in another country.

It is the experience of all the ages that the live stock industry is the most prominent factor in maintaining the fertility of the soil and any emotional or political sentiment which injures this industry strikes at the very foundation of the country's wealth. The people who started the senseless boycott against eating meat were perhaps honest in their efforts to correct a wrong but they hit the other fellow.

Out in central Kansas there seems to be a very general movement towards the organization of automobile clubs. During the past two months the roads have been so well nigh unpassable that the owners of automobiles have been unable to use them and this concerted movement has for its object the betterment of the roads. Membership is not confined to the towns and cities however, as some of the clubs have a majority of farmers among their members. The mud tax is a heavy one anywhere and united effort only will prevent it.

At a recent farm sale held in Atchison county a span of mules brought \$31 while a dozen Brown Leghorn hens sold for \$10 or more than 20 cents per pound. The total of the sale was near \$3,000 which was all paid for in cash except two small notes. While the price paid for the chickens would not be an unseemly one for pure breeding stock that paid for the mules was pretty fair. It pays to raise mules and the Kansas variety is just as good as that from Missouri and this buyer did not have to be shown.

It is reported that an Illinois manufacturing firm recently bought 26 car loads of broom corn brush in Wichita and were negotiating for another like cargo at approximately 9 cents per pound. This price is somewhat below the maximum of \$200 per ton recently quoted for Kansas broomcorn yet it indicates a tidy investment for the raw materials of a very common and necessary article. Allowing 10 tons to the car the total purchase would foot up to \$94,000 and the housewives of the country will find another added item of expense. Here is where the vacuum cleaner man gets in his work.

As showing the careful methods pursued by the KANSAS FARMER in protecting its patrons it may be mentioned that last week a letter was received from what purported to be a wholesale house in Chicago offering a nice advertising order. As the parties were unknown to the KANSAS FARMER management the order was held up pending investigation. Inquiry developed the fact that the business was of doubtful quality and it was rejected. Now comes word that the proprietor has been arrested for using the mails to defraud. The rejection of such advertising orders is still necessary, at times, though the reputation of the KANSAS FARMER is such that the frauds and grafters generally give it a wide berth.

J. Adam Bede, the witty ex-congressman from Minnesota, is said to have lacked the power and influence to which he was really entitled because of his reputation as a wit. When he began speaking on any subject his auditors thought he was joking. However, he managed to say some good things which have been accepted seriously. Among them may be quoted the statement that: "The cost of liv-

With which is combined FARMERS ADVOCATE. Established 1877.  
Published Weekly at 625 Jackson Street, Topeka, Kansas, by the Kansas Farmer Company.

ALBERT T. REID, President. S. H. PITCHER, Secretary.  
J. R. MULVANE, Treasurer.

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Chicago Office—First National Bank Building, Geo. W. Herbert, Manager.  
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Entered at the Topeka, Kansas, postoffice as second class matter.

**SUBSCRIPTION PRICE**—\$1.00 per year; \$1.50 for two years; \$2.00 for three years. One renewal and one new subscription, one year, \$1.50. One renewal for two years and one new subscriber for one year \$1.75. One renewal for three years and two new subscriptions each for one year, \$2.25. The date of subscription will be found on the label on your paper. We follow the usual custom of publications, and conform to the desire of most subscribers, by sending the paper until an order is received to discontinue it. We must be notified in writing when the subscriber desires the paper stopped. Returning the paper is not sufficient as we cannot tell from the label alone what the address is. Both name and address must be given and all arrearages paid.

**ADVERTISING RATES.**—25 cents per square line, 14 lines to the inch. Announcements of reputable advertisers respectfully solicited. No medical nor questionably worded advertising accepted. Forms close Monday.

**OUR GUARANTEE.**—It is our belief that all advertisements in this paper are from reliable persons or firms. To show that we are

ing is high because we make it so. The trouble with our farmers is that they don't treat their land right. They plant wheat and plant wheat, and then turn around and stick in a little more wheat until the ground is wheat sick. They do not give their land a chance to produce all that it would produce. They need the good offices of a society for the suppression of cruelty to the soil."

Perhaps nothing of direct interest to the farmer has grown so rapidly in popular favor in recent years as has Portland cement. This is a wonderful material in that it lends itself to such a wide diversity of uses. Being absolutely fire- and waterproof, cheap, capable of being molded into any desired form and practically indestructible it is truly the new rock of ages. Some knowledge and experience is necessary, however, or good results do not follow. Good materials are also necessary and with these any handy man can soon learn its various uses either as a cement, a plaster, a concrete or a reinforced concrete. In buying cement be sure to get only the best. In sand, use only that which is clean and sharp and in mixing a concrete be sure to follow the directions given by the cement manufacturer. This latter because cement rocks vary in their composition and the manufacturers' tests and experience are especially valuable to the amateur. KANSAS FARMER will be glad to answer questions about cement and its uses.

A subscriber asks for a definition of humus. Briefly stated, humus is partially decayed vegetable matter, or more accurately, of both animal and vegetable matter. There are certain substances in the soil and others which are drawn from the air and water which contribute to the life of both the plant and animal kingdoms. When a plant or animal has fulfilled its usefulness it dies and decays. This decay, however, is not perfect. If it were, the component parts of the plant or animal body would return to their original elements. Lacking this, they form a loose, dark colored substance which we know as humus and which is a most valuable feature in the soil. A clay soil does not produce vegetable growth because it lacks humus, although it may possess the necessary minerals. Humus is most readily added to the soil by the application of barnyard manure or by plowing under green crops of some legume such as alfalfa, clover, cow-peas or soy beans. The value of humus in agriculture lies in the fact that it contains the elements of plant life in that form which can be most readily assimilated. Soil with plenty of humus is said to be "rich," while that without it is poor.

In earnest in protecting our subscribers we guarantee the trustworthiness of our advertisers under the following conditions: We will make good the loss of any paid up subscriber who suffers by dealing with any fraudulent advertiser in our columns, provided complaint is made to us within thirty days after the transaction. This guarantee means just what it says. It does not mean that we guarantee to settle all trifling disputes between a subscriber and an advertiser, though we offer our good offices to this end. We do, however, protect you from fraud under the above condition. In writing to advertisers be sure always to say: "I saw your advertisement in Kansas Farmer."

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

KANSAS FARMER COMPANY,  
Topeka, Kansas.

### MARKET HOGS SOAR AGAIN.

Market quotations on Thursday of last week showed the price of hogs in Chicago to be \$9.40 which is the highest price reached since 1870. During the later days of the civil war the price on hogs soared to \$13.25. In 1882 the price reached \$9.35 while back in 1870 it was \$10.

Continued light receipts for several months at the packing centers and the reported scarcity of hogs in the country have been the causes assigned for the recent rise as well as for the prediction that the \$10 hog may be in sight.

### A WAIL FROM MISSOURI.

In almost every town in Missouri a considerable amount of Kansas ground alfalfa is being sold to farmers and town people who own a cow or horse, when this feed could well be supplied by growing more red clover, cow-peas, or alfalfa in this state. At the market price for this ground alfalfa an acre of good, average Missouri soil will produce an equivalent of from \$50 to \$75 if planted to any one of the above named crops. Our advice is grow more bushels of corn on fewer acres, grow more alfalfa, clover and cow-peas, and keep the money here to build better schools, better roads and better homes.—Farmer & Breeder.

### EGGS FROM EUROPE.

A press dispatch under a New York, Feb. 15, 1916 date line says:

"For the first time in five years the product of the pauper hen of Europe is being imported into this city in competition with the results of home industry. The eggs are shipped by brokers in Hull, Eng., but are gathered originally from Austria, France and Germany. Up to today the total receipts of the foreign eggs amounted to 900 cases, holding about 960,000 eggs.

The duty on foreign eggs is five cents a dozen and the shipping charges about four cents a dozen. Dealers say that European markets are flooded and the low prices there enable the shippers to make a good profit on their importations.

All of which shows that the great American public will eat eggs—and that Kansas hens need not fear a loss of occupation through over production.

### THE AGRICULTURAL COLLEGE CORN SPECIAL.

In cooperation with the Rock Island railroad the Extension department of the State Agricultural College will run another of its "Schools on Wheels." This train will start from Topeka on Tuesday, March 1, at 7:15 a. m. and will cover the lines of the Rock Island to the westward during the week. The itinerary will include points between Topeka, Herington and Wellington on Tuesday; Herington and Pratt on Wednesday; Pratt

to Bucklin and Herington to Salina on Thursday, Broughton to Phillipsburg on Friday and Norton to Belleville on Saturday. Exact dates at given stations will be furnished by the Rock Island station agents. The general subject for discussion will be corn and the preparation of the seed-bed. Lectures will be delivered at each stopping point by experts from the State Agricultural College.

### AGRICULTURAL COLLEGE CORN AND WHEAT TRAINS.

Superintendent J. H. Miller of the extension department of the Kansas Agricultural College is an indefatigable worker. He has organized more than 300 permanent farmers' institutes in Kansas with a membership of some 14,000 real farmers who are heads of families. These institutes meet regularly and, with the assistance of the extension department, are carrying on the work of agricultural education among the men and women to whom the doors of the college are not opened by reason of their circumstances. Another most potent factor in the success of the extension department is the educational trains which have been run under its conduct in co-operation with the various railroads of Kansas. These have been numerous and valuable and Prof. Miller is now able to announce that his plans are well nigh completed for two more special trains, one of which is to travel in the interest of "corn, the seed and seed-bed." This train will start from Topeka on March 1 and cover the lines of the Rock Island west. Announcements for the other train will be made later.

### FARM PHOTOGRAPHS.

Recently the KANSAS FARMER received some excellent photographs that were exposed, developed and printed by members of the family. It is possible that, from the standpoint of the expert, they were not perfect but as showing real farm scenes taken by real farm folks they were good and just what is wanted. There is no more fascinating relaxation from the heavy duties of life than having fun with a kodak and certainly the training developed in acquiring the necessary ability to secure such results as these is well worth the effort. The record of daily events on and about the farm or one one's travels which can be made with a camera has a lasting value which will increase as the years go by. Among the writer's most treasured possessions are some negatives taken with one of the earliest forms of hand cameras that came to Kansas and some of the best illustrations that appear in the columns of the Kansas Farmer were made from photographs taken by amateurs. Watch these columns. It may be that one of your own photographs will be reproduced there.

### PROVISION STOCKS LOW.

Reports from Chicago show that the stocks of cut meats now on hands in the cellars of the packing houses are only about half what they were one year ago and the scarcity of hogs and cattle throughout the country does not promise a better condition in the immediate future. On January 31 there were only 75,000,000 pounds of cut meats on hand in Chicago as compared with 146,000,000 pounds one year ago and 129,000,000 pounds two years ago. Even the meat boycott has not reduced the cost of meat on the hoof to such an extent as to enable the packers to stock up at profitable prices. While these same packers are accused of having engineered this meat boycott through the trades unions and by other means so that they could reduce the prices paid to farmers for live animals and thus refill their cellars with low cost meats preparatory to shooting the retail price up again to their own profit, the scheme seems not to have worked out. At least it is apparent that there is a real shortage of meat producing animals and that prices are not likely to get much lower at once. Meantime the boycott has hurt nobody but the farmers and feeders.

### THE CASH VALUE OF APPEARANCES.

Neatness has a commercial value whether it be found in a store, the

farm home or a man. This fact has been known and appreciated by the patrons of the store and by the man for many years and is daily increasing in value. In the surroundings of the farm home its appreciation is of more recent date, though that, too, is growing rapidly.

Mere size of the house or its architectural ornamentation is not in point though these may give an added value to the farm. Compared with another house that is surrounded with what are generally known as "improvements" the house which boasts of mere size shrinks in value and the farm with it. The writer has in mind a farm on which the house is not large, yet of ample size for the family. It is not architecturally beautiful, yet it is kept painted. The hitching posts are painted and are accompanied by stone horse blocks from which a neatly paved walk leads to the front and kitchen doors. Stone walks lead to the well, the outbuildings and to the barn yard, which is paved throughout. An inexpensive tool shed and a small workshop stand on one side of the barn yard and the farmer or his wife can make any necessary trip between buildings without wading in mud. In front of the house is a real blue-grass lawn that is cut with a lawn mower. Ornamental shrubs, trees and flowers are placed at proper intervals and the whole place looks like some one lived there and loved it as a home.

But, it may be urged, these things are expensive and hard to get. They are not. They are investments and, while they may be secured only gradually, they pay big dividends.

The neater and more attractive you make your home the more attractive you make it to a possible buyer and hence the more valuable you make it.

**THE FOOD BOYCOTT.**

The price of commodities does now, and always will, depend, primarily, upon demand and supply. Artificial conditions and unlawful combination may, for a time, and in a restricted way, increase or depress prices, but no such combination can create a demand which does not exist. If there is, for any excuse, a slight demand for any article, or if that article is greatly in excess of demand, the price will not be high. On the other hand, if the supply is insufficient, the price will be correspondingly high.

The demand of the consumer who is also generally a producer, depends, in no small degree, on his wages, or the profits of his business. There is in this country no considerable non-producing class, all are engaged in producing and in consuming. Their interests are, therefore, common. High wages and large profits tend for high prices and liberal consumption. Liberal consumption increases the demand and diminishes the supply. An era of low prices is always an era of want and financial distress. When things are cheap, labor is cheap, and in poor demand. Good prices, fairly distributed, are best for all. It is better for all that the farmer's corn and wheat, his beef and pork, sell at remunerative prices. Cheap bread and meat means that both will, probably, be hard to get, because when such things are cheap other things, including labor are cheap and in slack demand. When corn was selling for ten cents a bushel in Kansas, the poor in the cities were being fed at public soup-houses, and the country was overrun with an army of the unemployed, begging for bread. It follows that an attempt to change inevitable conditions by a foolish boycott of farm products, because they

are not cheap, will fail, and that its success would injure its promoters. While present prosperous conditions continue prices will be good, boycott or no boycott.

**CHAMPION KING ELLSWORTH IS STILL TEACHING.**

The wonderful Angus steer King Ellsworth, which was fitted by the animal husbandry department of the Kansas Agricultural College and exhibited by Professor R. J. Kinzer at the International in December, has been admitted by many observers and writers to be the most perfect beef animal in existence today. After the International Show, when King Ellsworth was loaded with the highest honor that it was possible for any steer to obtain and he was wearing his grand championship ribbon he was sold to an eastern packer who planned to make Christmas beef for the faculty and students of Yale University out of him. The Industrialist states that he attracted so much admiration that the butcher was prevented from slaughtering him because he would not be able to sell the meat. King Ellsworth was therefore turned over to another party, who is now taking him from town to town in a special car to show New England people what western ozone, Kansas alfalfa and an agricultural college education can do for a steer.

His owner has lately written to Professor Kinzer for the steer menu card to find out what to feed him to keep up his rotundity and the gloss of his black fur. The letter of inquiry intimates that King Ellsworth is attracting more attention in the cities and villages of that region than Barnum's big elephant "Jumbo" did some years ago. Wherever he goes the meat boycott melts like snow down in Florida. Professor Kinzer, who picked him up two years ago, and wrote his biography in the last Industrialist, is prouder than ever of the big disciple and is making preparations to send a few bales of Kansas alfalfa to New Haven to keep up Master Ellsworth's digestion and avoidupois and to prevent him from getting homesick for the sunny stock pavilion of the Kansas State Agricultural College.

**A NEW COURSE OF STUDY AT THE AGRICULTURAL COLLEGE.**

The entire working force of the faculty of the State Agricultural College, from President Waters down to the youngest assistant, is busy at work on a revision of the course of study of that great institution. Exact information is not yet available, nor is it needed. One fact, however, stands out prominently and this is of tremendous import to the farmers and tax payers of the state. The course is being planned so as to make the agricultural and industrial features, which have been so prominent in the history of this institution, immediately available to the students who enter college, whether he come from the city high school or directly from the farm. Heretofore, the College has been subject to severe criticism by those who knew the real facts because of its lack of provision for instruction along these lines to those who enter the sub-freshman classes.

In the late nineties there was a department provided especially for the instruction of young men and young women who had passed their teens but who had been deprived of the advantages of school training in their earlier years. This was called a preparatory department and was later merged into the sub-freshman classes. Naturally the lack of advancement of such students prevented them from taking hold of any technical study and they were compelled to spend from one to two years on the so-called common branches before they could have any instruction that related to agriculture or the mechanic arts.

Now the plan is to change all that and develop this institution along the lines on which it was founded. Plans are being perfected whereby every student, whether male or female, whether proficient or lacking in his early training, shall have immediate access to those practical studies which gave this institution its name and reputation and for which it exists. President H. J. Waters and his able co-workers are to be congratulated upon the readiness and energy with which they have tackled this serious problem and the people of the state are to be congratulated upon this contemplated change which will mark a new era in the history of this magnificent institution.

**Hair Switches and Braids**

So few women have enough of their own hair to dress it according to the new styles (with the long braid around the crown) that nearly all buy switches and braids. These need not be expensive if you send to us for them—but they will be of the best quality at the prices. Send a sample of your hair and we will write prices of what we have to match it.

KANSAS MAIL ORDER SERVICE, The Mills D. G. Co., Topeka, Kan.

**THE HOT SPRINGS OF ARKANSAS**

More than a mountain resort, more than a fashionable playground—these wonderful springs, with their mysterious health-giving waters, have become world famous as

**NATURE'S GREATEST SANITARIUM**

set apart by the United States government for the benefit of humanity. Where modern medical science joins hands with the wonderful curative agencies of nature—a retreat for the careworn or suffering in the great, beautiful out-of-doors.

**Water is the greatest eliminator of human ills and the Hot Springs of Arkansas are the greatest waters known to mankind.**

Patronized every year by more than 150,000 people from every part of the world the recuperating station of our army and navy, the training ground of the world's greatest athletes, the assembling place of statesmen and the rendezvous of society.

**There is no Substitute for the Hot Springs Baths**

The marvelous cures cannot be exaggerated. No one can afford to deprive himself of the quiet rest, the exhilarating joy and the wonderful toning-up that comes from a course of these baths, coupled with the rehabilitating influences of the mountain scene and woodland landscape. Luxurious hotels, medium-priced hotels and high class boarding houses with every modern convenience.

**BEST REACHED**

by the

**MISSOURI PACIFIC IRON MOUNTAIN**



Let us tell you more about it and help you plan your trip. For train time and railroad rates, address

Manhattan Grange, in addition to holding a special meeting with a splendid program this month will have an old settlers day on March 16. This grange is one of the oldest and most active in the state and its programs are always up-to-date. The one provided for old settlers day is especially attractive.

When writing advertisements, please mention KANSAS FARMER.

**PATENTS worth FORTUNES**  
Inventors Send for our Valuable Patent Books  
R.S. & A.B. Lacey, Dep 45 Washington D.C. Est 1868

**L. M. PENWELL**

**Funeral Director and Licensed**

**Embalmer,**

511 QUINCY ST., TOPEKA, KAN.

# TOCK



## Fewer Scrub Stallions Under Wisconsin Laws.

A striking decrease in the number of stallions of inferior breeding during the past four years, with the retirement from service of over 760 grade stallions, is noted in a new bulletin on Wisconsin horse breeding statistics with a list of licensed stallions for 1909, by Dr. A. S. Alexander of the department of horse breeding of the University of Wisconsin College of Agriculture.

While 65 per cent of the licenses were for grades in 1906-1907, in 1908-1909 only 58 per cent were for grades, the bulletin shows. Of the total of 1,603 grades stallions licensed, 767 have been retired since 1906. The decrease in grade stallions has been especially noticeable in those counties where the increase in numbers of pure bred stallions has been marked.

The number of pure bred stallions has increased in 37 counties, while grade stallions have decreased in 40 counties. There has also been a noticeable improvement in the soundness of stallions. A large number of undesirable animals have been retired and their places filled by sound ones.

The character and number of licenses issued during the past year have been as follows: 215 pure bred, 380 grade and 22 mongrel and scrub stallions and jacks, and 1 cross bred and 1 non-standard bred stallion. Since the law was first enacted licenses have been issued to a total of 7,726 pure bred stallions and 2,603 grades.

The mongrel and scrub license was provided for in an amendment to the law approved June 9, 1909, which provides a special license for stallions having neither sire nor dam of pure breeding, designating them as "mongrel or scrub." Stallions of like breeding were previously licensed as grades, and these licenses can only be renewed with mongrel or scrub licenses, unless proof is presented that one parent was of pure blood. Twenty-two of the latter class have been issued.

Progress in stallion legislation has been particularly rapid during the past two years. Following the lead of Wisconsin, Minnesota, Iowa, Pennsylvania, New Jersey and Utah passed laws which have been in operation for several seasons. During the last year stallion laws more or less resembling that of Wisconsin have been enacted by the following states: Colorado, Idaho, Illinois, Kansas, Montana, Nebraska, North Dakota, Oregon, South Dakota and Washington.

If the grape vines are not yet pruned, this should be attended to early. It does not do to prune grapes so late in the season that they will bleed. By pruning now and by judicious thinning the wounds will have opportunity to callous over before the sap starts. If the vines are too thick it is wiser to cut out some of them than to try to thin them by cutting out the new growth, as the latter will generally start more new growth which will thicken up the vines and shut out the necessary light and air upon the grapes.

## OF EXCEPTIONAL INTEREST.

A large, well-known Kansas business firm, having over \$225,000.00 invested in a going profit-earning business, wants to get into touch with a few men of some means, who are looking for a good business opening where profits are sure and worth while. To add extensions and improvements made necessary by the volume of business offered, and which now cannot all be handled, an interest in the firm, with a fully guaranteed income will be extended to a few progressive men. Costs nothing to investigate this. No time for speculators or curiosity-seekers. This is an opening that occurs only about once in a life time and for that reason will not be open long.

Full information to you by return mail, if you write today to A. R., 625 Jackson St., Topeka, Kan.



## Winter Reading

Send us your name on a postal card and we will mail you a free book which gives the facts about cement—tells how to use it and gives many practical descriptions of important work you can do yourself. It also explains why

### Ash Grove Superfine Portland Cement

goes 20 per cent farther than "standard" ground cement—why it saves you 20 per cent of the cement you use. Send for this book—get your name on our mailing list and receive all of the interesting free matter we are glad to send to all who want to learn to use the best cement—Ash Grove Superfine.

Ash Grove Lime & Portland Cement Co.  
Dept. 15 Kansas City, Mo.

Free Cement Book



## A Great Heider Invention Eveners

Made for 2, 3, 4, 5 or 6 horses. The HEIDER 4-horse Plow Evener works four horses abreast on gang, sulky or disc plow. Works free, no side draft, all horse pull equal. We make clevises to attach our Eveners to all plows. HEIDER 3-horse Wagon Evener for wagon, manure spreader, grain drill, or any other implement with pole. GO TO YOUR DEALER, if he can't supply you don't accept any other. Write us for catalog and we will tell you where to get them. We also make Wagon Doubletrees, Singletrees, Neck Yokes, etc. Insist on getting HEIDER'S if you want the best in EVENERS.



HEIDER MFG. CO. Dept. 1 ASK YOUR DEALER  
GARROLL - IOWA

## Clip Your Horses

With a Stewart Horse Clipping Machine

Farm horses need clipping. A heavy, sweaty coat of hair saps their energy and strength. Clipped horses keep in better condition, work, sleep and look better than unclipped horses, and are less liable to take cold. The World's Best The Stewart No. 1 is the best machine in the world and is better suited to your needs than any other. For it's made simple and works shapely. There are no complicated or delicate parts—as in other machines—so that it will last, and give good service, for lifetime.

Quick, Clean and Safe Clipping  
Anybody can clip horses with a Stewart. Can clip them better than the expert with the old hand clippers. It's just a case of guiding the knife while the crank is being turned.

The Stewart No. 1 is a Ball Bearing machine with all working parts enclosed, where they run in an oil bath. All gears are cut from the solid steel bar and made hard. These four features are essential to correct and easy clipping. Look for these points in every horse clipper; refuse the machine that has not got them.

Send \$2.00 Order a Stewart No. 1 from your local dealer. The price complete is \$7.50. Or send \$2.00 with your order and we ship the complete outfit C. O. D. for balance. Send for catalog. Order today.

Chicago Flexible Shaft Co. 206 Ontario St. Chicago

RIDER AGENTS WANTED  
In each town to ride and exhibit sample 1910 Bicycle. Write for special offer. We ship on Approval with best a cash deposit, allow 10 DAYS FREE TRIAL and prepaid freight on every bicycle. FACTORY PRICES on bicycles, tires and sundries. Do not buy until you receive our catalogs and learn our unheard of prices and marvelous special offer. Tires, coaster brake rear wheels, lamps, sundries, half prices. MEAD CYCLE CO., Dept. 5-224 Chicago, Ill

\$10.00 Sweep Feed Grinder | \$14.00 Galvanized Steel Wind Mill.  
We manufacture all sizes and styles. It will pay you to investigate. Write for catalog and price list.  
CURRIE WIND MILL CO., Seventh St., Topeka, Kansas

5-ft. Boiler Steel Hogtroughs \$1.95  
Write for free descriptive circular  
"Made of Heavy Boiler Steel 1-1/2 in. Thick"  
FULTON SUPPLY CO., 1617 Fulton St., Chicago, Ill.

DR. D. J. KENDALL CO.  
I have used your remedies with grand results for ten years, and would not be without them.  
Wm. H. Tuckers.  
**Kendall's Spavin Cure**



Keeps legs sound and trim as no other preparation has ever been known to do. The sure, quick remedy for Spavin, Ringbone, Splint, Curb, Swollen Joints and all Lameness. Equally famed as household remedy. At drug stores, \$1.00 bottle. Get free book, "A Treatise on the Horse," or write to—  
DR. D. J. KENDALL CO., ENOSBORO FALLS, VT.

Send for Booklet  
Horse Troubles  
**DEATH TO HEAVES**  
Heave, Cough & Newton's Distemper Cure  
Guaranteed or Money Back.  
\$1.00 per can, at dealers, or Express Paid. 15 Yrs' Sale.  
THE NEWTON REMEDY CO., Toledo, Ohio.

Steel Wind Mills..... \$12.75  
Iron Pumps..... 1.80  
Galvanized Steel Stook Tanks..... 2.70  
Direct from factory to users only.  
CATALOGS FREE.  
THE OTTAWA MFG. CO.  
King St., Ottawa, Kans.

**CASH FOR IDEAS**  
Investors with ideas communicate with us. We secure and promise patents. Free booklet. PATENT DEVELOPMENT CORPORATION  
526 Seventh St., Washington, D. C.

**Malt Coffee**  
Malted from choicest Montana Barley, shipped in strong, air tight drums at  
**6c per lb.**  
Samples and circulars free.  
MILWAUKEE IMPORTING CO.,  
506 37th St., Milwaukee, Wis.

**Clearance Sale**  
of the famous Ziegler corn harvester. Man and horse does work equal to corn-binder. Regular price \$15.00; factory clearance sale price, \$10.00; illustrated literature free, showing machine at work.  
Ziegler Mfg. Co., Salina, Kan.

**GOPHERS** Renken's Sure Catch Pocket Gopher Trap. It's free. only \$1.00 prepaid. Write for circular. A. F. Renken Trap Co., Kramer, Neb.

Something is wrong, and should be righted. You people here and we in Canada are not making the best use of the soil. When we note England's results from tillage we are only beginning to know the A B C of agriculture.

The men who produce good steers on good soil should be the finishers every time. Why are you raising so many hogs? Why don't you carry it all the way through and raise good bullocks?

You young men have the opportunity to learn more about live stock in this two week's course than it was possible for me to learn in ten years. The world never called as it is calling today for men who really know how to do.

I can't understand how it is possible for you to farm and have all your eggs in one basket. With this great market in your state, how is it possible that you are giving up live stock when cattle growing must go hand in hand with maintaining soil fertility? In coming down from Chicago the thing that impressed me most was the wastefulness of farm manure. The farmer's best bank is his manure pile.

The growing of rape for fall feed when pastures are apt to be dried up, gives excellent results in finishing cattle for future market, or getting the breeding herd into good condition for stabling. A run to rape and access to dry short grass or hay stack has been known to give a monthly increase of 75 to 100 pounds per bullock. I am surprised to see that so many cattle are put on the market in half-flesh condition.

The third class animal scarcely ever leaves any profit with the man who produced it and put it in order. The second-class animal may or may not pay its way. But how many of you have ever lost on a good animal? It is a rare thing.

I don't know of any line of work that should be so attractive to the young people of Illinois as life on a good farm nicely stocked with a good class of stock. Young men, set your standards high. Do not be satisfied with being an average farmer.



# DAIRY



### Economy on the Round Dairy Barn.

The planning, construction, and arrangement of farm buildings do not usually receive the thought and study these subjects warrant. How many dairymen have compared a circular, 40-cow barn with the common rectangular building containing the same area? How many understand that the circular structure is much the stronger; that the rectangular form requires 22 per cent more wall and foundation to enclose the same space; and that the cost of material is from 34 to 58 per cent more for the rectangular building?

To the writer's knowledge, heretofore there has never been published a carefully figured out, detailed comparison of a properly constructed circular barn with the rectangular barn. The objections that have been raised to round barns have usually been made by people who have not gotten far enough into the subject to really understand the relative merits of the two forms.

It has been found by comparison and experience that the round barn has many advantages over the rectangular form. In order to compare the amount and cost of material in the round and rectangular barns, the figures given are based on the careful, detailed estimates of an expert barn builder. Two comparisons, figured on wood construction throughout, are made, in which round barns 60 feet and 90 feet in diameter are compared with both plank and mortise frame rectangular barns containing the same number of square feet of floor space, respectively. I have found as follows:

1. Round barns would be more generally built if their advantages were known and if the few which have been erected had been rightly constructed.
2. The round dairy barn offers greater convenience in storing, handling and distributing the feed.
3. In the circular construction, much greater strength is secured with less lumber.
4. Detailed account, with cuts showing how the round barn at the university was built.
5. Itemized statement of cost of a
6. Brief descriptions with cuts and plans of several round dairy barns in actual use.

In summing up the data given in this bulletin, it is obvious that the advantages of the round barn are convenience, strength, and cheapness.

The round barn is more convenient because of the greater ease and fewer steps with which the feed can be gotten to the cows, owing to the central location of the supply, and because of the unobstructed mow, which reduces the labor required in mowing hay.

The circular construction is the strongest because advantage is taken of the lineal strength of the lumber. All exposed surfaces are circular, and withstand greater wind pressure because the wind can get no direct hold, as on the sides or gable ends of a rectangular barn.

In round numbers, rectangular barns require, according to their construction, from 34 to 58 per cent more in cost of material than round barns of the same area and built of the same grade of material.—W. T. Fraser, Champaign, Ill.

### Kansas Buttermakers Bi-Monthly Scoring Contest.

The first bi-monthly contest of the year 1910, will be held at the Dairy Department, K. S. A. C., Manhattan, Kan., March 1.

Considerable interest was taken in this work the past year, and we hope that this interest will be maintained the coming year.

The prizes for last year's contests were awarded as follows:

Nels O. Nelson, winning first place with a score of 91.1, entitling him to a special butter trier, and to hold the Buttermakers Cup for one year.  
P. J. Springsteen, winning second by

a score of 90.8, also entitling him to a special butter trier. These two men also received a Buttermakers Certificate granted by the Dairy Department for having had an average score for the year, of 90 or over.

We feel that a great deal of good is obtained from these contests since it gives the buttermakers a chance to get the friendly criticism of his products, from a competent and impartial judge. By the use of the blanks sent out, the judge has a chance to decide on the causes for the defects, and offer suggestions for improvement.

Any Creamery Buttermaker in the state of Kansas, is eligible to become a member, and we wish all, to send a tub of butter every two months, beginning March 1, 1910.

For blanks and further particulars, write A. B. Nystrom, dairy department K. S. A. C., Manhattan, Kan.

The daily press reports one of the greatest farm sales ever held in the state in the auction made by D. F. McAllister four miles south of Westmoreland last week. Mr. McAllister had sold his farm of 160 acres last fall for \$9,400 and bought another farm in Greenwood county. Preparatory to moving to his new home he held a farm sale and among the animals offered were a pair of gray 3-year-old geldings which went for \$500; a pair of 2-year-olds sold for \$390, while a 5-year-old gray mare brought \$277.50. Some of the younger animals are said to have sold proportionately higher. Mr. McAllister has kept from 2 to 4 Percheron stallions on his farm for a number of years, and is credited with having been of enormous benefit to his neighborhood and to Pottawatomie county in the improvement of horses which he has accomplished. The Topeka State Journal states that there was a crowd large enough to have made a good county fair and that the horses were fully equal to those usually seen at fairs.

Careful attention to the legs and feet of the horse during the muddy spring months will save much trouble and labor. If the mud is carefully cleaned from the legs and feet after each drive in muddy weather the labor will be found to be much less and results more satisfactory than will the treatment of a case of scratches later on.

### For Split-Bark on Fruit Trees.

Please advise me what to do for peach and plum trees when the bark splits and bleeds. The trees have been planted two years.

Can you tell me by what means I can destroy the worm which attacks the cabbage? Any literature or information on garden culture will be appreciated.—B. F. Brabant, Pleasanton, Kan.

The bark of fruit trees, particularly peach and plum, frequently splits when severe cold weather follows a season of vigorous growth. For bark splitting caused by winter injury, a coat of grafting wax will be helpful, although, in most cases, the trees will make a good recovery without treatment. Splits caused by cold are likely to be narrow and extend for some little length up and down the trees. A disease, upon which the pathologist is still working, frequently causes bark to split, but the breaks in the bark are short and wide, looking much like injury from hail storms and around this a growth of corky tissue ensues. This has been most frequently noticed on the varieties of the Japanese plum. No satisfactory treatment for this has been recommended.

While the cabbage plants are small they may be sprayed with arsenate of lead or Paris green, but as soon as the head forms, application must be discontinued. If this is done, you will not be troubled much with the cabbage worm after the head is formed. But, if they are very numerous, pyrethrum powder or hellebore may be dusted upon the cabbage. Prof. H. H. Bennett, U. S. A. C.



### AN INTRODUCTION

This note will introduce to you "Miss Dairy Maid" of Never-blue. She can't help smiling, even now, because her father sold one cow—The poorest of the herd, he said—And bought a "Butterfly" instead.



PRICES  
\$14.85  
and  
Up

Let us send you, free and postpaid, our 1910 Catalog of New Butterfly Cream Separators and a souvenir photo print of "Miss Dairy Maid." Prices direct from our factory to you, \$14.85 to \$46.30. Six sizes.

ALBAUGH-DOVER CO.  
2109 MARSHALL BLVD., CHICAGO, ILL.

## The Thing That Interests Dairymen

is not which Company has made the most failures in its attempts to make successful Cream Separators, or which Company has abandoned or discarded the most inventions because (by its own admissions) of the inferiority of those inventions, but

### Which Has the Best Cream Separator in 1910.

The United States Separator beat all of its competitors and won the GRAND PRIZE at the Alaska-Yukon-Pacific Exposition, June to October, 1909.

The United States Separator beat all competitors at the Pan-American Exposition in 1901, in fifty (50) consecutive runs, with ten different breeds of cows and won the WORLD'S RECORD and continues to hold the WORLD'S RECORD in 1910.

The best breeders and leading dairymen everywhere use the UNITED STATES SEPARATOR.

Beautiful Illustrated Catalogue No. 9, will give you all other necessary information.

VERMONT FARM MACHINE CO., BELLOWS FALLS, VT.

## ALFALFA SEED

prices and free samples. Address McBETH, & DALLAS, GARDEN CITY, KANSAS.

REID'S YELLOW DENT SEED CORN that will grow. I grow and carefully select every ear of my seed corn. Twenty ears won 2nd place at Nebraska State Show. Single ear won 3rd. Send 25c for sample ear, grains free. Write for prices; they are right. FRANK J. RIST, Humboldt, Nebraska.

CATALPA SPECIOSA. Special low prices on Catalpa Speciosa, Concord Grapes and Kieffer Pears. Write for descriptive catalog. KANSAS CITY NURSERIES, 417 Bellance Bldg., Kansas City, Mo.

ABILENE NURSERIES. W. T. Gough & Co., Abilene, Kan. Write for catalog and price list before placing your order. We have the stock that bears fruit, also all kinds of Ornamental trees, Forest Trees, Shrubs, Roses and Vines. Special attention given mail orders. 10 per cent Discount on \$5.00 order; 15 per cent Discount on \$10.00. Mention paper.

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buying Nursery Stock direct from me. I prepay transportation charges on every order, large or small. You have no unexpectedly large freight or express bills to add to the cost of your order. The money-saving price you pay me means for trees at your station. All trees guaranteed true to label, hardy, large size and satisfactory. Send for my catalogue and get a list of my Delivered-to-you Nursery Bargains. Better write now. NATIONAL NURSERIES, Lawrence, Box 2004, Kansas.

BROWN FENCE For Rabbits, Chickens, Hogs, Sheep, Horses, Cattle, 160 styles. Big heavy No. 9 galvanized Coiled Spring rust proof wires. Will defy stock, wind and weather. Free sample & cat'g. 15 to 35c per rod. We pay freight. The Brown Fence & Wire Co., DEPT. 159 Cleveland, O.

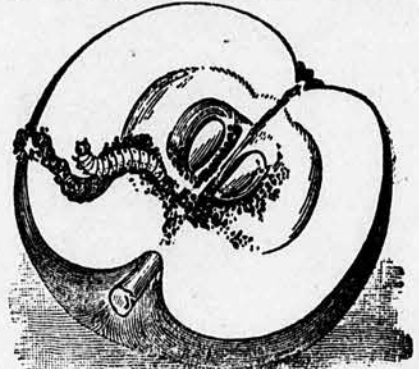
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For spring sowing. From locality where it grows best and most abundantly. Our seed won the Gold Medal at the St. Louis World's Fair, in competition with the world. All our seed is native grown, plump and vigorous. Write us today for beautiful illustrated catalogue No. 9, will give you all other necessary information.

## PURE BRED SEED CORN.

Reids Yellow Dent which tests 97 1/2 per cent of this year, 400 grains taken from 100 ears that 390 grew out of 400 planted in tester, guaranteed to satisfy or money returned upon return of grain, also several one hundred bushels of fine White Swedish Oats 25 bu. \$25. \$85 per 100 bu., fully guaranteed. W. W. ELLMORE, Easton, Illinois.

Spraying Fruit Trees. The question of spraying fruit trees to prevent the depredations of insect pests and fungous diseases is no longer an experiment, but a necessity. Our readers will do well to



write Wm. Stahl Sprayer Co., Box 3-B, Quincy, Ill., and get their catalogue describing twenty-one styles of Spraying Outfits and full treatise on spraying the different fruit and vegetable crops, which contains much valuable information, and may be had free.

14 1/2 Cents a Rod For 22-in. Hog Fence; 15 1/2-cs for 24-in.; 16 1/2-cs for 26-in.; 17 1/2-cs for 28-in.; 18 1/2-cs for 30-in. Farm Fence. 30-inch Foultry Fence 22-cs. Sold on 30 days trial. 30 rod spool Ideal Barb Wire \$1.55 Catalogue free. KITSSELMAN BROS., Box 51 MUNCIE, IND.

FENCE STRONGEST MADE. Built from double twisted wire. Sold to the user at Wholesale Prices. We Pay Freight. Catalogue free. COILED SPRING FENCE \$1.50 Box 500 Muncie, Indiana.



**Dairy Law.**

Will you please give in the KANSAS FARMER a synopsis of the dairy law passed by the last legislature? We are told that any one selling milk, cream or butter must have his cow barn at least 150 feet from any other barn.—T. S. Brockman, Cummings, Kan.

If the quality and quantity of dairy products of this state are to be increased it is essential to provide by law the sanitary requirements for the production of good flavored marketable milk and cream, etc., and likewise to aid the producer by opening markets for his products. As most of the dairy products are sold upon the basis of butter-fat it was found necessary that some legal protection should be given the producer in seeing that he receives perfectly accurate tests of butter-fat in the shipments of milk and cream made by him. Therefore, it was made unlawful, after Jan. 1, 1910, for any person to sample, test or to buy or handle dairy products where the value of the same is determined by the Babcock test without having a permit; permit to be granted to those who had proved themselves proficient in the art of testing dairy products and providing for the cancellation of same when the person holding the permit was found to be violating any of the provisions or regulations of the dairy law. Through this medium it is expected that the dairymen will get perfect and honest returns from the milk and cream he has to market and that the products thus handled will be cared for in a sanitary and proper manner so as to encourage the producer in furnishing better raw material for the market. While the law specifically provides for the protection of the product after it has been produced, it also has provisions which govern its production. It is quite possible that these provisions are the ones which the inquirer is most interested in.

In Section 2 the law provides that it shall be unlawful to sell or offer for sale milk, cream, cheese, butter, etc., that is not fresh, pure and clean, and empowers the dairy commissioner, or his deputy, to forbid and prohibit the sale of unclean or unwholesome milk, cream, butter, cheese, etc. It further provides that it shall be the duty of the commissioner or deputy to condemn for food purpose all unclean, unwholesome milk, cream, butter, cheese, etc., wherever they may find some.

In Section 4 it says that it shall be unlawful to offer for sale milk, cream, butter, cheese, ice-cream, or any dairy product that is not pure and fresh and handled in clean utensils or to offer for sale or to sell milk from diseased or unhealthy animals, or handled by any person suffering from or coming in contact with any contagious disease. It further provides that it shall be unlawful to add any foreign substance to dairy products such as preservatives, also adding water, etc., or to remove from the milk any of the butter-fat, or to in any way deteriorate or adulterate the milk so as to render it impure.

In Section 7 it forbids the handling or storing of milk or cream in any place that is unclean or where strong flavored products are stored and handled, such as vegetables, eggs, etc., or to handle milk or cream or any dairy product in a place opening upon or connected with a cow barn, horse or hog barn, sheds or other places where live stock are kept housed or handled. That is to say that the milk must be removed from the place of milking as soon as milked and placed in pure air, where the product can be kept in a pure and sanitary condition.

In Section 8 it provides for the richness and the age of cream. For many years our dairymen have been more or less negligent as to the age of the cream delivered to the creamery, therefore it was found essential to frame a provision to the law making it unlawful to sell or offer for sale cream, of which any part of the shipment is more than four days old, from November to April, inclusive, and from May to October, inclusive, three days old.

From the above synopsis it can be seen that it is possible for any person to comply with the law as to the principal requirements—cleanliness and purity.

To aid the dairymen and creamerymen to comply with the law some brief advice has been furnished by the Commissioner's Department and is given below:

"Milk stored or shipped in rusty or unsanitary cans, produced or milked in unsanitary surroundings, produced by unhealthy cows, or milk produced from cows with fifteen days before and five days after calving, is considered as impure and unhealthy milk.

"Cream stored or shipped in rusty or unsanitary cans, cream handled in unsanitary surroundings, or cream that has been skimmed by a separator that was not clean when used, is considered as unclean and impure.

"Butter stored where oils, vegetables, poultry or other strong-flavored merchandise are handled, or butter packed, shipped or stored in unclean butterstands, boxes, or packages, will be condemned for food by the State Dairy Commissioner or his deputies.

"Section 5 provides for testing of milk and cream or their products. The securing of accurate samples of dairy products is the first important step in testing. It is hereby required that all milk should be poured at least once from one vessel to another before a sample is taken for the test; and that cream shall be poured from one vessel to another at least three times before sampling, unless the said milk or cream is thoroughly stirred and sampled by the 'McKay' sampler or some other recognized sampler that will secure a representative sample.

"All milk or cream utensils that are used for the purpose of shipping or storing milk or cream that are not removed from the depot on the same day they arrive, and from which the covers have not been removed and the cans inverted in pure air, will be considered unclean and unsanitary utensils.

"Milk to be separated should be separated as soon as possible after milking, and the cream of each separation cooled by placing said cream in cold water before mixing with cream of different separations.

"A permit to test milk or cream shall not be granted to any person maintaining an unsanitary milk or cream depot until such place meets the approval of the dairy commissioner or his deputies, or satisfactory proof is furnished that the said milk or cream depot is sanitary.—D. M. Wilson, State Dairy Commissioner."

**Oleo and Butterine.**

A subscriber asks for an explanation of the difference between oleomargarine and butterine. The good Lord and the manufacturers only know what either one is made of, but the oleo manufacturers claim that "oleomargarine is a mixture of various animal and vegetable fats, which is churned with milk to impart a butter flavor. The principal fats used are oleo oil, a selected fat from beef that is obtained from the caul fat; this is washed, well chilled in ice water, then cooked, cooled and put into hydraulic presses by which the oil is extracted. 'Neutral,' or neutral lard, is the lard of the pig; the leaf fat when taken out of the animal is put into a refrigerator where it remains 24 hours; it is then well cooked, and becomes absolutely colorless and has neither taste nor odor. The vegetable fat commonly used is cotton seed and then highly refined." Investigators have found many other by-products, such as paraffine, boric acid, etc. Butterine is oleomargarine with which is mixed more or less butter. This is a purely commercial term, however, and not recognized by law. All "butterine" is legally oleomargarine. Oleomargarine and butterine surely ought to be called by synonymous terms, and their description reminds us of the advice given by an old colored preacher who told his flock that there were two roads the Christian should avoid, as one led to purgatory and the other to perdition.—P. F.

# Other Cream Separators

## Merely Discarded, or Abandoned

# De Laval Inventions

It is interesting and instructive to know that nearly, if not quite, every cream separator that has ever been made, and certainly all that are being made at this time, are merely copies or imitations of some type of construction originally invented or developed by the De Laval Company, and either not used by it because of something more practical or else discarded and abandoned in the course of De Laval progress and utilization of later improvements.

As earlier patents have expired some of their features have one after another been taken up by different imitators, so that at all times, as is the case to-day, every separator made in the United States or elsewhere in the world, utilizes some type of construction originally owned and developed by the De Laval Company though some of them have never been commercially used by the De Laval Company because of their inferiority to other types of construction used by it.

The De Laval Company has always been forging ahead, with its many years of experience and the best of experts and mechanics the whole world affords in its employ, so that before any expiring patent might permit the use of any feature of construction by imitators the De Laval Company had already gone so much beyond that type of construction that it was then old and out-of-date in the modern De Laval machines.

All cream separator inventions by others have been of immaterial details or variations, upon which patents have been taken, if at all, more for the sake of the name than by reason of any real value or usefulness attaching to them.

The first practical continuous flow centrifugal Cream Separator was the invention of Dr. Gustaf de Laval in 1878, the American patent application being filed July 31, 1879, and issuing as Letters Patent No. 247,804 October 4, 1881.

This was the original Cream Separator—of the "Hollow" or empty bowl type—and it has been followed from year to year by the various steps of cream separator improvement and development, all De Laval made or owned inventions, the American patent applications being filed and letters patent issued as follows:

- The original hand Cream Separator of the "Bevel Gear" type; application filed October 2, 1886, issuing as Letters Patent No. 356,990 February 1, 1887.
- The original hand Cream Separator of the "Spur Gear" type application filed January 17, 1887, issuing as Letters Patent No. 368,328 August 16, 1887.
- The original Steam Turbine-driven Cream Separator; application filed December 8, 1886, issuing as Letters Patent No. 379,690 March 20, 1888.
- The original "Tubular" shaped "hollow" bowl Cream Separator; application filed April 19, 1886, issuing as Letters Patent No. 372,788 November 8, 1887.
- The original "Disc" bowl Cream Separator; application filed May 12, 1890, issuing as Letters Patent No. 432,719 July 22, 1890.
- The original vertical curved or interlocking "Blade" Cream Separator bowl, covered likewise by the application filed May 12, 1890, issuing as Letters Patent No. 432,719 July 22, 1890.
- The original "Bottom Feed" Cream Separator bowl; application filed July 24, 1889, issuing as Letters Patent No. 445,066 January 20, 1891.
- The original "Suspended" bowl Cream Separator; application filed August 21, 1893, issuing as Letters Patent No. 512,203 January 2, 1894.
- The original "Star" or "Pineapple Cone" shaped series of cylinders Cream Separator bowl; application filed August 24, 1893, issuing as Letters Patent No. 521,722 June 19, 1894.
- The original "Curved Disc" Cream Separator bowl; application filed January 18, 1905, issuing as Letters Patent No. 892,999 July 14, 1908.

The original "Split-Wing" Tubular Shaft Cream Separator bowl; application filed April 29, 1898, issuing as Letters Patent No. 640,358 January 2, 1900—which invention, with a series of later improvements, is the type of bowl construction used in the De Laval machines of to-day, and still covered by protecting patents which prevent its appropriation by would-be competitors.

The patents thus enumerated are but a few of the more important of the more than 500 original Cream Separator patents owned, controlled and developed by the De Laval Company during its thirty years of creation and development of the Cream Separator industry throughout the world. They are recited because they show in the most illustrative and conclusive manner possible De Laval originality and leadership from 1878 to the present day.

In addition to these patent-protected features, the De Laval machines have within two years been mechanically re-designed and reconstructed in every part, from top to bottom, so that the new and improved line of De Laval machines are to-day even more than at any past period fully ten years in advance of any other cream separator made.

These are the Rock-of-Gibraltar-like separator facts against which the mere "word claims" of would-be competitors fade away like the mists of night before the rays of the morning sun.

## The De Laval Separator Co.

- 165-167 Broadway NEW YORK
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- Drumm & Sacramento Sts. SAN FRANCISCO
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Both Incubator and Brooder, ordered together, cost but \$11.50. Freight Prepaid. The Belle City Incubator has double walls and dead air space all over, copper tank, hot-water heat, self-regulator, thermometer, egg tester, safety lamp, nursery, high legs, double door. The Belle City Brooder is the only double-walled brooder made, hot-water heat, platform, metal lamp. No machines at any price are better. Write for our book today, or send the price now under our guarantee and save waiting. Satisfaction Guaranteed.  
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With progressive farmers it is no longer a question of whether or not to buy a manure spreader. Good spreaders have already proved their value. The real question is—which one will net you the most profit?

The I H C line answers that question. Among the many styles and sizes, you will find one that just meets your needs.

## I H C Manure Spreaders

embody all that is best in manure spreader construction—all that makes for greatest manure profits. They have strength in abundance to withstand the hardest usage; they are simple, sure and steady in operation; they work perfectly with fertilizer in any condition; they are exceedingly light in draft.

I H C manure spreaders are made in three styles; each style is made in three sizes, ranging from 30 to 70 bushels capacity. Corn King and Kemp 20th Century spreaders are of the return apron type; Clover Leaf manure spreaders have endless aprons. Two styles of feed are furnished—either ratchet or double pawl worm gear. There is an I H C to suit each requirement—large sizes for large operations, medium sizes for the average farmer, small sizes for orchards, vineyards—for every condition. I H C spreaders have lime hoods to spread commercial fertilizers; drilling attachments to distribute manure in rows. Whatever I H C spreader you buy will pulverize and spread manure or commercial fertilizer perfectly. You will find it durable, and it will net you big dividends on your investment.

Manure is the cheapest and best fertilizer but it must be handled and spread right or most of its value is wasted. You must have an I H C manure spreader to get 100 per cent value out of the manure. I H C spreaders are doubling the crops of others. The one that suits your needs will do it for you.

See the local International agent to get our catalogue and full information. Or, if you prefer, write us for further particulars.

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Revolving steel disk marker for corn-planters. Can be placed on any wood or pipe staff. Big improvement over the old cast drag. The staff goes through the hub casting which carries the flange that the disk revolves on. Every farmer takes pride in seeing the straight rows he can drive with it. Weight 6 pounds—13 inch steel disk. Price \$2.00 at your dealers. If your dealer hasn't it, write us for full particulars and you will be supplied.  
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You may say this little ad looks cheap, offering so many good horses. Well, friend, it is cheaper than a larger space, that's why we use it. The buyer pays for it. REMEMBER THAT. You who have seen our horses at the State Fairs for years know that they are not the cheap kind; although by our economical system of raising and selling our stallions we can sell cheaper than most dealers. The records show that we exhibited three year old Percheron stallions at the Nebraska State Fair, 1909, with five importers who claim to have bought the best in France and our horses stood 1st, 3rd and 5th. They are all for sale at very reasonable prices. Every one fully guaranteed. Terms to suit. Life insurance furnished.  
Write today or come to

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On main line C. & N. W. R. R., 25 miles N. W. of Omaha, 8 miles east of Fremont; 12 passenger trains daily.

# THE FARM



To secure the best results alfalfa should be sowed on rich land. It is generally accepted as true that alfalfa enriches the soil and about this there can be no doubt so far as the nitrogen content is concerned but it requires time. Cow-peas, crimson clover, soy beans or sweet clover are good preparatory crops for alfalfa.

An excellent crop rotation, at least in some communities, is alfalfa four years and corn two years with a good crop of barnyard manure between the corn crops. If the soil is poor it may be better to crop to cow-peas or crimson clover as a preparation for alfalfa. In clay land sweet clover grown and plowed under is a good preparation for alfalfa.

Editor Kansas Farmer:—Enclosed find check for a two years' subscription to the KANSAS FARMER. I am very much interested in your paper, and glad to renew my subscription. Through the KANSAS FARMER I have become very much interested in the west and would like to consider moving to some location where I could grow alfalfa and where good health prevails.—Theo. Vogelsburg, Loveland, O.

The Iowa Agricultural College finds the largest profit wherever the amount of organic matter has been increased by applying manure or by following clover with corn or by sowing cow-peas in corn at the last cultivation. Wherever this has been done there has been a distinct increase in yield of the corn amounting to four to seven bushels per acre the first year where manure was used, and to seven to eleven bushels per year where legumes were grown.

The United States Department of Agriculture announces that the pea vines, which have heretofore been a waste product of canning factories have now risen to the dignity of a by-product. These vines are now being cured for hay, fed to stock in the fresh state after the peas are picked, or are made into ensilage which is said to be superior in value to corn ensilage. Pea hay may be stacked as clover hay is and it will keep practically as well if it is well tramped. It has a value higher than clover hay and both the silage and the hay are found to be excellent feed for dairy cows and satisfactory feed for beef cattle, horses and sheep. It sells from \$2.00 to \$5.00 per ton.

### How is the Wheat?

KANSAS FARMER readers are invited to send in postal card or short letter reports on the present condition and prospects of the wheat crop. How did the wheat stand the winter? What portion of it, if any, is damaged? What do you suggest as the best treatment of the ground if the wheat has been killed to any considerable extent in your locality?

### People Living Too High.

Secretary Wilson of the Department of Agriculture is of the belief that the American people are suffering at present not so much from the high cost of living as from the cost of high living.

"It has been said an American is the best fed, best clothed, best educated, and best housed man on earth," remarked the Secretary. "We shall have to add now that he is the most expensively fed."

The Secretary pointed out that the fundamental difficulty was that people are leaving the farms to such an extent that there are not enough remaining to produce the food of the increasing population. The boys and girls of the farm, he asserted, are being lured away to the cities, to the factories, and to the mines, and to too great an extent the agricultural resources of the country are being neglected.—Ex.

### Horton's First Institute.

For the first time in its history Horton has a Farmers' Institute organization. For years Horton has been known as a railroad and shop town,

but it is now becoming headquarters for farmers from one of the best sections of Kansas. Tuesday Prof. P. E. Crabtree, of the State Agricultural College, and W. S. Gearhart, the state highway engineer, held an all day meeting in Horton. The Horton Commercial Club arranged for the meeting, securing the hall, furnishing dinner for all the farmers and their wives, and keeping the farmers supplied with cigars. The meeting was one of the best Prof. Crabtree and Engineer Gearhart have attended. The said. A farmers' institute was organized with the following officers: President, George W. Jones; vice president, Frank H. Belden; secretary and treasurer, Robert L. Waller. The institute will meet at least twice a year, possibly oftener, and the Horton business men will see that the farmers are entertained in the proper manner whenever they are in town.

### Corn from the National Exposition.

Editor Kansas Farmer:—Where can I obtain some of the prize seed corn that I read so much about in the papers? I mean the corn that sold for such fancy prices at the National Corn Exposition at Omaha.—X. Y., Shawnee county, Kan.

We do not know where you could obtain samples of this corn as there was only a very limited amount of it in the first place and it was purchased solely for advertising purposes. The prices paid for this corn could not be made profitable to the purchasers in any way except that in which it is used. This corn was bought by enterprising publishers of newspapers who offer it in small lots as premiums to their subscribers and who will doubtless continue to offer it as long as the demand lasts or as long as they can create a demand for it. One purchaser in another state is said to have bought ten ears. This quantity has undoubtedly been exhausted long since though the demand for it may still continue. Our suggestion to X. Y. is that he patronize a reliable dealer such as advertise in the KANSAS FARMER, buy what corn he needs and pay the very reasonable prices asked for it. By doing this he will be sure of what he gets, will know that it is of good quality and true to name. In fact, it may be wise to purchase seed corn this spring anyhow in many localities, as the weather conditions last fall were such that it is doubtful if corn will germinate if taken from the crib or shucked from the field. A few dollars invested in good seed corn will save many dollars and make many more.

### Secretary Wilson on Alaska Farming.

The federal government has definitely adopted the policy of encouraging settlers to take up agricultural land in Alaska and farm it. The Department of the interior has asked Congress to appropriate \$100,000 for surveying the agricultural and grazing lands and a bill is now pending for this purpose. Still more recently Secretary of Agriculture Wilson made the following vigorous statement as to the achievements and possibilities in agriculture there to a correspondent:

"The agricultural possibilities of the territory are practically assured, it is quite within the probabilities that the farm products there will eventually be worth more than the mineral output. Probably 100,000,000 acres are available for agriculture. This land can grow good crops owing to the long continued sunshine of the summer. There are at least two months when it never grows dark. The grains mature remarkably well under these conditions and hardy vegetables flourish. The very heaviest oats and barley that ever came to this office were from Alaska. We have also remarkably fine samples of wheat from there.

"Farmers in our northern states will, in the future, find that grain seeds brought from Alaska are very desirable as they are hardier than seed grown further south. Work has

already begun in the development of seeds.

"We have also been introducing domestic animals there, the effort being to produce a stock suited to the climatic conditions. We have now a herd of about sixty head of thoroughbred Galloway cattle on Kodiak Island which is propagating rapidly and seems to be very much at home."

**Boys and Girls Agriculture Clubs.**  
Farmers Bulletin No. 385 by the department of Agriculture summarizes the benefits to be gained from boys' corn contests, girls' cooking contests and other agricultural clubs organized for the benefits of the young folks, as follows:

Individually the members of such clubs have been led to observe more closely, to recognize good and bad qualities of the products they have grown and in the insects, fungi, and other various conditions affecting their work; and they have met and learned to solve some problems in the improvement of plants, fruits, animals and housework.

Collectively they have learned the value of organized effort, of cooperation, and of compromise; and the social instinct has been developed in them, a matter of great importance in rural districts, where the isolated condition of the people has long been a great hindrance to progress.

The influence upon the communities at large, the parents as well as the children has been wholesome. Beginning with an awakening interest in one thing, better seed corn, for example, communities have rapidly extended their interest to other features of rural improvement, with the result that in the regions affected by the agricultural-club movement, there has come about a general upward trend in the thoughts and activities of the people.

These club activities have in many instances exercised a very stimulating if not a "redirecting," influence upon the ordinary work of rural schools and teachers.

The knowledge gained from the work of these clubs has demonstrated that the natural love of competition among boys and girls (as well as their elders) can be utilized to immense advantage in furthering their own education for efficiency.

**To Poison Jack Rabbits.**

Private individuals and a number of the experiment stations have sought to discover a satisfactory means of poisoning jack rabbits in localities where they have become so destructive to crops as to prove a pest. The New Mexico Station announces success with a new combination.

The principal ingredients in this new remedy are, sugar, dried alfalfa leaves, and strychnine. It was prepared as follows: One ounce of sulfate of strychnine and two pounds of sugar were dissolved in two and one-half gallons of warm water. To the water while it was still hot, enough bright alfalfa leaves were stirred in to about absorb the water. The mixture should be kept hot for thirty minutes and stirred frequently so as to insure thorough impregnation of the leaves by the poison. Let the mixture set for three or four hours after which it will be ready to put out in the field. It will not be necessary to dry the leaves before putting out the poison. A small wooden paddle or large spoon may be used to dish out the mixture, which should be piled where the rabbits are accustomed to run and feed. Where the rabbits come into the field from the outside, the poison should be distributed along the edge of the field. The best time to do this is late in the afternoon, because the rabbits do most of their feeding at night; the poison will also be in a fresher condition when they come across it.

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Chase Manufacturing Co., 99 Broad St., Grinnell, Iowa.



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**Our New Steel Gearing** Can't be equalled. It's a wonderful improvement in manure spreader construction. Simple, complete, all gearing attached to gearing cage; perfectly adjustable; never wears out. Does away with the trouble of mud clogging the drive chains. No chains to jump sprockets here. Fits any size wheels. Beats anything you ever saw.

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That's the way I sell it. Right direct to you and save you every cent you can. Then I say to you, try it at my risk. Test it out any way you please, in any kind of manure, in every sort of weather—either as a manure spreader or farm wagon. Can be used either way. Saves you \$25 to \$50 on your investment. It's entirely in a class by itself. If you don't say it's the best spreader made after you try it—send it back—I will refund your money and pay the freight. You take no risk on my plan. Try the Grinnell first. It will fit any standard farm truck. Sold with or without the trucks.

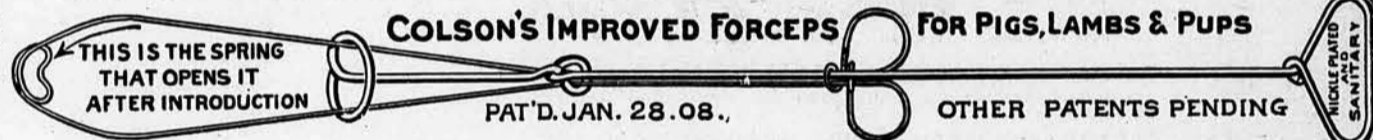
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These forceps are made of the finest spring steel polished and nickel-plated and are positively the best forceps on the market. The cut is necessarily so small it gives but a faint idea of the instrument. Farrowing season is close at hand and your sows cannot be watched too closely. Think what it means to lose one sow and a litter of pigs or even one pig.

Every farmer should have forceps on hand for an emergency. Colson's Improved Forceps are the best on the market. Thousands of them have been sold and given satisfaction.

Prof. C. A. Wilson, Instructor in Animal Husbandry of the University of Missouri says:

"We have just had occasion to use Colson's Pig Forceps and they are a complete success. We find that the pig can be readily gotten hold of and removed without injury to the sow or pig. Forceps of this pattern should be in the hands of every farmer who owns a brood sow, for once using of them will mean the saving of many times their cost."

That's pretty strong testimony is it not?

Owing to the great demand for them we were only able to secure a few of these forceps at this time but we are going to give our readers the benefit of the purchase while they last.

**HERE'S OUR OFFER.**

Send us \$1 for a renewal of your subscription to Kansas Farmer and 25 cents for express or mailing and we will send you at once one of these instruments. **FREE.**

Address

**Circulation Department Kansas Farmer, Topeka, Kan.**

out the poison is during the winter months or in early spring while the natural herbage on which the rabbits feed is scarce.

Remember to be cautious in the use of this or any other poison and remember to bury the dead rabbits.

**The Effect of Manure.**

The effect of manure has been tested at the Iowa Agricultural College with the following results: Corn grown the first year on untreated land produced 72 bushels per acre; on land where eight tons per acre were applied, 86 bushels. The influence of manure the second year from its application is seen in the yield of 49 bushels on untreated land and 67 bushels on the treated land; and the third year on oats, 53 bushels on untreated land and 59 bushels on the manured land; and the fourth year, on the clover which had been sown with the oats, in that the yield on untreated land was only 1.3 tons per acre, while the manured land yielded 3.5 tons. It should be stated that this great difference in the yield of clover the fourth year from manure was due largely to the better stand secured on the manured land. The manure is applied on the clover sod just before it

is fall plowed to go into corn for the next year. This traces the effect through the rotation of four years, but that is not all the effect of one application of manure.

**Corn is Still King.**

It is very doubtful whether there has ever been doubt so much thought and scientific, practical research to any known cereal crop as there has been to corn. Marvelous results have been achieved in increasing both quality and crop. The manufacturers of corn planting machinery have been doing all in their power to aid in this work, and to them some measure of praise is justly due. The Hoosier Corn Planter is one of the results of this painstaking work. Hoosier Corn Planters can be had in many styles, with and without fertilizer attachments. They can be had with shoe or runner, single disk or twin disk furrow openers. Also in round-hole, flat drop and edge drop plates. No matter what style of corn planter the user wishes to purchase, he can find it in Hoosier Corn Planter line. The Hoosier Corn Planter has many exclusive features. Every Hoosier Planter is sold under the most liberal of guar-

antees. The Hoosier must and will do all that the manufacturers claim. They are accurate, very simple, easily adjusted, strong and of light draft. Before purchasing a Corn Planter the farmer should write to the manufacturers, The American Seeding-Machine Co., Incorporated, Richmond, Indiana, for a Hoosier Corn Planter catalog. Then go to the retail implement dealer and insist on seeing the Hoosier Corn Planter.

The mule foot hog is being exploited in many localities on account of its supposed immunity from hog cholera. It has been found, however, that this variety of hog is not immune though he is much less likely to suffer from this disease than are other breeds. The mule foot hog is a "new" breed in the sense that he has only been bred in captivity a short time. Like other "new" breeds this one has the constitution of his wild ancestors and many of their traits. He is a natural hog while the other breeds are purely artificial products of modern civilization. When the mule foot has been bred along modern lines for a few generations he will probably be subject to the same diseases that afflict his brothers.

### This Wrench Takes Hold As Easy As It Lets Go



The Keen Kutter Pipe Wrench never balks or hitches, never needs coaxing or forcing. It takes hold with the grip of a vise, and yet easily, without crushing.

The Keen Kutter Pipe Wrench has a double action for gripping and relaxing and loosens quickly and cleanly on the back stroke.

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are made from drop forged crucible steel. This is tempered and tested by expert tool-smiths. The teeth of this wrench can be sharpened. When they grow dull, a file will fix them. The jaws are strongly reinforced. The frame is nickel plated. The handle is a handful—swelled to fit the grip; it cannot cramp the hand. Look for the Trade Mark on the handle. Made in all regular sizes—6, 8, 10, 14, 18, 24 inches. If not at your dealer's, write us. "The Recollection of Quality Remains Long After the Price is Forgotten." Trade Mark Registered —E. C. SIMMONS SIMMONS HARDWARE CO. (Inc.) St. Louis and New York, U.S.A.



# FARM INQUIRIES



ANSWERED BY  
Prof. A.M. Ten Eyck

### Corn Graders and Planters—Cane and Kafir Corn.

I see in the annual report of the station that experiments have been made with corn graders and planters. Can you send me any information on the results of the experiments on this subject? Also have you any corn either at Manhattan or Hays that is early matured? Have you any corn bred by the ear row method? If so, of what varieties? I believe that an early corn might mature here before the dry weather affected it much. Also have you any Kafir corn or cane which has been bred for early maturity?—I. N. Farr, Stockton, Kan.

We have no published report of the testing of the corn graders and corn planters. The general results, however, favored grading seed corn as compared with planting the whole corn, tips and butts included. Also the results were favorable to the edge drop planters, these planters dropping more accurately than the round hole planters, especially with graded corn. With ungraded corn there was little difference in accuracy of drop, if anything, the results favored the round hole drop.

I am mailing you Press Bulletin No. 175, giving list of seed corn and other seed grain which we have for sale. You may secure seed of western grown corn from the Fort Hays Station, Hays, Kan. Address assistant superintendent, Geo. K. Helder.

Practically all of the seed corn which we are sending out from this station has been produced from the product of the high producing ear rows. This well bred corn, however, may not be any better adapted for growing in Rooks county than other seed of eastern grown corn, since the corn will lack adaptation, and would have to be grown and bred, preferably by the ear-row method, for several seasons, in order to adapt it for your soil and climate. Some variety of western corn which has been grown for a number of years at the Hays Station or in counties west will give much better results with you for the first year's planting, but you might introduce well bred eastern varieties in a small way and by growing the corn for a few seasons and carefully selecting the best seed ears finally adapt it to growing in your section of the state.

You may secure seed of cane and Kafir corn also from the Fort Hays Station, which is more or less adapted to western conditions. We also have well bred seed of different varieties for sale, as given in Press Bulletin No. 175.

### Green Fertilizer Crop.

I have about eight acres of land that I wish to treat with a green fertilizer crop. I have been thinking of sowing cow-peas and cane (mixed), plowing them under while green. How do you think this mixture would do? Can you suggest something better? At what stage of growth should the crop be plowed under to give the best results? Please give number of pounds or bushels to be sowed per acre, if sowed broadcast. The surface soil is black and thin, with a stiff clay subsoil, which I wish to break up and loosen as well as to fertilize.—J. M. Riley, La Monte, Mo.

I am mailing you Bulletin No. 160 on "Cow-peas." From my experience at this Station I would not advise sowing sow-peas with cane unless you sow a very small amount of cane, since the cane, if sown quite thick, will grow rank and smother the cow-peas. Cane makes a fairly good green fertilizer, but cow-peas are better for green manure, and I would prefer to sow the cow-peas alone rather than with cane. You might sow cow-peas with rape for green manure with good results, or rape planted or sown alone makes a good green manuring crop. We often use it for planting in the stubble after wheat harvest, plowing

it under in the fall and following with corn the next year, and have had good results by this method.

Where cow-peas are planted alone for green manure and sown in close drills or broadcast, it requires about a bushel of seed peas per acre. It requires only about a third of a bushel, or 20 pounds of seed per acre, for planting in rows, and by cultivation the peas may make as much growth planted in rows three to three and one-half feet apart and cultivated, as when sown broadcast and given no cultivation.

Cane sown alone requires from a half to a bushel of seed per acre, depending somewhat upon the quality and vitality of the seed. Rape may be sown broadcast or planted in drill rows, the first method requires from four to eight pounds of seed per acre. Two to three pounds of seed per acre is sufficient for planting in rows three feet apart. Usually we prefer to broadcast or drill the rape and give no cultivation. You will find these points further discussed in Bulletin No. 160, a copy of which has been mailed you.

### Grain—Alfalfa.

I wish to know how we can secure free seed from the college of the pure varieties of grain. I also wish advice from the Experiment Station in regard to some alfalfa. It was planted three years ago on a piece of ground on the upland. There is half a stand in some places and none at all in others. I wish you would advise what is best to do with this ground this spring. Would you plant more seed on the same ground or plow it out entirely? If I have it plowed out, what kind of a crop would be best to plant? How would you prepare the ground for the crop? There are about ten acres of ground, and it is on a hill side, and not a very good piece of land.—Mrs. Annie E. Horton, Lucerne, Kan.

I am mailing you Press Bulletin No. 175, giving list of seed corn and other seed grain which we offer for sale, with prices, but would advise that you secure seed corn from the Fort Hays Branch Station, Hays, Kan. Address assistant superintendent, G. K. Helder.

We are not distributing free seed, having no available fund or seed for this purpose. We have been making some co-operative tests with a few farmers located in different parts of the state, but send only small quantities of seed for trial, a quart or two of corn and a peck of oats or other small grain, and really you should secure seed from the Fort Hays Station since our seeds are not well adapted for growing in western Kansas.

I am requesting the director of the Experiment Station to mail you Bulletin No. 155 on "Alfalfa." I doubt whether it will be advisable for you to attempt to thicken up the stand of alfalfa on this old field; you had better seed a new field this spring, and later when the new field is established plow up the old one. Prefer to follow the alfalfa with Kafir corn or cane if you break up the field this spring; or if this field were plowed during the summer and well cultivated so as to pulverize and settle the soil, it may produce an excellent crop of winter wheat. In this part of the state, however, we find it usually true that alfalfa ground is too fertile to grow wheat safely; wheat usually makes too rank a growth and lodges and fails to fill, but in your part of the state this is not apt to occur. The main thing which you will have to guard against is that the seed-bed may remain too loose and mellow, which is an unfavorable condition for growing wheat. I am mailing you Circular No. 13 on "Dry Land Farming," and Circular 9 on "Wheat Culture," in which the ideal seed-bed for wheat is described.

### Timothy, Clover, Alfalfa.

I have about 40 acres of fairly level land which has been in corn too long for profit. It is upland and yet not

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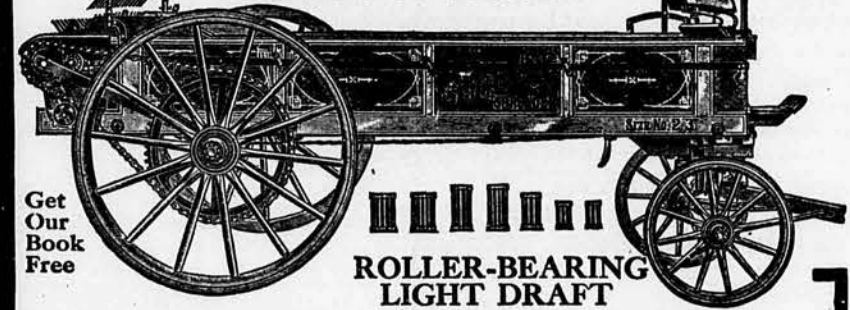
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Don't sell your hogs for 6 to 8 cents and buy poorly smoked meat from Meat Trust at 20 to 30 cents. Butcher your hogs, salt and smoke the meat yourself, sell the hams and bacon not needed for your use and make 3 or 4 times what you do now, besides having better meat. The extra profit will pay for what you use. No smokehouse necessary.

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Wright's Smoke guaranteed and backed by our \$250,000 capital. Money back if you want it. 618 Broadway, KANSAS CITY, MO.

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### QUEEN GALVANIZED IRON CUPOLA

Gives perfect ventilation in your barn—saves you money—constant up-draft gives fresh air circulation for your stock. Rain and snow cannot beat in and spoil your hay and grain—birds cannot get in. Costs less than wooden cupola; fits any barn; easily put on; each cupola furnished with gold leaf weather vane. Write for full information and prices.

SOBOLIK & PETERSEN, Dept. 10. CRESCO, IOWA

very high as it is along the side of a ravine and comes near being second bottom. It has a few hardpan spots which are wet in a wet season. I have been advised not to risk alfalfa but to plant red clover and timothy. The ground was in corn last year but having had two years of wet weather, crops have not been good, as the ground could not be well cultivated and it became foul with weeds. Would you advise me to seed to timothy and clover this spring, or seed to some other small grain?

If seeded to clover and timothy what varieties would you advise?

What proportions of each should be sown to the acre?

Would you plow the ground and then disk and seed with a planter, or broadcast?

Tell me as briefly as possible how your experience would suggest to proceed, where I can get absolutely pure seed, and amount to use per acre.—N. W. Lauback, Topeka, Kan.

The land which you describe is perhaps better adapted for growing timothy and clover than for growing alfalfa; it would do no harm, however, to seed both crops, trying the alfalfa on a small area, preferring the better drained land for the alfalfa. Considering the foul condition of this land, if you sow timothy and clover this spring it may be advisable to seed with a nurse crop of small grain. Alsike clover with timothy will make the best combination for the wetter portions of the land, but on the higher land either the red clover or Mammoth clover and timothy may give larger yields, though the alsike with timothy is a good combination anywhere where these two plants are well adapted for growing. Sow about 8 to 10 pounds of timothy with 6 pounds of alsike or 8 pounds of Mammoth or medium red clover per acre.

It will be difficult to prepare a good seed bed for timothy and clover by plowing the land this spring. If any of the land has been in corn or any other inter-tilled crop and is fairly clean, or if the weeds and trash can be cleaned from the land it may be better to prepare the seed-bed by disking and harrowing, seeding about 1 to 1½ bushels of oats per acre, sowing the timothy and clover after the oats are sown, either broadcast by hand or with the seeder attachment to the grain drill. A light harrowing after seeding the timothy and clover is sufficient to cover the seed. I am mailing you circular letter giving more detailed information regarding the principles of "Seed-Bed Preparation." Am also mailing circular letter giving information regarding "Grasses."

**Clover—Cow-Peas.**

Please send me some good information on clover culture. I sowed ten acres last spring and in the fall it showed up only in patches. What do you think I ought to do with it?

I would also like to plant some cow-peas. Where could I procure the right kind of seed to plant, and what would a bushel cost? Which variety is the best kind?—E. L. Gerardy, Americus, Kan.

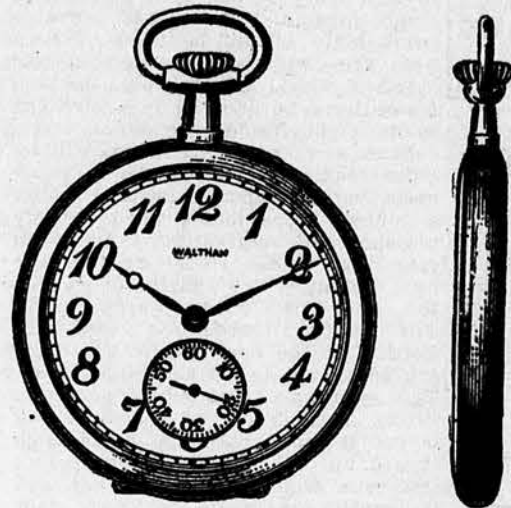
We have no bulletins on clover culture. If the clover is a good stand on part of the field it may be advisable for you to try to re-seed the bare spots early next spring, preparing the seed-bed by disking and harrowing. Sow as early as the soil is in fit condition to cultivate. If the clover is a thin stand in the best parts of the field it will probably be best to plow it up and re-seed again or crop for a season and sow again a year from next spring.

Another plan which you may follow is to re-seed the clover field with grass early next spring, preferably timothy, or you may use English bluegrass or Bromus inermis. The setting of grass will establish a stand which will last for several years, if you prefer to leave the land in grass. I always recommend to sow grass and clover together, the combination is more apt to give a full stand, also the production of hay or pasture may be greater from the combination and the grass and clover is more permanent than clover alone. And the clover grass combination will do as much or more to improve the fertility of the soil as clover alone. Regarding grasses, seed-bed preparation, etc., I am mailing you a short circular on this subject.

I am requesting the Director of the Experiment Station to mail you Bulletin No. 150, giving information regarding "Cow-Peas." The seed of cow-peas is very scarce and dear this

# WALTHAM WATCHES

The Authentic American Watch



—When an authentic watch is shown  
Each man winds up and rectifies his own."

There is nothing that gives so much value for the money as a good watch. You pay Fifty Dollars for a suit of clothes or a bicycle and it is gone in a year or two—no value remains. The same amount of money invested in a Waltham Watch *adjusted to temperature and position* is a safe and paying investment for your life and to be handed down to your heirs. Its value is constant and its usefulness increases.

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Send for the "Perfect American Watch," our book about watches.

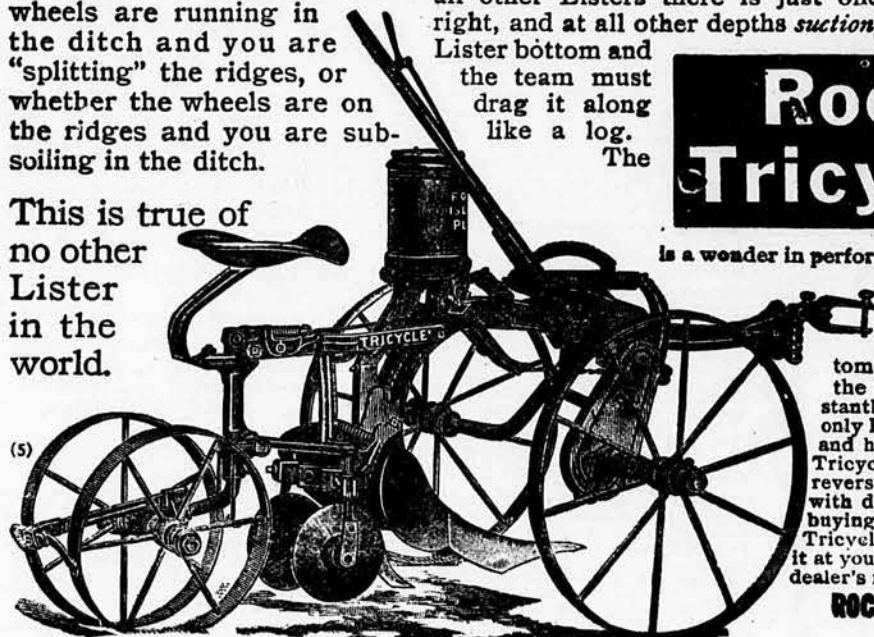
## Deep or Shallow—the Suction is Always the Same

The Tricycle Lister is frameless—no pole to worry the horses—operates with only one lever—yet holds the same "pitch" or "suction" whether wheels are running in the ditch and you are "splitting" the ridges, or whether the wheels are on the ridges and you are subsoiling in the ditch.

This is true of no other Lister in the world.

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## Rock Island Tricycle Lister



is a wonder in performance. It is frameless, but strong as a walking plow. It pulls easy and will stand all sorts of hard usage. No pole to worry the horses. Can be turned either way at end of furrows with bottom at full depth. Seed can be in front of the operator so that the drop can be constantly watched. No excuse for a bad stand. The only Lister that a boy can operate. Set it for depth and he will do as well as you. The Rock Island Tricycle Lister can be supplied with double-pointed reversible shovels with break pins or disc covers with dust-proof bearings as desired. Don't think of buying any kind of Lister until you have seen the Tricycle. You will wrong yourself if you do. See it at your dealers—or write for catalog and nearest dealer's name.

**ROCK ISLAND IMPLEMENT COMPANY**  
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The earliest and most productive Lima Bean. A trial will convince you. Send me 20 cents and I will receive postpaid, a packet each of Wonder Lima Beans, and Golden Bantam Sweet Corn, earliest, sweetest and most delicious sweet corn.

**SEED FOR A FAMILY ONLY 10 CENTS, NOW!**

These packets of Lima Beans and Sweet Corn contain enough seed to provide these varieties for any ordinary family. We will send also my seed, plant and shrub catalogue, with a packet each of Giant Mixed Parsnips and Mammoth Branching Asparagus. No 10-cent offer equal to this has ever been made. Send at once before stock is exhausted.

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Write today for catalog of clean, high-grade seeds. We have a large stock of new crop farm and garden seeds. Clay County White; and Eclipse Yellow Seed Corn and Native Alfalfa our specialties. Missouri Seed Co., Catalog 28, Kansas City, Mo.

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Seed Corn—"Johnson Co. White Dent" won more than \$10,000 worth of prizes at Chicago and Omaha National Exposition. Best in quality and largest in yield. Send for descriptive circular and hints on corn growing to the originators of this wonderful variety—

**L. B. Clore & Son, Franklin, Indiana.**

# APIARY

**Hives and Bee-Feeding.**  
Now is a good time to prepare hives for use during the coming season. They can be bought cheaper now than later on. There are more Langstroth hives in use among the most extensive beekeepers of the country than of any other style. It is a movable comb hive and none but movable comb hives should be used. Where bees are wintered on the summer stand I would advise that the ten frame have been adopted in preference to an eight frame hive.

From now on many colonies will require feeding as stores are in many cases running short. Probably quite a number of colonies have already perished of starvation. A syrup may be made from cane sugar by adding two parts of sugar to one of luke warm water. Stir until thoroughly dissolved. Feed it to the bees late in the evening so as not to attract robber bees. The syrup may be fed to them by lifting a comb out of the hive and laying it down with the comb cells turned up. Then pour the syrup into the cells from a small pitcher and in quantity nearly one pint every other day until fruit bloom comes on.—G. Bohrer, Lyons, Kan.

**Foul Brood Again.**  
Permit me to supplement what appeared in the Kansas Farmer recently concerning the treatment of foul brood, whether American or European. Instead of shaking bees from the combs, I find brushing them off preferable, for the reason that in shaking the bees from the combs more or less honey is shaken from the shells, which is very liable to be taken up by bees from other colonies not diseased and carried into their hives, and in case it is American foul brood that is being treated, the bacteria is known to be in the honey and when carried into hives free from the disease they will at once become infected. So that it will be seen that too much caution can not be observed in order that the spread of this terrible ailment may be prevented. I advised this precaution through the American Bee Journal, and was immediately endorsed by the A. T. Root Company in Cleanings in Bee Culture, and Dr. C. C. Miller of Marengo, Ill., who has been having a siege in stamping what he calls the European foul brood out of his apiary.

As to whether or not the bacteria producing the European or black foul brood is found at any time in the honey, is not at present well authenticated, but that it is a bacteria that causes it is not questioned. But let it be definitely understood that the bacteria producing American foul brood is invariably found in the honey of the colony affected by it. Hence, the only effective remedy is to remove the cause, which is the honey. To do this effectively all the combs must be removed with the honey. The honey may be removed from the comb by the use of a honey extractor and boiled for at least thirty minutes, when it may be fed back to the bees. Care must be observed not to scorch the honey when boiling. Scorched honey will kill the larvae or young bees not sealed over in the combs. The combs may be melted into wax, but care must be observed not to permit bees to have access to either infected honey or combs.

From quite an experience I feel well convinced that it is safer to close the entrance of an infected colony at night when all the bees are in the hive and remove it beyond the range of the bees in the apiary. About two miles is a good distance. Treat them there late in the afternoon so as not to attract the attention of any bees that may chance to be flying out of their ordinary range. In a day or two a colony treated at a distance from the apiary may be taken back to its old

stand, as there will no longer be any danger of spreading the disease from such a colony. Unless the colony is a fairly good one, it will be the safest, surest and least trouble to burn both bees and honey and the hive also, except it be an exceptionally good one. Burn at night when no bees are on the wing. Have a good fire so as to be sure to let none of the bees escape, as they will have some honey with them, and will carry it to other colonies.—Dr. G. Bohrer, Lyons, Kan.

**Beekeeping for Beginners.**  
From the fact that the honey bees have been a subject of deep study by our most learned men in every profession and age, and that apiculture has been successfully conducted by the ancients, it may sound strange when I assert that it has only been within the last fifty years that bee-culture has been developed into a science. Before Huber conducted his observations in the hive, through his assistant, Burmens, the natural history of this wonderful little insect was very imperfectly understood; but since the invention of movable comb hives, the introduction of the Italian bee, honey extractors, comb-foundation, and numerous other appliances to facilitate apiarian operations an observations, the economy of the hive is now well understood.

Beekeeping, when intelligently pursued, affords more profit in proportion to the capital invested, more pleasure and a greater field for mental exercise than any other of the small rural industries. Poultry keeping soon becomes monotonous. It requires no great amount of judgment to mate up your fowls, to gather the eggs, to set hens, to feed, and do all the other necessary work. It soon centers down into a sort of routine task; but not so with beekeeping. Here every day gives us some new problems to contend with. It is one of nature's grand novels, where the plot is so well laid that the farther you read the more deeply you become interested in the subject.

Beekeeping is like any other business in that it is subject to failure and success. It does not follow, neither can it be expected, that every one who takes hold of it is going to make a success of it. In this business there is no such thing as that abstract something called "luck." Luck in bee culture is always measured by "pluck" and by an observance of all those conditions upon which its successful prosecution depends.

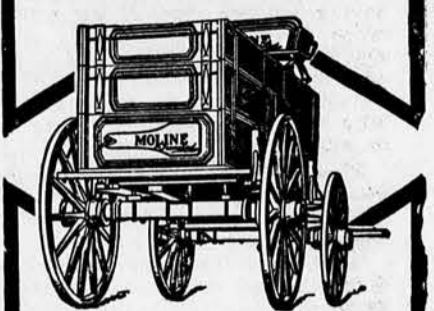
Bees can not gather honey unless there is nectar in the flowers; and the nectar secretion is dependent upon certain atmospheric conditions for its full development; or, in other words, the season must be favorable for the production of a good honey crop, the same as a full crop of wheat, corn, alfalfa, or any other of the farm crops.

While it is true that bees "work for nothing and board themselves," it is also true that in order to secure the best results, it is necessary that the labor of these industrious little insects be directed by the intelligence and knowledge of the beekeeper. No one can keep bees profitably without a thorough knowledge of the economy of the hive. He must know what to do, how to do, and when to do; for everything pertaining to bee culture must be done just at the right time.

Along with the purchase of bees, hives and supplies, the beginner should get books treating on the subject, and should subscribe for one or more bee journals, and read up and thoroughly study the question as he progresses. He will in this way combine theory and practice and as he proceeds will become proficient and expert with all details of management and manipulation, otherwise he will find it an uphill business attended with no profit.—J. C. Frank, Dodge City, Kan.

Where there are numerous earth worms there is plenty of humus in the soil. Where there is plenty of humus alfalfa will grow. Earthworms can thrive only where there is humus in the soil and their presence will determine whether it would be likely to prove good alfalfa land.

### Something's Happened In Wagons



Something has been happening down in this neck of the woods. It's vital to you, so we're going to give you a hint. Then it's up to you. We've got a wagon perfected down here—of air dried oak and hickory wood stock, so far ahead of any farm wagon you ever dreamed of that there's no comparison. We've christened this wagon the

**JOHN DEERE MOLINE IRON-CLAD**

We adopted this name, because it describes in one word, details that would require a full page of closest type. This Iron-clad is as much different from and better than other farm wagons as 14 brand new features—found in no other wagons—can possibly make it. Mind you, 14 entirely new ideas, each one making for greater strength, endurance, economy and beauty, and the

**Easiest Running Farm Wagon for its Capacity in the World.**

If you don't need a new wagon just now, send for prices and description just the same. But buy now, and the wagon will still be new, in 5 years, and you'll have a heap of satisfaction in between.

If your dealer knows which side his bread is buttered on, he'll supply you, but write us at once for our catalogue. It's FREE.

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Wallaces' Farmer, Des Moines, Ia.	55,000	.30	.27
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Prof. Shaw, Well-Known Agriculturist, Says "I would sooner raise cattle in Western Canada than in the corn belt of the United States. Feed is cheaper and climate better for the purpose. Your market will improve faster than your farmers will produce the supplies. Wheat can be grown up to the 60th parallel (800 miles north of the International boundary). Your vacant land will be taken at a rate beyond present conception. We have enough people in the United States alone who want homes to take up this land." Nearly

**70,000 Americans** will enter and make their homes in Western Canada this year. 1909 produced another large crop of wheat, oats and barley, in addition to which the cattle exports was an immense item. Cattle raising, dairying, mixed farming and grain growing in the provinces of Manitoba, Saskatchewan and Alberta. Adaptable soil, healthful climate, splendid schools and churches, and good railroads. For settlers' rates, descriptive literature "Last Best West," how to reach the country and other particulars, write to Sup't of Immigration, Ottawa, Can., or to the Canadian Government Agent.

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## NEW SEED OATS

### Big Money in Oats

New Seed Oats. Big money in oats if you raise the right kind. Here's your chance to get them. Imported Canadian Seed Oats for sale; extra fine. Send for free sample. It speaks for itself. This same oat was sold last year in the United States and proved their merit and our statement that the farmers need a change of seed in this country. We make a specialty of growing extra fine seed oats on our big Canadian farm; new, clean land; no weeds. Have best known varieties. Regenerated Swedish Select went 116 bushels to acre this year. Early New Market, Canada's favorite, 110 bushels to acre. Both of these are big early yielders. I believe it will pay you to get a change of seed. Try some of these oats. The average oats are inbred and run out. Canadian Government Grain Inspector graded this grain No. 1 White. Have stiff straw, white berry, thin husk, enormous yielder. It is as easy to put in and harvest a big crop as a small one. The reason your oat crop is not bigger is because your seed is run out. This has been proven. Look at this oat. Taken from photograph of two stalks from Galloway Brothers' field, over 200 kernels to the stalk. Write early for free sample, or, send ten cents for packet. Will also send you free booklet entitled "Big Money in Oats and How to Grow Them," by Galloway Bros. and Prof. M. L. Bowman, former professor of crops Iowa Agricultural College. Information in this book is priceless. Get it free.

GALLOWAY BROS., 232 Galloway St., Waterloo, Ia.

## NURSERY SNAPS

20 Budded Peach Trees \$1.00. 40 Concord Grape Vines \$1.00. 8 Budded Cherry Trees \$1.00. They are strong, healthy, ready to grow. Catalogue and 25c due bill free. Write now for choice selections. Fairbury Nurseries, Box 1 Fairbury, Neb.

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BEST IN THE WORLD PRICES BELOW ALL OTHERS

I give a lot of new sorts for trial with every order I fill. A Grand Big Catalog FREE illustrated with over 700 engravings of vegetables and flowers. Send yours and your neighbors' addresses.

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## GALBRAITH "NEW LAND" FRUIT TREES

FREE FROM DISEASE GROW FASTER Nebraska trees thrive best everywhere—famous for heavy fruiting. Apples and Peaches 5c. Catalpa Speciosa, \$2.00 per 1000. We sell direct—no agents—save you one-half and pay freight. We comply with all requirements for interstate shipments. Catalogue with special premium offers free.

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STRAWBERRY PLANTS at \$1.00 per 1000 and up. Catalogue free. Paw Paw, ALLEN BROS., Michigan.

IF YOU WANT TO BUY the best western grown nursery stock write us at once. Apple, pear, cherry, plum, peach, shrubs and roses our specialties. Freight paid to your station.

THE GRISEA NURSERIES, Lawrence, Kan.

CATALPA SPECIOSA GUARANTEED. To be pure seed gathered under our direction. Examined by the U. S. Agricultural Department and found to be pure. Copy of their letter and catalpa facts in illustrated booklet mailed free. Write for same. The Winfield Nursery Co., Winfield, Kan.

SEED CORN. Plant Young's Yellow Dent seed corn, the best on earth. Won Missouri's gold medal at National Corn Show, Omaha, 1908. Guaranteed 90 per cent germination under all conditions or will fill order again free of charge. Price \$2 per bushel. Sample ears, 50 cents each. Sample free. Choice Poland China fall pigs, \$25 each. One Jersey bull calf for sale.

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## The World's Fair Prize Winning SEED CORN

Garden seeds and grass seeds in bulk. Poland China hogs, Barred Rock cockerels and Scotch Collies. My 1910 catalog free; it's full of good common sense. Write now.

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## Trees from Chanute Bear Fruit YOU BET!

That's why they all want them. Write today for our great \$10.00 combination offer.

CHANUTE NURSERIES, James Truitt & Sons, Chanute, Kansas.

## SEED CORN

Hildreth Yellow Dent! Twice in succession winner at International (Barred from trying this year.) Seed all gathered before freeze. Take no risk write us. Seed costs you 15c to 25c per acre. Also Texas Red oats

The Deming Ranch, Oswego, Kan. Pure bred Shorthorns and Poland Chinas.

## SEED CORN

Plant Boettcher's Early White Dent, the result of 12 years' careful breeding. Seed all gathered before the freeze. A yield of 80 bu. per acre is not uncommon. \$60 bu. selected, graded and shelled. Price \$1.75 per bu. These prices f. o. b. cars. Order now.

JOHN F. BOETTCHER, Holton, Kansas.

## Agreement Between Landlord and Tenant in Wisconsin.

It will be interesting and instructive to Kansas farmers to know the kind of a farm lease used in Wisconsin. The copy presented herewith is varied to suit conditions. Hoard's Dairyman says this lease has been in use for six years and has proven satisfactory to the parties interested. Should KANSAS FARMER readers be in need of a lease form it is believed that this will be a sufficient general guide for reducing agreements to writing. This paper does not believe that a farmer—or any other man not a lawyer—should be his own lawyer. It is usually cheaper in the end to employ a good attorney to draw the farm lease.

Memorandum of Agreement between \_\_\_\_\_ of \_\_\_\_\_, lessor, party of the first part, and \_\_\_\_\_, lessee, party of the second part:

The party of the first part leases to the party of the second part for the term of one year from and including the \_\_\_\_\_ day of \_\_\_\_\_, 1910, the premises known as \_\_\_\_\_ Farm, situated in the town of \_\_\_\_\_ County of \_\_\_\_\_ State of \_\_\_\_\_ and more particularly described as follows: \_\_\_\_\_ and in connection therewith the following personal property: \_\_\_\_\_ and is to receive as rent therefor one-half of all the products raised on said premises, except hay and grain fed to stock, one-half of all the increase in number and growth of stock, one-half of the returns from creamery for milk and cream, one-half of the increase and product of poultry, and, in general, of all the gross receipts resulting from carrying on said farm whether herein specifically mentioned or omitted, as is to be to no other further expense in connection therewith, except to pay the general state, county, town and school taxes, furnish what new material may be required for repairing fences and exterior of buildings, such grass and clover seeds as he may wish to have sown, and one-half of all the feed which it may be necessary or expedient to purchase for the stock.

The party of the second part takes and leases the said farm and personal property in accordance with the foregoing provisions and undertakes and agrees to make his occupation and use of the premises as profitable to the lessor as may be, and especially to take good care of the stock and other personal property and return same to the lessor in as good condition as when received by him, ordinary aging and use and damage or calamity by fire, floods or lightning excepted; to carefully use house and care for all machinery, tools and implements, and keep same in good repair; to furnish all seed, except grass and clover, and all labor and team work necessary to carry on the farm in a proper manner; to work out or pay all highway taxes; be at all expense for threshing and filling silo; to account for and pay for or replace all hay and grain that may be on the place when he takes possession; see that all fences are kept in reasonable repair; leave all buildings in as good condition as when surrendered to him, natural wear and damage by the elements excepted; not dispose of any straw or other forage by removal or sale without lessor's consent; haul out and spread all manure and carefully in all things safeguard and promote the interests of the lessor as well as his own, without regard to whether the particular items are herein set forth or omitted.

The lessee further agrees to leave as much land plowed as is now plowed, and the farm generally in as good or better condition as it is at present; to deliver at market all stock or produce sold and take milk and cream to creamery.

The lessee is permitted to furnish additional stock, the product, growth and increase of same to be equally divided between the lessor and himself.

This lease may be continued from year to year at the pleasure of the parties hereto, but may be terminated at the expiration of any year by either party giving to the other three months' notice in writing of his wish to have the same end.

In witness whereof the parties have hereunto subscribed their names and affixed their seals this \_\_\_\_\_ day of \_\_\_\_\_ 19\_\_\_\_.

\_\_\_\_\_(L. S.) \_\_\_\_\_(L. S.)  
In presence of \_\_\_\_\_(L. S.)



## The Stark Year Book for 1910

is ready to mail. It will be sent to any person interested in fruit-growing on receipt of 7 cents to cover postage. The Stark Year Book for 1910 represents an entirely new idea in nurserymen's literature—it is a work of art as well as a catalogue of Stark Nursery products. Within its covers are 32 full-page illustrations of fruits and flowers, representing 175 varieties, done in four colors, and exactly reproducing nature. 84 pages are devoted to descriptions, prices, and records. Stark Delicious, the apple that has revolutionized orchard planting and established a new standard of apple values (selling at \$10.00 per bushel box this year); Stark King David, another apple of wondrous quality and merit; Stark King Philip, a hardy black grape of California grape quality, and dozens of the very best things in the horticultural world are fully described, illustrated, and priced. To any one planting one tree or many, of fruits or ornamental, this book is of inestimable value—a horticultural text-book—a guide to proper selection. Stark trees have stood the supreme test of actual planting for 85 years—they are the yard-stick by which all other nursery products are measured—they are the first choice of this country's most successful orchardists. The success of the orchard is dependent on the kind and quality of tree planted. Stark varieties are the best of the best. Our record of 85 years of successful selling is a positive guarantee of tree quality.

Before you decide to buy, send 7 cents for the Stark Year Book—do it today before the edition is exhausted.

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## 12 Hardy Blizzard Belt Strawberry Plants FREE!

Everybody likes strawberries and to prove that our "BLIZZARD BELT" plants are the strongest rooted and heaviest fruiters, we offer to send ONE DOZEN selected plants to you FREE OF CHARGE. We picked 25 quarts of fine fruit from a test bed of but a dozen strawberry plants set the year before. You can do as well. If you care to send 10 cents for mailing-expense, we will add 6 BABY EVERGREENS 2 years old and send all to you at proper planting time. Write to-day and we will enter your name for the plants and send you our CATALOGUE and BARGAIN SHEETS of HARDY "BLIZZARD BELT" fruits by next mail. Address THE GARDNER NURSERY COMPANY, Box 225 Osage, Iowa.

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# HORTICULTURE



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As to the food value of nuts, scientists are more and more advocating their use as food for the human body, since they average from 15 to 33 per cent protein and from 50 to 70 per cent fat, thereby proving a natural substitute for meals and much cleaner and healthier nature. The nutritive elements of nuts are better balanced than of meats, and when properly eaten, they are as easily digested.

The red cedar and apple trees do not agree. The red cedar is infested by a fungus, which makes the reddish jelly-like cedar apples in the spring. These are masses of the fungus spores which are carried by insects and wind to the apple trees, where they cause peculiar swollen and hairy places on the leaves and fruit, known as rust. Apple trees and fruit can be totally destroyed by this rust. The best remedy is to make Christmas trees out of the cedars.

### Spraying Orchards.

"There is nothing new under the sun." This is true of spraying. While orchardists of the present day are inclined to consider themselves the leaders, if not the pioneers, in spraying and combating all manner of insects and fungi, a glance backward will show that the practice is not by any means new.

In the year 1629, John Parkinson, writing on "The Ordering of the Orchard," says: "The canker is a shrewd disease when it happeneth to a tree; for it will eat the bark around, and so kill the heart in a very little space. It must be looked into in time before it hath runne too farre; most men doe wholly cut away as much as is fretted with the canker, and then dresse it, or wet it with vinegar."

To those familiar with the blight canker of the apple and the present method of treatment, the above will appear good advice, even if it comes over a distance of two hundred and eighty years. It is true we now use corrosive sublimate or copper sulfate as an antiseptic instead of vinegar, but the suggestion that "it must be looked into in time before it hath runne too farre," is most excellent.

### DISCOVERY OF BORDEAUX MIXTURE SPRAYING.

In Europe the French vineyardists were the first to look for remedies for the control of the vine mildew. Various drugs were recommended and used, but the problem was finally solved quite by accident and as follows. Vineyardists in the vicinity of Bordeaux (France) had suffered considerable losses by the theft of fruit from vines growing along the highways. It had been the practice for many years previous to 1882 to sprinkle the fruit with verdigris so that it might have the appearance of being poisoned. In 1882, for reasons of economy, certain growers substituted a mixture of lime water and copper sulfate and were astonished to note that the vines so treated were free from the downy mildew. Out of this accident grew the Bordeaux mixture, the most valuable remedy known for the treatment of fungous diseases of plants. While we have borrowed most of the remedies which we now use from France or Germany, much of the early development of spraying can be found in this country.

It is with considerable pride that Wisconsin horticulturists refer to the record of the late Prof. E. S. Goff in the pioneer work of spraying.

The first systematic trial of Paris Green as a remedy for codling moth was conducted by Goff at Geneva, N. Y., in 1885, as was also the first experiment for the control of apple scab. In the latter case hyposulfite of soda was used.

While it is true that we in the

United States have not added materially to the list of remedies for the control of insects and disease of plants, and while it is true that the Bordeaux mixture for fungi and kerosene for insects comprise about our entire list, much has been done in the development of special formulas. Our Experiment Station scientists have also laid bare the life histories of the plant pests, the first and most important step in their intelligent control.

My personal introduction to spraying was in 1891 at the end of a short pump handle, one of the first spray pumps, the old Nixon tripod, in a large orchard in the southern part of Wisconsin and the blisters on my hands were more numerous than the barrels of spray we put on the trees daily. But for all this I was kept steadily at my task of working the pump handle and I concluded that spraying must be very important or I would get a rest, so I watched closely for results for I had a dream of an orchard and some one else getting the blisters. And sure enough, when harvest time came, the results were very evident. The apples were freer from worm and scab than where they were not sprayed. And so I saw in the future some one else working the pump handle while I held the spray rod.

It was at this time that Professor Goff was carrying on the experiments in spraying with Bordeaux mixture to determine its efficiency as a fungicide. It was used very much stronger than we use it now and it was found to be no better.

### A COMMONLY USED SPRAYING OUTFIT.

The most commonly used outfit of today is the hand pump fitted to the end or side of a barrel, according to the style or make of a pump, and mounted on a stone boat, cart or wagon, to suit the user. If good judgment is exercised in the selection, very satisfactory results can be obtained.

Care should be taken to select a pump made of brass with a good agitating device and one that has sufficient power to produce a fine spray with the least amount of labor.

The power sprayers are of several styles and are much superior to hand-pump, barrel or tank pumps. When orchardist's interest warrants, a power pump should be used by all means.

All pumps, no matter what style, should be fitted with the best hose of proper length and for tree fruits an extension rod of six or eight feet long is very convenient.

The nozzle is perhaps the most important part of the spraying outfit. The Vermont type is the best and should be used.

### MAKING THE SOLUTIONS.

For making the solutions, procure a barrel, cut it in halves, using one-half for blue vitrol and the other for lime water. If much Bordeaux is to be used, it is well to have more barrels in which to keep a stock solution of vitrol and lime to save time in getting the mixture ready. Always use wood or earth in vessels for blue vitrol.

For large orchards, an elevated platform fitted with plenty of tanks of the proper size is necessary in order to do the work economically, having a good supply of water which can be gotten into the tanks without the necessity of hand pumping.

Bordeaux mixture is perhaps the most valuable remedy known for the treatment of fungous diseases of plants. That there will be others in the near future I have little doubt.

The lime-sulfur wash bids fair to become a valuable fungicide, as well as valuable for some of the insects that live on the sap of the tree, such as San Jose scale, which it will completely control if properly and persistently used.

Arsenate of lead is the best insecticide in use today for all biting insects, and should be used in spraying, instead of Paris green. It is safer, being less danger of injuring the foliage where it is used. Our desire in using any poison is to kill something



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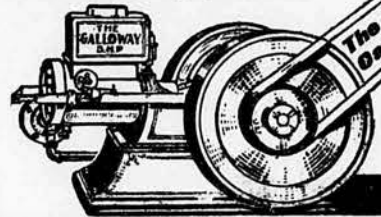


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## DOUBLE ACTING Red Jacket FORCE PUMPS

Almost any farmer can afford to install one or more shallow well Red Jacket equipments, located conveniently to his residence and other buildings, which, with a few lengths of hose, will provide ample fire protection. We want you to know about these pumps, also all about our pumps for deep wells.



Red Jacket Double Acting Force Pumps of the famous "So-Easy-To-Fix" kind—can be repaired without tearing up platform or removing pump from well.

Red Jacket pumps are sold by leading pump dealers. Write today, giving name and address of your dealer, and we will mail you interesting booklet, "Your Water Supply."

**Red Jacket Mfg. Company**  
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Largest exclusive Manufacturer of pumps in the World.

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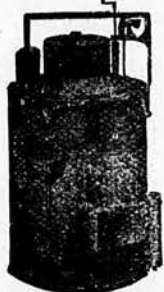
You cannot afford a telephone that is always out of order. A telephone that breaks down when you need it most is an expensive investment.

Our booklet on Farm Line Construction contains all the information you need to install your own telephone.

**Build Your Own Line**

This book tells you what materials are necessary and in what quantities and gives you the result of years of telephone experience in simple, concise language.

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**Kellogg Switchboard & Supply Co.**  
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Brilliant light costing less than coal oil. The "PHELPS" is the best, it has stood the test for years.

Write for free descriptive matter.

**Western Acetylene Co.**  
KANSAS.

and arsenate of lead is sure to bring results. It adheres to the foliage better and can be used in much greater strength, exercising care in putting on only sufficient spray to cover the plant or tree and avoiding any great amount of drip, thus reducing the possibility of poisoning the land, if there is anything in the recent statements that such is the case where spraying is overdone, which it seldom is.

The formula of Bordeaux is as follows:

Four pounds of blue vitriol, 6 pounds of fresh stone lime, 3 pounds of arsenate of lead, 50 gallons of water.

Put 25 gallons of water into each of the half barrels previously provided and dissolve the blue vitriol in one and strain the slaked lime in the other. Add the arsenate of lead to the lime water and pour both solutions into the spray tank at the same time. Now you have the complete Bordeaux arsenate mixture, which is the most widely used of all spray mixtures and controls the fungous diseases as well as insects that attack the foliage and fruit.

Should you wish to spray plums, it is a good plan to dilute the mixture somewhat and add about three pounds more lime, making what is called peach Bordeaux.

Three pounds of vitriol, 9 pounds of lime, 50 gallons of water.

The first application is made at the time buds are bursting and should be done thoroughly. The second application should be made as the blossoms fall and the third in ten days to two weeks later, the fourth about August 1 to 15. Should it be very rainy, it may be necessary to spray oftener, or in case of bitter rot on apple, then we should keep spraying till late, or till danger of disease is past.

Apple scab is perhaps the most troublesome of the fungous diseases in Wisconsin and four applications will be almost certain to control it if the work is well done. Sometimes two applications will be sufficient.

To control codling moth, three or four applications will be necessary for the best results and the late spray does very much towards keeping in check the second and third broods.

For oyster shell bark louse, use some of the soluble oils when trees are dormant.

After careful estimate of spraying, I find that for trees averaging eight years planted, the cost is about eight cents per tree for material and labor, three or four applications with hand pump; some less with power machines.

Very few commercial orchards in the state are receiving the thorough spraying they should in order to produce apples as perfect as it is possible to produce in Wisconsin, and still many are returning their owners good profit. But there is still chance for improvement. More application and applied with higher power and applied in a more thorough manner are the things we ought to be considering, closer observation of the time to apply the spray to be sure to protect rather than try to remedy or cure.

If you have no spray pump at your command, you can get a cheap one that will do to spray a few trees, any pump that will give force enough to produce a fine spray. You cannot produce results by forcing the solution into the tree in streams. It must coat over all fruit and foliage, leaving no space unprotected for the best results, and results are usually in proportion to the thoroughness of the work.

The profits directly due to spraying can be easily figured by observing the orchards that are sprayed and making a comparison with those not sprayed. The profits are very marked in the case of the cherry. It is extremely doubtful if cherries can be grown in Wisconsin to any extent without thorough spraying. And while apples can be grown in many seasons without spraying it is a fact that they cannot be produced at a profit through a period of years without the aid of Bordeaux. It has been done in a few instances however.

The profits cannot be figured entirely in the fruit produced, but much good is done the tree by keeping healthy foliage, enabling the tree to produce strong, vigorous fruit spurs and buds and also to be in condition to stand more severe colds.

Of course spraying will not do all, but when combined with cultivation and fertilization we are getting nearer the right way to grow good fruit.—  
**D. E. Bingham, Sturgeon Bay, Wis.**

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Chicks' Happy Home

# POULTRY



Fowls are very fond of milk and thrive upon it. Milk in any form, sour or sweet, will bring in better returns in eggs than in any other way it can be fed.

The hens have been laying so well lately that several breeders in this locality have already set their incubators agoing and many more are talking about doing so.

While it is a good thing to have early chickens, still there is such a thing as having them too early, especially if a spell of cold weather comes when they are only a few days old.

Wheat furnishes more material for eggs than corn. A bushel of wheat contains about one-tenth more protein than corn but about one-half less fat. So to fatten fowls feed corn and for eggs feed wheat.

The best laying hens should be picked out early in the season and the eggs from such hens be set to the exclusion of the eggs from the general run of the flock. Only by such means can the average stock be improved.

A farmer that has only the common flock of poultry should endeavor to grade up the flock by purchasing a pure bred male of some of the utility breeds and cross on his stock. The first season's progeny will pay the price of the pure bred male.

It is a good plan to provide plenty of nests for the hens to lay in. When there are not sufficient nests the hens are apt to quarrel and fight for their possession and in the scuffle eggs are apt to be broken. Then the hens eat the broken eggs and the egg-eating habit is formed.

During these sudden cold snaps that we are having this month the combs of the male birds are liable to be frozen. To get the frost out the best thing to do is to bathe the comb with snow; if snow is not available take cold water and bathe for quite a while then anoint with glycerine. It becomes necessary at times to bathe the wounds and sore places on some of the fowls. Nothing is better than a few drops of laudanum in a teacup of water, this is both cooling and healing. Tincture of myrrh is also recommended, about a teaspoonful to a half pint of water. Compound tincture of aloes, commonly known as "proprietary drops," is very useful, similarly diluted as is tincture of perchloride of iron, "steel drops," the last named unaltered, having the reputation of being a good thing to stanch blood flowing. If proud flesh shows itself around any wound apply a little burnt alum, or if burnt alum is not handy a little white or powdered lump sugar is a good substitute.

### About That "Free Egg" Proposition.

When the poultry department of the Kansas State Agricultural College made the offer two weeks ago of free settings of eggs to the farmers of Kansas, it never dreamed of the consequences that this offer has brought. The offer was made by a little notice in the newspapers to the effect that "the poultry department of the Kansas State Agricultural College is desirous of sending out over the state, eggs from pure bred poultry, free of charge. Anyone wishing to take advantage of this opportunity to add some pure bred stock to his present flock should address the poultry department, Kansas State Agricultural College."

Now that little notice appeared in the newspapers about the time the price of eggs was soaring around the highest pinnacles, consequently it was read by everyone who reads newspapers, especially as the editors made it conspicuous by placing it under headlines like, "What, Eggs Free of Charge?" or "K. S. A. C. Giving Away Eggs," etc.

Hence it came about that the ink of these press notices was hardly dry before the inquiries came pouring in to the poultry department concerning those "free eggs." From all over

the state at first the letters came flooding in, and later this onslaught of questioning missives from Kansas was added to by delegations from Oklahoma, Texas, Missouri, Colorado and other states. It became a national affair. The letters came at the rate of about 500 a day. Finally, as the number of inquiries rapidly approached the 4,000 mark, and as hundreds of letters were arriving every day, the philanthropic poultry department, realizing that it would be almost impossible to even answer so many letters, and certainly impossible to supply so many farmers with eggs, hurried off dispatches to the newspapers, stating that the department was swamped with requests for the free settings, and requesting that no more inquiries be sent in.

The object of the department in making this offer was threefold: first to give the farmers a chance to get a start with pure bred chickens; second, to enlarge the College flock; and third, to get the names of the farmers who are interested in poultry raising. The desire to get a list of farmers interested in poultry raising has certainly been satisfied, and the prospects for the realization of the other objects are bright.

A force of six stenographers attacked the pile of letters and postal cards, and for several days were busy with these interrogations. The universal question was, "How can we get them?" And the department answered this by sending out 2,500 replies stating the conditions under which the free eggs would be sent out. It was impossible to answer more queries except by postal cards, telling them that their requests had been received too late. Farmers who already have good pure stock will not be supplied. Here are the conditions that the farmers must agree to before the eggs will be sent to him: They must agree to keep a record of the fertility and hatchability of the eggs, and give one chicken out of every four raised to September 1, to the College.

The majority of the letters received were from farmers who wanted to get the free eggs for the purpose of improving the stock of their flock, but a good many of those who wrote were merely curious, and showed a "something for nothing" spirit. Some, perhaps city people, doubtless bought this an excellent opportunity to get eggs for table use. It seemed much more convenient than paying 45 cents amusing. One woman sent her photograph, for what reason she did not say, presumably to insure her being "on the ground floor." Several other writers asked that they might be favored with "thoroughbred College eggs."

Many applications from those who have agreed to the conditions, are coming in now, and the eggs were shipped Feb. 15.

### How To Build a Poultry House.

In a bulletin issued by the Colorado Agricultural College a poultry house for 100 hens is described as follows: Successful poultry raising and egg production go hand in hand with good care and shelter. For profits in the business, it is as necessary to house the poultry as it is dairy cows or good driving horses. Very small profits come from those flocks that roost in the trees or perhaps on the farm implements in an open shed. Fresh air is necessary, but it must not be given in such large doses, especially during the winter months. The hen that roosts in the open during the winter uses all her food to keep her body warm. If the poultry business is worth doing at all, it is worth doing right. If it is done right, the flock must be sheltered.

KINDS OF SHELTER.  
The poultry house can be successfully constructed of almost any kind of material, as lumber, brick, stone, adobe, sod, or cement. It does not need to be expensive. Many of our fanciers put too much money into buildings. All that is necessary is that the houses are warm, properly ventilated and well lighted. The wall does not need to be doubled, provid-

## Best feed for your baby chicks

It is no trouble to hatch chickens, but it takes the proper Feed to raise them: use **Otto Weiss Chick Feed**

a complete balanced Ration; it develops bone, flesh and feathers, saves your Chicks, and they make a rapid growth. Send for circular and prices on Poultry Supplies

**Otto Weiss Alfalfa Stock Food Co.**  
Wichita, Kansas.



## WHEN BUYING A CORN SHELLER.

Insist on Clean Shelling, Thorough Separation, Large Capacity and Lasting Qualities. These are Distinctive Features of

## The NEW HERO

2-hole and 4-hole Custom and 2-hole Farmers' Positive Force-Feed Shellers

They have Chilled Working Parts and other points of strength and convenience. We make Horse Powers, Wood Saws, Huskers, Farm Trucks, Manure Spreaders, etc. We guarantee our Goodhue Wind Mills for five years.

**APPLETON MFG. CO.,**  
19 Fargo Street, Batavia, Ill., U. S. A.



Write to-day for Free Catalogue.

## FROM FACTORY TO USER

The Perfection is guaranteed to be the best cleaner, separator and grader on the market. Mr. F. D. Coburn, secretary of the Kansas State Board of Agriculture, says of this machine: "It is nearer perfection than anything of the kind I have ever seen, and far more so than I had supposed possible. I couldn't have believed it without seeing it." Heretofore the jobber has handled this machine. We now propose to sell it direct to the user, thus cutting out the profits of the middleman. Write us for particulars.

THE JENSEN MFG. CO., TOPEKA, KAN.



### Anti-Friction 4-Burr Mills Double the Capacity of Geared Mills.

Two-horse mill has 24 ft. grinding burrs (Two set), all grinding at once, and grinds from 25 to 50 bu. per hour. Four-horse mill grinds from 60 to 80 bu. per hour—\$9,000 BU., WITH ONE SET OF BURRS. I have ground with one set of burrs more than 30,000 bushels of corn with my Mogul No 1 mill and the burrs are still in good condition—F. F. Craig, Mt. Carroll, Ill.  
Two complete mills in one, has double the capacity and double the durability. ABSOLUTELY NO FRICTION OF GEARING. Will earn cost price in three days. The largest ears of corn to these mills are like popcorn to other mills. We manufacture the most durable and fastest grinding line of mills sold, including our FAMOUS IOWA NO. 2 for \$12.50. Send for our free Catalogue.  
Bovee Grinder & Furnace Works, 118 8th St., Waterloo, Iowa.



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One Year's Subscription to the **Kansas Farmer**.

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The best hog paper published in the world. Established over 25 years.

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No better poultry paper published than the **Western Poultry Journal**.

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Information given in this publication on the spray proposition is alone worth many dollars to any farmer or fruit grower.

One year's Subscription to the **People's Popular Monthly**.

Not a cheap, trashy magazine, but a clean, first class publication for the home.

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**CIRCULATION DEPARTMENT OF KANSAS FARMER,**  
Topeka, Kansas.







### There are Fortunes in Farming the Right Kind of Land.

But why farm on land worth \$100 to \$150 an acre, producing but one crop a year, when you can get land of inexhaustible fertility in the San Antonio country at from \$25 to \$50 an acre, producing two or three crops every year? Land that costs a third as much—and crops three times as big.

Why burn up your profits in fuel, in heavy clothing and winter feed for stock, expensive houses and barns, when you can live here in a land of sunshine and comfort all the year and save that money?

Why farm in a land of snow and ice that forces you to be idle nearly half the year, when you can farm in this ideal climate and have something to sell every week of every month in the year?

In the San Antonio country you have the very best of transportation, good neighborhoods, schools and churches, soil deep and rich, health and happiness, prosperity, and perfect climate.

Write for "Farm Facts" (free), a book of facts for farmers interested in Texas lands. It is the best "land book" published. Address

**JOHN B. CARRINGTON,**  
Industrial Commissioner,  
42 Chamber of Commerce,  
SAN ANTONIO, TEXAS.

#### SOUTHWEST TEXAS OPPORTUNITIES.

Good farms, dairy and stock ranches, also colonization lands, near San Antonio. Best market in the United States for farm products. Write for list. Our prices are the lowest to be had. We are agents, not speculators. Members Chamber of Commerce. **CALAHAN-KIRBY CO.,** 310 Gibbs Bldg., San Antonio, Texas.

### Don't Have a Blind One

Wonderful Discovery  
"VISIO"



MOON BLINDNESS and all Diseases of the Eye successfully treated with this NEW REMEDY.

Money Back if it fails to cure. \$2.00 per bottle postpaid on receipt of price. Visio Remedy Ass'n, Dept. 1, 1832 Wabash Av., Chicago, Ill.

Best of materials and workmanship. Noted for strength, durability and neatness.

### SHIMER Poultry Fence

Spring Steel

is made of high carbon, crimped steel wire, heavily galvanized—won't sag, bulge, rust out nor pull apart. Requires fewer posts. Catalogue, illustrating Fences for all purposes and containing valuable suggestions on poultry raising, mailed free.

SPRING STEEL FENCE & WIRE CO., Bx 20, Western Factory, Coffeyville, Kas.

14 1/2 c. a Rod

for 24-inch Hog Fence. Send for catalog showing many styles. Save freight by buying nearest home.

The Ottawa Mfg. Co., King St., Ottawa, Kansas.

48 IN. FENCE 27c

Best high carbon coiled steel wire. Easy to stretch over hills and hollows. FREE Catalog—fences, tools. Buy from factory at wholesale prices. Write today to Box 62 W. H. MASON, LEESBURG, O.

next morning they are not werry. Santoin will cost about 65 cents an ounce.

We believe there is as much in the man who is breeding the hogs as there is in the hogs or the breed.

We select our largest and roomiest gilts for brood sows and have aimed to keep out of what is called the show type.

By following the above plan, we are able to get our hogs on the market at an earlier age and larger for their age than most farmers in this part of the country. Ask our neighbors.—W. S. Harding, Richland, Kan.

#### The Wild Turkey.

(Continued from Page 3.)

30 per cent, this would give about 9,000,000 turkeys, or almost one bird for every nine persons in the United States. The standard weight of a healthy fowl ranges from 12 to 36 pounds but not more than half of this remains for food. It can be well understood, therefore, that there is scarcely turkey meat to go around, and that, until the growers provide the country more bountifully, some one must soon do without this luxury for the great national holidays of Thanksgiving and Christmas.

The turkey is indeed dedicated to these two joyous festivals. On this account he has won his place in literature. Essayists have made him the subject of their themes, and poets have occasionally sung the praises. Shakespeare, to be sure, was more attracted to his humorous aspects, and ridicules a character by exclaiming: Here he comes, swelling like a turkey cock.

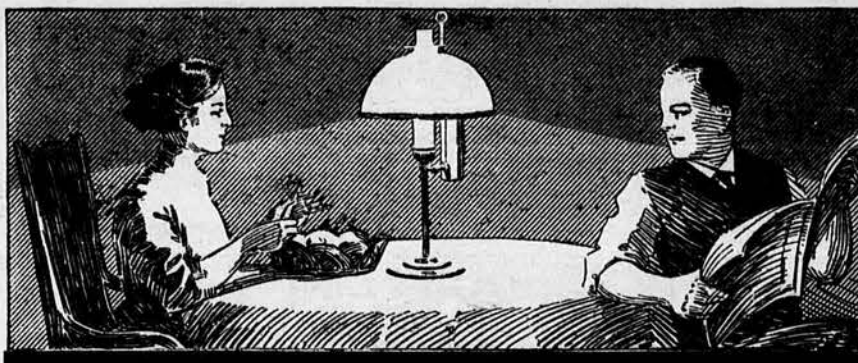
Pope can not avoid the ironical, although he recognizes the value of—An hundred souls of turkeys in a pie. But Gray strikes a truer note. He gives us a picture of a Christmas, in which—

From the low peasant to the lord  
The turkey smokes on every board.

#### Red Squirrels or Fox.

EDITOR KANSAS FARMER:—I notice in the KANSAS FARMER a synopsis of the game laws. In regard to the squirrels. I always thought that fox squirrels were sometimes called red squirrels. It seems from the way you have mentioned the fox squirrel it is not protected. I should like to have a description of a red squirrel.—J. D. Thompson, Stafford Co., Kan.

This editor has never heard a fox squirrel called a red squirrel though he has lived where they were more or less plentiful all his life. When the law was passed we were in formed that the fox squirrel was not meant to be protected but that the law was for the benefit of a different variety which existed in sparse numbers in southeastern parts of the state. Since that time, however, we have learned of several convictions of persons who had shot fox squirrels and, as the law says it shall not be necessary for the evidence to show the true name of the bird or squirrel killed we mention the matter simply to show in what a chaotic condition our present game law now is. State Game Warden L. L. Dyche informs us that one of his most pressing duties is to secure the passage of a real fish and game law under which he can act intelligently.



## "Let's Not Buy Another Thing Till We Put the Fences Right"

THE far-sighted farmer will say that when temptations arise to let the ready money go for some luxury. The luxury is an expense; the good fence is an investment—a producer. A farmer is losing money fast until he has his farm fenced off into a sufficient number of fields to permit of the proper rotation of crops and the most advantageous pasturing of stock.

The fields of a farm are like the rooms in a hotel—the more rooms or fields, the more revenue.

### AMERICAN FENCE Made of Hard, Stiff Wire of Honest Quality

is an investment that brings the most returns for the money paid out. It is made of a quality of wire drawn expressly for woven-wire-fence purposes by the largest manufacturers of wire in the world. Galvanized by latest improved processes, the best that the skill and experience of years has taught. Built on the elastic hinged-joint (patented) principle, which effectually protects the stay or upright wires from breaking under hard usage.

F. BAOKES, V. P. & G. S. A.

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NOTE.—Dealers everywhere. See the one in your town and have him show you the different designs and give prices. Also get from him booklet entitled, "HOW TO BUILD A CHEAP CONCRETE FENCE POST," furnished free for the asking.



INEXPENSIVE ARTISTIC DURABLE CONVENIENT STRONG LIGHT

## CYCLONE FENCES AND FARM GATES

There is no improvement you can make that will pay you better in satisfaction and in dollars than to surround your yard and garden with a neat and attractive **Cyclone Ornamental Fence**. They are made in many artistic patterns, of rust-resistant materials, and are so strong that they will require no repairs for years. Our special construction—cabled line wires and corrugated pickets—absolutely prevents the fabric from becoming unsightly on account of sagging or slipping of joints. **Cyclone Farm Gates** are made of the strongest material possible to secure for this purpose—special high carbon tubular steel. This makes a rigid durable gate that is light on hinges. The hinges latches and all fittings are of malleable iron to insure against any need of repairs. By writing to-day for our catalogue you will obtain proof that it will pay you to buy **Cyclone Fences and Gates**.

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### Lightning Pileless Scales

New Pattern. Solid Channel Steel Frame

Channels are seven inches which is the height of platform from ground. Levers are octagon in shape giving greater strength. Bearing are Toolsteel. This Scale will last a life time with ordinary care. Equipped with compound Beam Free. Furnished absolutely complete except platform planks. Guaranteed accurate and tested to more than its capacity. Write for our prices and description before buying.

**KANSAS CITY HAY PRESS CO., 129 Mill St. Kansas City, Mo.**

# WRITE ME NOW

—Wm Galloway

THIS IS A BUSY TIME! FARMERS EVERYWHERE ARE GETTING READY FOR SPRING. ARE YOU READY?



LOWEST Prices ever offered. Try it 30 days on your own farm.

Made in 5 Sizes

There is going to be the hottest rush for manure spreaders this spring that ever happened in Manure Spreader History, and I am prepared for it. I had the hunch 6 months ago. It's not too late now for you to write me and it isn't a moment too soon. Do it then while you have it in mind, today. Get my special prices and proposition NOW.

Never was so much manure piled around the barns and feed lots as there is this year. Never in 15 years has there been such a need for manure spreaders as there will be this spring? I say again, are you ready? You've been seeing my ads this year, last year and the year before. Never wrote me yet, did you? Just because I advertise you have often wondered if Galloway was really giving the value—the quality.

Say! Do you know that that is the reason I sell so many, just because I tell the people about them. All there is to selling the Galloway is simply telling the people about them. That's how I have got the biggest spreader factory making wagon box and complete spreaders, 100 a day, more on mighty short notice. I'm ready. Are you ready?

Don't put off that manure spreader matter one more day. Don't let it lie over night. Rouse out your pencil and drop me a card for my spreader catalog. Get it and investigate. Its full of live facts. You can't tell how good and valuable it is till you see it. Make yourself acquainted with the biggest thing in Manure Spreader History. That is the Matchless Galloway Wagon Box and Complete Spreaders. Made in enormous quantities in my own factories at Waterloo, Iowa. Priced right, guaranteed absolutely. What I say to you is in black and white. I write it in the contract. Whatever promises, claims or challenges I make, I write it in the contract. No verbal promises go with you. I put it up to you unreservedly. There are no strings to my promises to you.

Here's a part: "Try my Galloway Spreader 30, 60, 90 or 120 days. If you are not satisfied, I will pay the freight both ways and refund every cent of your money with 6 per cent interest."

**NOW** GET your letter, postal card, telephone or wire into my office. Ask me to send you my Book of Facts on the manure spreader. Today, right now, is the best time. Do it before some other thing comes up. Write me now for my Manure Spreader Catalog. Write me the kind of trial proposition you'd like to have.

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**FREE** This book contains barrels of good information about Manure Spreaders and how to make money with them. Ask us for one—they are FREE!



KANSAS LAND

FORD AND NESS COUNTY

wheat, corn and alfalfa land, \$15.00 to \$30.00, tracts to suit; liberal terms. Big investment opportunity, great chance for homeseekers. Also Pratt county lands. Write for further information.

I. L. Chinn & Co., Coats, Kan.

160 ACRES,

small improvements, good sandy loam soil, 8 1/2 miles from market, 3/4 mile school, telephone, R. F. D. and church facilities. Price \$6,600. Good terms. I have one or two other special bargains.

Ed Boots, Pres. Isabel State Bank, Isabel, Kansas.

320 ACRES

of good Jewell county land, \$50.00 per acre if sold before April 1. Well improved, all fenced, 125 acres alfalfa, abundance of water and timber, 6 miles from Mankato, the county seat.

Canan & Hill, Mankato, Kan.

680 ACRES IMPROVED LAND,

300 acres in wheat, half goes to purchaser; price \$30.00 per acre. Will take a good residence property for part pay. This farm is 4 1/2 miles from town and worth \$10.00 per acre more than asked.

J. C. Elvin, Harner, Kan.

240 ACRES VALLEY LAND

Good improvements, near school, 4 miles town, several acres orchard, fine grove forest trees, water at 12 to 30 feet, \$30 per acre. Good terms. Big list and booklet free. PARK H. THORNTON, Coldwater, Kansas.

BARGAIN.

Improved 1/2 section level farm land, 1/4 mi. P. O. and school, 250 a. in cultivation, 100 a. wheat, 1-3 crop goes with place. Price \$30 a.; make very reasonable and long time terms. W. B. GRIMES, Owner, Ashland, Kan.

ALFALFA FARM.

160 acres, 70 alfalfa, 3 miles of Saxman, Rice county, 8 room house, large barn, R. F. D., near school, telephone, complete system of waterworks, splendid improvements, 3 miles woven wire fence. Price \$14,500; terms; write.

NODURET & TORREY, Lyons, Kan.

INVESTORS.

480 acres, guaranteed, good, dark, corn, wheat and alfalfa land, 1 1/2 mile from good railroad market, 1/4 mile to school, telephone, rural delivery Plat and detailed information free. Only \$23,000.

C. A. Babecek, Harner, Kan.

SOME FARM SNAPS—210 acres, 2 1/2 miles from town, fair improvements, 100 acres wheat, near school, practically all tillable; price \$55 an acre. 160 acres finely improved, good buildings, close to Wichita and one that will advance rapidly; price \$75. 160 acres near Wichita, fair improvements, a real bargain, plenty of alfalfa, on main road, price \$80 an acre. Talk it over with Howard, the Land Man, Room 15 Turner Bldg., Wichita, Kan.

7 FARMS SOLD SINCE FEBRUARY LIST ISSUED.

If you have one of our Feb. lists mark off Nos. 52, 64, 90, 91, 101, 106, as they have been sold since the list was issued. We have also sold the 160 adv. at \$55, the first man that saw it bought it. Isnt this proof of our values? Some dandies left. If you havent one of our lists write for it today.

DONAHUE & WALLINGFORD,

Mound Valley, Kansas.

WHO WANTS THIS?—240 a., 165 a. in cultivation, of which 135 a. is creek bottom, 70 a. in alfalfa, 10 a. timber, 2 a. orchard, 2 modern houses, one 10 rooms, other 4 rooms; barn to hold 14 head of stock, 15 tons hay, smoke house, granaries, cribs, gas engine, saw and grinder, everything is in first class condition, 1/2 mile school, 1 to church, 4 of good town, 10 miles Cottonwood Falls, 13 miles Emporia, R. F. D. and telephone; write for price and lists. A. J. Klotz & Co., Cottonwood Falls, Kan.

MAKE OFFER on following for cash: All of section 13-12-42, Wallace Co., Kan. \$640 still due the R. R. Co. at 6 per cent. This is close to R. R. town and all good wheat land. Price \$6.00 per a.; will consider good cash offer. Also have some clear residence property and some equities to trade for young stallions or jacks or for clear western Kansas land; priced on market. All rentals in good repair and bringing good income. \$3,000 stock of general mdse. for clear western Kansas land. C. E. Tinklin, Corning, Kan.

FOR SALE OR RENT,

with privilege of buying, 640 acres, Sec. 36-7-3, Cloud Co., Kan. Desirable farm for stock raising; 150 acres in cultivation, two pastures, 400 acres and 90 acres each; improvements only fair; 7 room house, newly shingled; stable for 12 head horses, cribs and other improvements; Aurora 6 miles, 3 north and 3 east, telephone and rural delivery, good road to market; price, if sold soon, \$25 per acre, rental 1-3 of crops delivered at Aurora, and \$1 per acre for pasture. Address the owner, Chas. W. Hull, 706 Jackson St., Topeka.

For Prices

On Greenwood land write G. K. Jackson Land Co., Eureka, Kan.

BUTLER COUNTY, KAN.

Do you want to buy a farm? Send for our list of farms for sale in the best county in state. Make early selections before prices go higher.

WHITEWATER LAND & LOAN CO., Whitewater, Kansas.

Best Bargains on Earth

Are in the Solomon valley country in Smith and Osborn counties, Kansas. The home of alfalfa, corn and wheat. Come out and view the promised land.

H. A. TURNER,

Florida, Kansas.

J. C. Robison's Big Sale!

The tenth annual sale of Fercherons from the Whitewater Falls Stock Farm, owned by J. C. Robison, Towanda, Kan., was held in the big pavilion on the Wichita Fair Grounds, on Tuesday, Feb. 16. It was a success in every way. Much of the stock offered was rather young, but the figures show that it was appreciated by the buyers. When a great crowd of men of this caliber will assemble from many states to bid upon a draft of animals from a Fercheron stud it means much. It means that animals of this quality are in demand; that the farmers and breeders appreciate efficient motive power on their farms and will pay good money for good horses; that the reputation of this particular stud is excellent, and that the sale was well advertised. Buyers were present from several states, though all did not secure the animals they wanted. Of the 54 head sold, 34 were bought by Kansas farmers and breeders, who thus showed their high appreciation of these horses at home. Oklahoma took 10 head, Missouri 7 head, and Texas, Arkansas and Colorado 1 head each. The top of the sale was reached on the young stallion Myron 59250 by Imp. Saphir 32334 (46498), and out of Duchess 50419. He was bought by G. C. Denison of Topeka at \$1,660.

The sales were as follows:

Table listing stallions and their sale prices, including names like Perdreau 62354, Bayneville, Casinos Model, etc.

Summary. 25 mares sold for \$11,550.00; average \$462.00. 29 stallions sold for \$21,195.00; average \$730.56. 54 head sold for \$32,745.00; average \$606.49.

F. M. Gifford's Very Good Sale.

Fred Gifford made his usual good sale at Clay Center, Kan., on Feb. 16, and disposed of a splendid lot of stuff, as he always does. The bulls were an exceptionally good lot, although most of them were quite young. C. E. McKinnie of Beloit topped both the male and female offerings, buying the Scotch bull Lord Bampton for \$200, and the fine Red Knight cow, Red Rose of Elmwood 12th, for \$180. The cows, many of which were past 10 years old, averaged a trifle over \$96, and the bulls made the very good average of \$115. General average on everything sold was \$101.75. Following is a list of representative sales:

Table listing bulls and cows for sale, including names like C. E. McKinnie, Frank Dixon, C. Flitz, etc.

SEED CORN 153 BU. ACRE

Diamond Joe's Big White—A strictly new variety. None like it. It is the hardest and best Big White Corn in the World—because it was bred for most Big Bushels, not fancy show points; because grown from thoroughbred inherited stock; every stalk bears one or more good ears, because scientifically handled, thoroughly dried and properly cured and had the most rigid examination. Big Seed Catalog FREE. It tells about all best farm, grass, garden and flower seeds grown. Write for it today.

Address, BATHEN'S SEED HOUSE, Shenandoah, Iowa.

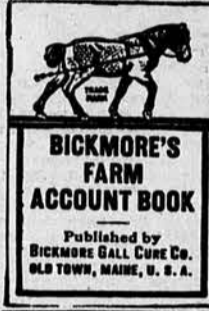
FREE-FARM ACCOUNT BOOK

Know How Much You Make This Year

No one shall pay a cent for Bickmore's Farm Account Book. It will be sent free to any farmer who will be good enough to tell who and where he is. The cost of a crop never demanded closer attention. Business farming puts money in the bank. This book is arranged to keep all accounts in simple form—more simple, and certainly more practical, than trying to remember them; shows what to charge against crop production; has a laborer's time record; and section for personal accounts. 64 pages; for ink or pencil. Not a cheap affair. It is meant for business. Its quality is in keeping with



Send Your Name on This Coupon or on a Postal Card



BICKMORE'S GALL CURE

a remedy that cures, and the horse works all the time. Users keep it in their stables the year round—they believe in it. It is always ready for Harnes or Saddle Galls, Chafe, Rope Burns, Cuts, Scratches, Grease Heel, etc. In cows use it for Sore Teats. Don't buy a substitute. Insist on getting Bickmore's Gall Cure—for the sake of your horse's health. But write now for Bickmore's Farm Account Book—it is ready for you. No cost. No obligation. Send your name and address—that's all.

Bickmore Gall Cure Co. Box 209, Old Town, Maine

Send me a Free Copy of Bickmore's 'Farm Account Book,' as advertised in Kansas Farmer

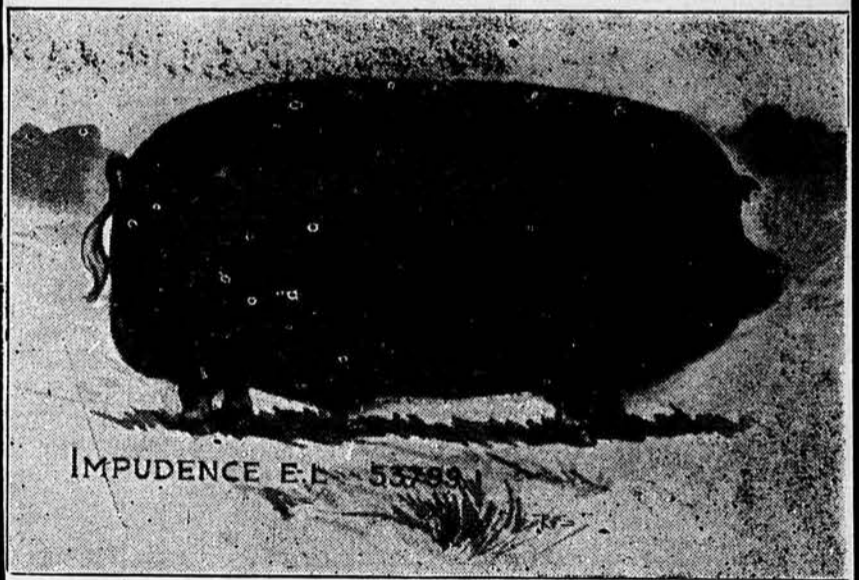
WOLFERSPERGER'S

CORRECT TYPE POLAND CHINAS

at auction

Lindsay, Kansas, Wednesday, March 9,

60 head, 35 head of which are in pig to the great Impudence E. L. and Noble Chief; more than half of the offering sired by Impudence E. L. Others by Hurry On, Trouble Maker, etc. Among the real attractions will be a very choice gilt sired by Perfection Likeness, dam Lady Winn by Meddler 2d. One gilt by Nobleman, the show boar by Meddler



2d. Her dam was the great show sow, Orange Blossom by Chief Perfection 2d. Two gilts by Nobleman and out of E. L. Flower by Cn and On. A sale of attractions. Many animals are being sold that I would not part with but for the fact that I am changing locations. Catalogs ready now. Sent upon application. Mention this paper.

Lafe Burger, auctioneer. Jesse and J. W. Johnson, fieldmen.

D. A. Wolfersperger, -- Lindsay, Kansas

DRYBREAD AND BAKER DUROC JERSEY BRED SOW SALE AT ELK CITY, KANSAS, MARCH 16, 1910

60 head of choice sows and gilts, best strains of breeding, representing the blood lines of Ohio Chief, Buddy K IV, Red Wonder, Froud Advance, Kant Be Beat, Col. S, Hanley, King of Cols., Oom Paul 2nd, Inventor, Tip, Top Notcher, Ingomar, King Wonder V., and bred to the following high Class boars: Buddy K IV, Bells Chief by Ohio Chief, Crimson Prince, Hanley's Wonder by Red Wonder, Beat Me if You Can by Cant Be Beat, Red Advance by Red Wonder. We believe we have one of the best bred offerings that will be sold this year. Send for catalog to either party, and come to our sale.

SAM DRYBREAD, J. J. BAKER, ELK CITY, KAN.

COLORADO LAND

LAND BARGAINS. We undersell all others in low priced lands in Eastern Colorado...

HENRY M. CHASE LAND CO., Denver, Colorado.

YUMA COUNTY, COLORADO.

We own and have for sale 3 160-acre tracts, unimproved, nice laying land...

YUMA COUNTY REAL ESTATE CO., Wray, Colorado.

COLORADO ALFALFA

Was first prize among standard farm crops in Eastern Colorado, near Denver...

Ask COLORADO FARM LAND ASSOCIATION, 879 Dearborn St., Chicago, Ill.

Colorado Lands and Sunshine.

If you are looking for a home, investment or health, where the climate is perfect...

THE B. W. JACKSON REALTY CO., Fort Morgan, Colorado.

ROCKY FORD BARGAIN—ACT QUICK.

480 acre well improved sheep or cattle ranch, 6 miles from Rocky Ford...

THE ROCKY FORD REALTY CO., 208 S. Main St., Rocky Ford, Colo.

DO YOU WANT A HOME?

Buy now in Washington county, Colo., where choice land, with best of soil can be had...

Vanderhoof & McDonald, Otis, Colo.

MUNTZING PAYS THE FREIGHT.

FARMS, SHEEP and also CATTLE AND HORSE RANCHES.

I own 40,000 acres of choicest lands in Washington and Yuma counties...

AUGUST MUNTZING, Akron, Colorado.

\$1 MAKES ANOTHER — WHERE

In the South Platte Valley, Morgan county, Colo. Money invested in land here will double itself in 3 years.

E. E. SEAMAN, Brush, Colorado.

Colorado Irrigated Land

22,000 acres of irrigated Government land in Southeastern Colorado has recently been opened for entry...

Price of Land 50 Cents Per Acre

Perpetual Water Right \$35 Per Acre

Payable \$5.25 per acre cash, balance in ten annual payments. The tract is nearer Kansas City and Mississippi Valley markets...

THE TWO BUTTES IRRIGATION AND RESERVOIR CO., LAMAR, COLO.

KANSAS LAND

A Big Farm Bargain

320 acres 3 miles from good railroad market. 300 acres under cultivation, 200 acres of which are in wheat...

H. M. COLLENS, Caldwell, Kan.

A galvanized iron cupola is one of the up-to-date improvements for the barn. There is being made a cupola, also a ventilator of this kind...

Hendershot at the Head.

At the last meeting of the Nebraska State Board of Agriculture a step was taken which will meet with the hearty approval of the farmers and breeders...

Demonstrator of Agriculture.

The Santa Fe railway has employed Prof. J. D. Tinsley to teach the settlers along its lines in the art of "dry farming."

Myers Duroc Jersey Sale.

E. M. Myers Duroc Jersey bred sow sale at Burr Oak, Kan., Wednesday, Feb. 2, was held in the worst kind of a storm...

Table listing names and prices for the Duroc Jersey sale, including C. F. Warren, Al Cummings, L. Banker, etc.

Rinehart & Slagle's sale of Duroc Jersey bred sows at Smith Center, Kan., Thursday, Feb. 3, was well attended...

Table listing names and prices for the Rinehart & Slagle sale, including Henry Williams, Pearl Pagett, etc.

KANSAS LAND

IF YOU WANT The right land, at the right price, in the right place, from the right man, write right now to H. D. Hughes, McDonald, Kan.

SNAPS IN CENTRAL KANSAS LANDS

320 acres, 270 acres bottom land, 50 acres upland, fair improvements, 200 acres alfalfa land, running water and timber...

JAS. H. LITTLE, the Rush County Land Man, LaCrosse, Kansas.

CHOICE KANSAS FARMS in Smoky Valley, Saline and McPherson counties, where you can raise alfalfa, corn and wheat with profit.

150 ACRE FARM, 80 alfalfa, 3 1/2 miles county seat, alfalfa mill, will net \$30.00 acre profit yearly...

COWLEY COUNTY FARM, 140 acres, good six room house, about 80 acres bottom, never falling water...

WE WANT WESTERN KANSAS LANDS. We have eastern Kansas lands to exchange. Give legal description, stating distance from town...

BARGAIN. Hotel, 12 rooms, well located in Winfield, 10,000 population, 2 story brick building...

LIVE AGENT WANTED. In your locality to assist in selling corn, wheat and alfalfa land.

RENO COUNTY FARM—320 acres, highly improved, fine new house with gas and water in, sandy loam soil...

80 ACRES, 4 miles county seat, all first class bottom land, 52 acres alfalfa...

240 ACRES, 80 alfalfa, 60 wheat, 25 winter oats, well fenced, 80 acres woven wire, good 7-room house...

200 ACRES IN Marshall County, Kan., three-fourths mile from town, 100 acres in second bottom land...

EASTERN KANSAS FARM BARGAIN, 60 acres adjoining Osage City, 32 acres in cultivation, 22 acres of which is in red clover and timothy...

A FINE HALF SECTION FOR SALE, Two and one-half miles from South Haven, in high state of cultivation...

WHEAT, CORN, ALFALFA AND OATS, Produce mammoth crops in Barber Co., Kan., adjoining the famous alfalfa county...

MARION COUNTY RANCH, 1,800 acres, 4 miles railroad town, 600 corn and alfalfa bottom land...

SHARON COUNTY ALFALFA LANDS, Choice corn and alfalfa farms for sale in Barbour county, Kansas...

GREENWOOD COUNTY STOCK FARM, Nicely improved 480 acres, 180 under plow, 225 slightly rolling pasture...

ACT QUICK, Owner wants to sell great combination farm. Good buildings, rich bottom, well set pastures...

LANE COUNTY KANSAS, Offers bargains in wheat and alfalfa ranches at \$10 to \$20 per acre.

RENO COUNTY FARM, 160 a. 4 1/2 mi. from Langdon, good bldgs., 120 a. cult., 40 a. pasture...

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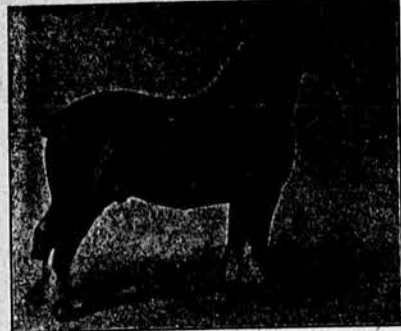








# GET BUSY



You are missing the opportunity of a life time if you do not send and get OUR NEW 1910 CATALOG before buying a stallion. It will show you a large number of actual photographs of stallions now in our stables. These horses were all selected and imported early in the fall of the year 1909 and are all in prime condition to go out on the stand and do a big season's business. They are nearly all solid colors, range in age from 3 to 6 years, in weight from 1700 to 2000 pounds. They are the big-boned, blocky type, with lots of style and action. Our 60 per cent breeding guarantee is as good as a Government Bond. GET OUR CATALOG. It is free for the asking.



WATSON, WOODS BROS. & KELLY CO., LINCOLN, NEB.

## ROBISON'S PERCHERONS



—FOR SALE NOW—

Twenty-five extra good Imported and American bred Percheron stallions.

PRICES RIGHT.

J. C. ROBISON, - - Towanda, Kansas

**SHETLAND PONIES FOR SALE**—20 imported stallions and a few bred mares. We have recently returned from Scotland with the finest importation of ponies ever brought to Nebraska. Write for private sale catalog. CLARK BROS., Auburn, Neb.

**PERCHERON HORSES, HOLSTEIN-FRIESIAN CATTLE**

Up-to-date Poland China hogs. Write your wants. H. N. HOLDEMAN, Kansas.

**FOR SALE**—I have a good road or general purpose stallion (Standard bred, but not registered) sired by Douglas Almont (0398), by Allie Gaines by Almont (32), dam by Champlonian by Hambletonian 10. Bred by the present owner, has never been abused and is a sure foal getter and gets good ones. Fine disposition. \$300 will buy him. Address "H," Box 314, Baldwin, Kan.

**M. H. ROLLER, J. O. ROLLER.**

Breeders of registered jacks and jennets. For sale, 14 jacks and 20 jennets, 14 to 16 hands. All black. We raised all of these jacks and broke them. We are not speculators and you get them first hands if you buy from us. \$9 miles N. W. of K. C., 65 miles W. Leavenworth. (passenger trains daily except Sunday, 2 Sunday) Write for catalog—free for asking if Kansas Farmer is mentioned. M. H. & J. O. Roller, Circleville, Kan.

### JACKS.

I have on hand a large collection of the best stallions the world produces. I have the best line of big boned, dapple gray and black, ton stallions that can be shown in the United States this season. These stallions measure from twelve to fourteen inches below the gamble and from eleven to thirteen inches below the knee and carry corresponding quality. They run in weights from 1,800 to 2,630 pounds each. I am offering greater attractions in stallions than any other importer. Prices the lowest. I have also forty big imported mares, all in foal, for sale.

W. L. DECLAW, Cedar Rapids Importing Farm, Cedar Rapids, Iowa. Register your jacks in the American Jack Register. Write for blanks.

### JACKS AND JENNETS

Stocks for sale at all times. Write us what you want. YATES BROS., Faucett, Mo.

### STALLIONS AND JACKS

Several Kentucky jacks from 15 to 16 hands high. One mile from town. BRUCE SAUNDERS, Holton, Kansas.

### KENTUCKY MAMMOTH JACKS.

Jacks, jennets and saddle horses. 250 head to select from. Tamworth swine, all ages. Catalogs now ready. J. F. COOK & CO., Lexington, Kentucky.

### Dunham's Percherons

46 splendid stallions and mares arrived Feb. 9. These, added to our present stock, afford intending purchasers the finest selection in America. If you want the best horses, horses with bone, quality, size, action and best breeding—if you want fair and liberal treatment, if you want lowest prices, consistent with good merchandise. Visit Oak-lawn, headquarters for Percherons in America, and renowned for nearly fifty years as the greatest importing and breeding establishment in the world. Catalog shows the place and the horses. W. S., J. B., & B. DUNHAM, WAYNE, ILL.

### 75 HEAD JACKS AND JENNETS

All ages up to seven years old. Guaranteed as represented and prices reasonable. Special prices for fall trade. Come and see me. PHIL WALKER, MOLINE, KANSAS.

### 35 Jacks & Jennets 35

Few good Percherons and saddle stallions. Jacks 14 1/2 to 16 hands and the very largest that can be found. 40 miles K. C. on U. P. and Santa Fe. Long distance rates. AL E. SMITH, Lawrence, Kan.

### FOR SALE.

The thoroughbred imported French Coach stallion Viveur is for sale. Any one desiring information address the undersigned.

C. R. MILLER, Chairman Sales Com. Atchison, Kan.

## JACKS AND STALLIONS

### AT QUIET GLENN.

One or a car load of big jacks, the kind you will want and that will do your country good. Come and see a lot of jacks that are all good. Choice of three young Percheron stallions. Come now or write for catalog. G. M. SCOTT, Me.

### STALLIONS AND JACKS.

2 black Percheron stallions. 2 Chestnut Stallions (Standard bred). 1 Spanish Jack. 1 Mammoth Jack. No better individuals or surer sires in Kansas. You run no chances. Their colts are here to show. All qualified under the Stallion law. If you want the very best at reasonable prices, come quick. SUTTON FARMS, Lawrence, Kansas.

## Percheron Stallions and Mares.

Several nicely matched teams of registered Percheron mares, safe in foal, and a few young stallions for sale, ages from three to five years old. Come and see me. F. H. Schrepel, Ellinwood, Kan.

## PERCHERONS, SHIRES SADDLERS and JACKS

28 registered jacks and jennets. 12 registered Percheron stallions and mares. 1 Imp. Shire stallion. 1 comb. harness and saddle stallion. Good stuff and at prices that will move them. Barns 3 blocks north depot. Fred Poo, Fetter, Kan.

## H. & H. WOLF and DAVID COOPER

Imported and Home Bred Belgian Stallions. Branch barn of H. H. Wolf, Wabash, Ind. The same terms and insurance will be given at Freeport, Kan., as at Wabash, Ind. Several extra good two, three and four year old stallions, one that weighs a ton and ten pounds at 27 months old. All are good individuals, guaranteed as represented. Priced reasonable. Write or call and see me. DAVID COOPER, Mgr., Freeport, Harper County, Kan.

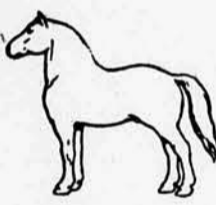
**Profits in Potatoes.** Potato raising, either as a side issue or as a main crop, proves profitable to the farmers everywhere. Few farmers, however, realize as much from their potato "patch" as the should. Good cultivation—planting good seeds, using good tools, fertilizing, spraying, etc.—will make the same space double or triple its production and greatly improve the quality. And quality potatoes get the top prices. On Long Island the average gross return from potato land is \$225 per acre, the cost of production \$56.50, and the net profit \$169 per acre. Of course, this is probably exceptional, but it shows what is done by some farmers, and farmers anywhere can make big money in raising potatoes. Moreover, the price of potatoes has steadily risen from a market value of 75 cents per bag of 180 pounds in 1896 to \$1.50 in 1910. One way to learn how to increase the yield is for the farmers in a neighborhood to organize a potato club. Invite a half dozen of your neighbors in and talk over methods and markets, etc. Wonderful results in the way of larger crops will follow. The 1910 "Iron Age" booklet should be sent for and used as a text book at the first meeting. It contains much valuable information and a copy will be sent free to yourself, as well as one for each member of the club. The ladies, too, should be invited, for if they do not take part in the potato "discussion" they can surely spend the evening pleasantly and profitably. For the 1910 "Iron Age" booklet and other literature address the Bateman Manufacturing Co., Box 71-P, Granloch, N. J., makers of the "Iron Age" farm and garden tools, which includes a 1910

## Percheron Mares and Stallions Registered

Several matched teams of Percheron mares, all blacks, safe in foal by Imported Stallions. Have both imported and home bred mares. Come and see our horses and satisfy yourself.



Our Motto: Top notch animals, square deal, quick sales, small profits. Make your wants known.



DANIEL WREN, Manager,

EUREKA, - - - KANSAS



## Percheron Stallions

I am offering an extra good lot of 2- and 3-year old Stallions for sale. Big drafty fellows with lots of bone. Also have a few mares for sale from yearlings to 8 years old.

R. F. D. 2. J. W. BARNHART, Butler, Mo.

## BLUE RIBBON STOCK FARM

For sale, 20 head of registered Percheron mares. Safe in foal. Color, ages, weights and prices right. Call or write

LEE BROS., Harveyville, Kan. Farm joins town.



## HOLLAND STOCK FARM

IMPORTERS AND BREEDERS OF Percheron and German Coach Stallions and Mares

Do you want to buy a stallion for cash? Go to the Holland Stock Farm.

CHAS. HOLLAND, Prop. Springfield, Mo.







# FRANK IAMS'

new importation of draft stallions and mares arrived September 20, 1909, by "Iams' own Special train" of "ten express cars." They are "business propositions" that "jar the cherries" on a "wide-awake" "horseman's hat." Iams' "Peaches and Cream" stallions and mares are "eye-openers." They are "diamonds," sold "at fifty cents on the dollar." They are "winners" and "sons of winners," having won "eighty prizes and medals" at Paris and Brussels and leading European horse shows. Iams makes buyers.

## "SIT UP AND TAKE NOTICE"

"Ikey Boys" get into Iams' "money-saving game." Buy a stallion and mare today—save \$300.00. Iams "tickles" buyers with "Rippers" at "Let Live Prices." Owing to bad crops, panic—Iams' cash, his 27 years' successful business, he bought and sells better horses cheaper than ever. Mamma, Iams is a "hot advertiser," but, "he has the goods" and sells horses at his barns only. Buyers get the "middlemen's profits" at Iams'. Iams has

## 200--PERCHERONS AND BELGIANS--200

two to six years old, weighing 1,700 to 2,500 pounds; 90 per cent blacks, 50 per cent ton stallions. All registered and branded. He sells "toppers" at \$1,000 and \$1,400 (few higher), mares \$700 to \$1,000, so good they need not be "peddled" or put on the "auction block" to be sold. Iams' "selling clothes" fit all buyers. No man with money or bankable notes gets away from Iams. He buys, owns and sells more stallions than any man in the United States; saves thousands of dollars to stallion buyers. Iams is not in the stallion trust. Iams places \$1,500 insurance.



## \$1,000--SAVED AT IAMS'---\$1,000

Ikey, what "a graft" these "stallion salesmen" are working on the farmer, selling fourth-rate stallions at \$4,000 and \$5,000! Mr. Buyer, see Iams' stallions yourself. Take no stallion salesman's word. "Iams has the goods you read about." His establishment is worth going 2,000 miles to see. Iams' competitors "holler." He is knocking "high prices" out of the Xmas tree. Iams saws wood, "butts in," sells more stallions each year. He makes every statement good. Big Bill, buy a stallion of Iams. His \$1,200 stallions are much better than our neighbors paid those Ohio men \$4,000 for. Then I can wear diamonds. Iams speaks the languages, buys direct from breeders, pays no buyers, salesmen or interpreters; has no two to ten men as partners to share profits with. Iams guarantees to sell you a better stallion at \$1,000 to \$1,500 than are sold to stock companies at \$2,500 to \$5,000 by slick salesmen, or pay you \$500 for your trouble, you the judge. Iams pays horses' freight and buyers' fare; gives 60 per cent breeding guarantee. Iams' guarantee is backed by one-half million dollars.

Write for Million Dollar Horse Catalog. Greatest on Earth.  
References—St. Paul State Bank and Citizens' National Bank,

ST. PAUL, NEBRASKA

## HENDERSHOT'S PERCHERONS AT AUCTION Wednesday March 9, 1910, at 9 a. m. Sharp SALE AT FAIR GROUNDS, LINCOLN, NEB.

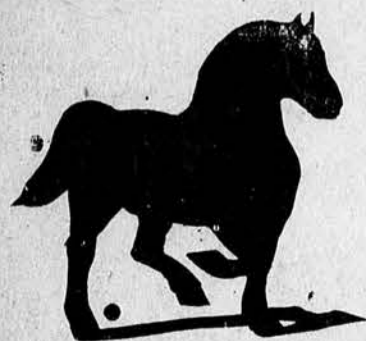


## 70 Big Boned Percheron Stallions and Mares FIVE MAMMOTH KENTUCKY AND SPANISH BLACK JACKS

For catalog address

O. P. HENDERSHOT, LINCOLN, NEBR.

Auctioneers—F. M. Woods, Z. S. Branson, Ray Page.



## —PERCHERONS— SHIRES - BELGIANS

We received on Dec. 30th at our So. St. Joseph barns another carload of Percherons. All of our stallions and mares are imported; no home-bred, short-bred scrubs.

Our prices are the very lowest if you want a square deal, with the best and safest insurance and guarantee. All street cars going south from Union Depot pass our barns; one block from Transit House, one block from the South St. Joseph depot.

PERCHERON IMPORTING CO.,

Chas. E. Kirk, Pres., So. St. Joseph, Mo.

## MAASDAM & WHEELER

Breeders and Importers of Percheron Horses.

60 STALLIONS AND MARES to select from. Our stock has size, bone and quality. Stallions and mares from weanlings to 7 years old for sale. Imported and home bred.

FAIRFIELD, - IOWA.

# 30--PERCHERONS--30

## Stallions and Mares

AT AUCTION AT

## Beloit, Kan., Friday, March 4

This is a dispersion of the well known J. A. Gifford Percheron stud numbering 14 head. 12 are mares from one to ten years of age. One year and a half stallion colt and the great breeding and show stallion, Pioneer. Probably the greatest stallion ever sold under the hammer. Mr. Gifford is the well known authority on Percherons and while his Percheron stud is not large in point of numbers it is one of the best in the west and in Mitchell county, the well known Percheron center.

## LAKWOOD SHOW STALLIONS

H. G. McMillan & Sons, Rock Rapids, Iowa, recognizing the strong demand from Kansas for high class stallions have decided to sell in this sale with Mr. Gifford 16 show stallions from their famous Lakewood Percheron farm. This is to be a red letter day for lovers of Percherons. For a catalog address, either

J. A. GIFFORD, Beloit, Kan.

H. G. McMILLAN & SONS, Rock Rapids, Ia.

Col. Woods, Auctioneer.



## ROSS FARM

Registered

PERCHERON STALLIONS AND MARES, KEN-  
TUCKY JACKS, SHORTHORN CATTLE



30 head Imported and American bred mares 2 to 5 years old, several nicely matched teams, a number in foal, 10 head Imported and American bred stallions 2 to 4 years old, all extra good, big boned, smooth fellows fit to head the best herds of registered mares.

Several splendid big boned Kentucky jacks. 30 head pure Scotch Short-horn cows and helpers. 5 extra good red bulls coming yearlings, pure Scotch and in fine condition.

GEO. B. ROSS, Aiden, Kan.

Farm adjoining depot, main line A. T. & S. F. R. R.

## LAKWOOD FARM

The Greatest Breeding Establishment in the World.

Clypeo, the world's champion, at head of stud. Sensational show record: 20 prizes awarded Lakewood Percherons at International 1909, 12 of which were firsts and championships, a record never before equaled by any one other exhibitor. In addition Lakewood Percherons won 155 prizes at the great state fairs and exhibitions of the west the past season, 76 of which were firsts and championships. A grand lot of big heavy boned stallions, and a choice selection of mares at prices that defy competition. If you want the best, do not fail to visit Lakewood Farm before buying.

H. G. McMillan & Sons, Rock Rapids, Ia.

Branch Barns: Sioux City, Ia.

Great Falls, Mont.



## Imported Percheron Mares and Stallions

For sale, several nicely matched teams of two and three year old Imported Percheron mares, bred, black and grays. Several extra good two and three year old Imported stallions. We handle only the best. Come and see us.

J. A. FEE & SONS, STAFFORD, KAN.

## FOR SALE AT RIVERSIDE STOCK FARM.

5 Percheron Stallions from 2 to 5 years old, 5 Percheron mares from 15 months old to 5 years old. A pair of registered matched Belgian mares. All registered and breeding guaranteed.

A fine young registered Shorthorn Herd with Royal Glenster at the head, a pure Scotch bred bull. I will trade this herd on a good farm.

Chapman,

O. L. THISLER & SONS,

Kansas.