

# KANSAS FARMER

## WITH WHICH IS COMBINED FARMERS ADVOCATE

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# Dissemination of Tuberculosis

A. T. PETERS AND CLARENCE EMERSON  
Nebraska Experiment Station

Schroeder and Cotton by their work published in Bulletin No. 99 of the Bureau of Animal Industry, on "The Danger from Tuberculosis Bacilli in the Environment of Tuberculosis Cattle," have aroused considerable interest in this subject. Their conclusions indicate that one of the commonest paths of egress for the tubercle bacillus from the bodies of infected cattle is the intestinal tract, and that bacilli are passed through the intestines and still retain their virulence. They ascribe to the feces of tuberculosis cattle a place similar to that accorded to the sputa of tuberculosis persons. The report of the chief of the Bureau of Animal Industry for 1907 says: "The work of the year demonstrated that the commonest mode for the discharge of tubercle bacilli from the bodies of tuberculous cows is with their feces, that about 40 per cent of the tuberculous cows that show no symptoms of disease are expelling and scattering tubercle bacilli, and that tubercle bacilli passed with the feces of tuberculous cows are actively pathogenic." If 40 per cent of those which show no symptoms of disease are passing virulent tubercle bacilli, the per cent, without much doubt, will be greater if the visibly tuberculous cows are included. These results are indeed striking, since, if definitely established, we shall have to deal with a problem which is of far-reaching importance, important because fecal contamination of milk would offer a means of frequent occurrence of tubercle bacilli in dairy products, and deserving of exceptional consideration because hogs are commonly permitted to run in the same pasture and feed lots with cattle and since, being very susceptible to infection by this organism, its presence in cow manure would be a constant source of danger to them.

Schroeder and Cotton examined seven samples of feces from cows affected with tuberculosis. They claim to have found, by microscopic examination, tubercle bacilli in five of these samples, or 71.43 per cent. Inoculation and ingestion experiments were made with the feces of four of the cattle, with the result that three were shown to be passing virulent bacilli.

Reynolds and Beebe made a larger number of examinations, having had 45 animals under experiment. Some of them were tested from three to five times for virulent bacilli in the feces. Their results differ considerably from those of Schroeder and Cotton since they were able to demonstrate virulent bacilli in the feces of only one cow and this one was badly affected with tuberculosis, the bacilli being constantly present in the nasal secretion.

Schroeder and Mohler have demonstrated the ability of the tubercle bacilli to pass through the intestinal tract and retain its virulence. This was shown by feeding healthy cattle a culture of virulent bacilli. The manure from these cattle was given to an experimental pen of four hogs. Three out of the four became infected with the disease.

DEMONSTRATION OF TUBERCLE BACILLI IN THE FECES.

It may be well at the start to mention a few important things to be considered in an examination of cow feces for the tubercle bacillus. In the first place it should be borne in mind that

a microscopic examination alone is of little value. In cow feces we frequently meet with morphologically similar bacilli which stain in the same way and which by means of the ordinary microscopic examination we are unable to differentiate from the tubercle bacillus. Besides this, tubercle bacilli might be (and the probabilities are that this is true in many cases) present in such small numbers that a microscopic examination would be inadequate to disclose them. This was true in the feces of cow No. 2 1-2 of the Minnesota Experiment Station, in which tubercle bacilli were demonstrated by animal inoculation while repeated microscopical examinations failed to reveal them.

We must resort to animal experiment for absolute proof, and the guinea pig is the most serviceable for this purpose. Even here we cannot rely merely on the production of symptoms and nodular formations, because Rabinowitch's butter-bacillus may give rise to these. The nodules should be examined for the giant cells and the histological picture which is characteristic of the tubercle noduli.

Before we can say positively that a given sample of cow feces contains

virulent tubercle bacilli we must have produced in a susceptible animal the characteristic lesions of tuberculosis and must have demonstrated in these lesions the typical features of a tubercle bacillus nodule.

Ingestion experiments with hogs might be a valuable method of demonstration were it not for the frequency of the natural infection in these animals. Schroeder and Cotton have shown that hogs readily take the disease when fed with infected material, and if we could be certain that they are free from disease before the experiment, their use for this purpose would be advisable. The application of the tuberculin test must then be resorted to before utilizing a hog for this purpose.

#### THE INVESTIGATION.

The cows utilized in this experiment, forty-one in number, were for the most part from a single large dairy herd in which over 80 per cent had reacted to the tuberculin test. The majority of these were in excellent condition, the fact that they were suffering from the disease being indicated only by the tuberculin test. Four of the forty-one included two dairy cows and two males at the Nebraska Ex-

periment Station. In all cases the tuberculin test had been applied only a few weeks before making the examination.

#### METHOD OF INVESTIGATION.

The feces were taken from the rectum by means of a rectal spoon. This was inserted several inches into the rectum and rotated as it was withdrawn. Difficulty in obtaining sufficient material was very seldom encountered.

The investigation included a microscopic examination of stained spreads of the material and animal inoculations. No attempt was made to determine the presence of the tubercle bacillus by the microscope, believing this to be impossible.

For inoculation of guinea pigs the manure was suspended in water and about .5 to 1 cc. injected. The guinea pigs succumbed to the action of toxic substance or septicaemia in only a few instances.

#### RESULTS OF THE INVESTIGATION.

The results of this investigation are indicated in the following table. It will be seen that in twenty-two out of forty-one samples of manure, acid-fast bacilli morphologically similar to the tubercle bacillus were demonstrated by the microscope. Subsequent inoculation tests showed that of these twenty-two samples only three (7.31 per cent of the forty-one samples) were passing virulent tubercle bacilli. This brings out the fact before mentioned, that a microscopic examination is untrustworthy in demonstrating tubercle bacilli in cow manure.

Of the three which were passing virulent tubercle bacilli in their feces, two were in good physical condition and from their appearance the disease would not have been suspected. The third, cow No. 102, was poor, but the symptoms of the disease were not marked. The number of acid-fast bacilli in her feces, as revealed by the microscope, was exceedingly large. In every field a number of them could be located, and in one place an area of degenerating tissue with many bacilli clinging to it was found.

The appearance of cow No. 20 was such as to arouse no suspicion of tuberculosis. Her feces contained fairly large numbers of acid-fast rods, some of which were virulent tubercle bacilli.

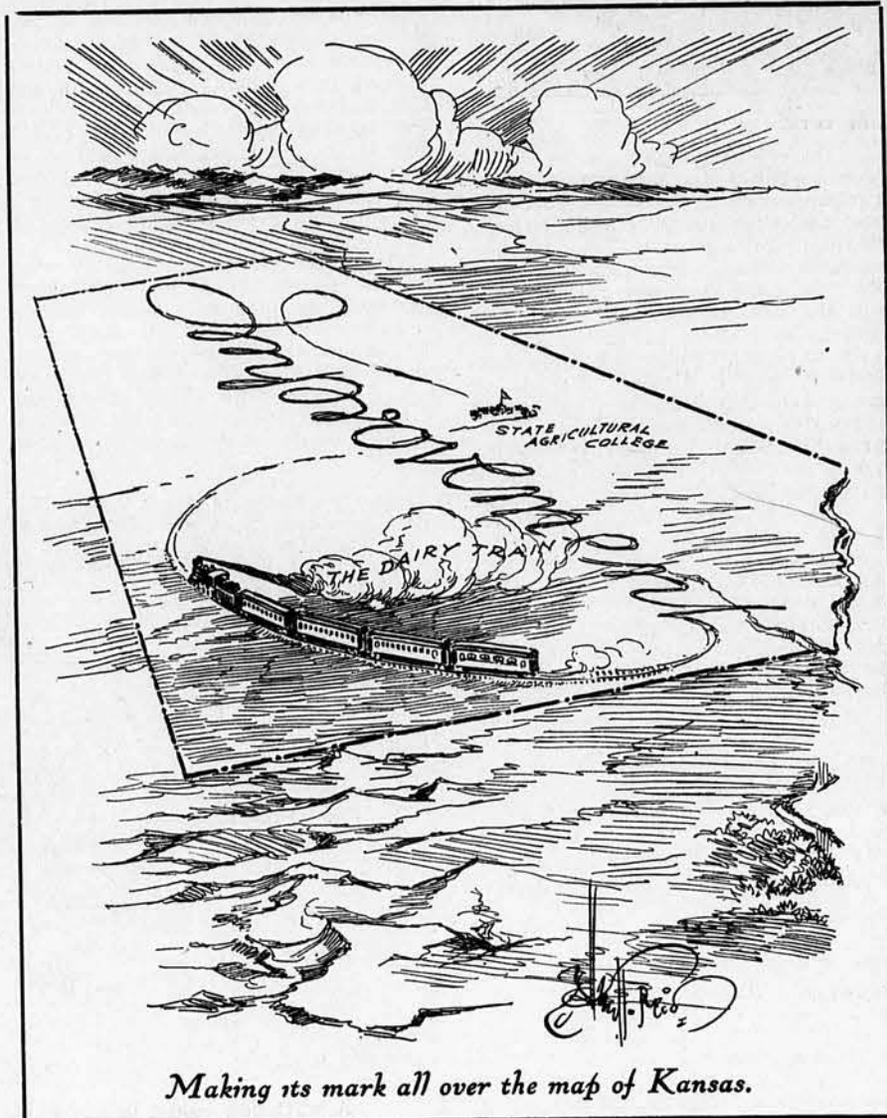
No. 204 is of special interest because of his exceptionally fine appearance. This is a large Aberdeen Angus bull, remarkably fat and sleek. He, however, suffers a persistent but moderate cough and was passing virulent tubercle bacilli in his feces.

In the face of this evidence we cannot disregard a possible danger from cow manure even though the appearance of the animal is excellent.

It will be noted that only those bacilli were demonstrated microscopically were utilized in inoculation experiments. The probabilities are that some of those in which the microscope did not reveal acid-fast bacilli contained virulent germs of tuberculosis. The one positive case at the Minnesota Experiment Station was constantly negative to microscopic examination.

A temporary scarcity of guinea pigs necessitated the selection of those samples in which the presence of the germ was considered probable.

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Making its mark all over the map of Kansas.

# Farming on South African Border Lands

By FRANK L. SNOW

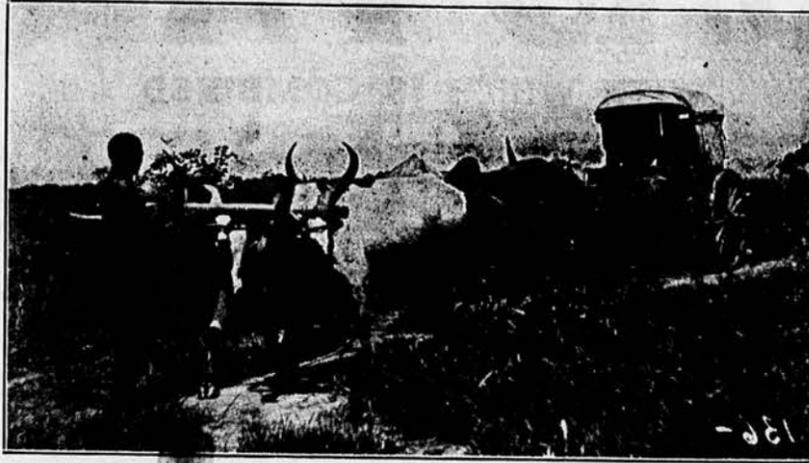
In south central Africa is a province—Rhodesia—where they do things differently. This expanse of territory does not present a very bold appearance on the map of the African continent, but, nevertheless, it comprises 750,000 square miles, or in other words it is a fourth as large as the United States.

So enthusiastic over this British colony, which was first settled in 1890, are some of its white inhabitants that they go so far as to claim that it was the site of the garden of Eden. At any rate the climate is delightful and the agricultural possibilities great.

When the pioneers came into the territory they found lemons growing wild along the streams and those who believe that it was here that man first roamed conjecture that Eve got hers!

Owing to its fertile soil, regular rainy season, and possibilities for irrigating, Rhodesia offers prospects for successful farming operations second to none in South Africa. The farms are capable of producing most kinds of cereals, tobacco, vegetables and fruit where energy and enterprise are applied. Cattle find abundant grazing the year round, remaining sleek through the dry season.

Small stock, particularly native sheep and goats, Cape Boer goats, Persian and the Cape fat-tailed sheep



Trekking in South Africa.

the country that he concluded to cast his lot in this portion of the world. American machinery and Kansas mules have figured in the development of his farm. Corn is the main crop produced on a portion of his 20,000-acre farm but his hobby is the planting of forests of eucalyptus trees.

There are many farmers of Dutch ancestry in the province. The Boer

raked to one side and a hole dug in the hot earth. Within the excavation the pig is dropped and a thin layer of earth applied and the coals of fire raked back to their original place.

The other articles on the bill of fare consisted of hard bread eaten with pork drippings and strong coffee. When the repast was finished a single bowl of water and towel were passed down the line beginning with our host!

It was a merry gathering as relatives had trekked from a farm hard by for one of the all-day visits which are characteristic features of Boer farm life. A weird sort of waltzing was enjoyed in front of the rough log and mud-plastered house, and by 10 o'clock the day visitors were trekking home, the children being hustled to sleep by the screeching of the "colonial" driver who was commanding the 16 oxen in the Dutch language—they know no other—and the various nocturnal sounds peculiar to the Rhodesian veldt.

There were twelve of us who remained and when it was proposed that we retire I was curious to see how we would all be stowed away, for there was but a single bedroom in the house.

The male portion—8 of us—stretched out on an improvised bed on the mud floor of the dining room. Sleepless I lay for hours and how I wished that I could just spread out like molasses so weary was I. There was snoring humanity on either side and at the point when I was becoming desperate, our host called out "pindula" (a Mashona word for turn around) and greatly to my relief the entire line flopped over.

The next morning early I was shown around the farm. One thing that was conspicuous was the lack of any system in methods employed. The tools were reposing just where they had last been used, and the great barns seen on the farms of Kansas were a quantity unknown.

The methods adopted by the native

peoples in tilling the soil are still more crude. They merely scratch the soil with small hoes of aboriginal design, and make no pretense at cultivation.

## THE SANTA FE DAIRY TRAIN.

Wheels Carrying Instruction to the Farmer's Home.

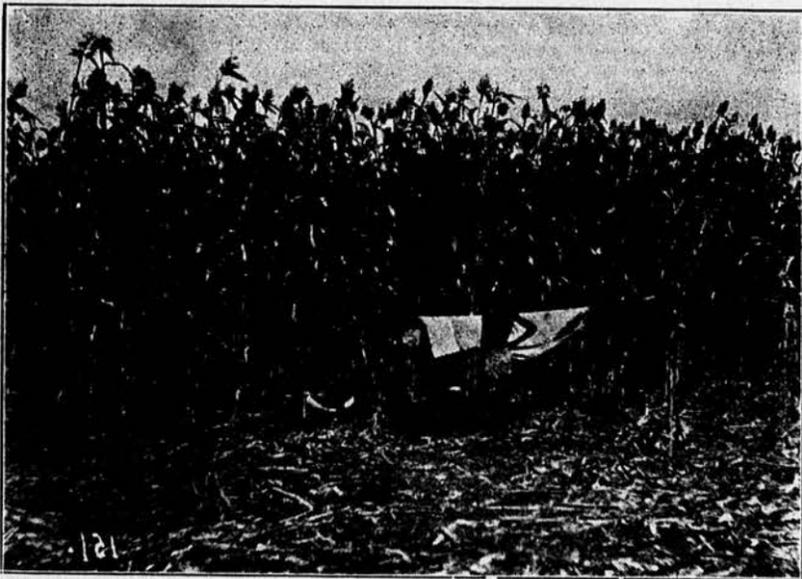
During the week ending October 30, the Santa Fe railroad ran a special train over its main line and branches in southeastern Kansas, the object of which was wholly educational. This train was officered by professors and dairy experts from the State Agricultural College at Manhattan, who traveled 719 miles and made 70 stops, at each of which one or more lectures was given on some phase of dairy husbandry.

It is a fact that has long since been recognized by keen observers that another change in Kansas agriculture is due. The old days of the cattle range were replaced by the days of the fenced ranch, and these in turn by the smaller and more highly cultivated farms, and with each has come a period of increasing prosperity for the people of the state. It is still true in many sections, however, that somewhat crude methods are employed and the old tendency to farm by the mile instead of by the acre prevails. Continuous cropping without restoring fertility to the soil has had its effects and sections which once produced heavy crops now have a lower general average. A long period of prosperity has served to increase the price of land and the farmer must now have larger returns from his acres.

These conditions serve to turn the attention of thinking farmers more and more toward the live stock industry, and especially toward dairy farming, as the quickest, easiest and most profitable solution of the problems which now confront them. It is now realized by many that the present methods will permit the home farm to last only during their own life time, but will leave little for their children. It is a fact that grain farming is destructive of the fertility of the soil unless it is practiced in rotation; or unless the fertility is restored through live stock farming or by the purchase of expensive fertilizers. When a farmer sells a ton of wheat he disposes of \$8.50 worth of the fertility of his soil. He does this every year, and unless something is done to replace this fertility he soon learns that his average yield decreases and his heirs receive only a worn out farm as their heritage. A ton of butter, which sells for about \$500, only takes 50 cents worth of fertility from the soil, and the farming methods through which it was produced have added to the value of the farm.

Kansas is better adapted to dairy farming than are the states that are now most noted as dairy states. With more than one million acres of alfalfa and with an enormous acreage and yield of corn this state stands pre-eminent as the producer of the cheapest and most valuable of ready balanced rations for either beef or milk. Kansas alfalfa is now being sold throughout the dairy districts of the

(Continued on page 7.)



A field of Kafir corn.

thrive remarkably well in all portions of the country. On some of the mountain ranges in the eastern section Merino sheep do well.

Tobacco is being cultivated to a considerable extent by the farmers and there is, in the opinion of an American expert on the subject, a large field for enterprise in this line of agriculture. The different varieties of soil to be found in the country are capable of producing light cigarette tobacco, cigar leaf and heavy smoking tobacco of excellent quality.

The cultivation of fruit is still in its infancy, but there is every promise that there are great returns in store for those who put out orchards using scientific methods. Oranges, lemons, guavas, plums, grapes, plantain and other fruits are now on the market in abundance.

It has already been mentioned that they do things differently in Rhodesia. It is true that there are a few English and Scotch and two or three American farmers who use scientific methods in connection with the tilling of the soil, but they are exceptions to the rule. In this class is William Harvey Brown, Member Legislative Council and Mayor of Salisbury, who was graduated at the University of Kansas. Mr. Brown was one of the pioneers to help place the British flag in Rhodesia in 1890. For two years he killed big game for the Smithsonian Institute, Washington, D. C., and finally became so much interested in

farmer—hardy, but lacking in education—a marked degree, sows his seed broadcast and then turns it under with a single furrow plow. Then he procures the family Bible and evokes a blessing upon the work accomplished and the harvest to come, leaving to nature the task of producing a crop.

As a representative of the "Rhodesia Herald" I chanced at dusk, on one occasion, to arrive in a bedraggled and water-soaked condition at a Boer farm homestead. In answer to my rap a well-built, roughly attired, red whiskered individual sang out in a coarse but pleasant voice, "Come right in, you are welcome, stranger."

A change of attire was offered me and I soon appeared at table clothed in a buttonless coat which fit me several sizes too soon, a pair of trousers of duck material with the clinging propensities of a bull dog of the thoroughbred type, and a handkerchief of scarlet hue in lieu of a collar!

On account of the general air of hospitality which prevailed and in spite of the grotesque appearance I must have presented, I felt perfectly at ease. The table was a rough affair spread with a dirty cloth.

A small steaming wart hog was on a large platter in the center of the table, and with an appetite characteristic in veldt life I was eager to "get busy." This is a savory dish that the ex-President has probably found to be one of the treats of camp life in the heart of Africa.

A fire is kindled and as soon as a bed of coals is produced they are



A wart hog baked in the ground makes a dish fit for a king.

# G L A N D E R S

## L. VAN ES,

*Veterinarian, North Dakota Experiment Station.*

In presenting this description of one of our most important diseases, the writer has been guided largely by the character of the inquiries made regarding it by those interested. He has endeavored to give a summary of the knowledge on the subject at this time, but has avoided the discussion of its purely scientific phases. Where, for the sake of completeness of treatment of the subject, he has been obliged to use some strictly technical terms, he has endeavored to reduce them to a minimum and refers the reader, not familiar with them, to a short glossary appended hereby. To farmers and stockmen, the paragraphs on the prevention are especially recommended, while in the preceding chapters there is much which should appeal to them.

Glanders is a transmissible disease peculiar to the horse family, due to the introduction and vital activity of a specific organism and characterized by the formation in various organs of nodules, which have a tendency to break down and by doing so, when occurring in the skin and mucous membranes, to form ulcers.

Of all the horse diseases, glanders is one known from the earliest times. Greek and Latin writers described the disease with considerable accuracy and had a clear idea of its infectious nature. This idea prevailed for a long time until it was finally questioned by the elder Lafosse in 1749, who regarded the disease to be of a spontaneous origin. This unhappy theory was vigorously combated by the teaching staffs of the recently established veterinary schools of Lyons and Alfort.

The disease has ever followed great movements of horses, so that through the agency of military campaigns, the settling up of new sections of country, the building of railroads, etc., it has invaded the entire civilized world with the possible exception of Australia.

In the northwestern section of this continent by the attraction of immigration (and horses) from widespread areas, the disease has become firmly established and will probably continue to engage the attention of the live stock sanitary authorities for some time.

Most of the North Dakota cases occur in the counties having the greatest influx of settlers and in those where railroad construction work was most recent.

This organism known as *Bacillus mallei* occurs as a delicate rod, rather variable in its dimensions. Its length varies from one to two-thirds of that of a red blood corpuscle, while its thickness is about one-fifth to one-eighth of its length. (Length 2.5 microns, thickness 0.5-1. micron.) The dimensions depend largely upon the nature of the medium upon which they grow, as well as upon the growing qualities of the strain of bacilli under consideration.

Natural infection takes place through the digestive tracts or through lesions of the skin or mucosæ. When the bacillus enters through an abrasion of skin or mucous membrane, the result of its multiplication expresses itself most commonly by the initiation of a process of ulceration at the point of inoculation. From there the lymph-vessels and spaces rapidly carry the infected organism to places beyond the original seat of infection. The effects of the infection, however, may show considerable variation, according to the virulence of the strain of virus and especially according to the susceptibility of the animal infected.

The virus once introduced into the lymph circulation is readily disseminated, because the lymph seems to afford an excellent medium of growth, while the lymph nodes prove to be a rather feeble barrier to the further progress of the infective material. The bacilli sooner or later arrive in the blood circulation and while they do not multiply there, the blood being rather inimical to their growth, they are carried by it to the capillaries, especially those of the pulmonary circulation, where they again have an opportunity to invade the tissues, of course, subject to the above named modifications.

In animals exposed to infection or certain symptoms become manifest spontaneously or artificially infected, certain symptoms become manifest after a period of incubation ranging

from two to three days to several weeks. This time varies according to the conditions under which infection took place, the susceptibility of the animal, the virulence of the bacilli, etc. It should also be observed here that not all horses exposed will contract the disease; this also depends upon the conditions mentioned above. In general we find that horses run down in condition either by previous disease of any sort, by being starved or by being overworked are the most liable to becoming infected. Most veterinarians can testify to the rapid spread of the disease in stables, where feed is scarce or where the horses are being overworked.

When we consider the various parts of the body, which may be involved in glanders infection, it is not surprising that we encounter a great variety of symptoms, by which such an infection is expressed. In fact, before the discovery of the glanders bacillus, there existed for a long time, an inclination to regard certain forms of the disease as distinct affections. Such a division is no longer necessary but for the sake of systematic description, we are, however, justified in speaking of acute and chronic types of the disease.

In acute glanders certain general symptoms precede any local manifestations, provided that the acute attack is not a sequel of chronic infection. The earliest symptom commonly consists of a sudden high temperature, ranging often as high as 106 degrees F., or even 107 degrees F. There may be chills, while the animal is stupid and unexcitable. The gait is stiff and painful and the coat becomes dull and staring. There is no appetite, but a little water may be taken. Respiration as a rule is hurried or jerky. The pulse rate is increased often as high as eighty beats per minute, but in spite of a violent heart action, is weak and in many cases difficult to feel. The visible mucosæ are injected and of a deep red color.

After those general symptoms have existed for a couple of days, local phenomena make their appearance.

As acute glanders is always an evidence of the general dissemination of the infection throughout the body, we may look for symptoms, pointing to damage to many of its component structures.

The nasal mucous membrane is reddened, congested and is apt to show small blotches of a deeper red. Somewhat later those hyperæmic spots become the seat of damage and exfoliation of the epithelium, so that, by the accumulation of exudate under the loosened epithelium small blisters arise. Those vesicles, of a yellowish color and filled with a serous or pus-

like fluid open soon after their appearance and then make way for a shallow ulcer, the bottom of which is covered by small granulations. In the course of a few days these ulcers may deepen, while their edges often become marked by a whitish, raised color consisting of a proliferated connective tissue. As the initial vesicles often show a decided tendency to become confluent, large areas of mucosa may thus be involved in the ulcerative process.

When such grave changes are under progress in the nasal cavity, it is readily understood that a discharge is commonly bilateral; at first serous and straw colored, it soon becomes mucopurulent of a deep yellow color, while in a great number of the cases it is tinged or streaked with blood. The amount of this discharge varies in the individual cases, but usually is quite abundant. It dries about the nostrils and upper lip, giving rise to tough yellow or rusty colored incrustations about the parts.

As the disease progresses, the ulcerations extend, become more numerous, while the rest of the mucosa participates in an edematous swelling, which often renders the respiratory effort most difficult and sonorous. This is furthermore aggravated by sloughing of parts of the mucosa, which in combination with clots of fibrinous discharge, is liable to cause considerable obstruction to the respiratory passage. Ultimately those clots and pieces of necrotic mucosa appear in the discharge, which at that time is liable to be very abundant.

Simultaneous with the symptoms mentioned voluminous swellings occur at different parts of the body, in connection with the joints, the subcutaneous tissues, the head, etc. Those swellings are tender, edematous, hot. The skin covering them often shows nodules which break and ulcerate, giving rise to chankers with ragged edges, which by coalescence produce a considerable amount of damage. Ulcers of this type yield an abundance of a stringy, yellowish or rusty discharge.

With the well known tendency of the lymphatic structures to participate in the glanders process, it will not surprise any one that they show characteristic changes, soon after the onset of the infection. The lymph-vessels of the region involved, mark themselves as distinct cords, either hard or edematous. They are hot and painful, often showing nodules in their course. Those nodules have the same tendency to break down as those seen in connection with other structures. The lymph nodes, so far as they can be explored are swollen, painful and surrounded by an edematous con-

dition, while occasionally they become the seat of abscess formation.

While those are the most conspicuous symptoms of acute glanders, it must not be forgotten that any of the internal organs, and especially the lungs may become seriously involved, and give rise to symptoms pointing to suspension or modification of their functions.

As the disease progresses to its usually fatal issue the general symptoms mentioned become more marked. An especially striking feature of the acute form of glanders is the rapidity with which the animals lose flesh. In the short duration of this type of the disease, which usually runs its course in from three to fourteen days, a well nourished animal may waste away to a mere skeleton. According to No-card and Leclairche, the loss per day even amounting to about 80 pounds.

Certain other symptoms also occur in acute glanders, but as they are also common to the chronic type of the disease they will be mentioned under that head.

Acute glanders is more commonly seen in donkeys and mules, although by no means excluded in the horse. It may follow immediately upon the introduction of infection or arise during the course of the chronic form.

Chronic glanders, the prevailing type in this section of the country and in the horse; may exist for a long time before any characteristic symptom makes its appearance. As symptoms occur, they are especially characteristic as they point to lesions of the nose and to those of the skin.

We are still apt to speak of glanders proper when the lesions are situated in the nose. The symptoms, in such a case, consist of the ulceration of the nasal mucosa, the involvement of the sub-maxillary lymph nodes and the discharge.

The earliest evidence of ulceration of the mucosa is the erosion of the epithelium or the eruption of one or more nodules. Those lesions have already been described and need no further mention. When they occur in the lower parts of the nose, they can be readily seen, when the horse is placed in a manner to face the light with the head raised and the nostrils pulled open. Instead of the erosion nodules or ulcers we may find the characteristic scar, which was considered in describing the lesions.

It must not be forgotten, that the not finding of the lesions mentioned, does not mean that they are not present, because they may be situated in such portions of the nasal cavity as are out of reach of ordinary inspection.

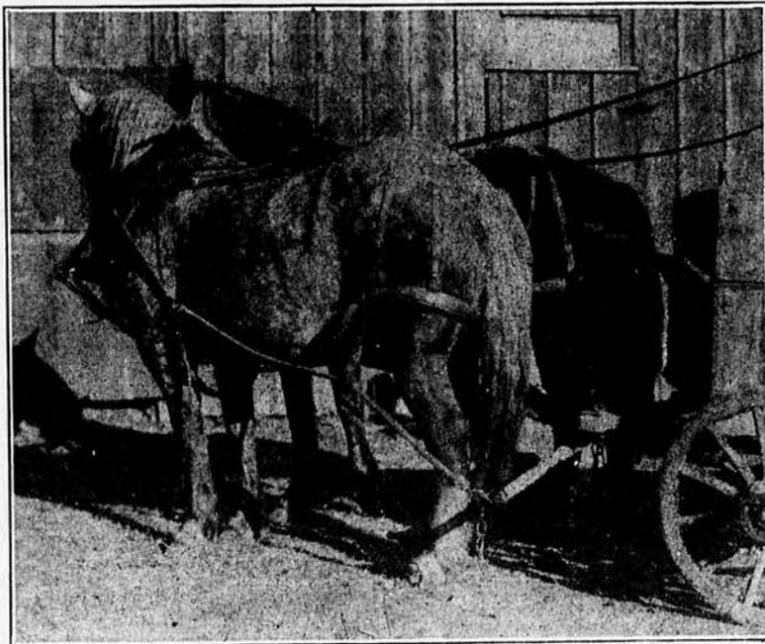
In most cases, where lesions are present in the nasal chambers, their presence is manifested by the discharge. This discharge is subject to great variations. It may be so slight as to escape attention altogether, or be merely shown, by a yellowish incrustation about the nostrils, while in other cases, it may be exceedingly profuse.

The substance of the discharge of glanders has nothing by which it can be recognized as such. It often is unilateral; serous during the early stages of the eruption later on mucopurulent or containing lumps of cheesy debris. The feature, most liable to warrant the suspicion of glanders is the admixture of blood with the discharged material or the simultaneous occurrence of nasal hemorrhages. Those are occasioned by the erosion of blood vessels during the ulcerative process. As this is uncommon in most other diseases, the symptom should always suggest the possibility of glander infection.

The nose lesions are commonly accompanied by enlargements of the sub-maxillary lymph nodes. This enlargement may either be uni- or bilateral. The nodes are hard, somewhat nodular, and not very tender to the touch. As a rule the skin lies over them loosely, although cases are not infrequently seen in which by infiltration of the loose connective tissue the skin has become fused, as it were, to the tumified structure. It is very common, however, that the nodes lie deeply in the sub-maxillary space, and appear to be fastened to the base of the tongue.

In a small percentage of cases the lymph node breaks down and forms an

(Continued on page 6.)



A Pair of the Percheron Mares to be Sold at Auction on Nov. 18. at the Closing Out Sale of Walnut Grove Farm, O. M. Keats, Manager, Horton, Kan.



# KANSAS FARMER

## EDITORIAL



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Topeka, Kansas.

Altogether, two championships, eight first prizes, four second prizes and one third prize were won by the Kansas State Agricultural College cattle and hogs at the American Royal in Kansas City. The final battle for American honors is to be at the International at Chicago the first week in December. It is expected that these cattle will win additional laurels for the state and college at this greatest of live stock shows.

The novice must be on his guard as to literature. Many books and magazine articles contain just enough truth to make them dangerous. The safe book is more than likely to be somewhat dry, or at least not to fire the enthusiasm to white heat. It is a good rule to beware of any book or article that makes farming very easy, and that does not state the cautions and warn of the disabilities.—L. H. Bailey.

The Delaware, the latest addition to our navy, is one of the most formidable war vessels afloat, but others like it are in process of construction. Our navy of the time of the Spanish war is now practically obsolete. The new navy now being built at a cost of many millions, will, in a few years, be waste junk. A small part of the money wasted on the navy would have opened many an inland waterway, greatly to the advantage of the country.

Complaint is made that taxes are high, and they are, and getting higher every year, but the needless expense caused by bad roads is a much greater burden than all state and county taxes which the farmer pays. There is little excuse for bad roads in the west, where good roads are so easily made and maintained. A little work with a road drag, at the right time, and proper drainage, will make most country roads fine the year round. Bad roads are so expensive that no neighborhood can afford to submit to them.

Manure scattered on the alfalfa will bring profitable returns next year. No other crop responds more promptly than alfalfa to a liberal top dressing of fresh manure. A covering of manure in the fall and winter, and a thorough disking early in the spring will surely result in a generous yield of hay; it will add 25 per cent to the crop. Remember that the greener the manure the more nitrogen and potash it will contain, and that these elements are what make the manure valuable.

Professor Dyche, of Kansas University, will ascend Mt. McKinley with Dr. Cook to prove the latter's claim of having gone to the summit of this mountain. The services of Professor Dyche were offered by the university regents, which body felt that the question at issue is an important one in present day scientific affairs, and they made the offer to Dr. Cook believing that Professor Dyche's experience as an explorer and his acquaintance with Dr. Cook fitted him to do notable service in helping to settle the questions that are now commanding the attention of the scientific world.

The commission form of government is the latest fad, and while it is improbable that the adoption of this system will cure all the imperfections of city governments, there is much to recommend it. One of the principal advantages is that it tends to do away with the ward boss. It is easier to elect a bad or an incompetent man from a ward than from a whole city. Commissioners elected at large are likely to be more representative men than those elected from a ward, where local influence, and local interests are more potent. Any system which will eliminate the ward boss and the ward heeler, is a decided improvement.

### FINED \$100 FOR SELLING BAD EGGS.

An egg buyer at Allen, Kan., pleaded guilty to selling 104 dozen bad eggs, and was fined \$100 and costs last week. The buyer sold these eggs to a Topeka house, and an expert candler found that of the 1,200 in the shipment only three dozen were fresh. The trial brought out the fact

that the local buyer at Allen had held these eggs ten days after purchasing them, and the supposition is that the farmers of whom he bought them had held them for a considerable time before delivery.

State Inspector John Kleinhans says that farmers and dealers all over the state are holding eggs for high prices, and that they are frequently held too long. He had orders to break up this practice so far as possible, and the prosecution mentioned in the dispatch quoted above is a sample of his work. Mr. Kleinhans says that he does not wish to interfere with the farmers in any way, but does desire to caution them against holding eggs too long. Each farmer who sells bad eggs is liable to a penalty provided for in the law under which Mr. Kleinhans works. Inspector Kleinhans has no choice in the matter. He simply does his duty.

### READERS' SUGGESTIONS WILL HELP.

No pains or money are being spared to make each succeeding issue of KANSAS FARMER a better paper and if the many words of appreciation are an index to the feelings of our readers then we feel that our object is being accomplished.

In view of this fact we appreciate a letter like that under date of October 25 by W. A. Hopper, Downs, Kan., who sends in his remittance for the KANSAS FARMER and says:

"I have taken the KANSAS FARMER since the early seventies, when Joe Hudson owned it, and I want to say it is better now than it has ever been before. It suits me better than any other agricultural paper that comes to me, five in number.

We would like to hear from our readers occasionally, and we don't expect every letter we receive to contain nothing but praise. Friendly criticism is always helpful to the editor, for it enables him to keep in closer touch with his readers and by following their suggestions make improvements that might otherwise never have been considered.

If, like Mr. Hopper, you like the KANSAS FARMER, we would be glad to hear from you. If you can make any suggestion as to ways or means for improvement in our publication we want all the more to hear from you. We want all of our readers to have a friendly interest in KANSAS FARMER.

### INAUGURATION OF WATERS.

The inauguration of President Waters on November 11 will be made a notable occasion in the history of the Kansas State Agricultural College. The people of the entire state of Kansas have been invited and at these inaugural ceremonies should be the largest attendance ever known upon any occasion in connection with a state educational institution. The agricultural college is the people's school. The people of Kansas are farmers. Kansas is an agricultural state. Then when such a man as

President Waters takes the reins of government and an aggressive policy for agricultural education and its widest dissemination is assured why not make the day one for rejoicing? Already President Waters has a warm place in the hearts of Kansas people. Although in Kansas only a few months he has said and done enough things for Kansas people to know that he is the man they have been looking for. President Waters' inauguration marks not only a new era for the school of which he is the head but marks the beginning of a diffusion of agricultural education which will add much to the wealth of the state.

The inauguration ceremonies will take place in the auditorium of the agricultural college and the speakers will include Congressman Charles F. Scott, who is chairman of the agricultural committee of the house, Governor Stubbs, Chancellor Strong of the State University, President Hill of the State Normal School, State Superintendent E. T. Fairchild and Secretary F. D. Coburn.

### CHINCH BUG MAY START TROUBLE.

When the chinch bug starts out on a rampage he does great damage. It has been estimated that the chinch bug has in years past caused Kansas a loss of 25 million dollars in a single year and a loss of 5 millions would not be at all extraordinary. Dr. Headlee, head of the department of entomology of the Kansas State Agricultural College, started some anxiety among farmers when he said: "If next summer should be dry enough throughout the season to favor the propagation of the chinch bug, it is certain to prove a terrible scourge, and even if a normal season occurs, the damage may run into several million dollars. With a wet season, they are likely to do little if any serious harm."

Dr. Headlee's reasons for his statement are not debatable here, but it is fair to presume that he knows what he is talking about. So convinced is Dr. Headlee of the correctness of his position and so important does the condition appear that he has his assistant, J. B. Parker, devote his entire time to a study of the best methods of combating the pest. Mr. Parker is located in the southern part of Kansas, where the bug is most threatening, and is carrying on his experiments on the farms of some of the most intelligent men and under the exact conditions with which the farmers must contend.

It is commonly supposed that this insect may be destroyed by burning all the dried grass, leaves and other rubbish during the winter or early spring. The results of Dr. Headlee's investigations have shown, however, that the bugs have a decided preference for certain hiding places, and that the methods to be employed in destroying them will need to be varied in accordance with the condition of the soil and the amount of moisture

contained in the rubbish under which they are hiding. Mr. Parker is trying different methods of destroying them under these various conditions of weather and season of the year.

A bulletin is now being prepared by the Agricultural College giving detailed results of these studies and of the experience of the experts at the college in combating this pest, which will be distributed to the farmers of the state in ample time to put into practice the recommendations made and thus protect the state as far as possible against danger from this source.

### SCHOOL HOUSE AGRICULTURAL CAMPAIGN SUCCESS.

Last week KANSAS FARMER commented editorially upon the "school house educational campaign" inaugurated in several counties by the agricultural extension department of the Kansas State Agricultural College. The first campaign has closed and the results seem to indicate that this will become a most successful method of widening the influence of the State Agricultural College among the people of the state.

Six counties, Anderson, Linn, Leavenworth, Marion, Ottawa and Doniphan, availed themselves of this opportunity to arouse more interest in better farming and home making among their inhabitants. In each county a schedule had been prepared by the superintendent of schools. The teachers sent word to the parents as to the expected visit and invited their attendance, and in spite of the fact that farm work was pushing, many patrons were present at the schools visited. At one meeting in Linn county 25 patrons were present. Evening meetings were held at the smaller villages and in some cases in the large country school houses.

At the school house meetings the speakers put before the children in as simple and interesting a manner as possible a few important facts in connection with farm life. The fact that agriculture is a most important and honorable profession was impressed upon them and their minds were directed towards some of the interesting and important things with which their home life is constantly associated.

Miss Brown, who lectured in Ottawa county on the various domestic science problems, reported that at some of the schools visited every woman in the community was present, the babies being left in care of the men of the family. Miss Brown assisted a lady in one home to make a "fireless cooker" and they prepared a part of the breakfast by its use.

J. C. Cunningham, horticulturist, visited Leavenworth county and reported the keenest interest by the children in the various horticultural subjects as presented. He visited 25 schools and talked to 815 boys and girls and in all addressed 1,160 persons.

G. C. Wheeler visited Marion county and talked to the children of twenty schools on the subject of seed corn selection, conservation of soil moisture and plant growth, meeting in all 704 pupils and 60 patrons. At the evening meetings in that county 550 people were addressed at the five meetings held. The large number of young men present was especially gratifying.

J. C. Hinman, dairy specialist, met the people of Anderson county and Mr. Holsinger, horticultural expert, visited the schools of Linn county and held evening meetings during the week.

The interest aroused by these meetings cannot help but aid greatly in securing increased attendance at the various regular institutes to be held later in the various counties. At many of the school houses visited not a child knew of the various contests held at the farmers' institutes for the purpose of arousing the interest of the young in rural pursuits. Naturally they will talk of what they heard at home and the parents will be led to direct their thoughts towards the Kansas State Agricultural College and the work it is doing for the farmers of the state.

The regular institute work is taking the time of the extension department so fully at the present time that many requests for this form of county

work must necessarily be turned down. During March it may be possible to visit a number of counties before the schools close for the year.

ALFALFA FOR ENSILAGE.

Shawnee Alfalfa Club Holds Important Meeting—Discussed Alfalfa Machinery and Alfalfa for Silos.

The October meeting of the Shawnee Alfalfa Club was of unusual interest though the attendance was not as large as had been expected. This meeting occurred on the day of the great foot ball game between Washburn and the State University and it was jokingly said that some of our members had deserted the club meeting to attend the game. The real facts, however, were that the beautiful weather enabled the farmers to hurry their work along so that they disliked to leave home even for a meeting of their favorite club. For the first time in the history of the club manufacturers of alfalfa machinery were invited to be present and take part in the discussion of various methods and processes of caring for the alfalfa crop. F. H. Ness, inventor of the Hess Alfalfa Mill, of Wichita, Kan., gave a very instructive address on the value of alfalfa meal. In his address he stated that nature had made a provision for the protection of the more vital parts of a plant by giving it a hard covering and unless this covering was broken, it was impossible to get at the parts which were most available for animal food. He showed how his mill would split the hard stem of the alfalfa plant and cut it into meal in such a way that the entire food value of the plant would be readily available to the animal. He stated that before the invention of alfalfa mills it was found that cattle and sheep would eat the leaves of the plant and refuse the stems, while horses naturally took to the stems first, and there was a good deal of complaint about the ill effects of alfalfa upon the kidneys of the animals. Since alfalfa meal has been used, however, such complaints are not heard, and the animal has access to all of the food value of the plant, and does not waste any portion of it as was formerly true. Mr. Hess manufactures a mill for farm and ranch use which can be operated with any available power, from 8 to 16 horses, and which has a capacity of from 1,000 to 2,000 pounds per hour. It is so constructed that the alfalfa is in contact with steel parts of the machine from the time it enters the hopper until it is delivered in the form of meal. This removes any possibility of damage or loss by fire. His talk was very much enjoyed by the members present, and he became the target for very many questions. As his machine is one of the few that will handle alfalfa from the bale as well as in bulk, the members were greatly interested. Secretary F. L. DeWolf read letters from a large number of manufacturers of various kinds of alfalfa machinery, all of whom expressed a great deal of interest in the work of the club. Another phase of interest in this meeting was shown in the discussion of the silo as the best possible means of taking care of the first crop of alfalfa. It is well known that red clover harvest and the first crop of alfalfa comes at a season of the year when

it is very difficult to save it as hay. The silo solves this problem by not only saving the entire first crop of alfalfa but by putting it in a condition in which its feed value is actually increased, and is rendered very much more easily handled and very much less subject to waste than when fed out as hay. W. J. Kirk, representing the Indian Silo Company and the Silver Manufacturing Company, gave an especially interesting talk on the value of the silo and emphasized the fact that by its use the entire corn crop can be saved instead of only about 60 per cent of it as is now done when the ears only are harvested. He also showed that in an emergency season, such as we have had during the past summer, the corn crop may be saved in spite of dry weather. In making ensilage from alfalfa, he recommended that it be cut in one-quarter inch length carefully distributed in the silo and tamped around the edges so as to exclude the air and preserve the silage in a sweet condition. Mr. Kirk is quite an enthusiast and has met with large success in selling silos in Kansas and Missouri during the past season. It is known that within the last eighteen months the number of silos in Shawnee county has increased about ten times over what it was before, and that most of them are of the kind represented by Mr. Kirk. Mrs. Theo. Saxon, who is one of the most enthusiastic members of the Alfalfa Club and who personally manages her own farm, showed some samples of alfalfa hay which she had cut, cured and placed in the barn, all in one day. This hay was perfectly sweet and in fine condition and was pronounced an excellent sample by every member of the club. The color was not quite so brilliant a green as is frequently found in the best samples of alfalfa, but the feeding value was there, and she had handled the hay in such a manner as to preserve all the leaves which constitute the most valuable part of the plant. Her excellent discussion of her methods brought out the statement from one member that he really preferred the brown hay for feeding purposes, and it was generally admitted that mow browned hay was not seriously hurt for this use provided the protective shell of the stem was not damaged. Mrs. Saxon also showed some samples of Boone County White and one sample of Reid's Yellow Dent had been secured from Hon. Bradford Miller, former president of the Shawnee Alfalfa Club, and now president of the Boyns' Corn Contest Association of this county. The other sample of Reid's Yellow Dent was secured from Funk Bros. of Illinois. Secretary DeWolf is entitled to a good deal of credit for the amount of work he performed in the preparation of this program. It was decided that the same subject be continued for discussion at the next meeting, but that, owing to a possible conflict in dates with the Shawnee Boys' Corn Contest, the exact date of the next meeting should be left to the call of the president. Unless a different date is announced, a meeting will be held as usual on the last Saturday afternoon of November.



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Kansas Farmer Ads Bring Results

GLANDERS.

(Continued from page 3.) abscess. When this is opened the contents may have the appearance of ordinary pus, but more frequently it is tenacious, clear, yellow or reddish, dry on the surrounding parts as an amber colored incrustation.

When the larynx and trachea also present lesions, there is liable to be a cough, which can readily be induced by pressure upon the larynx and which is often followed by a more profuse discharge than at any other time. This discharge is frequently streaked with blood.

Glanders of the lungs, unless the lesions are very extensive, usually escape attention during the examinations of a living case. When the lesions are considerable, a dry suppressed cough may be in evidence and there may be some respiratory distress which in such cases can be ascribed to extensive lung solidification or to the thickening of the mucosa of the bronchial tubes owing to chronic inflammatory changes. It is rather rare that physical exploration of the chest will enable us to form a correct opinion of the extent of the lesions.

Accompanying the symptoms of this form of the disease or occurring entirely independently, there may be also vague symptoms about different parts of the body, which, however, in sections where the disease occurs, should never be disregarded. These are sudden and apparently unprovoked swellings of the legs, the lower parts of the chest, abdomen, the sheath, etc. Such swellings are sudden in their onset, ill defined, hot and exceedingly painful. The swellings may again disappear, but often persist, leaving an enlarged limb. They occur most frequently in connection with the hind legs and are frequently followed by an eruption of nodules or ulcers of the skin covering them.

Sudden and severe inflammations of the joints (perhaps most commonly in the hock) not infrequently serve as the first phenomenon of glanders infection. Those symptoms may again disappear, or become intermittent, while in not a few cases the inflammatory condition assumes a chronic form, either accompanied or not by softening or ulceration.

In stallions, a severe, sudden and painful orchitis, may mark the onset of the disease. This condition is liable to assume a chronic nature after having persisted for some days.

Glanders of the skin or farcy is a very frequent accompaniment of the chronic form of the disease, while in many cases it constitutes the only manifestation of the infection.

The most typical feature of glanders of the skin is the occurrence of nodules or small tumors, the so-called farcy "buttons." They originate in the skin proper or the connective tissue underlying it. Inflammatory in their origin, they are rather ill defined at first, hot, edematous and painful. While no region of the skin is exempt from those lesions, they are more commonly seen about the legs, especially the hind ones, and wherever the skin is loose, soft and pliable, such as on the inner side of the thighs for example.

As time advances, the "buttons" gradually lose their acute inflammatory character, they become more circumscribed, harder, drier and for a great part lose their tenderness. In this condition they may persist for a greater or less space of time as rounded hard tumors, ranging from the size of a pea to that of a walnut, but sooner or later, their interior softens, the skin covering them becomes thin, shining and transmits a sticky exudate, while the hair about those small areas mats together and drops out.

By the breaking down of the skin or by its coming in contact with surrounding objects the "button" is opened and there escapes a viscid, oily, sticky, yellow fluid, which often has a certain admixture of blood, while in a smaller portion of cases the tumor discharges pus or a sero-purulent liquid.

By the evacuation of its contents, the "button" is changed to a deep ulcer, frequently spoken of as a "farcy chanter." This ulcer usually is rather deep, with undermined, ragged edges and a level base, covered with small granulations. The skin immediately surrounding the ulcers, becomes thickened and endurated and is commonly covered with a crust formed by the inspissation of the oily pus, which continues to discharge from the crater-like opening of the ulcer. The

buttons may occur widely apart or close together. If the latter be the case, the subsequent ulcers are liable to become confluent giving rise to irregular fungoid sores, defined by a nodular elevated edge.

The eruption of the farcy nodules may be so that they all appear about the same time or that they spring up in different installments, while in some cases they make their appearance one by one during a considerable period.

In ill-fed, overworked or very old horses and under certain climatic or unsanitary conditions, the ulcers thus formed, show little or no tendency to heal. In horses in good condition of health and nutrition, they may slowly heal, leaving bare shining scars. This is a common occurrence on our northwestern plains. The healing of the ulcers, however, does not mean the elimination of the infection as we see many cases in which a new crop of buttons springs up, long after the preceding ulcers have scarred up.

The eruption of the nodules and the subsequent ulceration is followed by the involvement of the lymphvessels of the affected region. The vessel becomes enlarged, edematous, painful. Later the edema subsides, and the vessels can be recognized as dense cords or as cylindrical tumors, often showing a secondary crop of nodules in their course which terminate usually like the "buttons" mentioned above.

As a result of this lymph vessel involvement and connective tissue proliferation, a limb may become permanently and monstrously thickened and enlarged, and many of our so-called cases of "milk-leg" or chronic lymphangitis have a glanders infection as their origin.

The lymphnodes receiving the lymph from the affected vessels, also share in the infection, they become tumified and are liable to show the changes already described.

While as a rule the constitutional symptoms are less striking in chronic glanders than in the acute form of the disease, they should not be disregarded.

There commonly is a rise of temperature of a few degrees. This may be continued with certain fluctuations or be altogether intermittent. In the latter case a normal temperature may persist for a number of weeks and this condition may be followed by an elevation lasting for an indefinite period.

A loss of flesh and a persistent emaciation in spite of an abundance of feed and a fair appetite is a very common symptom and justifies the suspicion of glanders in many cases. The appetite often is irregular and capricious.

The skin is dry, the coat rough without the luster so often expressive of good health. The subcutaneous fat is wanting, giving rise to the condition, so fitly spoken of as "hide bound" by our horsemen.

The duration of a case of chronic (Continued on page 14.)

The dairy cow holds a unique place in the civilized world. In her relation to man, she stands out superior to all other domestic animals. How necessary to the comfort and well being of the human race are her products. She contributes largely to the food of the poor and the rich, the young and the old, the inhabitants of the cities and the rural districts. Her product is what nature has designed for the young, both of man and the domestic animals. And for all ages it is the least expensive of foods, the most healthful and the most desirable. No meal would be complete without the product of the cow in some form. She has been termed the "God mother of the human family." Her importance is tersely expressed in the following quotation: "There is nothing aside from the milk of human kindness so necessary to the comfort of any family as the milk of a good cow. It is like oil poured upon the waters of life; it is a perfect food for the baby; it is an excellent beverage for the children; it furnishes cream for the coffee, butter for the bread, and cheese for the lunch. It shortens the pie crust and raises the johnnycake; even the cat and dog cry for it. With the farmer it goes still further. It raises the calf, it feeds the pig, it pleases the colt, and it delights the chicken. Yes, and if he will only give her a fair chance, the cow will clothe the children, buy comforts for the wife, pay the taxes and help lift the mortgage."—Bulletin, Maine Department of Agriculture.

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and profitable by using the RAMSEY IMPROVED HUSKER and THUMB COT. Adjustable, metal construction, nothing to wear out, fully guaranteed. Husker, 50c; Cot, 25c; or set 75c postpaid direct from manufacturer. Remit by check, M. O. or coin.

NEBRASKA CORN HUSKER CO. Dept. K. BEATRICE, NEB.

# PUBLISHERS' NEWS

Montgomery County, Kansas, lands are in demand and are selling rapidly at very low prices. Write W. J. Brown & Co., Independence, Kan., for their selected list of farm bargains and prices.

Lineback Bros., LaHarpe, Kan., are offering a fine 240 acre Anderson county farm to the highest bidder on or before November 20. They would be pleased to have you call and look the farm over and judge for yourself what it is worth.

Mr. Ross Defenbaugh, of Independence, Kan., can sell you a 120 acre farm in Montgomery county, Kan., with free gas for domestic use for only \$30 per acre. See ad on another page for terms. Mr. Defenbaugh informs us that this is a bargain. Write him at once.

Kansas Farmer acknowledges a preliminary program and announcement of the second National Apple Show to be held at Spokane, Wash., Nov. 15-20. Among the speakers will be Prof. H. E. VanDeman, Washington, D. C., who was first professor of horticulture in the Kansas State Agricultural College in the seventies. The meeting promises to be a greater success than the one of last year, which was complete in every detail.

Attention is called to the handsome advertisement of the Ash Grove Lime & Portland Cement Company, Long Bldg., Kansas City, Mo. This firm manufactures white Ash Grove lime and Ash Grove Portland Cement. In this age of cement construction it is extremely important that the builder secure first class material. A failure to do this results in inferior work, and expensive re-building. Write to J. F. Pollock, Sec'y., Ash Grove Lime & Portland Cement Co., Long Bldg., Kansas City, Mo.

Remember the date for the National Horticultural Congress which will be held at Council Bluffs, Ia., Nov. 15-20. Full information will be furnished by Freeman L. Reed, Supt., or by F. W. Dixon, Holton, Kan., who is Vice-President for this state. Mr. Jas. M. Irvine, Editor of the Fruit Grower, St. Joseph, Mo., is chairman of the committee on program, and announces that Prof. S. W. Fletcher of the Virginia Experiment Station, Jac. McComb, Jr., Jacksonville, Fla., L. A. Roy, Chicago, Harriett MacMurphy, Food and Drug Inspector of Nebraska, Judge Fremont Wood, Boise, Idaho, E. P. Taylor of the Missouri Experiment Station, and E. P. Stephens of Crete, Neb., will give addresses during this session.

Beginning in the year 1870, the first importation of Brown Swiss cattle reached the United States from their native country, Switzerland. Since that time they have spread throughout the country, and wherever they have been given a fair trial there have been words of praise for their good producing qualities. The Swiss cow is quite large, strong in bone, and carries a considerable amount of flesh, and when not milking make better beef than any of the dairy breeds. They are therefore very valuable in the northeast among the dairymen. They are very quiet and docile in nature, are good rustlers, are very hardy and quite free from disease. Dahlem & Schmidt of Pontiac, Kan., have a fine herd of Brown Swiss cattle, and are always glad to answer inquiries at any time.

The United States Civil Service Commission announces the examination on Nov. 24, at places designated in the list they furnish to candidates, or all persons who wish to compete for the position of Junior Zoologist. This position is in the Bureau of Animal Industry of the Department of Agriculture, and the initial salary is fixed at \$1,200 per annum subject to increase in proportion to the efficiency developed by the employee. The age limit is from 20 to 40 years at the date of examination, and men only are admitted. Applicants may receive blanks and information from the United States Civil Service Commission at Washington, D. C., or from the Secretary of the Board of Examiners at any place provided for the examination. In Kansas these examinations will be held at Emporia, Ft. Scott, Lawrence, Manhattan, Salina, Topeka and Wichita.

Sewell Land Company Have Bargains. The Sewell Land Co. at Garnett, Kan., are advertising a real bargain in the way of an improved farm. Look up their ad on another page and write them for prices and description. Kindly mention the Kansas Farmer.

Buy Land in Anderson County. With this issue of Kansas Farmer the Spohn Bros., of Garnett, Kan., are starting an ad in our real estate columns advertising some valuable farms in Anderson county. The Spohn Bros. are a reliable firm and are reliable for any statement they make. We urge our readers to look up their ad on another page and write them. Kindly mention the Kansas Farmer when you write.

Keep Your Feet Warm. It is generally conceded that if the feet are warm one is tolerably comfortable all over. The Clark heater is made for the express purpose of keeping the feet warm on cold winter drives. These heaters are made in various styles but a good one and a dozen bricks of the fuel for it can be purchased for as low as \$1.50. When so much comfort can be had for so little, it would seem wise to be comfortable.

The Farmers National Congress. The twenty-ninth annual session of the Farmers National Congress is now in session at Raleigh, N. C. This is a most important meeting, and will have on its program some of the most noted speakers of the United States. At least four governors of states will address the convention, and other parts of the program will be made up of addresses presented by United States Senators, university presidents, member of Congress, editors and manufacturers. The convention will end on November 9.

Did You Read It? We refer to the page advertisement that appeared on page 5 of the issue of the Kansas Farmer of October 23. If you didn't read it, look it up. You'll find a lot of good facts in land investments. Such men as Hon. F. D. Coburn, Secretary of Kansas State Board of Agriculture, and Wm. L. Rockwell, Government Irrigation Manager, would hardly endorse a proposition unless it had merit. You would be repaid in many

ways if you could read what they and many others say about the wonderful Pecos Valley of Texas. You can get these letters and full descriptive illustrated booklet and other literature, by simply writing to F. A. Hornbeck, Land Dept., Kansas City, Mexico & Orient R. R., 948 Baltimore Ave., Kansas City, Mo.

Concrete in Highway Construction. Kansas Farmer acknowledges the receipt from the Atlas Portland Cement Company, 30 Broad St., New York City, of a beautifully printed and illustrated booklet, bearing the name "Concrete in Highway Construction." This booklet is published as a text-book for highway engineers and supervisors, and sells at \$1 per copy. It is the last of a series issued by the Atlas Portland Cement Company, which includes: "Concrete Construction About the Home and the Farm," "Concrete Country Residences," "Reinforced Concrete in Factory Construction," and "Concrete in Railroad Construction." The book is well worth the money. Readers of Kansas Farmer, who are actively interested in the good roads movement and who will make the request on their letter-heads, showing their official title as road officers, will be given this book free of charge, provided they mention the Kansas Farmer when writing.

Kansas City Firm Wins Out. As noted some time ago in the news dispatches, the Jury of Awards at the Alaska-Yukon-Pacific Exposition awarded to the Witte Iron Works Co., of Kansas City, Mo., through their representatives, the Moran Engineering Co., of Seattle, Wash., the medal of highest award on Witte stationary gasoline engines. Shortly after the award was made, a protest was filed by some of the competing exhibitors, (of whom there was a large number), claiming its effect, at the award had been placed without due consideration of everything involved. The superior jury of awards, (the final authority on all appeals and protests in the placing of awards), at once ordered, by a special jury, a re-examination and a reconsideration of the whole matter, with the result as shown by the following letter to the duly authorized representatives of the Witte Iron Works Co.:  
Seattle, Wash., Oct. 16, 1909.  
Moran Engineering Co.,  
Seattle, Wash.,  
Gentlemen:

I beg to inform you that the special jury on awards selected by ourselves and approved by the superior jury, after re-examination of all the gasoline Engine Exhibits, sustained the award given by the original examining to you.  
Very truly yours,  
Henry E. Dosch,  
Director of Exhibits and Privileges.  
This result must be gratifying to the Witte Iron Works Co. It is a recognition of note in these columns, and we are pleased to extend our congratulations to the company on the success won by their merit in this competition.

## THE SANTA FE DAIRY TRAIN.

(Continued from page 2.) eastern states in the form of meal at \$25 or \$30 per ton. It is being sold in Denmark and other European dairy countries as the best possible feed for dairy cows. In both these cases the men who buy Kansas alfalfa for their dairy cows and pay the high prices made necessary by grinding and freight charges are selling their products in the same market that is open to the Kansas farmer without these costs.

Kansas farms are higher in price than they were twenty years ago and yet they have a lower producing capacity. Kansas farmers who have won in their fight for a competency did so on cheap land, but their sons are obliged to make profits on \$100 acres. They cannot leave the old, worn out farm and seek their fortunes in a new state with virgin soil of unsurpassed richness, as did their fathers, because there are none. They can, however, practice dairy farming and enrich the paternal acres, themselves and their children.

Corn is a most important factor in all western agriculture, but under present practices one-half of the crop is wasted and the ears only are saved. With the use of the silo the entire crop will be saved and rendered more valuable for feeding purposes, while the acreage may be proportionately reduced. Every cattle grower, feeder and farmer knows that his animals, both young and old, do their best on the rich, luscious grasses of June. Ensilage makes June conditions the year around. Ensilage costs less than \$2.00 per ton, and ten tons to the acre is only a common yield. Ensilage will keep indefinitely and is relished by all kinds of stock the year around. Ensilage and alfalfa make a perfectly balanced ration for either beef or milk.

In order to dry successfully good cows are necessary, and here is the one place in her whole economy where Kansas does not make a satisfactory comparison with her sister states. The average annual production of butter fat of our 700,000 milk cows is only 125 pounds, while the general average for the United States is 10 pounds. Such cows are not merely boarders, they are robbers. No cow should be kept for dairy purposes that does not produce twice as much, and even then she is only barely profitable. Com-

## SHIP YOUR Hides and Furs

**DIRECT TO BIGGS & KOCH THE HIGHEST PRICES AND**

A square deal and quick returns. One hide, one skin or a car load. Largest hide and fur house in the Southwest. Established 1882. No matter whether you are a trader or trapper, farmer or dealer we can do you good and make you money.

**BIGGS & KOCH**  
1539 St. Louis Ave.  
KANSAS CITY, MO.

It will pay you to write us for price list and FREE shipping tags. Fur shipments held separate on request and your furs back if our returns are not O. K. Trappers Guide free to shippers. Write for catalogue of trappers supplies.

## INCREASE YOUR BANK ACCOUNT

Send your shipments of hides this fall and winter to us—receive highest prices in double quick time—no other firm can do your bank account so much good as we—so ship to us.

Write for shipping tags  
Postal card is sufficient

**James C. Smith Hide Company** Topeka, Kansas

It Will Pay You To Ship Us Your HIDES

YOU can have a warm, serviceable fur coat made from your cow or horse hide that will wear you for years.

We tan and make them up into soft and pliable coats, robes and rugs, moth and waterproof and guarantee the work. Write us today for our FREE BOOKLET. It tells you all about hides.

**Des Moines Tanning Co.,**  
Dept. F Des Moines, Iowa.

## LET US TAN YOUR HIDE.

Mr. Stockman, what difference does it make to you when you send your hides away to be tanned and made up into coats, robes and rugs, whether the distance is less or more, so long as "Crosby pays the freight" both ways when three or more cow, steer or horse hides are sent in one shipment?

Why not send them to the oldest and largest establishment of the kind, where you will be sure of good results? In that way you can get better and cheaper fur goods than you can buy.

Figure on it and get our illustrated catalogue, which gives prices and a lot of other useful information. Address

**The Crosby Furs Company,**  
Rochester, N. Y.

pare this average produce of the Kansas cow with that of Colantha 4th Johanna, which produced 998 pounds of butter fat in one year, and note the possibilities. This equals about 1,200 pounds, or nearly her own weight, in butter.

Good dairy cows cannot be bought in numbers in this country because they are not here. Kansas dairymen are enriching those of other states because they do not breed their own cattle. The only thing for the Kansas dairyman to do; therefore, is to breed his own cattle, and in order to do this he must use the cows he now has. Most of these cows are not profitable as dairy animals and can never be eliminated from the herd by weighing and testing the milk each day, and those which prove deficient and unprofitable can be sent to the block at once, while the better individuals may be saved and bred to a pedigreed bull.

In selecting a bull do not buy him for appearance sake, nor yet for his pedigree. Many people buy a pedigree and have the bull thrown into the bargain. Look up the ancestors of your bull and see that he comes from a line of producers. If he has good ancestors behind him he is very likely to reproduce his good qualities in the calves, and even one infusion of such high class blood will make a marked difference in the milk pail. Work like that which is now done by the poor cows of our average herds would bankrupt any other kind of business. Save the heifer calves if you like until they are old enough to test, and then save only the best of them for future use. Never save a bull calf and never allow a grade bull to be used in your herd.

The demand for dairy products is practically unlimited, and with increasing population will remain so. The demand for good dairy cattle is exceedingly strong and the opportunities for the breeder were never better in the history of our government. A good dairy cow produces her value in milk products each year of her active life. A beef steer produces value but once and that is when he goes to the block. Dairy farming enriches the land, increases the products and the profits with each succeeding year. Kansas is the ideal dairy state, and by the use of ensilage and alfalfa the daily feed of a cow would only cost about 9-12 cents. Did the Kansas farmer ever have such a golden opportunity as is now offered him in the breeding of dairy cattle and the practice of dairy farming?

Quality Only Counts for Veals. Referring to a marked change in sentiment regarding the dairy bred calf for veal the Breeders' Gazette says: "Breed counts for nothing, quality and weight everything in de-

## 1,000,000 RAW FUR SKINS WANTED

for my manufacturing and exporting trade. Skunk, Mink, Muskrat and others. Top prices. Write for special quotations.

**A. E. BURKHARDT**  
International Fur Merchant,  
CINCINNATI, O.

**GALVANIZED STEEL \$12.75 WINDMILL**

Sold direct from factory to user at wholesale price. Strongest guarantee. Send for catalogue. Prices will surprise you.

**THE OTTAWA MFG CO.**  
702 King St. Ottawa, Kansas

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

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

**CURRIE WIND MILL CO.,**  
Seventh St., Topeka, Kansas

**10-95 Buys This Large Handsome Nickel Trimmed Steel Range**

without warming closet or reservoir. With high warming closet, porcelain lined reservoir, just as shown in cut, \$17.95; large, square, oven, wonderful baker, cooking holes, body made of cold rolled steel, Duplex grate; burns wood or coal. Handsome nickel trimmings, highly polished.

**OUR TERMS** are most liberal ever made. You can pay after you receive the range. You can take it into your home, use it 30 days. If you don't find it exactly as represented, the biggest bargain you ever saw equal to stoves recalled for double our price, return it to us. We will pay freight both ways.

Write Today for our beautifully illustrated Stove Catalog No. 5152; a postal card will do. 100 styles to select from. Don't buy until you get it.

**MARVIN SMITH CO., CHICAGO, ILL.**

## THE STRAY LIST

Morton County—W. D. Thompson, Clerk. Taken up June 5, 1909, by John Maguire, 1 mile east of Rolla, Kan., one sorrel horse, about 8 years old, branded on left shoulder. White stripe in face, old wire cut on left front foot; valued at \$25.

termining prices, and a Shorthorn calf has no advantage over a Jersey." And prices are soaring. At Chicago choice veals have been taken by butchers at \$9.00 per 100. The bobs that the traveling calf buyers collect and slaughter for shipment would not be "choice veals" at the stock yards.

# DAIRY



The editor spent last week at the National Dairy Show held in Milwaukee. This show has the same relation to the dairy interests of the United States as does the International Live Stock Show to the beef cattle interests of the country. The dairy show is new, this being the third exhibit, the two previous exhibits being held in Chicago. In all probability the dairy show will be permanently located at Chicago. The show should have a permanent home and be held at about the same time each year. This permanency will prove a valuable asset and tend to work a greater success.

At the National Dairy Show is displayed all kind of machinery employed in the manufacture and handling of dairy products. This part of the exhibit was this year much larger and more complete than at any of the preceding shows. This feature was highly educational. The observer could not help but be impressed with the fact that in the processes of manufacturing dairy products this department of dairying has forged far ahead of the producing side of the business. On every hand were creamerymen and buttermakers buying the most up-to-date equipment for their creameries and milk plants, yet at the same time there was indicated slow increase in production of milk and butter-fat and slow improvement in the quality of raw material. This feeling seems to exist in every section. While buttermakers and creamerymen were in attendance in large numbers the man who feeds and milks the cow was conspicuous for his absence, yet one nearby creamery it was said had 150 of its patrons in attendance. If this statement is correct this editor feels like assuring his readers that the show was attended by the largest number of farmers of any exhibit yet held.

This small attendance of farmers can not be accounted for through the fact that the show failed to provide anything of interest or value to farmers. The exhibit of dairy cattle was large. All of the leading dairy breeds were represented by a good showing. In our judgment not less than 500 of the choicest dairy cattle of the United States were on exhibition and in contest for the prizes and honors. Such an exhibit of dairy cattle should alone attract farmers for hundreds of miles. For \$16.90, the round trip fare from Topeka to Milwaukee, what real dairyman could afford to pass by this exhibit of royalty among dairy breeds? Any man at all inclined toward dairying and the improvement of his dairy herd could have received at this exhibit the enthusiasm necessary to remove from his mind any doubt that a good cow was a necessity. If he be a breeder he would have received an inspiration worth hundreds of dollars in his business. So many farmers engaged in milking cows and improving their herds, are not familiar with the really good type of dairy animal. At this show was the best place known to us to study dairy type, to know the characteristics of the different breeds, and to learn from the attendants points actually worth dollars in the handling and breeding of dairy animals. Such an exhibit of dairy animals in Topeka would warrant every farmer in the state spending the time and money necessary to make the trip. The stay-at-home tendency is one of our worst faults. Our tendency to be satisfied with present conditions and our lack of desire to improve our condition is responsible for the stay-at-home feeling. If we really wanted information

we would get it and one of the best places is at the National Dairy Show.

Every morning and afternoon in the dairy stock section were given lectures on feeding, breeding, selection, etc., by the best authorities of this country. These lectures were illustrated by living animals. In a lecture on dairy conformation a queen of each of the several breeds was led into the ring and the lecturer explained why a big stomach and a big udder and consequently large milk production were found in the same cow. A cow cannot produce large quantities of milk without a correspondingly large udder. The cow cannot carry that udder unless she has a place for it. If the thighs are meaty there is no place for the udder so the dairy cow with the large udder has thin thighs while the beef cow with no udder to carry has beef where the dairy cow has udder. A large udder will not supply large quantities of milk unless there is a large stomach to consume large quantities of food from which the milk is derived. A good lecturer goes over a dairy cow in this way from nose to the tail tip giving a good and sufficient reason for every point of dairy conformation. The story is more interesting than a fairy tale. It is a story worth going miles to hear. The best dairy cows used in illustrating these lectures are worth going still further to see.

These same great cows are fed and milked in public view. Valuable lessons in feeding are learned. One feeder bought ensilage from a nearby silo for his cows. This shows what he thought of ensilage. Other feeders were using alfalfa hay—in fact every feeder was using more or less alfalfa. This should teach the value of that wonderful plant. This hay was bought from a dealer in the city who had established a branch store near the exhibit. The salesman told this editor that the hay he was selling came from Kansas and it cost the men who fed it \$20 per ton. The hay was baled and of fine quality. Why is not more alfalfa grown in Kansas and why not more of it fed to good dairy cows? The exhibit furnished important feeding lessons for the man who would grasp them.

A herd was milked twice daily by a milking machine and since there were not many farmers to attend, this was inspected by large numbers of the Milwaukee city people. The milking machine is practical and successful. Many are being sold. They go to large dairies but the man who is milking 15 to 20 good cows can afford to buy it. A number are in use in Kansas. While the machine is a good thing we can't make interest on the investment by milking scrub cows. When we can milk one cow giving five times as much milk as our average cow is now producing and have 15 or 20 such cows to milk then a milking machine is the next step in progress.

Last year the management of the dairy show exhibited as a special attraction the world famous Holstein cow, Colantha's 4th Johanna, bred and owned by W. J. Gillett, Rosedale, Wis. Shortly before the fair this cow had completed a 12 months' authenticated record of 998½ pounds of butter-fat or 1,248 pounds of milk, the largest amount of dairy products ever produced by any cow of any breed in 12 months. While this Holstein cow was at the fair being admired by the thousands of visitors, a little Jersey owned by A. O. Anton, at Jerseyville, Ill., was performing in a wonderful way and winning for herself a place in the halls of fame. This cow was Jacoba Irene. Her owner was making a desperate effort to outdo the record of Colantha's 4th Johanna, but in the 12 months' test Jacoba Irene failed by a narrow margin.

But this was Jacoba Irene's year at the National Dairy Show. She occupied an open box stall on the main

floor and was on exhibition day and night. Over her was hung a placard reading, "Long distance dairy champion of the world," a title which means just what it says. Jacoba Irene has produced in four years, during which time she was under official test, more butter than any other cow of any breed. During the 37 consecutive months from Dec. 19, 1905, to Jan. 25, 1909, Jacoba Irene produced 42,065 pounds milk, 2,755 pounds butter and three calves. During the last 12 months of her test, and when she was endeavoring to beat the world's record made by the Holstein cow, she produced 1,126 pounds of butter, not butter-fat.

To the student of dairy animals to see this wonderful cow was worth making a trip across the continent. The first glance of Jacoba Irene convinces the judge of dairy animals that she is capable of doing just what is claimed for her. She is as remarkable in her appearance as differing from the ordinary cow as her record is remarkable compared with the average cow. Jacoba Irene is all stomach and udder, with the vigor, vitality and constitution necessary to do a tremendous lot of work and that is what she has done.

Professor Frazer, chief of dairy department of Illinois University, was a lecturer at the show and of Jacoba Irene he had this to say, which shows still more of the prowess of this wonderful animal: "This cow produced in one year 17,253 pounds, or nearly nine tons, of milk, and 1,126 pounds of butter at a total cost of \$96.43 for feed. This is an official record, made by a representative of the dairy department of the University of Illinois, and has broken all Jersey records. Only one other cow in the world has a higher record for one year, but, taking Jacoba Irene's average production for four years, she stands absolutely without an equal.

"This is over four times the production of the average cow for Illinois, and seven times that of the poorest fourth in Illinois. There are 250,000 poor cows in Illinois, so poor that it would take 209 of them to equal one such cow as Jacoba Irene in actual profit. How much easier to milk one such cow than 209 poor ones! The first would be play, the latter drudgery.

"During this year she could have supplied 80 people with the average amount of milk consumed per capita, and furnished cream for their coffee,

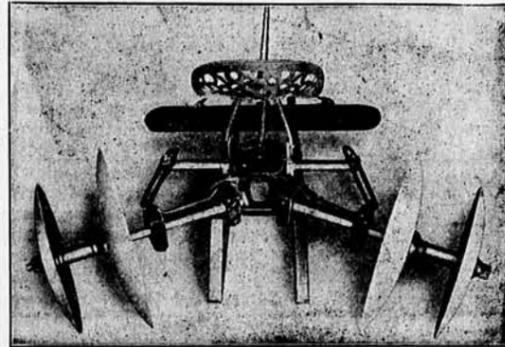
besides. This was rich Jersey milk, containing 5½ per cent butter-fat, and worth, for direct consumption, at least 8½ cents a quart, amounting to \$653.50 a year. A dairyman would need only four such cows to supply milk for the average sized milk route, making him a good living, and have an excellent profit besides. If one could be so fortunate as to own ten such cows, he could have a nice little income of \$6,535 a year."

While quartered in the immense auditorium in which the show was held Jacoba Irene dropped a handsome bull calf. The calf is indeed distinguished. Its mother is the world's champion and its sire has the blood of the best and largest producing families of the breed. The bull calf of Colantha's 4th Johanna was sold for \$8,000, and should this Jersey calf be worth a similar sum, as he is, the youngster is in fact worth his weight in gold. Jacoba Irene's calf was small, quite small. If we owned him and he was the calf of an ordinary mother, we would think our calf did not amount to much. But it's the breeding that counts!

There is one other view point from which Jacoba Irene has broken all world's records and that is her prowess as an economical producer of human food. The 17,253 pounds of milk produced during the year contained 14.65 per cent, or 2,527 pounds, of total milk solids. This shows something of the perfectly enormous amount of work done by this efficient dairy cow in one year. Compare this with the work done by the average steer, weighing 1,100 pounds at the age of two years. When born, he will weigh close to 100 pounds. Thus in the two years of growth he has actually produced 1,000 pounds of carcass, only one-fifth, or 200 pounds, of which is edible dry matter. This means that Jacoba Irene produced as much edible solids in one year as would twenty-five such steers, thus certainly establishing, by a good margin, the world's record for a cow of any breed.

While the dairy show was in progress numerous meetings of various associations were held. Milwaukee's auditorium is arranged with 25 or 30 separate audience rooms, each seating 100 to 150 people. Most of these rooms were continuously in use by some one of the many associations connected with the dairy industry.

(Continued on page 25.)



**CORN SLED AND DISK.**  
This is the machine that made the reputation of the Wilshusen line of implements, and has always been a favorite with dealers and farmers everywhere. While not reversible, it permits of a wide range of adjustments and as a ridge buster it has no equal anywhere. It is simple and strong in construction and never wears out. The sleds first put out seven years ago are still in use. Any farmer can repair it. This machine is also made in double row. All machines are of best iron and steel and guaranteed to give satisfaction. Write for price list.  
**THE WILSHUSEN MFG. CO.,**  
Stafford, Kan.

## An Ideal Farm For Sale

Many well versed in farming say this is the best farm in Kansas. Any way it will produce with any of them, and is well and beautifully located.

Then here is the one for which you are looking. It adjoins a live town about 40 miles west of St. Joseph. It comprises 300 acres and is exceptionally well improved, well watered and has lots of fine walnut timber.

## Do You Want a Great Farm?

One agricultural expert says it is the best conditioned farm he ever saw. It has always been a money maker. Much land in this vicinity, and not so well located has changed hands for more money than is asked for this.

If you are interested, address

**R 227, care Kansas Farmer, Topeka, Kan.**

**BALL BEARING AUTOMATIC GATE**

IF NOT THE BEST AUTOMATIC GATE ON THE MARKET SEND IT BACK

GUARANTEED THE SIMPLEST, STRONGEST AND EASIEST OPERATED AUTOMATIC GATE ON THE MARKET

Don't Look Elsewhere

MONEY REFUNDED IF NOT SATISFACTORY IN EVERY WAY

**ADAMS GATE CO.**  
1009-N KAN AVE. TOPEKA, KAN.

November 6, 1909.

# LIVE STOCK



Large sums of money have been accumulated by growing and selling wheat and corn. Of course, every bushel of grain sold from the soil carries to market and the farmer sells with it a part of his farm. The exclusive grain farmer is as surely selling his farm piece by piece as regularly as his crops mature. The farm, the fertility of his soil, is his capital stock. When he sells a bushel of grain and banks the money, a part of his capital, the farm, is transferred to the bank. Capital is not as safe in the bank as in the soil of a good farm, and it is questionable if the exclusive grain farmer is ahead as much as he thinks when he sizes up the bank account, for that account represents a part of his land, a thing which he had not considered. So, the Kansas Farmer feels safe in assuring its readers that in grain farming there is not the profit believed by those who follow growing and selling grain.

Farmers in eastern and central Kansas are beginning to realize that their farms are not so productive today as twenty-five years ago. This belief is evidenced by the large numbers of manure spreaders bought and used in these sections the last few years, and further evidenced by inquiries made by them of the Kansas State Agricultural college for information regarding green-manuring crops and other means of restoring fertility. The fact that the corn crops of eastern Kansas and the wheat crops of central Kansas show a yield per acre of about one-half the number of bushels as compared with twenty-five years ago is the condition which has brought farmers to their senses. That grain growing robs the farm is undisputed—that it will if continued long enough force the farmer to desert the land is unquestioned because the deserted farms of the New England and Southern states are yet today witnesses to the robbery of the soil and the poverty of the owners. There is only one kind of farming under which the fertility of the soil is maintained and the farm kept as productive or made more productive than was the virgin soil. That is live stock farming.

In speaking of live stock farming in this article it is not to be inferred that the growing of live stock and the growing of feed for the same is to demand the farmer's attention exclusively, or that the farm should become exclusively a live stock farm. It is our idea that the numbers of live stock should be measured by the available help. All the like should be kept on each farm that the help can properly care and provide for. This, therefore, means mixed farming. The grain and forage products of the farm can be marketed to good live stock at a greater profit than by sale to the dealer. The manurial value of all feeds is kept on the farm and this helps maintain the fertility. The best feeds for live stock are such as in themselves do not rob the soil of its fertility. In fact, the best feed crops, clover and alfalfa, are in themselves enrichers of the soil. With live stock farming the general farm practice of today is reversed and instead of robbing the soil the land is made more fertile.

Not only in the above respects is live stock farming advantageous, but it helps in the distribution of farm work. It provides less work in summer when from natural causes there is the most work to be done on the farm, while in winter the feeding of live stock provides the pleasant and profitable employment of farm help which otherwise would be for the most part idle. Live stock farming will aid in the solution of the existing hired help problem. It is an idea that the live stock farmer of Kansas will continue to grow wheat. He will grow few acres than at present, but his yield per acre will be increased from an average of about 14 bushels for the state to 25 bushels. This will come through better care of the land, early plowing and better preparation of the seed-bed, because not so many acres will be sown. The larger the yield per

acre the proportionately less help required, less expense per acre for plowing, sowing and harvesting. With this class of farming a higher degree of intelligence will be exercised and the profits proportionately increased. At this time many farmers are "blessed" with too many acres of land to promote good farming. The large farm is in many respects a detriment to the state, community and the farmer himself. Smaller farms, better tilled, would make a happier, more contented and generally wealthier people.

The prices for grain are necessarily sure to range higher than heretofore. People will continue to eat meat and the same conditions which are the cause of grain prices being high will cause all meat prices to be maintained at the proper ratio. The people of the world will eat ham, bacon, pork, lard and butter, the products of the live stock farm. In fact, statistics tend to show that the consumption of these is on the increase, especially dairy products. The dairy cow, the hog and the beef steer are the most economical producers of human food in the order named, the dairy cow ranking first. After all, our trouble and our labor is to feed ourselves first and then feed the people of the world. The tendency toward increasing the farm live stock will not result in overproduction or prices which will result in loss. The beef supply from the ranges is decreasing each year. The ranges are gradually being occupied by settlers and the small farmer only can supply the beef cattle deficiency.

Conditions would appear ripe for a gradual change from grain farm to live stock farming. Animal husbandry gives the farmer an opportunity to exercise intelligence and judgment, each reverting to his profit, to a greater degree than any other kind of farming. The better the live stock the more economical its products are. Aside from the possibility each year of decreasing the cost of animal products is the chance to sell a superior animal for breeding purposes, opening a possibility with no limitations to the alert mind. The pure bred animal of superior qualities, either milk or beef, will in time become the common animal instead of the scrub at present. Economy cannot forestall the forward march of pure bred live stock. KANSAS FARMER has before recorded that the percentage of pure bred animals of all classes as compared with the whole number is so small that it can scarcely be considered. There is no possibility of overdoing the breeding of good animals. This phase of live stock farming cannot help but add increased profit for the man who has the ability.

For the small farmer, the man of 80 acres say, the dairy cow offers the greatest opportunity. The cow with the number of hogs necessary to consume the skim milk and which can be fattened on the corn produced aside from that used as cow feed, properly handled, will cause the man who does the work to be much more fortunate than many of the present time can realize. Too many young men of today feel that the 80 acre farm cannot make them a living, and so because they cannot have more acres they make the mistake of moving to the city. It is almost beyond the understanding of the average Kansas farmer that a man can make a living for his family, put money in the bank and at the same time make the farm more fertile on 80 acres. But it can be done. Many Kansas farmers are doing it.

The 160-acre farmer can not get away from some dairying because it will not be profitable for him to keep a cow a year for her calf alone. This man need not follow dairying, however, so intensely as the 80-acre man, for this man must make dairying his business. He will use dairy bred animals and get the greatest return in dairy products, regardless of beef return. While this editor believes in the dairy cow for dairy purposes, it is never-the-less our claim that many

(Continued on page 24.)

## NATIONAL DAIRY SHOW DE LAVAL BUTTER AWARD TRIUMPH AS USUAL

The great NATIONAL DAIRY SHOW was held at Milwaukee, Wis., October 15-24, and in keeping with the invariable result since "ALPHA-DISC" DE LAVAL CREAM SEPARATORS went into use all the HIGHEST BUTTER and CREAM awards went to DE LAVAL users, in this latest representative contest, which included the exhibits of nearly one thousand of the best butter and cream producers throughout the country.

The three highest awards in the CREAMERY BUTTER class—all to DE LAVAL users—were as follows:

A. J. ANDERSON, Otisco, Minn., - - - Score 97  
THOR. MOE, Winthrop, Minn., - - - Score 96½  
A. L. OESTRICH, Watertown, Wis., - - - Score 96

The highest award on DAIRY BUTTER was to P. Daingaard, Camp Point, Ill.—Score 94½—a DE LAVAL user.

The highest award in the CERTIFIED CREAM contest was to G. Van B. Roberts, Highland, N. Y.—Score 99—a DE LAVAL user.

The highest award in the CREAMERY PATRONS contest for hand separator cream was to G. B. Fisher, Viroqua, Wis.—Score 93½—a DE LAVAL user.

Full details of all the entries and scores have not yet been made public, but there is no doubt that the vast majority of all exhibits scoring 90 and above will prove to have been DE LAVAL made, as heretofore.

Incomplete reports have been received of highest butter awards at the various STATE FAIRS this year, but practically all of them have been to DE LAVAL users, including particularly New York, Indiana, Michigan, Missouri, North Dakota and South Dakota.

As has been said before, the separator does not of itself insure the making of the best butter, but the superior mechanical and sanitary bowl construction and low speed of the DE LAVAL separator indisputably enable the production of better cream and better butter under the same conditions than can possibly be made in any other way.

This is something that even the most enterprising and resourceful of those who seek profit through the manufacture and sale of would-be competing separators never attempt to explain or deny,—that practically all the best butter, as evidenced by the highest awards in all representative butter contests, is and has for more than twenty years been made by users of DE LAVAL cream separators.

Hence the great advantage to every DE LAVAL user in having the separator that not only makes the MOST but the BEST cream and butter, is the simplest and easiest machine to use and lasts an average of twenty years against from two to five years in the case of all others.

A DE LAVAL catalogue helps to make plain the reasons for DE LAVAL superiority in good buttermaking and other respects, and is to be had for the asking.

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SEATTLE

# HOME CIRCLE



## Willie's Wondrous Pocket.

What is this tremendous noise?  
What can be the matter?  
Willie's coming up the stairs  
With unusual clatter;  
Now he bursts into the room,  
Noisy as a rocket;  
"Auntie, I am five years old—  
And I've got a pocket!"

Eyes as round and bright as stars;  
Cheeks like apples glowing;  
Heart that this new treasure fills  
Quite to overflowing,  
"Jack may have his squeaking boots;  
Kate may have her locket;  
I've got something better yet—  
I have got a pocket."

All too fresh the joy to make  
Emptiness a sorrow;  
Little hand is plump enough  
To fill it—till tomorrow.  
And, ere many days were o'er,  
Strangest things did stock it;  
Nothing ever came amiss  
To this wondrous pocket.

Leather, marbles, bits of string,  
Liquorice sticks and candy,  
Stones, a ball, his pennies, too—  
It was always handy.  
And, when Willie's snug in bed,  
Should you chance to knock it,  
Sundry treasures rattle out  
From this crowded pocket.

Sometimes Johnny's borrowed knife  
Found a place within it;  
He forgot that he had said;  
"I want it just a minute."  
Once the pantry key was lost;  
No one could unlock it;  
Where do you suppose it was?  
Down in Willie's pocket!—Selected.

## Fold Damp Clothes.

Some housekeepers when wash day comes prefer to take down the plain clothes when still a little damp, so as to do away with the necessity of sprinkling before ironing. The starched pieces of course need sprinkling and should be allowed to dry thoroughly.

One clever housewife finds it a great time saver in taking down the plain clothes from the line they are folded then and there.

She says that if they are crowded into the basket carelessly there will be innumerable wrinkles that might have been avoided, and so the time spent in ironing will be materially increased.

Then, too, there is a saving of time in not having to handle the clothes a second time in the house to make them ready to iron.

The same housekeeper sees to it that the large pieces are put in the basket first, thereby saving time in sorting.

## Barnacles.

(The following incident, taken from the Youth's Companion, is an excellent illustration of the way in which character is often wrecked: Five years ago the merchant ship Albatross sailed from an Atlantic port, bound for the coast of Africa.)

"And she will never reach it," said an old sailor on the pier.

"Why?" asked a bystander. "She seemed to me to be a staunch, well-built vessel."

"She should have had a copper bottom. Here is what I found on her hull."

He held out his hand, on which lay a soft tiny mass, a lump of jelly within a wall of shell.

"What harm could that do?" said the other, laughing. "It is a harmless, half-dead creature."

"Harmless, half-dead creatures like that will eat into the soundest hull that was ever laid, and leave it a rotten hulk." was the reply.

At the end of a year the good ship Albatross was reported to have sprung a leak and sunk. The barnacles had eaten their way through the sound oak timbers, and brought ruin and death.

How many gallant boys and young men leave school and college with high hopes for the voyage of life before them! They are well born and trained; they have inherited vigorous bodies and alert minds; they are honest, self-respecting, ambitious; they are equipped with some special craft or profession, which will, in all probability, bring them success. The ship is, to all appearances, sound and staunch; the sails are set, the wind is fair, the sun shines; every voice prophesies a fair voyage.

But has any miserable little barnacle fastened on the sound timbers? This lad relishes unclean jokes, and is

happy only in low company; this gay, brilliant youth, a favorite in society, seeks only his own ease and comfort; another "good fellow," is oddly regardless of money, whether it be his own or his neighbor's.

It is the little neglected traits, like the harmless worms, that eat and eat into the strongest character, until they bring ruin. Remember, boys, it is hard to clean them off in the middle of the voyage. A great vice, which draws upon us the scorn of the world, or its punishment, we strive to drag out by force; but the little habits, the routine of daily acts, acquired in youth, usually stay with us.—Ex.

## Recreation in the Home.

Most parents live for their children; few are willing to live with their children, to give true sympathy and heart-to-heart confidence. Many teach children helpful work, while a few give much attention to helpful amusement. The center of companionship in a child's recreation should be the parents themselves. Recreation should not unfit the child for his duties but refresh both mind and body.

## STIMULATE THE CONSTRUCTIVE.

Playthings which stimulate the constructive element in the child's character should be chosen. Building blocks are particularly desirable, as are paper, pictures, pencil and scissors. Ball, croquet, tennis and athletic sports may well be prominent.

With the help of a thoughtful mother or older sister, dolls may often be made the source of useful education, or where is the little girl who doesn't love to sew for her dolly as well as wash and iron the clothes she makes?

## THE BETTER KIND OF PLAYTHINGS.

Mechanical toys, as walking and talking dolls and barking dogs, seldom amuse for long, and tend to develop the destructive element. A wagon, kite, set of carpenter or garden tools and a place to work with them, a set of doll's patterns, some pretty pieces of cloth, lace and ribbon, a blackboard with crayons, a box of water colors, will afford most children more real pleasure than the most costly or intricate toy.

Good books, papers and magazines should be provided to fit the needs and taste of every member of the household. In some reading aloud forms the principal recreation of the long winter evenings. A taste or talent for music should be cultivated. A variety of games may instruct as well as amuse, and the parents may join in them.

## GUIDANCE AS TO ASSOCIATES.

Parties for little ones are easily arranged. For little children they should be held in the daytime, with simple refreshments. Avoid all games with a tendency to sentimentalism and sex distinction.

How much wiser the mother who makes an effort to get acquainted with her children's friends, and seeing the lovely and helpful in some, quietly encourage these while the coarse and harmful are as quietly crowded away by what is better.

## MOTHERS TO PROPOSE PARTIES.

Occasionally say to John or Susie, "We have nice apples, and a cake baked, and you can make lovely candy. Wouldn't it be nice to have the boys and girls in for a frolic? And we will give ourselves up to having a regular good time." Busy mothers, don't wait until they are in their teens, or for them to timidly ask permission. What if work is looming up for the next day? There will be other days to work, but you have your children with you now, and the time is so short to do all you want to do for them.

## BETTER THAN HOUSEKEEPING.

It is good to be a perfect housekeeper. It is better to have the adoring, confidential love of your children. Old notions of duty may have to be given up, and the order of life recast, but it can be done. Let us live with our children. The gain to both parents and children will be great.—Mrs. Mary W. Smith in Magnolia Grange, PPutnam County, from Illinois Farmer's Institute.

## Home Science to the Front.

So the women are being stampeded by pots and kettles! Flocking pell-mell, as fast as ever they can go, away from the slavery of the kitchen and dining room and parlor to the shop, the mill and the office.

The situation is pictured in strong colors by the socialistic school of writers. If we may credit their forebodings—uttered, it would seem, with more of relish than regret—the disappearance of the individual American home is only a matter of time; the census of 1910, they say, will make revelations beside which the figures of the year 1900 were trifling in comparison.

It is not to be denied that the feminine worker, her head once inside the industrial tent, will soon be pretty well within. She is in business, for good and all, with a corresponding loss, it may be, to the traditional life of the home. But are not the writers who are dilating upon this theme like the alarmists who were wont every year to remind us of the appalling influx of immigrants from the south of Europe? Our invaders were quite numerous enough, to be sure, but when someone calmly pointed to the fact that scores of thousands of these people went back to Italy every winter, returning to America each spring to be counted over again in our immigrant statistics, our alarm somewhat subsided.

Cupid is not dead. Nor is the old-fashioned love of home. Girls and women whose early careers are laid in the office and the store have a way, a great many of them, of surrendering the independent income and the durance of trade and school for the "slavery" which we hear so much about, which in the long run they seem to prefer. And, by the way, the domestic slavery of a woman who has been through the industrial mill need not give us acute concern.

Furthermore, it is time for our alarmist friends to wake up and learn that housekeeping and home making are not all what they were twenty or thirty, or even ten, years ago; that there is a New Housekeeping which is sweeping the United States of America with a force and enthusiasm which the general public is only just beginning to appreciate.

It may interest the victims of alarms to know that in the great movement for industrial education, which is world-wide, the claims of household technology—home science—are at the very forefront; that the schools of home science are multiplying, steadily; that the number of graduates is increasing in a far greater ratio, and the demand for the graduates so sharp as to exceed the supply. By way of illustration, we may add, it is no easy matter for a magazine to secure the services of one competent graduate in household technology on its staff, the educational field swallowing these young women up as fast as they receive their degrees. The country is literally crying for women trained in home science; there are not enough to go around.—Good Housekeeping Magazine.

## How to Keep Bulbs.

A number of persons have written asking how to keep bulbs through the winter.

For bulbs to keep well over winter and grow well the following spring or summer when they are planted they must have special care before storing. First, as soon as the stalks have been killed by frost cut them off a few inches above the ground. The bulbs or tubers will have matured before this time and they cannot secure more nourishment from the frosted and dead stems. Injury may result if the frosted stems are allowed to remain. Let the bulbs and tubers remain in the soil till late in the fall or till just before the ground begins to freeze hard. They will keep better in their natural home in the soil, under normal moisture conditions, than they will out of the soil. If the soil becomes very wet after the first frosts, then it will be better to dig them immediately.

Select bright, clear weather for digging the bulbs. Begin the work in the morning after the dew is off the dead grass. Lift the clump or single bulb with a garden spade, being careful not to injure any of the underground parts, shake off any excess of adhering soil and lay the tubers and bulbs on the dry ground for sunning. If the ground is wet or very damp place dry straw or leaves under them so that they will dry on all sides. At night

protect them with straw, canvas or some covering to keep out dampness and prevent possible freezing. Uncover them each morning for exposure to air and sun and let them cure in this manner from three to five days. Be sure that any soil that may be remaining on them is perfectly dry before they are placed in storage.

Be careful in handling clumps of dahlia tubers not to break any of them from the crown on which they grow. The buds on each tuber are at the top and in no other place. In dividing the clump care must be taken to secure at least one bud with each tuber. It is best to divide the crown by cutting with a sharp knife, for if a tuber is severed from the clump without the terminal bud it will no more grow than a piece of dead wood. Clumps may be divided in spring at planting time as well as in the fall at digging time.

Dahlia tubers are comparatively easy to keep, the conditions being about the same as those for potatoes. See that they are dry and well cured before storing and store in a frost proof cellar, where they will not become damp during the winter. Canna bulbs should be kept perfectly dry and in a very mild or warm atmosphere. They will rot very quickly in a cool, damp place. Dry and cure them thoroughly and pack in perfectly dry sand or dust. Gladioli bulbs must also be well cured and dried before storing. They should be kept in extra dry atmosphere and where they will not freeze. A good way is to place them in paper flour bags and hang them in some upstairs room, where the air is dry and mild.

It is well to examine all bulbs at intervals through the winter to see what they are doing, and if any of them are spoiling, separate the spoiled ones from the good. A little attention in this way may prevent a choice collection from becoming worthless.

## The Fireless Cooker.

The official report for 1909, recently published, of the commissary general to the secretary of war, has this to say of fireless cookers:

"The fireless cooker has been perfected. It was exhaustively tried out and favorably reported upon by officers of organizations and others. But after these trials, which showed the cookers to be entirely satisfactory and producing excellent results, it was found that the majority of the officers only desired them as an adjunct to the field equipment, and not in substitution of such equipment, which would necessitate field equipment beyond what it is thought advisable."

How about housekeepers? Does the experience of a majority of those who have used them confirm the conclusion of these army officers that the fireless cooker is a valuable adjunct to the usual kitchen equipment rather than a substitute for the ordinary cook stove?

## Oatmeal Cookies.

One cup of sugar, one cup lard, two eggs, four tablespoons sour milk, one teaspoon salt, two and one-half cups flour, two cups oatmeal, one cup raisins, one teaspoon baking powder, one tablespoon soda, one teaspoon nutmeg and one teaspoon cinnamon (last four named all sifted with flour); add raisins last. I have never failed with this recipe. Use the same size cup for all measuring.

## Cream Pie.

This may not be just like one given in The Inter Ocean about a year ago, but that was where I got my ideas about cream pie. Two small cups rich milk, one tablespoon cornstarch, one egg, a pinch of salt, any flavoring desired and sugar to taste. Wet the cornstarch with a little of the milk, then place the rest in a double boiler on the stove to scald. Add the sugar, flavoring, salt and yolk of the egg to the cornstarch. When the milk boils stir in the other ingredients. Much depends on getting this of just the right consistency, not solid like custard, but just creamy, so it won't run when cut. After one or two trials you will know just how much cornstarch to use. I let cool a little, then put in a baked shell and cover with a meringue made of the white of the egg.

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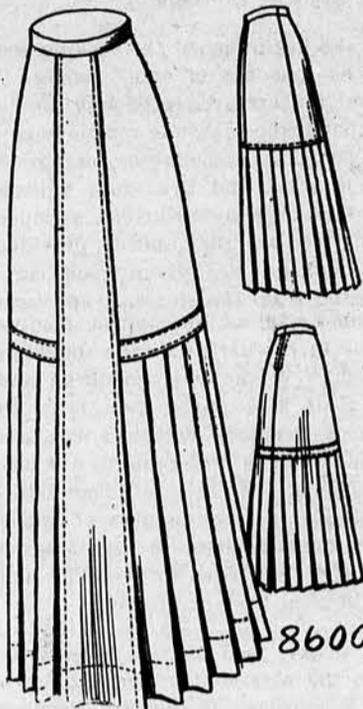
FASHIONS



No. 8557—A Natty Little Suit.

Nothing is smarter for the little boy than the pretty little tunic suits, simply finished by machine stitching or narrow braid. Such a model is here illustrated in white serge. A shaped trimming band outlines the neck and front edges, and a deep pleat is arranged the full length of the front and back, extending out over the shoulders in a very becoming manner. The little knickerbockers are shaped by the usual outside and inside seams, the fulness at the knee being adjusted by an elastic inserted in the hem. The top is finished by an inside waist band. The mode is equally suited to the firmly woven wash fabrics, such as linen and pique, as well as the flannels and woolsens. For a child of 6 years 2 1/2 yards of 54 inch material will be required. Sizes 2, 4, 6 years.

No. 8587—Ladies Waist—A Charming Tucked Blouse Waist.  
This design may be made as a separate waist, or attached to a suitable skirt. In silk, cloth or linen the model is equally desirable. The fulness is tucked over the shoulders. The waist is closed at the side, is slightly double breasted and finished with a shaped trimming piece that may be of contrasting material. In this instance, blue satin messaline was used with velvet in a darker shade for belt and trimming. The sleeves show groups of tucks and is finished at the wrist with a velvet facing. The pattern is cut in 6 sizes, 32, 34, 36, 38, 40, 42 inches bust measure. It requires 2 3/4 yards of 36 inch material for the 36 inch size.



No. 8600—Ladies Skirt. New and Stylish Skirt Model.

Here is one of the latest designs in skirts. The upper portion is cut in smooth fitting gores, with a panel front that extends to the lower edge of the skirt, and is joined to the plaited flounce. This skirt may be effectively developed in gray mixed tweed with touches of bright red. Mohair, panama or serge are also appropriate. The pattern is cut in 5 sizes, 22, 24, 26, 28, 30 inches waist measure. It requires 5 1/2 yards of 36 inch material for the 24 inch size.



No. 8588—Ladies Shirtwaist. A Simple Stylish Model.

There is nothing more satisfactory for general wear whether at home or at business than the rather plain shirt waist. It may be made of linen or madras or of the same material as the shirt to which it may be attached. The essential feature is that shirtwaists should be easy to launder if made of wash goods and easy to keep pressed if made of woolsens. Such a model is here shown with its simple Gibson plait and shirt sleeve. Buttons trim the front. The waist is cut in 6 sizes, 32, 34, 36, 38, 40, 42 inches bust measure. It requires 2 1/2 yards of 36 inch material for the 36 inch size.



No. 8574—A Practical Work Apron.  
Every housekeeper knows the value of a large apron that may be easily slipped on. Here is one that is very practical as well as attractive, as it is full enough to cover the entire dress, and is a real aid in preserving a tidy appearance. It is also available as a studio apron, being supplied with bishop sleeves that are full enough to prevent any wrinkling of the dress sleeve underneath. The model is appropriate for linen, gingham, percale or any of the material used for such garments. For the medium size 6 1/2 yards of 36 inch material is required. Sizes small, medium and large.

No. 8590—Girls' Dress With Princess Front.  
For school or general wear this model will be found very serviceable. It is built on simple lines. The broad tucks give breadth to the figure. The sleeve is new and is a comfortable model. The design will develop well in blue poplin with striped or figured silk in blue and white for trimming or in red cashmere, with white trimming. The pattern is cut in 4

sizes, 6, 8, 10, 12 years, and requires 2 1/2 yards of 36 inch material for the 10 year size.

is cut in five sizes, 2, 4, 6, 8, 10 years, and requires 4 1/4 yards of 44 inch material for the 8 year size. Braid or gimp may be used for trimming with buttons or loops and frogs for the closing.



No. 8590—Girl's Dress.

A semi princess dress for mother's girl. A prettier dress than this model cannot be conceived; it is likewise simple and yet attractive. The panel front with rounded yoke edge and broad Gibson tucks is especially graceful. The skirt may be plaited or gathered under the belt. In red serge with trimming of black velvet and jet buttons, and fine net or embroidery for yoke, this model will be very effective. The pattern is cut in 5 sizes, 6, 8, 10, 12, 14 years. It requires 6 1/2 yards of 24 inch material with 1/4 yard allover or net for yoke, for the 8 year size.

RECIPES.

To Make Cider Vinegar.

If A Subscriber's Wife will put old-fashioned brown paper and sorghum molasses in the cider she will have good vinegar. Put in paper and sorghum according to the cider. I made some this summer and it is now sour.

White Nut Cake.

Two cups sugar, one-half cup butter, one cup milk, whites of four eggs, three cups flour, two teaspoons baking powder; fold in beaten whites of eggs last, one cup of nut meats chopped fine.

Dark Cake.

Two cups of sugar, four eggs, one cup of butter, four cups flour, two teaspoons of baking powder, one tablespoon of cinnamon, one-half teaspoon of nutmeg. Ice with two tablespoons of boiling water and enough powdered sugar to make a paste to spread. Flavor with vanilla.

Chocolate Pie.

Put some grated chocolate into a basin and place on the back of the stove and let it melt. Do not add any water to it. Beat one egg and some sugar in it. When melted spread this on the top of a custard pie. Lovers of chocolate will like this.

Boiled Ham.

Prepare the ham and boil the day before needed. Soak in cold water over night. In the morning take out and wipe. Put over the fire, with cold water to cover. Boil slowly for three hours or until done. When cold remove the skin. Serve cold in slices sprinkled lightly with pepper.

Creamed Potatoes.

Pare large potatoes, cut into fourths, drop into cold water. About forty minutes before dinner put to cook in a small quantity of hot, salted water. When done and the water has nearly boiled away add sweet cream to half way cover. Let get hot and serve.

Tomato Soup.

Rub two pints of tomatoes through a sieve. When hot, salt to season, and add one heaping tablespoon flour and one rounded tablespoon butter, blended with cold water. When thickened, stir in two tablespoons sugar and serve hot. To lessen the day's labor the tomatoes may be rubbed through a sieve the day before and set in a cool place.

Baked Eggs.

Butter well a small agate pudding-dish or deep pie tin, or let the size of the dish be according to number of eggs you wish to cook, as they are not as nice if spread out too much. Season with salt and pepper, and for each egg allow a teaspoonful of sweet cream, then bake in quite a quick oven—hard, if you like them so, or much better slightly. Try these, sisters. They are much more wholesome than fried ones.

Puff Ball Doughnuts.

These doughnuts, eaten fresh and warm, are a delicious breakfast dish and are quickly made: Three eggs, one cupful of sugar, one pint of sweet milk, pinch of salt, one-half teaspoonful nutmeg and flour enough to permit the spoon to stand upright in the mixture. Add two heaping teaspoonfuls of baking powder to the flour, beat all until very light. Drop by the dessertspoonful into boiling lard. These will not absorb a bit of fat and are not at all rich, and consequently are least injurious of this kind of cakes.

8602—A Becoming and Desirable Coat for the Little Boy or Girl.  
The plainer a garment of this kind the more practical as well as becoming it is.



The model here shown is especially simple and easy to make. The loose shaping makes it easy to fit. It is suitable for friese, covert, mohair, chevrot, serge, and other coatings now in vogue. The pattern



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The "ENTERPRISE" is the strongest chopper made—has the fewest parts—is the simplest in construction. Easily cleaned. Cannot rust.

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"ENTERPRISE" Meat and Food Choppers are made in 45 sizes and styles for Hand, Steam and Electric Power. We also make cheaper Food Choppers but recommend the above. Illustrated catalogue FREE.



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## Sausage Stuffer and Lard Press

The quickest way, the easiest way, the cheapest way to make the best sausage and lard is to use the "ENTERPRISE" Sausage Stuffer and Lard Press—two machines in one. It is an absolute necessity at butchering time.

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# THE FARM



As a rule, a well improved farm indicates a good farmer. The difference in farm appearances is more nearly an index to the quality of farming done and not to the quality or location of the land.

At the beginning of the feeding season the tendency of many farmers is to use feed extravagantly with the result that if the season is a little longer than usual on account of late grass feed is short and live stock suffers. Most farmers grow two times as much roughage as they need, provided the roughage was given good care, protected from the elements and kept palatable and as its highest feeding value. In the early fall the roughage is usually in the best condition and less of it is required than later on when it becomes damaged by rain and snow. It is preferable to use less roughage in the early fall than later. By this plan a large quantity of roughage is available later in season when more of it is needed to keep the animals in good flesh or growing.

By saving feed is not necessarily meant the skimping or cutting down of the ration. Racks for feeding roughage should be so arranged that the animals cannot waste as much, or twice as much, as they eat. The structure of the feed rack deserves a good deal of study. Upon the right kind of a rack depends upon whether or not the farmer feeds economically. Economy along this line is worth thinking about. If you need the full product of your acres and you are compelled by wasteful methods of feeding to sow two times as much cane, Kafir corn or millet as you actually need, the corn and wheat field is diminished to just that extent. The acres of the farm represents your capital. Do you keep all that capital working. Is every acre at work producing all it will?

Speaking of economy in feeding and the largest production of feed possible from a few acres again brings to mind the silo question. The silo undoubtedly provides the means whereby the feed given on an acre will maintain more live stock, make more milk and beef, than another other means yet known. No crop, where corn is grown, will produce so many tons of feed per acre as Indian corn. If that crop is cut as fodder and fed as ordinarily done forty per cent at least of the total weight of fodder is lost. Under average feeding methods 50 to 60 per cent is lost. The loss from good silage is not in excess of ten per cent. Moreover, that part of the corn fodder fed to the stock has lost a large part of its most valuable food constituents by molding, decay and bleaching, and that most highly essential element, palatability, is almost, if not entirely, lacking. Silage is highly palatable as much so as would be green fodder fresh from the field fed in the dead of winter. Silos and silage are essential to economical and most highly profitable feeding. Ten years hence will find each on most of the farms of central and eastern Kansas. Fifteen years will find them in western Kansas.

It is claimed that in the vicinity of Topeka 35 silos were built this fall and filled with this year's corn crop. Some four or five silos have been used for several years in that section. Like every other new and untried thing in the community farmers had to wait for ocular demonstration of results. When one farmer told the dairy man's association of Shawnee County that when the last of his ensilage last spring was fed and he had lost one

half of his milk, even though he fed alfalfa hay, corn chop and bran, his neighbors began to take notice. The latter ration cost him three times the cost of his silage-ration yet he produced only one-half as much milk. If on feeding methods without the silo cost three times as much and give only one-half the product of silage, then what is the loss to the farmer? When this kind of feeding is done and we fail to produce beef or butter-fat at a profit. It does the fault lie in the prices received for the product?

The feeding of farm animals is too often regarded as a matter of simply filling the animal's stomach, regardless of whether or not the feed will promote growth, meat, milk or even maintain the body. While many animals are given all the roughage they will eat daily many times those animals are starving. This applies especially to the milch cow. She has all the prairie hay, the sorghum or millet she will eat, yet produces little or no milk. As a producer of milk under such system of feeding she is starved. The spring calf is getting the same kind of feed. He ought to be growing and getting heavier every day but he is not. Ninety of every 100 calves will weigh no more on May 1, 1910 than they weighed November 1, 1909. The calf has not been fed for growth and he does not grow so he has been starved. The same feed which will cause the cow to produce milk is required by the calf for growth. If the cow does not give milk and the calf does not grow each has been improperly fed and the feed wasted. Let us realize for what particular purpose each farm animal is kept and feed to make that animal accomplish that purpose.

For economy in feeding we must learn to know the food requirements for meat, milk or growth. We waste each year millions of dollars in feeding unbalanced rations—too much of one kind of feed and too little of the other. The rations are "too wide" to use the term of the skilled feeder. Animals kept for different purposes use protein and carbohydrates and fat in their rations in varying proportions, but these proportions hold a certain relation to each other. It is found that fat has about two and a half times as much value as force producer as have the digestible starches in the food. Therefore in the computing of a ration this extra value of the fat must be accounted for, and it is added to the carbohydrates. The sum is divided by the amount of the digestible protein in the food to obtain what we call the ratio of the muscle-forming elements to the force-producing elements. Thus, if a food on analysis is found to contain four per cent. protein and sixty per cent. carbohydrates and fat, we divide the latter by the four per cent. and find the ratio to be one to fifteen, which is a very wide one. Timothy hay, late cut corn fodder, and prairie hay, sorghum, millet etc. under varying conditions often run as high as one to 15 and in feeding these alone our ration is causing a waste of almost two-thirds of the carbohydrates of each of these roughages.

It is known that animals can economically use a ration varying from one to four to one to seven but not outside of these limits. The feed has a ratio of one to nineteen, almost two-thirds of the carbohydrates are wasted, as it goes through the animal without being taken into the system. To illustrate it is known that in winter thousands of idle horses are fed for months on nothing but timothy hay. Think of the waste! If a much smaller portion of timothy hay were fed and some other food like bran or alfalfa hay were given to balance the timothy at least two-thirds of the timothy could be sold or more horses fed. Every year hundreds of horses are fed timothy and corn, which is an exceedingly wasteful combination to feed. The corn itself will run about one to ten, which indicates a waste of at least thirty per cent. of the digest-

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The boars are sired by Inventor, Col. Carter and Bell's Chief out of sows by Red Wonder, Red Raven, King Wonder, Inventor, and other good breeding. Send for catalog and come to my sale. This will be the best lot I have ever sold. Don't miss a grand opportunity to get some good breeding and good individuals. Send bids to O. W. Devine representing the Kansas Farmer in my care.

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**Kansas Farmer ads Bring Results**

ible carbohydrates. The timothy being still wider in ration, is in no sense a balance for the corn, but is out of balance on the same side as the corn. And, this kind of feeding is going on everywhere. For the most part this has been ignorantly and was formerly excusable, because men knew little of the components that made up each ration. But now the light of science is so widely diffused along agricultural lines that it is not necessary for the wasteful methods to continue.

If alfalfa hay was grown on every farm in sufficient quantity to make from one-third to one-half the roughage ration of every animal Kansas farmers would save one-half the annual feed bill. Alfalfa hay has protein three or four times in excess of the best of other farm roughage and is needed to balance western seeds.

#### Hogs Clean by Nature.

Pigs have evidently some idea of sanitation, as is seen by their usually reserving a corner clean and dry in which to rest and sleep. But in this respect the pig is the more abused of all farm animals. His quarters are not arranged with a view to cleanliness and so he has no opportunity to show how really clean he is. Give the pig a chance and he'll be decent.

#### Corn Shocks.

An enormous waste of feed is occasioned by allowing a shock of fodder here and there to lop over, twist out of shape, and fall to the ground. The rain penetrates the heart of the shock, so that the moisture, both from above and below, and the fodder coming in contact with the ground, soon cause mold and rot to destroy a much greater amount of feed than the farmer realizes. It will pay to make a tour of inspection occasionally straightening up and tying all loosened shocks.

#### Winter Cover Crops.

The ground should be bare as little as possible in the fall, winter and early spring when the loss from drainage is always the greatest. A cover crop of rye or winter wheat not only will prevent the loss of a large amount of available plant food, but will protect the surface soil from wasting away and being carried off the farm. The erosive force of water is reduced by any growing crop which keeps the soil covered and the minute soil particles firmly held together.

#### Professor as Farmer and Feeder.

Prof. A. M. TenEyck of Kansas State Agricultural College is known to KANSAS FARMER readers as a specialist in farm crops and he is one of the best in the United States. He is a farmer, living on his own land west of Manhattan, and doing on a small tract of land more than many farmers are able to accomplish on several times as large a tract. He is making a success also with live stock on his own account. His hogs topped the market last Monday in Kansas City, selling at \$7.80. These hogs were pure Duroc Jerseys, about a year old, and averaged 250 pounds, Kansas City weight.

#### Failed to Recognize Merit of Alfalfa.

"During a recent inspection of farming conditions in western New York, we found an alfalfa field that has produced from two to three good cuttings of alfalfa every year for seventeen years writes the New York Rural Life. This field is located in the southwestern part of Monroe county. The soil is a deep loam with good drainage. The only fertilizing it has received is an occasional dressing of stable manure.

"It seems exceedingly strange to us that more farmers who have suitable soils on their farms have not made the attempt to grow alfalfa. No other hay crop yields better returns on the investment."

#### Cement Posts Again.

The Colorado Experiment Station has been experimenting with cement fence posts, which is thoroughly described in Bulletin No. 148. Tests proved that the life of the best wooden posts is from twelve to fifteen years, while the poor ones last but from three to five years. In the making of cement posts the following conclusions were reached: Poured posts are easier to make than tamped ones, but are more expensive because one mold will make but one poured post per day. Poured posts are more than twenty-five per cent stronger than tamped ones, besides being more nearly waterproof. The most economical mold is the one that casts a post of equal di-

mensions throughout. Two or more wires twisted together furnish as satisfactory a reinforcement as can be obtained.

#### Redeeming Worn Out Forty.

An Indiana farmer says he bought a forty acre of land that had been worn-out and its owner had to leave it. The new owner put it all in wheat using a fertilizer and the wheat paid the bill. On this he secured a stand of clover. This clover he clipped. He took hay from the richer spots to pay expenses. Then he clipped the seed crop and left it on the land. The next year he repeated the same treatment, leaving the bulk of the growth to rot on the land and shade it. The next year he got fifty bushels of corn per acre. Then a good crop of wheat followed with clover, and the land was redeemed. No manure was used because it was a distance from the barn. This man has 100 head of Jersey cows, and covers all his grass land with manure before breaking for corn every year. One of his fields will make 100 bushels per acre this year, and another will make 80 bushels.

#### To Cure Pork.

A subscriber submits this recipe for curing pork. Take three ounces of saltpetre, four ounces of brown sugar and three pounds of salt, to eighty pounds of meat. Mix well. Rub each joint with the mixture for four minutes. Pile up the joints. In three or four days rub each joint again in the mixture one minute. Pile up the joints four or five high and let them lie ten days. During this time they must be kept in a place where it will not freeze. Hang the meat up and smoke till a light brown. Use green hickory wood to smoke the meat with. Be careful not to allow the wood to blaze.

Part of the sides we salt down by rubbing both sides and the edges well with a layer of salt, and then smoke.

To pickle sides, make a brine strong enough to bear up an egg. Pack the sides in a jar, pour in enough brine to cover, put on a weight, tie a cloth over the jar, and set away.

After the hams, shoulders and salted sides are smoked, dust each one with powdered borax, then put in muslin bags and hang in a dark place.

#### Value of Hog Manure.

In this western country it is unusual for the farmer to place sufficient value on hog manure to remove it from the hog houses and pens to the fields. Yet it is a fact that no manure on the farm gives greater results than that from hogs. It is an exceptionally good fertilizer of poor land. This is no theory, but a well proved fact. Still, farmers make little or no effort to secure as much as possible of it as a fertilizer. When pigs are confined as in winter, then the greatest advantage of their manure is gotten. On farms, however, the different manures are rarely kept separate, pig manure being mixed with stable manure, thereby improving the latter. Cleaning out the pig houses once or twice weekly is not so necessary as some advocate, but plenty of bedding put in time after time, and trodden into a thick layer, when mixed with manures from stables and other houses, adds to the value of the manure heap, and produces heavier crops than if the pig manure was wanting. Pigs are the best manure manufacturers, and the more bedding supplied the richer the products for fertilizing purposes.

#### Good Farming Rules.

A farmer of many years, and who thinks a successful farmer must know about his business, submits the following ten rules:

1. Prepare a deep and thoroughly pulverized seed-bed, well drained; break in the fall to a depth of 8, 10 or 12 inches, according to the soil, with implements that will not bring the subsoil to the surface, (the foregoing depths should be reached gradually).
2. Use seed of the best variety, intelligently selected and carefully stored.
3. In cultivated crops, give the rows and the plants in the rows a space suited to the plant, the soil and the climate.
4. Use intensive tillage during the growing period of the crops.
5. Secure a high content of humus in the soil by the use of legumes, barnyard manure, farm refuse and commercial fertilizers.
6. Carry out a systematic crop rotation with a winter cover crop on southern farms.
7. Accomplish more work in a day

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by using more horse power and better implements.

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9. Produce all the food required for the men and animals of the farm.

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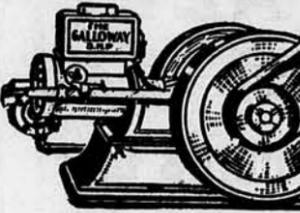


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Good breeding and exhibition cockerels now ready to send out. Don't wait until show time or spring and take just what you can get. We are crowded for room and are making low prices. Few S. C. pullets in pairs, trios and pens. No R. C. hens or pullets for sale.  
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Lawrence, Kansas.

**GLANDERS.**  
(Continued from page 6.)  
glanders cannot be estimated in advance as a chronic case may at any time succumb to an acute attack or less rapidly become eliminated by repeated sub-acute exacerbation.

Again a chronic case may be kept for years or even live out its natural life and finally die of other causes.

It is certain, however, that hard work, poor nutrition and unsanitary surroundings contribute much towards a rapid termination of chronic cases of glanders, because there is nothing which is borne more badly by animals affected.

**PREVENTION.**  
With a disease as fatal as glanders and so liable to become transmitted to other horses or even to man, the question of treatment and prevention is one of uppermost importance. Attempts at relief by means of medicinal treatment have so constantly failed, that without better understanding of the nature of the disease they are not further indulged in by intelligent veterinarians and if the disease is to be eradicated and its progress stopped we will have to look to prevention alone as the means to accomplish our purpose.

This prevention practically centers on two lines of effort i. e., sanitary measures put in force by stock owners themselves and the sanitary police regulations enforced by government (federal, state or otherwise).

While in other diseases prevention and suppression can be accomplished by the aid of vaccines and sera, all attempts of this nature in connection with glanders have thus far failed, so that we must especially depend on our own effort and the police protection given by the state.

The new horses brought in by immigrants are a common source of infection, as is shown by the great number of glanders cases found in the more recently settled sections of our state. It is not impossible that many of such horses were bought of a low type of dealers as horses affected with the occult form of glanders, owing to their unthriftiness are very liable to change owners at frequent intervals. They may also have contracted the disease while in transit; but, however originally infected, the fact remains, that a very large percentage of our glanders' cases are found among this class of horses.

The itinerant thrashing outfits, traveling far and wide during our harvest season, also become frequent distributors of glanders not so much as a result of being more liable to have diseased horses at the start as owing to the fact that they are stabled in so many quarters and are thus exposed to a greater number of chances of infection.

Up to within recent years the congregation of large numbers of horses from a large area of country in the lumber woods of Minnesota was a very constant source of infection. Now that more care is being used in the traffic of horses to and from the woods, there is good reason to expect that this focus of infection will be eliminated, in the near future.

Not only the lumber woods, but any place, where horses are kept together in large numbers and especially when they come from far and wide is liable to be instrumental in the distribution of infection. In the past railroad construction work, with its great horse camps, has been responsible for the stocking up of this state with disease.

On a smaller scale many carelessly managed feed and sale stables, where any horse is admitted without challenge become clearing houses of disease.

The use of public watering troughs is a most excellent means of infecting great numbers of horses and the writer remembers of one instance, where in a large city the disease could not be suppressed, until the public troughs were placed out of commission.

The dealer in the poorer classes of horses, the traveling trader or gipsy, must also be remembered as possible disseminators of glanders and their stock in trade should be carefully scrutinized before a trade is indulged in.

Those whose horses are free from glanders can keep them so in a large measure if they make it a point to remember the various ways by which infection may be introduced.

Such individual efforts should be supplemented by a careful supervision of the horses coming into the state by the live stock sanitary authorities.

In this manner, any campaign against the disease within the state can be made more efficient, while it would tend to prevent the state becoming a dumping ground for the glandered horses from without.

While watchfulness on the part of horse owners and the supervision of horse traffic on the part of the state are forceful in the suppression of the disease, the fact that glanders occurs here and there will for some time to come cause us to be confronted with the disease and naturally the question arises as to what method should be pursued in the case of such outbreaks.

With the means now at our command, the successful suppression of disease in the face of actual outbreaks centers upon 1st., the destruction of infected cases and 2nd., the complete segregation of exposed animals or those suspected of being diseased or exposed.

As soon as possible after the existence of glanders in a stable has been ascertained, the state live stock sanitary authorities should be notified, in order to comply with existing laws on the subject and especially to secure the necessary action without delay.

Under the system in vogue in this state, the cases showing clinical symptoms are ordered destroyed by the state official representing the live stock sanitary board. This order of destruction is placed in the hands of a justice of the peace, who appoints appraisers and their returns with a declaration that the horse was killed and the carcass properly disposed of are filed with the state auditor, who issues warrants for the reimbursement of owners of horses so destroyed in so far as funds are available for this purpose.

The horses which were merely exposed or cases of suspected glanders are now made subject to a quarantine order until a subsequent mallein test or a long period of observation warrants the conclusion that they are free from infection.

The use of mallein becomes thus one of the great factors in the suppression of glanders and for this reason it is to be very highly deplored that the funds set aside for live stock sanitary work are not sufficient to permit that this mallein testing be undertaken at public expense because, if it were done, a more rapid progress in stamping out the disease could undoubtedly be made.

This unfortunate circumstance, however, does not prevent the mallein test from being applied, at the expense of the owners and after comparing the cost of mallein testing with the benefits derived from it, there is no reason why the test should not universally be applied in all outbreaks.

When absolute certainty is desired, it is well to repeat the test. The first test is made immediately after the elimination of the clinical cases and the disinfection of the stable and the second one some four weeks afterwards. This second test is recommended in view of the possibilities that in spite of apparent thorough disinfection, animals, shown to be clean by the first test, may become infected by fodder, mangers, harness, etc., which were neglected during the process.

When animals fail to react on both occasions or the last one, and are free from any clinical evidence that can be attributed to glanders, they can be released without further question. Animals, showing a typical reaction, can only be regarded as infected and should be dealt with as such. That the autopsy of such cases sometimes fails to reveal glanders lesions is no reason for any action to the contrary. Also the small number of instances in which the reaction fails to occur upon a second test cannot very well be cited as a reason for neglecting radical measures in such cases. If we confine action to horses giving a reaction, described above as typical, there is only an insignificant minimum of danger of making a false diagnosis. We should, however, insist upon a typical reaction and not take chances at reactions which are not such.

While the repeated test is to be preferred, much can be accomplished by one test as with a careful technique and interpretation, its indications are usually sufficiently conclusive and when stable disinfection is thorough, there is little to be feared of an after infection, provided reactors or suspected cases are eliminated from the common stable.

Horses giving an atypic reaction should be retested after a period of a

month or so, but during the interim, they should be kept from coming in contact with other horses, while all indirect contact should also be prevented. This refers to drinking troughs, harness and the like.

Such horses or other suspects must not be kept in the common horse stable. They must have a stable to themselves until they are proven to be free by the mallein test. For this purpose of segregation, a cow stable can well be used if need be, as bovine animals are not susceptible to glanders infection.

Exposed animals in which the mallein test was not used should remain segregated and in quarantine for considerable time, certainly not less than six months. Should, after that period, nothing have developed which can be attributed to glanders infection, it would be reasonably safe to withdraw the quarantine restrictions.

Horses quarantined, either on account of exposure or of being in the suspect class, need not be confined to a stable. If care is being taken that they do not come into contact with clean horses and are kept away from public stables, drinking troughs, etc., they can be permitted to do field work or to run in enclosed pastures.

After infected cases have been eliminated the stable should be thoroughly disinfected and this should not be done in a perfunctory manner. To simply cause a stable to smell like carbolic acid or formaldehyde does not always constitute disinfection and those confronted with an infected stable are therefore referred to the article on stable disinfection, hereby appended.

Precautionary measures are not complete without the proper disposal of the carcasses of glanders cases. Wherever possible, burning is always to be preferred. An old straw stack is often available and usually contains a sufficient amount of fuel to consume several carcasses. Where wood or lignite is available, this can be used. In such cases it is best to dig a shallow trench which is crossed by a similar one. The fuel is placed in this trench and the carcasses placed on top of it and surrounded by more fuel. The opening of the abdomen of the carcass and the addition of kerosene to the fuel will materially enhance complete combustion.

**GLANDERS IN MAN.**

Considering the frequent occurrence of glanders among horses of the state, the fact that the disease is also communicable to man should not be overlooked. While the transmission to man is comparatively rare, the fact remains that persons in contact with glandered horses are constantly in danger of becoming infected and the more carelessly such persons handle glanders cases the greater will be this danger.

In man, the infection gains entrance in a similar manner as described for the horse, but abrasions of the skin are perhaps the more common means by which the virus is introduced.

The disease in man frequently shows a very acute character. In some the disease made its appearance in 2 to three days after the introduction of the infection and resulted in death in 6 to 8 days. As a rule, however, the disease will run its course in from two to three weeks.

Local manifestations at the point of inoculation may precede the general constitutional disturbances. Preliminary symptoms of an undefined nature are common. Those are fever of an irregular type. Painful swellings about the joints, pains in legs and arms. Such symptoms are followed by the eruption of the characteristic nodules and ulcers of skin and mucous membranes. The skin frequently shows pock-like eruptions red in color and which gradually change to ragged ulcers.

Abscesses in the depth of the tissue may be present. Those may involve the surrounding tissues in a destructive process, by which bones and tendons may become exposed to view.

Ulceration of the mucosa of the nose leads to a profuse discharge in the same manner as in the case of the horse. The lungs and other internal organs also participate in the disease process.

In rare cases of human glanders the disease shows a chronic tendency, when the symptoms correspond with those seen in the horse under similar conditions.

While in certain instances of human glanders, the disease has resulted in recovery, its issue, as a rule, is a fatal one, and with this in mind persons handling diseased animals are



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especially cautioned to be careful. The smallest abrasion about the hands is sufficient to permit the introduction of infection, while the blowing of a particle of pus into the eye by a sneezing horse may be a most fatal accident.

Those handling diseased horses should thoroughly disinfect themselves after contact and in examining glander cases the face should be protected with a cloth mask moistened with some antiseptic fluid.

And speaking of table scraps, there is generally enough of these in the ordinary family to feed a small pen of chickens, that would furnish something in the way of animal food should be provided in their place but green bone is the best substitute, but is sometimes hard to get. Refuse bones from the butcher, boiled till a good soup is made will help fill the bill. Mix the soup with corn chop and bran, salting it a little and the hens will enjoy it.

We shall be glad to hear from our subscribers on subjects pertaining to the poultry industry, so as to make this department a mutual improvement society. If you have a method that lessens the labor around the poultry house or yard, send it in for publication so that the rest of us may be benefitted by it. If you believe you have the best breed on earth, send in a description of it, and tell us in plain figures what the flock can do in the way of laying eggs. Let us know what you feed your fowls, and how you feed it to them. In short, let us help one another.

It is often asked why a small flock of hens pay better than a large flock. The answer is not hard to find. It is because better care and attention are given to the small flock than to the larger one. The feed of the small flock is generally composed of table scraps, which is the best egg-producing ration that can be fed to laying hens. If large flocks could be fed the same kind of feed that comes from the table and given the same amount of attention there would be no doubt but the profit would be as large.

The Kansas Board of Railroad Commissioners has ordered its attorney, Mr. Dawson, to bring action before the Interstate Commerce Commission to secure a reduction in the express rates on dressed poultry from Kansas to points in other states. The action is based on a complaint made by Fred Nelson of Hutchinson. There ought to be a reduction on the rates of live poultry, both common and fancy, especially on the latter. In fact there is no reason in the world why fancy poultry should not be carried at the same rate as common poultry but it is more than double the ordinary rate.

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40 Stallions and 60 Mares and Fillies

Sons and daughters of CALYPSO, the greatest sire of prize winning Percherons that ever lived. Several of the stallions are of the show yard quality, some of our State Fair winners included. Fifty high class young mares bred to the great CALYPSO and CARTILAGE, an International and State Fair winner, weighing 2,200.

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**A Select draft from a  
strictly big heavy  
boned herd.**

1 yearling boar, 2 fall boars, 17 spring boars, 16 spring gilts, 4 fall gilts and 2 yearling sows, the two sows bred for early farrow. The offering was sired by Union Leader, W. R.'s Quality, Expansion, Caut. Hutch, Prince Hadley, Sunflower King and Messe's Mastiff.

All noted big strains represented. A pair of last fall boars by Expansion are attractions, among the dams of the offering are sows by Grand Look, Blain's Wonder, Designer, Expansion, Orphan Boy, etc.

Catalogs mailed upon request. Trains met at Severance and Bendena, Kan.

**W. R. WEBB,**  
**Bendena, Kansas.**

Frank Zaun, Auctioneer.  
Send sealed bids to Jesse or J. W. Johnson in my care.

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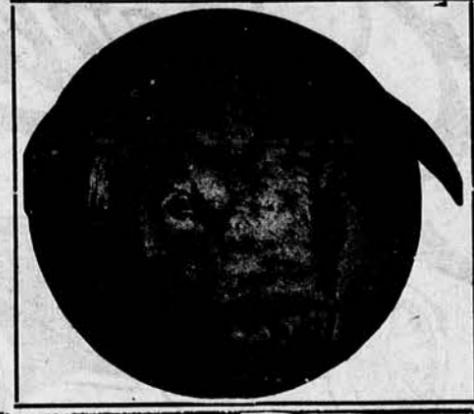
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Tuesday, November 16

Wednesday, November 17

40—SHORTHORNS—40

40—HEREFORDS—40

12 two year old bulls, 8 yearling bulls. These bulls are pure Scotch and Scotch topped. A number of the Scotch topped bulls contain from 87 to 94 per cent Scotch blood. A number of the cows have calves at foot and are bred again. A number of strong milkers are included in this offering, several coming from the celebrated Condiff family.

12 choice bulls. A sturdy lot and very fashionably bred, good individuals. A number of herd headers are included in this offering. 38 cows representing the blood of Anxiety 4th, Java, Beau Donald. These cows are good individuals; part of them have calves at foot and are bred again. A valuable and useful lot.

CONTRIBUTORS—C. W. Merriam (Alysdale), Topeka, Kan.; Col. Ed. Green (Greensdale), Florence, Kan.; W. T. Dickson, Carbondale, Kan.; C. A. Stannard (Sunny Slope), Emporia, Kan.; L. L. Vrooman (Rose Lawn), Topeka, Kan.; James A. Carpenter, Carbondale, Kan.; Krause Bros. (Shadeland), Bendena, Kan.

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At Farm 3 Miles  
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Wednesday, Nov. 10, 1909



40 head in all, 20 strong vigorous boars, among them individuals good enough to head any herd in America, 20 gilts that give promise of becoming great sows. Not a poor animal in the offering. Everything sired by Judge Taft 53094 and Logan W. 51871. Breeders will recognize the blood lines. The first named is closely related to Jensen's Mogul and Logan W. is a near relative to Expansion. Among the dams of the offering are Big Model by Expansive, Surprise B. (prize winning blood), Alice Fuller by Big Ex, by Expansion, Miss Jumbo by Jumbo U. S. One litter by Capt. Hutch and one by a good son of the noted Big Hadley.

Bred and fed for real business. Breeders and farmers from everywhere are invited. Stop at Waldo hotel as my guest.

Write for catalog. John Daumm, Auctioneer. Jesse Johnson will represent Kansas Farmer. Send bids to him.

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## Imported Percherons at Auction

At My Farm Adjoining Kirksville, Mo., Monday, November 15

40 HEAD—20 IMPORTED MARES—10 IMPORTED STALLIONS—TEN STANDARD BRED MARES AND STALLIONS—ONE FRENCH COACH STALLION—ONE IMPORTED SHIRE STALLION—TWO MAMMOTH JACKS.

IMPORTED STALLIONS include: HARPEAU, 2 years, first prize winner Paris Show 1909; HARDI, 2 years, second prize winner at Paris; HALEUR, 2 years; all bred by Edmond Perriot, Nogent, France. THE IMPORTED YEARLING COLTS: IDELOGUE (first prize Paris, 1909) rich combination of BRILLIANT blood; IDEAL (winner of second prize at Paris) both excellent individuals.

THE IMPORTED MARES include: CANDIE, a daughter of BESIQUE; XIRONQUETTE, a richly bred BRILLIANT mare; COQUETTE, winner of first prize at Paris, 1906, and the wonderful GOURMETTE. Three two-year-olds will include HIRONDALE, HISTORIE and HURSHLINE. HISTORIE and PALMETTE, a three-year-old, are a beautifully matched pair. FOUR IMPORTED YEARLINGS include ISTALE (first at Nogent, 1909) ABSINTHE and NIPONE are both four years old.

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THE JACKS: Mammoth Bob, fifteen hands, sire Walter's Mammoth; Harvey's Mammoth, a three-year-old by the same sire.

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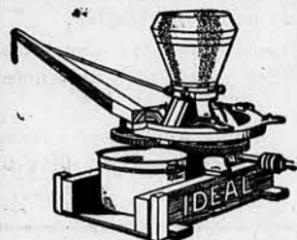
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NOTE—For a limited time we will give to any stockman an injector free with his first purchase of 100 vaccinations.

## Why Cream Tests Vary.

Separator and Operator Together Responsible.

The article following was written by the editor of KANSAS FARMER while editor of Farmers Advocate. In such great demand was it by creamerymen and dairymen large and small in the United States as well as Canada, the article was printed in pamphlet form and more than a half million copies have found their way into the hands of the people who milk cows and use the hand cream separator in getting their dairy product into the most marketable condition. The article having never appeared in KANSAS FARMER and believing that it is as valuable now as when written a year ago, it is reprinted for the readers of this paper.

Aside from the production of butter fat on an economical and paying basis, there is probably no one thing in connection with commercial dairying which causes the patron so much uneasiness as the constant and continued variation of the test of cream sold to cream receiving stations and creameries. This variation in test not only results in the patron being dissatisfied but also causes the creamery buying the cream uneasiness in maintaining harmonious relations with the patron—which relations creamery men everywhere recognize as being necessary if the continued patronage of the patron is to be had. It is our experience as a result, first as a cream producer and a creamery patron and second as creamery manager that the complaint of test variation is on account of the patron not having a full understanding of the causes which affect the density or percentage of fat in hand separator cream. It is the policy of all reputable and honest creameries to pay the patron for just exactly what his cream tests, to pay him for every pound of butter fat delivered, and it is the creamery's positive instruction to its agents and employees to be very careful to obtain accurate results in sampling and testing. The accuracy of a test always depends upon an accurate sample. Unless the sample represents a fair average of the cream delivered the test, while correct of the sample will not be a correct test of the cream delivered. Therefore the first requisite for a correct test is an accurate sample.

That there is a variation in the percentage of fat in cream, produced either by centrifugal separators or the so-called "water separators" cannot be disputed, and is well understood by patrons who have observed the workings of the separator or who have tested their cream themselves with hand farm testers. A variation of from 5 to 8 per cent in test is not at all unusual with no change in the cream screw of the separator and which difference is chargeable only to the varying condition of the machine and its operation from time to time. But we have known of many instances of variation of from 10 to 20 per cent in tests due to the thoughtless and careless handling of the separator, milk or cream. This later is an extreme variation which can and should be prevented, but a variation of from 6 to 8 per cent in hand separator cream can hardly be overcome in every day practice.

Bulletin No. 136 from Kansas experiment station is on this subject and should be in the hands of every hand separator owner. The conclusions drawn by Prof. Erf, the author of the bulletin, are as follows:

1. The temperature of milk makes a difference of from one to five per cent in the test of cream at average skim-

ming temperature, greater variation being caused in extreme cases.

2. The amount of flush water used with average skimming temperature makes a difference of from one to three per cent, in extreme cases making a difference as great as 10 per cent.

3. The variation in steadiness of the bowl makes a difference of from two to 16 per cent, depending on the amount of vibration.

4. The variation of the speed of the bowl causes a difference of from two to 13 per cent in the test of cream, depending on the variation in speed.

5. The amount of milk allowed to flow through the separator bowl from one-half to full capacity makes a difference of from one to six per cent, depending upon the divergence from full capacity of the machine.

6. The amount of acid in the milk causes an irregular variation in the test of cream, depending upon the amount of acid it contains. Where the acid reaches a high point, three to four per cent for instance, and the separator is used continuously for an hour or more, it will eventually clog the same as in the case of cold milk. The cream will then become thicker until the separator is entirely clogged. The extent of the clogging will depend upon the amount of acid in the milk and the size of the machine. The higher the acidity and the smaller the machine the sooner the separator will clog.

Referring to the first conclusion above the experiments show a variation in the test of cream ranging from one to 19 per cent from milk separated immediately after milking and to milk as cold as will separate. When milk is so cold that the bowl clogs, the cream outlet also clogs, which has the same effect on the density of cream as if the cream screw had been set for a heavier cream. There is no economy in separating cold milk, neither is there satisfaction in operating the separator when the milk is cold. It is advisable always to buy a separator which will handle cold milk most advantageously because there frequently occur on the farm emergencies by which cold milk must be separated. It is to be noted then that the condition of the milk has much to do with varying test and the condition is a thing which the farmer cannot be expected to note twice a day because to do so is impractical, but he must expect variation in his cream test from this source.

It is our observation that the amount of flush water used in general practice has a greater effect on the variation in test of cream than reported in the bulletin. In the experiment from which the conclusion was drawn only a sufficient quantity of water was used to drive the cream from the bowl which amount would not exceed a quantity greater than two separator bowls full. In practice, however, the operator uses whatever quantity is most convenient. This can best be illustrated by an experience of the editor on a Shawnee county farm recently. The patron was complaining of the varying test of cream sold the creamery. The editor went to the farm and remained over night. At the evening separation 150 pounds of 4 per cent milk was separated. The cream obtained was 15 pounds of 40 per cent cream which would contain 6 pounds of fat. The farmer was operating the separator to demonstrate to me that he was doing the work

(Continued on page 22.)

# Readers Market Place

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POLAND CHINAS, SHORTHORNS AND B. P. Rocks—Yearling boars, sows and gilts open or bred, also fall pigs. B. P. Rock sows \$3 per 100. A. M. Jordan, Alma, Kan.

FOR SALE—ONE CORRECTOR 2D boar 12 months old, one last March boar pig, three Corrector 2d gilts, all out of Perfection E. L. dam. They were prize winners at Topeka State-Wide fair. Will ship on approval and at prices of ordinary ones. Address J. W. Ferguson, R. F. D. No. 1, Topeka, Kan.

## POULTRY.

BUFF ORPINGTON COCKERELS, \$1 and \$1.25 each. Mrs. P. D. Briggs, R. R. 3, Sedan, Kan.

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FOR SALE—18 DIFFERENT VARIETIES of thoroughbred poultry, cocks and cockerels, 3 kinds of ducks, geese, turkeys, guineas, bantams, dogs, white rabbits, all kinds of fancy pigeons. Write for free circular. D. L. Bruen, Platte Center, Neb.

100 SUPERIOR BUFF PLYMOUTH Rock cockerels surplus stock and well bred, at \$3 each or 3 for \$5 while they last. Order direct from this ad. C. R. Baker, Abilene, Kan.

CHESTNUT'S ROUP CURE GUARANTEED formula for roup. This remedy is certain both as preventative or cure. Price \$1.00. Also formula for Chestnut's poultry food. As good as the best. Price for the two formulas \$1.50. H. W. Chestnut, Centralia, Kansas, breeder of White Faced Black Spanish chickens.

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FOR SALE—COLLIES OF ALL AGES. Natural born cattle drivers. Pedigreed stock. Write for circular. Harry Wells, Belleville, Kan.

SCOTCH COLLIES—PUPS AND YOUNG dogs from the best blood in Scotland and America now for sale. All of my brood bitches and stud dogs are registered, well trained and natural workers. Emporia Kennels, Emporia, Kan. W. H. Richard.

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HONEY—CHOICE EXTRACTED \$10 per case of 3 60-lb. cans. Broken comb or chunk honey in 60-lb. tin cans \$6 per can. A. S. Parson, Rocky Ford, Colo.

RAILWAY MAIL CLERKS, WANTED—Commencement salary \$300. Rapid advancement to \$1,200 or \$1,400. Short hours. Steady work. Annual vacation with full salary. Examinations everywhere soon. Common education sufficient. Preparation free. Write immediately for schedule, Franklin Institute, Dept. M., 115, Rochester, N. Y.

AGENTS: IF I KNEW YOUR NAME, I would send you our \$2.19 sample outfit free this very minute. Let me start you in a profitable business. You do not need one cent of capital. Experience unnecessary. 50 per cent profit. Credit given. Premiums. Freight paid. Chance to win \$500 in gold extra. Every man and woman should write me for free outfit. Jay Black, Pres., 227 Beverly Street, Boston, Mass.

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**HORSES AND MULES**

**HORSES AND MULES**



**Percheron Horses and Shorthorn Cattle**

FOR SALE or will trade for good farm land in Kansas or Oklahoma (alfalfa land preferred.) 30 head of Registered Shorthorn cows and heifers, mostly one and two years old, all reds and of the richest pure Scotch families. Some have young calves; others bred and being bred to a choice Harriman bred Scotch bull in good condition. Also a few splendid registered Percheron fillies one to three years old. Will pay difference in cash on good quarter section. No rough or cheap pasture land. Main line A. T. & S. F. **GEO. B. ROSS, Alden, Rice Co., Kan.**



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We now have a large number of stallions and mares for sale from two to five years old, of the most typical draft qualities we ever had together and prospective buyers will find more draft qualities in our horses for the number than elsewhere.

Our prices are reasonable and give terms to suit the buyer with our guarantee—the best. We prefer selling at the farms and invite prospective buyers to come and see the grandest lot of horses ever brought together. If you or your community needs a stallion, write us, mentioning Kansas Farmer.

**ROBISON'S PERCHERON SALE**

60 Registered Percheron Stallions, Mares and Colts at Auction on the Whitewater Falls Stock Farm, Towanda, Kan., November 9, 1909

20 Registered Imported and American bred stallions, herd headers.

40 Imported and American registered mares.

10 weanling colts, sired by Casino.

40 mares bred to Casino, the greatest prize winning Percheron stallion living.

Auctioneers—R. L. Harriman, Jas. W. Sparks, L. E. Fife, Wm. Arnold.



This is the first sale held in the new \$5,000 sale pavilion. COME.

The 1909 show herd included in this sale. Send for catalog.

**J. C. ROBISON,**  
Towanda, - - Kansas

Mention Kansas Farmer.

**HOLLAND STOCK FARM**  
IMPORTERS AND BREEDERS OF

**Percheron and German Coach Stallions and Mares**

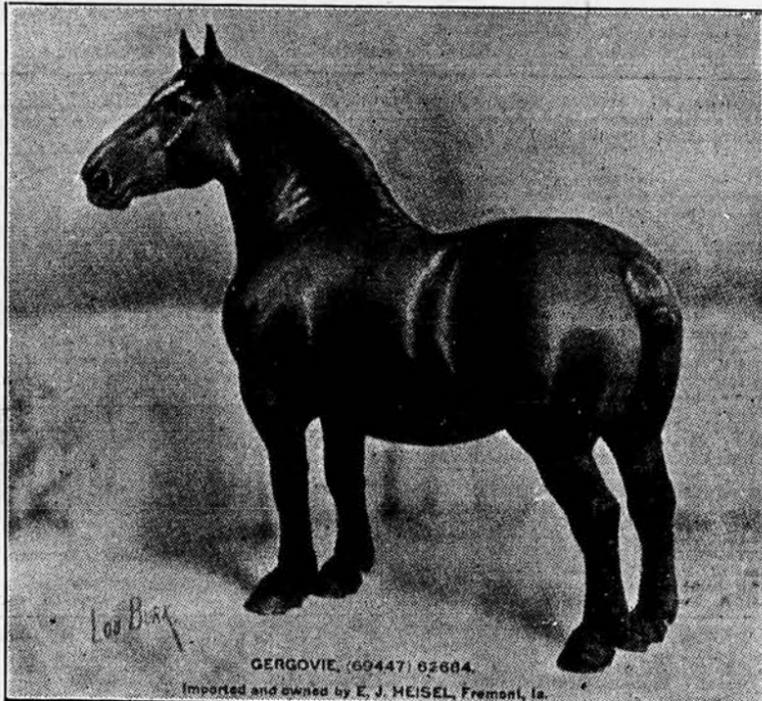
Our summer importations arrived in August 100 head as good as grow, and the best lot of stallions and mares west of the Mississippi. If you wish quality and finish in an imported or American-bred stallion or mare, or young registered stock, produced from the most select herd of imported mares in America, we will supply you for less money than others. Mares all bred. Come and see for yourself. The best Percheron stallions and mares. The best German Coach stallions and mares.

**CHAS. HOLLAND, Proprietor, SPRINGFIELD, MISSOURI.**

**E. J. HEISEL'S SALE**

**40 Imported Percheron Mares 40**

Fremont, Iowa, Wednesday, Nov 10, 1909



GERGOVIE, (69447) 62684

Imported and owned by E. J. HEISEL, Fremont, Ia.

These mares were all personally selected by E. J. Heisel and his being in the Perch District of France in the early part of the spring before most other importers arrived, he had the opportunity to buy the cream of the Percheron mares. Most all are bred to some of the best stallions in France, and in this offering you will not find the kind of mares that are sold on the auction block. All of these mares were bought to be sold at private sales, but being very busy with the stallion business, it has been decided to let this importation of mares take care of themselves at the highest bidder's price. All who are thinking of buying Percheron mares should be at this sale, as it may never again be in the history of the horse business that such an importation of Percheron mares will be made by any importer. Send for the greatest mare catalogue ever issued. It should be in the hands of every prospective buyer. It tells you just how to reach the sale.

My new importation of stallions that arrived Aug. 12th, '09, will be offered privately on sale day. Cary M. Jones, Auctioneer. Address all correspondence to

**E. J. Heisel, Fremont, Mahaska Co., Iowa**

Fremont is on the main line of the Iowa Central Ry., and a branch of the C. B. & Q. Ry. from Burlington to Oskaloosa, Iowa.

**Line Breeding.**

I am asked about line breeding: "What is it, and its possibilities and dangers?" The matter of line breeding opens up a long road to cover. It has been talked over, written about, by so many persons that I had rather someone else would do it now.

Many people practice line breeding with poultry who would take offense if told the fact. The farmers in the southern part of Massachusetts, and over in Rhode Island, where line breeding when they selected each year the "best red cockerel," raised the season before, to head the pen of breeders. Or some man might go to a neighbor's farm and get a good red rooster for breeding to the best pullets at home. But as these farmers "swapped" roosters quite often the flocks were not far off in relationship. It may not have been close inbreeding but certainly it was line breeding. So far as injury to the flock is concerned in this special illustration we have the beginning and fixing of the R. I. Red. The strong sturdy, laying, Rhode Island Red, is enough to prove that line breeding of the kind outlined is helpful rather than harmful.

In line breeding there is blood relationship of some sort in the matings. It may be near, or far, yet it must exist, or it is not the sort of breeding I am handling.

The best results in fancy points, the best laying flocks, the noted broiler matings, all get their start in line breeding. The man who is mating non-related birds every spring cannot produce a strain of layers or of winners.

What then is the secret of line breeding? It is in knowing your birds and applying that knowledge to breeding for better things. It is not enough to know the birds in your flock but to get uniform good results you must know the birds in your flock. One or two generations back may have more influence on your chicks than you suppose. The man who line breeds must be thoughtful, be observing, and willing to keep at the work even though one season's trial seems to prove the whole matter a failure.

To begin with line breeding you need birds that are well up in all the points you wish to fix. If it is comb you have in mind, mate male and female with the best combs you can find. You may want winter layers and go about the matter of getting the best laying females you can find, as well as one or two cockerels out of record layers. This is for your start. So long as your birds remain sturdy, vigorous, free from illness, you will not go outside your flock for new blood. You may be careful not to breed brother and sister, but you will often mate father and daughter, or mother and son. You may have two lines of breeding, using males from one to females of the other. This puts off the day when you might have to buy new blood to tone up your flock.

Line breeding calls for a lot of careful work. You may be running an experiment station all your own. You will not only be mating your best looking cockerel to good females but you will be testing brothers of this best male along the same lines. It is not the prize winner that always produces the future winners. Most likely it will be a less favored looking brother that will produce the blue ribbon birds. "Handsome is as handsome does," is true of fowls as of persons. The man who would line breed his flock needs to know something of Mendell's law of breeding. In it he will find an explanation of some of the strange results that he has seen in past breeding as well as suggestion as to what and how to mate. Reject any bird that is not absolutely healthy. Do not mate two birds with like faults. Make sure of vigor, life, in your breeding stock, as well as the same points in the line of birds from which your matings came. Just how to handle line breeding in the third and fourth generations will be taken up in a special article later in the season.—Poultry Keeper.

**Cutting Corn Fodder for Feeding.**

A subscriber recently inquired if cutting would increase the feeding value of corn fodder. Cutting will undoubtedly cause the stock to eat more of the stalk. Cutting was found advantageous at the Wisconsin Experiment Station which station says there should be a good feed cutter on every dairy farm, useful for silo filling in the fall and for chaffing feed in the winter. All cornstalks should be put through this machine, for then they are in better condition for feeding,

and the coarser portions left uneaten are in good form for bedding and the manure heap. Long cornstalks are a nuisance in the feeding manger, worthless for bedding, and troublesome in the manure pile. Many farmers find difficulty in feeding cut cornstalks, since sometimes the cows refuse to eat them. In a few cases we have found that the sharp ends of the cornstalks, when cut certain lengths injure the mouths of the cows. When they are not well eaten the cause is often due to over feeding, or endeavoring to have the cows live on too limited a variety of foods. Keep the mangers clean and feed the cut fodder with care, and usually very little will be left over, and that only the coarsest portion. Experiments at the Wisconsin station show that with the varieties of corn raised there much more of the cut stalks will be eaten than if fed uncut under the same conditions.

**Depth of Cultivation and Soil Bacteria.**

Prof. Walter E. King, bacteriologist of the Kansas Experiment Station has just issued a technical bulletin on "The Influence of Depth of Cultivation upon Soil Bacteria and their Activities." In this bulletin 161 which reports preliminary experiments Prof. King draws the following conclusions:

1. Deep plowing (eight to ten inches) tends to increase the number of soil bacteria in both sandy and silt soils.
2. Deep plowing tends to increase bacterial activity. More ammonia is produced.
3. Deep plowing tends to decrease denitrification or the reduction of nitrates and the liberation of free nitrogen.
4. The volumetric method of quantitative bacteriological soil analysis has the following possible advantages over the gravimetric method: (a) It is more simple and convenient; (b) There is less danger of contamination; (c) the results are placed on a more accurate basis for comparison. The volumetric method can be used to advantage when comparative results are desired.
5. Increased soil temperature increases bacterial activity.
6. An excess of moisture reduces the number of bacteria and is detrimental to bacterial activity.
7. The maximum number of bacteria is found within the fifth and sixth inches. Either side of this zone the numbers of bacteria decrease.
8. Due to certain conditions, different times in predominating numbers.
9. Bacterial life and activity seem to rise and fall with more or less regularity. These periods of maximum and minimum activity are to a certain extent independent of moisture and temperature and are possibly due to the presence of bacterial by-products.

**BEST IMPORTED PERCHERON, BELGIAN, English Shire, Suffolk Punch and German Coach Stallions, \$800 to \$1,000 your choice. Imported mares, home-bred horses, \$250 to \$650.**

**A. LATIMER WILSON,**  
Creston, Iowa.

Frank L. Stream, of Creston, Iowa, is selling young, choice imported Belgian Percheron, English Shire, Suffolk Punch and German Coach Stallions, at \$1,000. Home bred registered draft stallions \$300 to \$600.

**PERCHERON HORSES, HOLSTEIN-FRIESIAN CATTLE.**

Up-to-date Poland China hogs. Write for wants.  
**H. N. HOLDEMAN,**  
Meade, Kansas.

**SPRING VALLEY FARM**

— Headquarters For —  
Big Stylish Mammoth Jacks. Some extra good ones of serviceable age for immediate sale. Prices consistent with quality.

**I. T. SUTER**  
Box 82, Palmyria, Mo.

**JACKS FOR SALE**

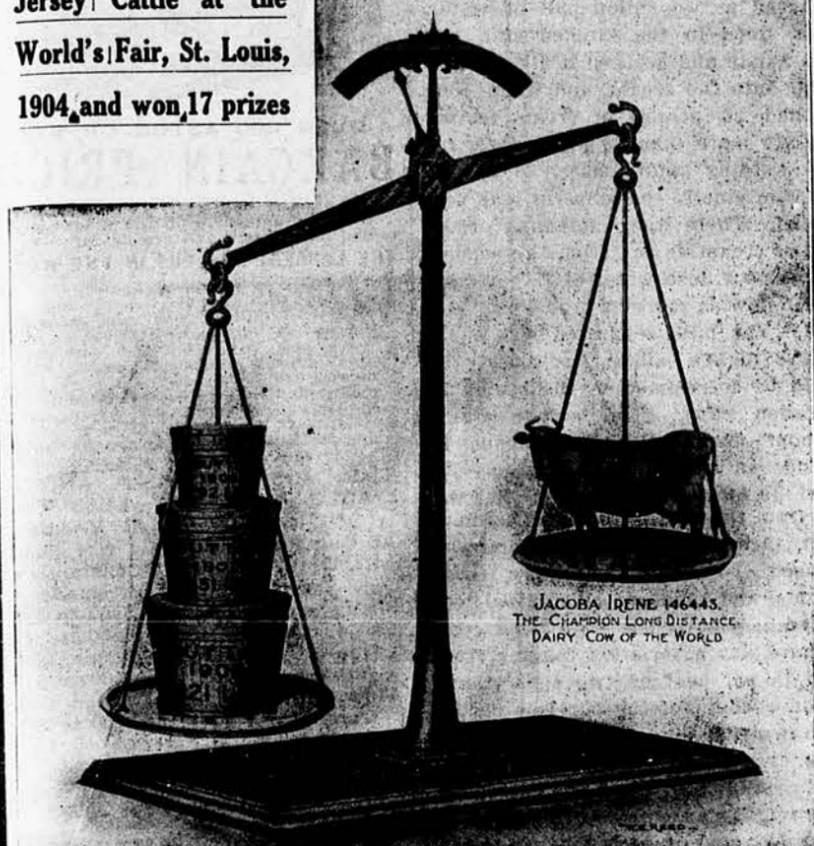
WE have at all times a good supply of Jacks from 14½ to 16 hands high. Buy one this fall and save money. Thirty head to select from. All Guaranteed.

**PETTY BROS., SEDALIA, MISSOURI**

**PURE HONEY.**  
Extracted in cans of 60 lbs net, amber \$7.80, white \$9. Comb honey in one lb. sections. Send for price list. Nothing but genuine bees' honey. Reference Kansas Farmer. The Arkansas Valley Apiaries.

**CHEEK & WALLINGER,**  
Los Angeles, Cal.

We made 19 entries of Jersey Cattle at the World's Fair, St. Louis, 1904, and won 17 prizes



JACOBA IRENE 146443.  
THE CHAMPION LONG DISTANCE DAIRY COW OF THE WORLD

THREE YEAR TEST OF JACOBA IRENE 146443.  
AUTHENTICATED BY THE ILLINOIS AGRICULTURAL EXPERIMENT STATION.

YEAR	MILK LBS.	FAT LBS.	BUTTER LBS.
1906	11391	619	792
1907	14255	792	931
1908	17253	952	1121
<b>TOTAL</b>	<b>42899</b>	<b>2363</b>	<b>2844</b>

# 40 Richly Bred, High Testing Jersey Cattle 40

## AT AUCTION

Three Bulls of Serviceable Age. Remainder Cows and Helpers, all Safe in Calf. At Farm 2 Miles from

### St. Joseph, Mo., Tues., Nov. 9, '09

We include in this sale the great cow Pogis Irene 2d 146435 (dam of Jacoba Irene 146443, the world's champion cow), and four of her daughters. Pogis Irene produced 11,000 pounds milk and 660 pounds of butter in one year.

Her daughter, Jacoba Irene, produced 17,253 pounds of milk and 1,121 pounds of butter in one year.

These records are World's Records, and these 40 head of Jerseys are every one of such renowned stock. No better opportunity ever offered in Jersey cattle.

# 40 Richly Bred Polands 40

## Same Day

Two Outstanding January Boars and one Herd Boar, Peter Mouw breeding; 14 Spring Bears, rest bred Sows and Gilts. The tops of 100 head.

Auctioneers: Cols. H. S. Duncan and J. E. Duncan, Clearfield, Ia.; Col. J. A. Benight, St. Joseph, Mo. Write for catalog. Send bids to Jesse Johnson in my care,

## ROBT. I. YOUNG,

R. F. D. 9. St. Joseph, Mo.

# FARM INQUIRIES



ANSWERED BY  
Prof. A.M. Ten Eyck

**Sowing Timothy.**  
Will you please tell me when is the best time to sow timothy? If it should rain now would it do to sow this fall?—H. L. Klick, Toronto, Kan.  
It is now too late (Oct. 21.) to sow timothy this fall. Prefer to sow early next spring, but plow the ground and get the seed-bed ready during the fall and winter or very early in the spring. Timothy may also be sown in the fall but should be sown rather early, usually not later than the middle of September, preferably the last week in August or first week in September. I am mailing you circular letter giving information regarding the "Preparation of Seed Bed for Bromis Inermis." The same principles apply also to preparing the soil for timothy.

**Crop Rotation for Wheat Land.**  
I wish to know if you think it would be profitable to apply commercial fertilizer to upland for wheat in Phillips county, Kan. If so, what kind and when is the best time to sow it? This land has been in cultivation for a good many years and the soil is thin. I suppose what it really needs is humus, but what I wanted to know is whether a commercial fertilizer could be employed that would bring immediate results.—W. W. Colby, Kirwin, Kan.  
I do not think it would be profitable to apply commercial fertilizer to upland in Phillips county for growing wheat. Better grow some other crop in rotation with wheat in order to improve the soil texture and add humus and nitrogen. Grow a crop of cow-peas next year and plow them under. Or you may plant and plow under

other green manuring crops such as rye, spring grains, rape, millet, buckwheat, etc. Our plan here is to plant a crop immediately after wheat harvest such as cow-peas or rape, plowing under in the fall before frost and plant to corn or some spring grain the next year. Better arrange a definite system of rotation of crops, using alfalfa as one of your crops in rotation. If this land were seeded to alfalfa and plowed up in four or five years its productiveness when planted with wheat or other similar crops would be doubled.  
The use of commercial fertilizers is risky and expensive even in the best farming districts and there is no need of applying commercial fertilizer to the lands in your part of the state. Simply rotate, use barnyard manure, practice green manuring, and cultivate well, plowing deeper occasionally in order to bring up new soil. I am sending you circulars 2, 3 and 5, giving information regarding Manures, Fertilizers and Crop Rotation." I am also sending pamphlet on Farm Management," circulars 2 and 9 on "Wheat Culture" and circular 13 on "Dry Land Farming." I believe if you will carefully read these publications that you will get many valuable suggestions that will help you maintain the soil fertility and produce larger crops.

**Corn on Alfalfa Land.**  
I have about 45 acres of ground that has been in alfalfa for about ten years. I now wish to plant it to corn. The land is good bottom land, no water stands on it. How deep should I break? Would you recommend listing or planting? What variety of seed corn would you advise?—D. R. Gordon, Abilene, Kan.  
The usual practice is to break alfalfa sod in the fall, to break rather early, preferably plowing rather shallow, three or four inches deep. Be sure and have the plow sharp and do not make too wide a furrow. Give the heel of the share considerable bearing. The plow should not have too much suction. Prefer to plant the corn by listing next spring, running the lister rather deep so as to plant the corn in the firm soil beneath the mellow plowing. Prefer to plant a rather early maturing corn, since your alfalfa ground is apt to be lacking in soil moisture. I am mailing you bulletin 155 on "Alfalfa Seeding and Culture," in which you will find further information regarding breaking alfalfa.

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**WHY CREAM TESTS VARY.**  
(Continued from page 18.)

right and that he could not in any way be blamed for delivering cream of varying test. In flushing the bowl he used a two gallon pail of water. This stood in the kitchen sink and was handy and he used it all, one-half going into the cream, and when done he had 23 pounds of cream testing slightly more than 25 per cent of fat and yielding approximately 6 pounds of fat originally contained in milk separated. There was a lowering of the test of cream as run from the separator without flush water of 15 per cent. The following morning was frosty and cold. The milk separated was equal to the night's milking as closely as could be determined by measuring in 10-gallon cans. The cream taken, without flush water, was about 15 pounds as at night. In flushing the bowl the farmer this time used hot water from the tea kettle and not more than three quarts. The water increased the weight of cream three pounds, and reduced the original test of cream slightly less than 5 per cent. So here was a variation ranging from 5 to 15 per cent on two separations, all on account of the careless use of flush water. This happens on every farm every day where a separator is used. And the same variation between milkings exists on each day's separation and on each delivery to the station. There are conditions not within the farmer's control, but this matter is within his control, and should be controlled. There is an advantage in separating and delivering heavy cream, and after the separator has done its work there is no use in spoiling it all by using more flush water than necessary.



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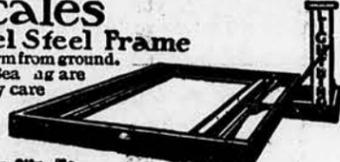
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To our old customers in Kansas and to those who may become our customers, we take this opportunity to call your attention to the fact that we have just completed our new importing establishment opposite the Nebraska State Farm at Lincoln, Neb., and believe that we have one of the most complete importing establishments to be found in the West today, and are in a better position than ever to fulfill the needs of the stallion men throughout the country. At the present time we have 100 head of imported Percheron, Shire, Belgian and German Coach stallions in our stables. These horses were all imported during the months of August, September and October and are the low-down, heavy-boned kind with lots of quality. They range in age from two to five years, in weight from 1,700 to 2,300 pounds, all the fashionable colors. Write us telling us your wants. All correspondence cheerfully answered. Write for our new catalog. It will be ready for distribution in three weeks.

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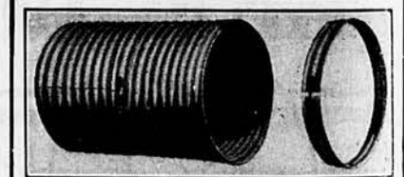


Users of separators write that their cream screw has not been changed in years and that their cream should test now as it did years ago. The fact that the cream screw has not been changed is good reason why the cream test should not be the same as when the separator was new. With use the cream screw wears off and takes the cream farther from the center of the bowl, and therefore produces a thinner cream. Thick cream is produced by drawing the cream from the center of the bowl, thin by drawing from a point nearer the outside, other conditions being equal. The physical condition of the separator affects the cream density. That is to say the longer a separator runs without renewing its bearings, and the more vibration in the bowl the greater the variation, and from this cause alone the cream test will vary one to 16 per cent, or more. Vibration in the bowl may be due to improper oiling, improper adjustment, unsolid foundations, and machine not being properly leveled. Uneven turning of the handle will also cause vibration. Therefore the more the machine gets away from its normal condition and operation the greater the variation. Therefore the fact that a machine has "its screw set as it always had and the machine not in any way changed" as operators write is good and sufficient reason for variation in cream test.

With the separator in good repair and with even speed of crank and bowl, the manner in which the milk supply is fed into the bowl will effect a variation as shown in conclusion No. 5 given above. On milk 3.9 per cent a bowl fed full capacity produced 28 per cent cream, and the same bowl, same speed and same temperature fed half capacity produced cream 36.8 per cent fat. If the machine is fed milk unevenly or if at any time during the run the inlet should be clogged by dirt so that the bowl does not take the full

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inflow of milk wide variation in test of cream delivered must be expected. It may not, in fact is not practical on the farm, to keep the separator bowl worked to its capacity by even feeding or equal pressure of milk on the bowl, but this being so, variation must be expected from successive separations.

Conclusion No. 6 refers to acidity of milk and its effect on cream density. This is not of account when milk is separated at once after milking, but must be considered when the night's milk is held until morning, or vice versa, as is the case on many farms. The more acid milk contains the more the separator bowl will clog, and when the acid is high the bowl will clog as in the case of cold milk. As the separator bowl clogs the cream will gradually become thicker, until complete clogging, when the cream will not flow.

There are other causes than the six mentioned above responsible for varying tests. One of these is imperfect straining of the milk before separating. The milk should always be strained through a fine wire strainer into cans. With this done it is well to tie over the receiving can a piece of reasonably close cotton cloth—one thickness of a flour sack is good. For convenience, fasten with a strap around the can. This will catch all sediment which can be caught by straining, and will give the separator clean milk. A particle of dirt lodging in the opening or tubes of the bowl at any time during the run will vary the density of cream.

Imperfect washing of the bowl will also affect the test. If the openings are not all perfectly clean and free from accumulation the capacity is affected by diminishing inflow or outlet. We have been told that occasional farmers will not wash the separator bowl after each separation. This is filthy practice. Such practice is even criminal, and a severe punishment should be administered in each case. Any farmer or farmer's wife practicing such neglect has no regard for decency or public health. The separator bowl is unequalled as a clarifier of milk. It removes substances which no system of straining will remove, and this matter allowed to remain in the bowl even an hour after finishing the run is an ideal breeding place for millions of the worst kind of bacteria.

It is very rarely possible to place the bowl parts together in the same way two successive times. This is particularly true after the bowl has become worn. This almost impossibility will prevent uniform skimming successively. Care in getting the bowl together in same manner should be exercised, however.

As should be realized from the above, it is impractical under farm conditions to operate the separator in such way that even density of cream can be produced. A separator securing such results is impossible, so long as separation by centrifugal force is employed. The centrifugal force exerted on the milk in the bowl by the motion of the bowl is always influenced by conditions practically impossible to control. It is the part of the separator user to secure as even work as possible, and prevent all the variation in cream test possible. The creamery patron can, by small expense, secure his own tester, and its use will better satisfy him regarding the creamery's treatment, and will give himself an insight into many things of inestimable value concerning his dairy operations. The patron can do much to overcome the fancied prejudice he has regarding the creamery's unfair dealing. The man who knows most about his business is always the best satisfied.

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Shropshire Sale, Wednesday, Dec. 1st, 1 P. M.—For catalog write Mortimer Levering, Secy., Lafayette, Ind.

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### LIVE STOCK NOTES.

(Continued from page 9.)

farmers are not yet justified in disregarding beef entirely. In changing from grain to live stock farming, the 160-acre man should milk good common cows, gradually improving by selection and breeding and when he comes to realize the necessity of real dairying a good start will have been made in that direction. The calves from these cows will produce as good beef as any ever grown on the range and these calves will furnish a profitable market for all the graft consumed.

On the farm with these milk cows may be run a number of cows not fit for milking at some profit. The number of cows milked should depend upon the number of milkers available and if the farm conditions will warrant carrying a larger number of cows and their offspring this should be done.

In live stock farming the hog must not be forgotten. He has a place on every farm, large or small. The hog is a money maker. He converts feed into money quickly and economically when properly handled. He can be easily accommodated and the labor involved in swine husbandry is not great.

With the change in live stock farming will come other changes not here enumerated, but to which reference may be made in another issue. KANSAS FARMER knows that live stock farming is the real money making and satisfactory kind, and is the inevitable pursuit in this section. Think about it and begin to switch in that direction before the poverty of the soil compels you so to do.

Oh, Kansas is dressed in her Sunday best and her gown is alfalfa blue, and she carries a locket around in her pocket she has bought with a steer or two. Adorned with a chain of golden grain, of length, four hundred miles. She's out awheel in her automobile, and she's nothing but nods and smiles.—McCord.

It is wicked to waste the resources of the country. If it is important that our forest and mineral resources be conserved, how much more important is it, that the fertility of the soil be not only conserved, but improved? Forests may, to a great degree, be dispensed with; there are many substitutes for wood, but there must be bread and meat; nothing will take their place. The progressive farmer realizes that conservation, in its most important aspect, must begin at home on the farm.

We are often asked how many chickens can be raised on an acre of ground or how many can be put in a certain sized house, but never asked how few can be raised on an acre with profit or how few can be profitably kept in a house. The tendency is to overcrowd, to have more chickens than you have room for. A gentleman advertised for a coachman and asked the first applicant how near to a precipice he could drive without overturning the carriage. He answered that he could drive within a foot of any precipice without going over. The next one said he could drive within an inch of any such place with perfect safety. The third applicant said he made it a custom to keep as far away from such dangerous places as he could. He was the one that was hired. The great danger in poultry raising is overcrowding, keep as far away from it as you can. Don't try and get as near the danger line as possible without failure, but shun all appearance of overcrowding, and you are bound to be on the safe side.

The secretary of the Kansas State Poultry Association is sending out circulars this week to poultrymen all over the state, urging them to join the association. The dues are only 50 cents per year and for this you get your name and address and the variety of fowls you breed, printed in the premium list of the state show and in the secretary's report to the governor. It is the cheapest advertising any poultryman can get. If you are interested at all in fancy poultry, it will pay you to send 50 cents to the secretary and have your name enrolled among the members. Address Thos. Owens, Sta. B., Topeka, Kan.

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This is one of the finest rifles made for boys. I want you to have one. All I ask of you is a little easy work. Write me today and I will tell you all about the gun and how you can get it.

M. Piper, 120 Popular Bldg., Des Moines, Ia.

**Dairy.**  
(Continued from page 8.)

One meeting of especial importance was that of the National Dairy Union. The efforts of this organization secured some years ago the present oleomargarine law. An effort is being made to overthrow the present law and the reorganization of the Dairy Union means an active campaign for the continuance of the sale of oleo as oleo and not as butter. The newly elected directors are: W. D. Hoard, Fort Atkinson, Wis.; J. A. Walker, manager Blue Valley Creamery Co., Chicago; Hon. James Faust, Dairy and Food Commissioner, Harrisburg, Pa.; S. B. Shilling, secretary National Creamery Buttermakers' Association, Chicago, Ill.; Hon. Geo. L. Flanders, Chicago, Ill.; Hon. Geo. L. Flanders, Albany New York.

Following the reorganization of the National Dairy Union, the American Association of Creamery Butter Manufacturers gave under the supervision of Prof. G. L. Mackay an anti-oleomargarine banquet. More than 250 workers in all of the various phases of the dairy business were in attendance. The speakers were: Prof. Oscar Erf, Ohio; Hon. Colon C. Lillie, Michigan; B. H. Rawl, Chief United States Dairy Division; Gov. W. D. Hoard, Wisconsin; Hon. Andrew French, Dairy Commissioner, Minnesota; Prof. C. F. Curtiss, Iowa; Dr. W. D. Cutler, Missouri Dairy Commissioner; Prof. Crane, Indiana; Jos. Newman, Illinois; G. L. Hubbell, Minnesota; H. E. Van Norman, Pennsylvania; Hon. H. R. Wright, Dairy Commissioner of Iowa; T. A. Borman, editor KANSAS FARMER.

It is the purpose of the National Dairy Union to prevent fraud by those who traffic in oleomargarine, and to do this the present national oleomargarine law must be strengthened and in many instances the state laws governing the sale of this counterfeit be revised. It is well known that the manufacturers of oleomargarine have been violating the national oleomargarine law and retailers have been selling oleo as butter. Yellow oleomargarine is being sold without paying a revenue of 10 cents per pound as provided by law. In permitting such practice oleo can be sold to the innocent consumer

as butter and at the same price. Dairy men have no objections to the manufacture of oleomargarine and selling it as such, but they do to its being sold as butter. In Pennsylvania fully 85 per cent of all the oleomargarine sold passes to the consumer as butter. This is a fraud of the worst kind, no matter what the merits of this counterfeit may be.

Many other features of the show were worthy of mention and these will be considered at a future date. The show was a highly educational institution. It marked the progress of dairy thought and achievement and it is to be regretted that there are not each year in the United States so many seekers for dairy truth as to pack the show day after day.

Professor Kendall, of dairy department of Kansas State Agricultural College was a lecturer. He bought eight or ten of the dairy animals exhibited for his herds at the college. If Professor Kendall can get the money he will give Kansas people a chance to see some good dairy animals in their own state.

Dean Webster of the Kansas State Agricultural College was an interested observer of things in general. He appeared on the programs of several organizations.

Professor Erf, formerly of Kansas, now of Iowa, was a lecturer in the cow demonstration work. Professor Erf gives eight months of each year to teaching in Ohio University and the remaining time to his individual dairy business. He uses a milking machine and sells certified bottled milk.

F. L. Huxtable, city milk inspector of Wichita, with several of the dairymen of his town were in attendance. Huxtable was filling his dairymen with information regarding the value of ensilage, how to produce more milk from few cows and how to make cleaner milk.

### Dissemination of Tuberculosis.

(Continued from page 1.)  
APPEARANCE OF COWS WHICH ARE PASSING VIRULENT TUBERCLE BACILLI.

According to Schroeder and Cotton, cows which are apparently in good physical condition and show no marked symptoms of infection may scatter virulent bacilli in their feces. They explain this by the fact that cows, instead of expectorating, swallow their sputum, and the bacilli being able to preserve their lives and virulence during a passage through the intestinal tract are excreted without having lost the power of infecting other animals. This reasoning appears logical and is substantiated by their results and by the work of the Nebraska Experiment Station.

Many cases of tuberculosis in cattle may exist in which tubercle bacilli do not appear in the feces or in any part of the intestinal tract. Their excretion in this way is not due to a localization of the disease in the intestinal tract for, quoting from Schroeder and Cotton, "It must not be supposed that the occurrence of the bacilli in the feces of cattle affected with naturally acquired tuberculosis is due to an intestinal disease, as tuberculosis of the intestinal mucosa of cattle is an extremely rare affection."

The presence of tubercle bacilli in the intestines is the result of a communication between a tuberculosis focus and the intestinal tract. This might be true in some cases to a sinus from a sloughing gland but it is due in most instances to the swallowing of necrotic, or diseased, tissue eliminated from the lungs. It is the general opin-

ion that in all animals the lungs are by far the most frequent organs affected. It is therefore to be expected that at some stage of the infection most of the reacting cattle will be eliminating and swallowing material which contains the germ.

Cows which harbor extensive tuberculous foci and present a chronic cough of severe grade may still retain a fat, sleek appearance. Although animals which present visible signs of the disease are more apt to have the virulent germs in their manure, we shall, nevertheless, have to suspect every cow on which reacts to the tuberculin test.

### CONCLUSION.

1. Tubercle bacilli may pass through the intestinal tract of cattle and retain their virulence.
2. Tubercle bacilli in the feces of cattle may readily contaminate dairy products and cause infection in hogs.
3. Animal inoculation and a microscopical examination of the lesions produced are necessary to definitely establish the presence of tubercle bacilli in cow feces.
4. Ingestion experiments with hogs, previous proved to be free from the disease by application of the tuberculin test, are valuable means of demonstrating tubercle bacilli in the manure of cattle.
5. Hogs should not be permitted to run in the same pens with cattle, especially if the latter are known to be tuberculous.
6. Dairy products from tuberculous cows, even though there is no infection of the udder, are a source of danger to man.
7. The number of tuberculous cows which show no symptoms of disease, but which excrete virulent tubercle bacilli in their manure is sufficiently large to make this an important factor in the control of tuberculosis.

## MARKETS

### KANSAS CITY LIVE STOCK MARKET.

Kansas City Stock Yards, Nov. 1, 1909. —The cattle supply last week totaled 84,000 head, including 13,000 calves. As usual since the proportion of cattle from distant range points has been large, the run was distributed all through the week, better than when the supply comes from nearby territory. Prices advanced 10 to 25 cents on beef steers the first of the week, but lost the greater part of the gain before the week closed, cows and heifers closed 10 to 15 higher, and calves suffered a big break, closing 50 cents to \$1.00 lower for the week. The run today is 19,000 head, market steady to 10 lower on steers, steady on she stuff, and a quarter higher on calves. Stockers and feeders exhibited their customary strength the first of last week, and lost as usual after the middle of the week and the close was mean, inasmuch as owners were unable to sell all their stuff, even after reductions had been made. The market on country grades is slow today, but steady. Prime Nebraska steers reached \$9 here last week, but this is hardly a criterion for anything except very long fed stuff, bulk of the fed steers selling today at \$5.25 to \$7, top for the day \$7.75, paid for some yearlings. Grass westerns sell at \$2.75 to \$5.50, grass cows and heifers \$3.00 to \$4.50, heavy cows \$4.00 to \$4.50, bulls \$2.75 to \$3.75, calves \$3.25 to \$6.25, best feeders \$4.90 to \$5.40, fair to good feeders \$3.90 to \$4.75, bulk of stockers \$3.80 to \$4.50, medium to common stockers downwards to \$3.00.

The hog run last week was fairly good at 67,000 head, which was nearer the total for corresponding week a year ago, 81,000 head, than any week has succeeded in reaching before this fall. The market had a strong tone last week, and closed with a small gain for the week. Run is 11,000 here today, market 5 higher generally, some sales of light hogs 10 higher, heavy hogs today at \$7.70 to \$7.85, weights from 200 to 250 pounds at \$7.60 to \$7.85, light hogs \$7.30 to \$7.75. Pigs for roasting are in good demand, at \$6.50 to \$7.25, as owners are not sending in any great number of pigs now. Should the market hold anywhere near where it is now, feeders will realize 75 cents per bushel for corn fed hogs, and pigs at present prices look like a sacrifice.

Sheep and lambs were a little lower last week, prices off 10 to 20 cents, but the market is stronger today, and it looks like there would not be any great declines soon. Run is 10,000 here today, top lambs at \$6.80 fair to good lambs \$6.40 to \$6.75, feeding lambs \$5.75 to \$6.25, fat wethers and yearlings \$4.40 to \$5.00, fat ewes \$3.90 to \$4.50, breeding ewes \$4.50 to \$5.00.

### HIDE MARKET.

Furnished by James C. Smith Hide company, 108 E. Third street, Topeka, Kan. Below prices are for week ending November 6, 1909, while they may not prevail for week following they will give you a very close idea of prices which will prevail. No. 1 G. S. bull hides 13c, No. 2 G. S. hides 12c; No. 1 G. S. bull hides 11½c, No. 2 G. S. bull hides 10½c; G. S. side branded hides (under 40 pounds) 10c; No. 3 G. S. hides 7c; deacons dry flint hides (heavies), 17c; dry flint, 35c to 50c hides (lights), 17c; dry flint calls, 11c; dry salt hides (over 18 pounds), 11c; dry salt hides (under 18 pounds), 11c; No. 1 G. S. horse hides (according to length and condition of wool), 35c to \$1.00; dry flint sheep pelts, 10c to 12c per pound.

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When you buy other roofings you buy roofing material whose probable durability is vague and indefinite. When you buy Congo (3-ply) you buy ten years of assured protection, and the guessing does not begin till after the guarantee term expires.

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320 a., perfectly level, 200 a. in wheat, 4 miles from two towns .....\$20.00 a.  
488 a., very fine, not a foot of waste.....\$12.50 a.  
160 a., 12 miles out, very fine.....\$11.00 a.  
These are special bargains. Write ma. **H. D. HUGHES,** McDonald, Kansas.

320 acres of perfectly level land. 160 acres in cultivation. 160 acres in pasture good improvements, close to school, on telephone line and Rural Route. Terms on \$2,000.00 if desired. If interested please write for full complete description.  
**EDWIN LYMAN, McDONALD, KANSAS.**  
\$20 PER ACRE.

## KANSAS LAND

**WHY NOT BUY LAND** of the owner and save from \$5 to \$10 on the acre? Land of all descriptions from \$3.50 per acre up. Send for circular and come and see us. **G. N. DAVIS & CO.,** Cimarron, Gray Co., Kan.

**BEST FARM IN JACKSON COUNTY** for the money. 287 acres, 200 under plow, 25 acres alfalfa, rest pasture, \$10,000 worth of improvements, half mile from town. Price \$30.00 per acre.  
**MANVILLE & BAILEY,** Holton, Kansas.

**SOUTH-CENTRAL-KANSAS ALFALFA LAND.**  
320 acres, near good town and school best soil for corn, wheat and alfalfa. Large improvements. A beautiful home for \$19,000. Liberal terms. Write for others.  
**J. S. SMITHSON & CO.,** Anthony, Kan.

**THE BEST TOWN TO LIVE IN.**  
If you would like to live in the most beautiful city in the West, with unsurpassed education, business and religious advantages, in a city clean, progressive where real estate values are low, but steadily advancing, where living expenses are reasonable, a city with natural gas at lowest prices, address the Secretary of the Commercial Club, Topeka, Kan.

160 acre farm, good improvements, house worth \$4,500; best orchard, 1 1/2 miles from good town, high school. Smooth, rich corn, and alfalfa land, corn is making 50 and 60 bushels this year. Good terms. Price \$94 an acre. Write to  
**V. J. BOSE,** Marion, Kansas.

**NESS COUNTY LAND.**  
320 acres, 10 miles from Ness City, 100 acres in cultivation, 4 room frame house, barn, well and wind mill, some good alfalfa land, place is all fenced, land lays good, and in good locality. Price \$16.00 per acre. \$2,000 cash, three to five years time on balance.  
**LOHNES & OASON,** Ness City, Kansas.

**SCHUTE & SHINEY,** the Rush county Kan., real estate hustlers; 30 years in the same old place. Good farms raised from 26 to 47 1/2 bushels of wheat per acre here last season. We can sell this land at from \$20 to \$25 per acre. Good improved ranch land, 1/2 good farm land, at \$15 per acre. Good bottom land not over 5 miles from market at \$25 to \$35 per acre. Well improved and running water, plenty of timber. See us, or write us at La Crosse, Kan.

**KANSAS CORN, WHEAT AND ALFALFA LAND.**  
Beautiful Smith Co. improved farms and 20,000 acres unimproved land in Comanche Co. now being surveyed and ready for settlement in a short time. Buy now at reasonable prices and terms. Double your money before long. Can use some good paper on approved securities as cash. Write me and do it now, for list, descriptions and prices.  
**CARL G. ANDERSON,** Athol, Kansas.

**SPLENDID FARM IN WILSON CO.**  
Within a few miles of city, 142 acres of first class land, 2 sets of improvements, consisting of frame house and large cattle barn, new brick house and large barn, part in cultivation, balance alfalfa and clover, never failing water. Come and see this farm or write for particulars. Can be bought for less than actual value. Price \$12,500.  
**W. T. DEWESE,** Neodesha, Kansas.

**SOLOMON VALLEY LAND.**  
We have farms for sale in Ottawa and adjoining counties, good upland improved, at from \$25 to \$60 per acre. Bottom land improved at from \$60 to \$125 per acre. You have not seen the best till you see the Solomon Valley.  
**A. E. ROBINSON LAND CO.,** Minneapolis, Kansas.

**TWO GOOD BARGAINS.**  
**TWO BIG BARGAINS IN KANSAS LAND.**  
240 acres smooth prairie land, 5 miles from Dodge City; price \$18 per acre. 1600 acres near Perry, Jefferson county, Kansas, partly improved, price only \$40 per acre. For information write  
**HALE & ENGLISH,** Dodge City, Kansas.

**GREENWOOD COUNTY LAND.**  
160 acres about 1/2 in cultivation, and 1/2 in native grass; small improvements; 3 1/2 miles from one town, 4 to another; price \$35 per acre; \$1,000 cash; balance at 6 per cent.  
**G. K. JACKSON LAND CO.,** Eureka, Kansas.

**CHEROKEE COUNTY BARGAIN.**  
160 acre farm, 65 acres in cultivation, 60 acres prairie grass, 35 acres pasture, good 6 room plastered house, large new frame barn with basement. Well fenced, good water, on R. F. D. Price \$35.00 per acre. We will carry two thirds of the load, long time at 6 per cent. Write  
**THE CONQUEROR TRUST CO.,** Joplin, Missouri.

**TWO REPUBLIC COUNTY SNAPS.**  
800 acres 3 1/2 miles from Wayne, 9 mi. county seat, 1/2 good farm land, balance pasture, 200 a. cultivated, fair house, 2 good barns, 75 a. alfalfa, 60 a. hog tight, timber, running water. Price, \$45 per acre. Consider smaller tract near Kansas City. 160 a., 2 mi., Wayne, fair improvements, timber, running water, some alfalfa. For other bargains write or see  
**B. J. GEORGE,** Wayne, Kan.

**CLOUD COUNTY LAND.**  
313 acres, a fine bottom farm in the Republican valley, 3 miles from the best market in Cloud Co. Terms to suit purchaser. 30 acres of growing wheat, 80 acres of pasture, the balance in corn ground; best in the state. Call on or write  
**J. C. MURPHY, Real Estate Agent,** Clyde, Kansas.

## KANSAS LAND

**ROOKS COUNTY LAND**  
One Hundred Farms for sale. Write for lists  
**C. H. DEWEY, -:- Stockton, Kan.**

**A HOME.**  
For you at a bargain price, 320 acres the level land. For particulars write to  
**WINN REALTY CO.,** Jetmore, Kansas.

**160 ACRES 3/4 FROM DIGHTON.**  
80 acres level wheat land, balance pasture. A few acres alfalfa land, at \$1000 on fifth cash, balance 4 equal payments. Write for list.  
**WARREN V. YOUNG,** Dighton, Lane Co., Kansas.

**CLAY COUNTY FARMS.**  
If you want a choice farm or stock ranch at prices ranging from \$25 to \$100 per acre, call on or address  
**ERNEST PINKERTON,** "THE PIONEER LAND MAN," Clay County, Kan.

**Buy Western Kansas Land**  
Should you want to buy any Western Kansas land for speculation or for a home don't fail to write me. I am selling land throughout all counties in western Kansas. I am myself farming extensively on the kind of land I offer for sale. I can sell you land that will make you money. Write me at once for prices. Address,  
**EUGENE WILLIAMS,** Minneola, Kansas.

**HELLO FARMERS!**  
Have you read my list of GREENWOOD CO FARMS? The best corn, alfalfa, clover cattle and hog country in the west. Fine blue stem pastures. Write for list and prices to **P. D. STOUTON,** Madras, Kansas.

**160 Acres—\$50 Per Acre**  
160 acres well improved. 100 acres in cultivation, 30 acres pasture, balance meadow and timber. 1/2 mile from school of R. F. D., two good wells, creek runs on land. Price \$50 per acre. Write the owner  
**Box 315, Neodesha, Kan.**

**Every Man is Entitled to a Slice of This Good Old Earth.**  
Some Are Getting It; Some Are Not. Are you one that is not? You can get a slice from \$10 to \$20 per acre in the wheat belt, where they have fine soil, fine climate and plenty of water. If you will write **TEED & ORBISON,** Jetmore, Kan. for their list of farm lands. They have something good.

**Sumner Co. Kansas Land for Sale**  
Wheat, oats, corn, alfalfa and hogs. All kinds of fruit and berries do fine. Abundance of water. Fine climate. Farmers get rich here; so will you. Prices \$30 and up. Write us, information free. List your stock of merchandise for exchange.  
**H. H. STEWART & SONS,** Wellington, Kansas.

**BARGAINS IN ANDERSON COUNTY.**  
187 acre farm in Anderson Co. Kan. 10 acres of choice creek bottom land in cultivation, 45 timothy and clover, 25 timber, balance pasture, 7-room house, stable 16x24, corn crib, granary, 1 mile to school, rural mail, price \$37.50 per acre.  
360 acres, Anderson county, Kan., 4 miles from Welda and Colony, 200 acres in cultivation, balance meadow and pasture, nice 7-room house, good barn, fine orchard, rural mail, telephone, price \$35 per acre. This is a splendid stock farm. Let us show them to you.  
**SPOHN BROS.,** Garnett, Kan.

## EXCHANGE COLUMN

**If You Want**  
a quick deal, list your trading property with us. We trade while the other fellow sleeps. We have exchanges for land, merchandise, live stock, or anything of value. Try us.  
**NEFF REALTY CO.,** Olathe, Kansas.

**Trades Wanted**  
direct from owners of farms, ranches, income property, merchandise, and hardware, stocks, hotels, livery stocks. List your property with us, giving complete description. We can get what you want. No sale, no pay. Buyers wanted for good farms.  
**BERSIE REAL ESTATE AGENCY,** Eldorado, Kansas.

**500 TRADES.**  
We have the largest list of farm merchandise, income property, merchandise, hardware, hotels, livery, etc., of any firm in the West. We print description of your property on our list, and we will get you a good honest trade of just what you want.  
**GRAHAM BROTHERS,** Eldorado, Kansas.

**FOR SALE OR TRADE** for stock of merchandise. 80 acres, all under cultivation, 60 acres ready for wheat. Fenced but no other improvements. Price \$2,500. Also 6 room residence, good frame barn 32x24 with loft; 1/2 block in fine fruit trees, on half bearing; four blocks from postoffice. Price \$3,000. Address owners, **J. C. LOHNE & Son,** Ness City, Kansas.

KANSAS LAND

COWLEY COUNTY FARM. 160 acres, good six room house, about 80 acres bottom, never falling water, 12 acres alfalfa, 60 acres corn, close to school and church. Price \$7,500. Terms if desired. H. A. GILMER, Arkansas City, Kan.

POTTAWATOMIE COUNTY LANDS. Pottawatomie county is the best all round section of country for diversified farming in the state. Our land is cheap. Write, J. F. LEONARD, Kansas. Olburg.

BUY A HOME CHEAP. We are showing lands in the Lost Mountain section of Canada at prices ranging from 10 to \$20. Low excursion rates twice a month. Write for full information. NELSON BROS., Clyde, Kansas.

320 ACRES CHOICE ROOKS COUNTY LAND, \$6,800. Nearly all tillable. Some in cultivation. 6 miles from station. STEVENS & RUBY, Stockton, Kansas.

200 ACRES IN Marshall County, Kan. Three-fourths miles from town, 100 acres in second bottom land, 100 acres in cultivation, balance pasture, 7 room house, cellar, small barn. Cattle shed, hog house, orchard, well and windmill. A bargain at \$90 per acre. Good terms. SUMMERFIELD REALTY CO., Summerfield, Kan.

BOURBON COUNTY FARM BARGAIN. 160 acres, 4 miles north of Fort Scott, Kan. 65 acres in cultivation, 40 acres wild and tame meadow, 55 acres pasture, practically all tillable, good 5 room house, barn, abundance of water, near school, on R. F. D., telephone. Small orchard and grove. Price \$50 per acre. We have others. Write for list. MURPHY & SIMPSON, Fort Scott, Kansas.

REPUBLIC COUNTY LAND. 25 farms in this county for sale; ranging in prices from \$50 to \$75 per acre. Choice corn wheat and alfalfa land bargains. Write for information, on call on. J. G. HELWICK, Belleville, Kan.

FARM UNDER PRICE. 320 acres, 100 acres in cultivation, balance in grass; located 6 miles from good R. F. town, 2 miles from post office on R. F. D. and phone in house, 1 mile to school; in Butler county, Kansas, 40 miles from Wichita. Improved with good 4-room house, barn 24x30, granary, crib, etc., fenced and cross-fenced, has good wells of fine water. Price, \$35 per acre. This is a bargain. Land joining it selling for from \$40 to \$50 per acre. This must sell. See The Nelson Real Estate & Img. Co., 137 N. Main street, Wichita, Kan.

44,000 ACRES. Just put on the market in Texas close to the Simmons property, lays fine and a black sandy loam. We will sell the entire tract for \$10 per acre. A fine colonization proposition for someone who can handle this tract. 150 acres acres, 2 miles from a good town in McPherson county, Kansas, well improved, 100 acres under cultivation. Price, \$5,500. Fifteen quarters in Hodgeman county, fine for a ranch. Price \$7.50 per acre. CHAS PETERSON, 18 1/2 N. M. St. Hutchinson, Kan.

GREAT ALLEN COUNTY BARGAIN. 340 acres, 230 acres under cultivation, 50 a. in timothy meadow, 60 a. pasture, living water and good shade for stock. Has a good 5 room house and splendid water. Barn for 14 head of stock, 20 ton hay, 1,500 bushels grain, good orchard and all kinds of small fruit. This farm is well fenced and is a good producer. Can be sold on terms. This fine farm is located 4 1/2 miles from the new town of Mildred, where the new million dollar cement plant is located which insures the best market in the country. This is one of the best propositions ever advertised for the money. If you want a bargain write or call on WILSON & WOOD, Moran, Kansas.

To Farm Buyers. 151 acres, one mile to center of good town half mile to school. Lime stone soil, black and rich. 115 acres in cultivation, 35 acres grass. Fine water, common buildings, bearing orchard, small fruits. Price \$37.50. Easy terms. L. B. DAVIS & SON, Elk City, Kansas.

MISSOURI LAND FARMS FOR SALE in South Missouri. I have several good farms for sale on easy payments from \$5 to \$10 an acre. Please write me for full particulars. WILLIAM BOWEN, Houston, Missouri.

Ozark Fruit Farm For Sale. 120 acres, 60 acres in cultivation, balance fine timber. Good 8 room house, 3 fine springs, fine apple orchard, large thrifty trees, other fruits. 1 mile from town. Good reason for selling. Price \$1000 Write me for full particulars. JOHN D. BAKER, Ava, Douglas County, Missouri.

OREGON LAND ENGLISH WALNUT LANDS For sale in Yamhill county, Oregon, 40 miles from Portland, both water and railroad transportation, 5 and 10 acre tracts; 10 per cent down and 2 per cent per month. These tracts are already planted and we will care for them four years free of charge. Write for further particulars. Address FRED A. WALKER REALTY CO., 133 N. Main Wichita, Kan.

FIELD NOTES

FIELD MEN.

O. W. Devine.....Topeka, Kan. Jesse R. Johnson.....Clay Center, Kan. J. W. Johnson.....Beloit, Kan.

PURE BRED STOCK SALES.

Nov. 9—J. C. Robison, Towanda, Kan. Nov. 11—Percheron Breeders' Sale at Manhattan, Kan. Will H. Rhodes, Manager. Nov. 15—J. H. Miller, Kirksville, Mo. Nov. 16, 17—Lakewood Farm, Rock Rapids, Ia. Sale at Sioux City. Nov. 18—Closing out sale M. A. Low, Horton, Kan. O. M. Keats, Manager.

Draft Horses.

Nov. 26, 27, 28—Percherons, Belgians, French Draft, Shires, Clydes, Trotters, at Bloomington, Ill. C. W. Hurt, manager, Arrowsmith, Ill.

Trotters, Saddle and Drivers.

Nov. 18—Closing out sale, M. A. Low, Horton, Kan. O. M. Keats, Manager.

Jack and Jennets.

March 1st and 2nd—Monsees & Son, Smithton, Mo. March 1-2—L. M. Monsees & Son.

Marriage Muleys.

Nov. 18—John Marriage, Mullinville, Kan.

Jersey Cattle.

Feb. 15—O. P. Dovel, Auburn, Nebraska.

Herefords.

Nov. 12—Breeders' Sale Company, sale at Bloomington, Ill. C. W. Hurt, manager, Arrowsmith, Ill. Nov. 16—Shawnee Breeders' Association, L. L. Vrooman, manager, Topeka, Kan.

Shorthorns.

Nov. 9—Breeders' Sale Company, sale at Bloomington, Ill. C. W. Hurt, manager, Arrowsmith, Ill. Nov. 17—Shawnee Breeders' Association, L. I. Vrooman, manager, Topeka, Kan. Nov. 19—A. M. Jordan, Alma, Kan. Nov. 26—C. S. Nevius, Chiles, Kan. Feb. 24—Glover & McGlynn, Grandview, Mo.

Polled Durhams.

Nov. 10—Breeders' Sale Company, sale at Bloomington, Ill. C. W. Hurt, manager, Arrowsmith, Ill.

Aberdeen-Angus.

Nov. 11—Breeders' Sale Company, sale at Bloomington, Ill. C. W. Hurt, manager, Arrowsmith, Ill. Nov. 23—W. F. Eckles, Green City, Mo.

Holstein-Friesians.

Feb. 8-10—Henry C. Glesman, Station B, Omaha, at South Omaha, Neb.

Poland Chinas.

Nov. 19—A. M. Jordan, Alma, Kan. Nov. 27—G. W. Roberts, Laredo, Kan. Jan. 7—B. M. Bell, Beatrice, Kan. Jan. 19—H. O. Sheldon, Wichita, Kan. January 22—H. B. Vanhooser bred sow sale, Eldon, Mo. Jan. 27—F. G. Nies & Son, Goddard, Kan., sale at Clearwater, Kan. Feb. 12—D. A. Wolfersperger, Lindsay, Kan. Feb. 15—C. H. Plicher, Glasco, Kan., at Concordia, Kan. Feb. 16—J. H. Harter, Westmoreland, Kan. Feb. 23—G. S. Hamaker, Pawnee City, Neb. Feb. 25—Chas. O. Parsons, Clearwater, Kan. Feb. 25—Lee Gress, Nelson, Neb., and John Barnard, Angus, Neb., at Nelson, Neb.

Durocs.

Nov. 16—F. T. Hadachek, Wayne, Kan. Nov. 20—S. W. Alfred & Son, Sharon, Kan. Nov. 20—S. W. Alfred & Son, Sharon, Kan. Nov. 27—F. G. McDowell, Corning, Kansas Jan. 11—W. M. Putman, Tecumseh, Neb. Jan. 31—J. E. Jones, Clyde, Kan. Feb. 1—Pearl H. Pagett, Beloit, Kan., and R. G. Sollenbarger, Woodston, Kan. Combination sale at Concordia, Kan. Feb. 2—E. M. Myers, Burr Oak, Kan. Feb. 3—Elnhart & Slagle, Smith Center, Kan. Feb. 4—W. C. Whitney, Agra, Kan. Feb. 7—Frank Elder, Green, Kan. Sale at Clay Center, Kan. Feb. 9—Samuelson Bros., Cleburne, Kan. Feb. 9—Miner & Cross, Guide Rock, Neb., at Superior, Neb. Feb. 10—Samuelson Bros., Blain, Kan. Feb. 14—R. B. Marshall, Willard, Kan. Feb. 17—Thompson Bros., Garrison, Kan. Feb. 18—T. E. Goeths, Leonardville, Kan. Feb. 21—W. T. Fitch, Minneapolis, Kan. Feb. 22—Pearl H. Pagett, Beloit, Kan. Feb. 23—F. G. McDowell, Corning, Kan. Feb. 23—R. G. Sollenbarger, Woodston, Kan.

Berkshires.

Feb. 15—F. T. Hadachek, Wayne, Kan.

Combination Sales.

Dec. 11-12—End Fine Stock Show and Sale. F. S. Kirk, Manager, Enid, Okla. Feb. 16, 17, 18—Mitchell County Breeders' Association, Beloit, Kan.

International Sales.

Nov. 30—American Hereford Breeders' Association, Chicago, Ill.

Pearl H. Pagett, Beloit, Kan., is offering a few choice March and April boars and a few choice gilts of the sale age. Mr. Pagett guarantees everything just as he describes it, and you can't miss it by giving him an order by mail for a boar or gilt. His herd boars, Bonnie K 47076, Lincoln Chief 77656 and Put's Model 61863 are three great breeding boars, and with the great sows that are in this herd make it one of the really great herds of Durocs in the central west. If you can use a well grown out and extremely well bred young boar at a very moderate price you had better write Mr. Pagett at once.

The Kansas Farmer representative recently visited Riverside stock farm, Chapman,

KANSAS LAND

MARION, MORRIS AND DICKINSON county, Kansas lands. Bargains in improved farms at prices ranging from \$45 to \$80 per acre. Write for big list. T. C. COOK, Lost Springs, Kansas.

SHARON VALLEY ALFALFA FARMS.

Choice corn and alfalfa farms for sale in Barber county, Kansas. Crop failures unknown. Write for particulars and list. Address WILLIAM PALMER, Medicine Lodge, Kansas.

800 ACRE BARGAIN IN NESS COUNTY, KANSAS.

Only 1 1/2 miles from Ness City, all in cultivation and will all be sown to wheat and 1/4 crop goes to purchaser. Price for a short time \$25 per acre, look this up, a genuine bargain. Let us send you our land list. KIRBERG & MILLE, Ness City, Kan.

100 FARMS FOR SALE.

200 acres adjoining Horton, one of the best locations in Eastern Kansas. \$80 per acre. This is a real bargain. Write for complete description. McCORMACK & FRIEND, Horton, Kansas.

A 240 ACRE BARGAIN.

Anderson county, Kansas. 7 room house. Telephone, R. F. D., 1/4 mile from Kincaid. Good orchard, abundance of good water. All tillable, all fenced and cross fenced. Price \$50 per acre. V. C. ARCHER, Colony, Kansas.

CO. HIGH SCHOOL PRIVILEGES FREE with our farms. We have farms of all sizes, improvements to suit. Some we can sell on small cash payment. For a special bargain, we offer, 12 acres 2 miles from Altamont, 4 room house, fair barn for 6 head, good water, well fenced, in fine neighborhood. 35 acres farm land, 55 acres pasture. Price for quick sale \$3,800. NEWHOUSE & SON, Altamont, Kansas.

FARMERS, BUY LAND WHERE IT PAYS RETURNS.

640 acres, 11 miles from town in famous Cheyenne Valley perfectly smooth choice land. This section will sell for \$20.00 per acre within 12 months. Get busy if you want it at \$18.00 per acre. Cash. W. O. FALLIS, St. Francis, Kansas.

GET REPORTS ON CHEYENNE COUNTY CROPS THIS YEAR

Then write W. O. Fallis about a 640-acre wheat, alfalfa and corn farm, one-half mile from St. Francis. 350 acres on river bottom, 30 acres alfalfa, 300 acres under cultivation, large barn and other improvements. Plenty running water, timber and fish. Price \$29.00 per acre. Good terms.

ARE YOU LOOKING FOR A HOME.

No farmer should think of buying a home before seeing a copy of THE FARM AND REAL ESTATE JOURNAL. It contains the largest list of farm lands, city property and stocks of goods of any paper published west of Chicago. It reaches 50,000 readers each issue, 85 per cent of whom are farmers. Every one who has any property they wish to advertise will find this journal one of the best advertising mediums published. Advertising rates 2c per word each insertion. Send 75c and we will mail you the Journal for one year, or for 10c in silver or stamps we will send it for two months on trial and stop it at the end of the two months unless you renew your subscription. FARM AND REAL ESTATE JOURNAL, Traer, Iowa.

DOES THIS SUIT YOU?

200 acres, Cherokee Co., Kan., 12 miles west of Joplin, splendid roads; 75 acres in pasture and grass, 5 acres in orchard, yard and stock lots, 80 acres in cultivation; 40 acres sown to grass last spring; hedge and wire fence; every foot tillable, no rock or waste land; lays fine; good bearing orchard, good 8 room house, cellar, smoke and chicken houses, corn cribs, hog sheds, barn 24x48. An ideal home in a good community and a rich country. The price is only \$50 per acre; half cash, balance on liberal terms if desired. The owner has made enough money to retire. SHARP REALTY CO., Wichita, Kansas.

KINGMAN COUNTY LANDS

Banner wheat and corn county of the state. Write for selected list. Brown Real Estate Co, Kingman, Kan.

Hodgeman County Lands.

Choice wheat and ranch lands. Write for price list and county map. F. M. PETERSON, Jetmore, Kansas.

COWLEY COUNTY FARM

440 acres, 11 ml. from Winfield, 5 miles from Townsend. 100 acres cultivated, balance blue stem pasture, living water, good buildings, orchard, alfalfa, prairie hay, fine grain and stock farm. Price \$13,500, good terms. CHAS. N. PAYNE, Hutchinson, Kansas.

HOMESEEKERS

Send for copy of the southeastern Kansas Homeseeker, the best land journal published. It's free to those wanting homes or investments. We make a specialty of lands on small payments and easy terms. Address THE ALLEN COUNTY INVESTMENT CO., Longton, Kansas.

Good Things to Buy

80 acres, fenced, good land, 14 miles from Wichita, \$55 per acre. Also 140 acres same. These are the two best buys on a large list. I. B. CASE & CO., Wichita, Kansas.

COLORADO LAND

IRRIGATED FARMS FOR SALE. In the famous Arkansas Valley of Colorado and the Pecos Valley of Texas, reasonable prices, good farms. If you want a money making investment or an ideal home write for further information. J. F. CURRY Lamar, Colo.

KANSAS LAND

HALE THE LAND MAN can sell you Saline and Dickinson county farms for \$30 to \$95 per acre. Also cheap farms in Caddo Co., Okla. T. E. HALE, Solomon, Kansas.

RICE COUNTY BARGAIN.

160 acres, one mile of town, 50 acres alfalfa, choice farming land, highly improved. Price for 30 days only, \$17,500. Write me for anything you want in central Kansas. W. W. BARRETT, Sterling, Kan.

CHOICE FARMS NEAR Emporia. 80 a. near school and town, extra good upland, \$5,000. 160 near school and station on Santa Fe, \$50. 120 near school and church, \$5,000. A large list of trades and city property. Write me. H. L. DWELLE, Emporia, Kan.

BARGAIN IN WASHINGTON county land. 430 acres creek bottom under cultivation, 4 miles from Washington, 1 mile to school, 2 sets of improvements, good water. Price \$55 per acre. W. J. GORDON, Washington, Kan.

A 30 DAY BARGAIN.

42 acres, adjoins Baldwin, the home of Baker University. 400 bearing apple trees, balance good farm land. \$4,200 if sold in the next 30 days. Write, Wm. M. Holliday, Baldwin, Kan.

MONTGOMERY COUNTY FARMS.

Montgomery county is second in population and 5th in wealth in Kansas. Write for list of choice farm bargains and prices. W. J. BROWN & CO., Independence, Kan.

EASTERN KANSAS FARM BARGAIN.

166 a., 3 1/2 miles from town, 75 a. cultivation, 2 a. orchard, balance native grass, 5 room house, good cellar, barn for 8 horses with left, other out buildings, good water, close to school, R. F. D. and phone, farm on main traveled road. Price \$45 per a. For particulars write J. C. RAPP, Osage City, Kansas.

240 ACRES TO THE HIGHEST BIDDER.

On or before Nov. 20, we will sell to the highest bidder, 1/4 cash, balance long time 6 per cent, one of the finest farms in Anderson county, Kan., good house, barn, shade trees, close to school and R. R. town, best of corn and clover land. Come at once. LINEBACK BROS., LeHarpe, Kansas.

Good Bargains

Six room house. Eighty acres of valley land, balance good mow land and good pasture and orchard, for family use. Price \$4,000. And I have several other good 80-acre and 160-acre and so on up to 640 acres, and several large ranches. WM. FORBES, Fall River, Kan.

READ THIS.

160 acres two miles northeast of Fredonia; about 1/2 under cultivation, a part of which is in alfalfa, timothy and clover. Balance is pasture and meadow. Plenty of good stock water; good 5 room house; large barn; improvements in good condition. This is one of the best farms and is in a good neighborhood, nicely located. Close to school and town and a bargain at \$40 per acre. Address C. R. CANTRAIL, Fredonia, Kansas.

OTTAWA COUNTY FARM BARGAINS.

Nice little 80 acres, 6 miles out \$2,600. Fine 120 acres, 4 miles out, fair improvements, mostly smooth, black soil at \$5,000. A dandy half section, 5 miles out, 16 miles from Salina, half in cultivation, nearly all could be farmed, black loam, lies fine, plenty good water, 2 windmills, lots of fencing, fair improvements. A bargain at \$40 per acre. We have others. Come or write. SHEPARD & HOSKINS, Bennington, Kansas.

AN IDEAL FARM FOR SALE.

Kansas farm of 300 acres, adjoining a flourishing railroad town, forty miles west of St. Joseph, Mo. The soil, naturally rich, has been made more fertile by twenty years of judicious crop rotation, and by the liberal application of manure; well watered, fine walnut timber, finest blue grass pastures, alfalfa, timothy and clover meadows; finest corn and wheat land; well fenced; hay, cattle and horse barn for a large amount of live stock; large silo, water tanks, granary, fine mill, etc. A model stock or grain farm, ready for use. An excellent opportunity. For complete information address K 225, care Kansas Farmer, Topeka, Kan.

A GREAT FARM SALE

Of the very finest farms in this country. 160 a., 16 ml. Topeka, 2 1/2 ml. level road to town, main line Santa Fe, fine 6 r. house, new barn 40x48; another 30x46, good orchard, 40 a. hog tight, not one acre rough or waste land, rich soil, must be seen to appreciate. Price \$75 per acre. No. 1. 80 a., 8 ml. Topeka, one fine wagon road, 1 1/2 ml. station, 7 r. house, fine new barn, no waste land, rich soil, most beautiful slightly location in county, school, orchard, alfalfa. Price \$10,000. No. 23, 160 a. wall imp., 16 ml. Topeka, 3 1/2 ml. station, \$7,500; \$6,500 cash. No. 17. 146 a. highly imp., rich valley land, 19 a. alfalfa, \$9,500. No. 16. Write for list; we have the farms. WINGETT LAND CO. A. J. White, Farm Salesman, 109 W. 6th Ave., (Stormont Bldg.), Topeka, Kan.

Oklahoma lands are good investments.

They are continually increasing in value. Look up the many bargains under that head in this issue.

KANSAS LAND

SPLENDID IMPROVED FARM.

\$8,000 will buy 7 1/2 acres of good second bottom land, 60 acres in cultivation, good new 5 room house, cellar has sand rock floor, good out buildings, close to railroad, school and church. On R. F. D., telephone and gas line. Perfect title, no incumbrance. Rents for \$400 the year. Write

LEROY N. WALLING, 1007 Massachusetts St., Lawrence, Kan.

FARMS FOR SALE NEAR WICHITA.

240 acres, 13 miles from Wichita, Kansas, and 1 1/2 miles from Clonell, Kansas, on the Orient railroad, all level land, black soil, all in cultivation, 7-room house, barn for 10 horses, granary, chicken house, well and other improvements. Price \$55.00 per acre. We have a large number of well improved farms. Write for our list.

V. L. MOORE & CO., Opposite Postoffice, Wichita, Kan.

SEDGWICK CO. FARM BARGAIN.

For Sale: 480 acre farm, level dark soil, 800 a. in cultivation, 180 a. in pasture. Good 11 room house, large barn 32x56 ft., also good tenant house and barn, close to good market town, and 18 miles of Wichita, price only \$24,000. \$8,000 cash will handle this, balance at 6 per cent interest 5 years.

BEATTY REALTY CO., Opposite Post Office, Wichita, Kan.

AN EXTRA FINE FARM.

240 acres, 1 1/2 miles from shipping station, 5 miles from good town, on R. F. D. and telephone, 140 acres under cultivation, 100 acres in pasture, land in extra fine condition. Large house, large cattle barn, 40x52, large horse barn 40x50 all new. Fine young orchard, 2 acres of timber. Lots and all fences in best of condition. Price \$50 per acre.

T. F. COLLINS, Harris, Kansas.

PAWNEE COUNTY FARM.

560 acres for sale. 10 miles south of Nekoma, 8 miles of Rozel. Good house and barn. Granary for 4,000 bushels of grain. Two wells, two windmills, all fenced and cross fenced. 20 acres hog tight fence, about 400 acres in cultivation. 15 a. of alfalfa. 160 a. of alfalfa land. 30 ft. to water. This is a good farm and will bear inspection. Price \$40 per acre. \$15.00 cash, balance terms.

G. A. ROSE & SON, No. 5 Sherman East, Hutchinson, Kan.

COOK FOUND IT?

A 1680 acre ranch for \$6500. Over 300 acres in cultivation, all fenced and cross fenced, new house, cow stable, cattle sheds, barn, cave, 3/4 acre garden, fenced. Well, windmill, 3 tanks, phone, over 7 miles of fencing, only 4 miles of town and railroad. No trades. Send for plat. Address

STINSON & WEYAND, Spearville, Kansas.

NEMAHA COUNTY 200 ACRES—7 miles from Corns. Large 2-story, 7 room house, two barns, cattle sheds and hog houses. 20 a. fine alfalfa, 20 a. clover, 40 a. fine blue grass pasture with running water. Balance corn land. All two good orchards, hog pasture. Close to school, on R. F. D. and phone line. Land lays rolling, but very productive. Price for 30 days at \$75 per a. Will carry one half back on farm at 6 per cent. C. E. TINKLIN, Corns, Kansas.

I WANT TO OFFER AS A SPECIAL BARGAIN.

a farm 15 miles from Colby, smooth as a floor, good black loam soil, 100 acres in cultivation, and seeded to winter wheat. Rural delivery running by the farm every day. All the 100 acres of wheat to go with farm. We think this one of the best bargains in the county today. And anyone wanting a quarter section in a good live neighborhood, will find a bargain by getting in touch with the owner.

IKE W. CRUMLY, Colby, Kansas.

MONTGOMERY COUNTY BARGAIN.

120 acres, 1 1/2 miles from good shipping town, 80 acres in cultivation, balance pasture, orchard, 5 room house, barn, telephone, R. F. D., free gas for domestic use. Price \$30 per acre. \$1,500 cash; balance to suit purchaser. For further particulars write

ROSS DEFENBAUGH, Independence, Kansas.

CORN, ALFALFA AND WHEAT LAND.

160 acre farm in Republic, banner corn and alfalfa county of Kansas only 1 1/2 miles from Belleville, 6-room house, new barn and other improvements, nicely located. 35 acres alfalfa, \$12,500. Another 160, fair improvements 1 1/2 miles from Belleville, \$10,800. These are two of the many choice bargains we have to offer. Write for information or call on

HALL & CARSTENSON, Belleville, Kan.

\$4,000

80 acres, Anderson county, Kansas, adjoining town of 700. On 3 railroads, all in cultivation, good 6 room house, barn for 10 horses. Plenty of good water and gas for light and fuel. Price \$50.00 per acre. \$1,000 down, balance on terms at 6 per cent. Write

EBERT C. SIMON, Garnett, Kansas.

\$2400 Buys 'Eighty' Near Town—Terms

Because owner must sell we offer a nice smooth fertile eighty, half mile of good town, 5 room house, barn, abundance water, 20 pasture, 60 cultivation, nice neighborhood, worth \$3,000 for \$2,400 on terms to suit.

DONAHUE & WALLINGFORD, Mound Valley, Labette Co. Kansas.

Kan. This great breeding farm consists of 800 acres and is the best improved in every way the writer has ever seen. It is owned and personally managed by O. L. Thisher, who is well and favorably known to breeders of Shorthorn cattle and Percheron horses all over the country. The Shorthorns here are famous and the Percherons are no less so. But the information we have for Kansas Farmer readers is the fact that both the Shorthorns and Percherons are to be dispersed. There are around 30 head of Shorthorns among which are several young bulls of serviceable age simply immense. There are also young heifers and cows which are really reserves, and are intended for this sale. The great herd bull, Royal Gloster 232568, is in his prime and goes at a reasonable figure. The Percherons consist of stallions and mares and they are indeed a fine lot. If you are in the market for Percherons or Shorthorns don't think of buying until you investigate this dispersion at private sale. If you can use a great herd bull visit Mr. Thisher at once. Royal Gloster was sired by Imported Day Dream's Pride, and is 5 years old. He was bred by Hickler, Go to Chapman and phone Mr. Thisher, and you will be called for and returned to the station Mr. Thisher is going out of the breeding business and for that reason is dispersing these two great herds.

We wish to call the attention of the readers of this paper to the new announcement of Watson, Woods Bros. & Kelly Co. appearing on another page of this issue. The writer after looking over the 100 head of Percheron, Shire, Belgian and German Coach stallions in their barns can say that it is the best lot ever imported by this firm and as good a lot as ever came across the ocean. The president of this firm spent all summer in Europe selecting these stallions and he wouldn't have one carrying even the slightest blemish. In addition to being one of the best judges of draft horses on either continent he has a knowledge of the European studs that enables him to go where the good ones grow. Moreover he is one of the firm who stands for quality, even though it takes money to get it. When the writer looked upon the 100 head of stallions now in their barns, everyone sound as a new dollar, thick of quarters, muscular, true to type broad hocked, heavy boned and several of them winners at the shows on both sides of the ocean. It seemed that no purchaser of a stallion could find a better place to buy them right at the barns of this firm. It will be remembered that this firm absorbed the Lincoln Importing Horse Co. and moved to the quarters of the firm opposite the State Farm. In addition to the commodious barn already there, they moved their own large barns to that location and now have the largest and best equipped stallion emporium in the West. Better write to Watson, Woods Bros. & Kelley Co. and get their new catalog. Their office is still in the Lincoln Hotel, Lincoln, Neb.

Duroc Boar Changes Hands.

C. A. Tiller, the hustling young Duroc Jersey breeder of Pawnee City, Neb., has again demonstrated his good judgment by selecting a very choice young boar sired by Valley Chief to assist his other boars this breeding season. He is an excellent individual and has certainly found his way into a good home.

Mischief Maker Boars.

O. G. Mitchell, of Centerville, Kan., is offering some very fancy boars sired by Mischief Maker and out of an On and On 2nd dam. They are very fancy and fine show prospects for next year. They are priced very reasonable for such high class stuff. Write Mr. Mitchell and kindly mention Kansas Farmer.

Correction.

The grand championship of grade and pure bred Aberdeen Angus steers at the American Royal was incorrectly credited to W. J. Miller's "My Choice." Mr. Miller's "My Choice," a grade steer, won the championship in the grade classes. The pure bred 2-year-old steer, "King Ellsworth," shown by the Kansas Agricultural College, won the championship of pure bred Angus steers, and the grand championship of pure bred and grand Angus steers.

Red Polled Cattle for Sale.

In this issue F. H. Shoemaker, of Centerville, Kan., is advertising 10 head of extra good Red Polled cows and heifers. Most of them are registered in the R-two letters and are from the good herd of D. Vanbuskirk of Bluemound, Kan. Mr. Shoemaker also has a valuable herd bull in Coburn No. 14634 letter-O-S. This bull was bred by Mr. Vanbuskirk and from one of his best cows. Write for prices and kindly mention the Kansas Farmer.

Hamaker Buys Great Boar.

G. S. Hamaker, one of the old guard of big type Poland China breeders of southern Nebraska, made a very fine business move recently when he purchased from Mr. H. S. Chapman the great boar Looks Grand by Grand Look. Looks Grand is one of the best producing boars in the state, and will be crossed on as large heavy boned finished cows as can be found anywhere. They will be attractions in Mr. Hamaker's Feb. 23 sale. Remember this great herd is located at Pawnee City. Put this sale on the list of those that you will attend.

Herd Boar Material.

Write to Roy Johnston, at South Mound, Kan., for prices on those large and smooth Poland China boars he offers for sale. They are bred from a large type standpoint and are out of large smooth sows. The herd boars used in Mr. Johnston's herd are Orphan Chief, John Long I and Logan Ex. There are the large strictly type. Don't fail to mention the Kansas Farmer when you write.

S. W. Alfred & Son Sells Show Herd.

On Nov. 20 S. W. Alfred & Son will sell the best bunch of Durocs ever sold in Sharon Valley. They are the tops of over 750 head and in this offering there will be many champions and first prize winners. Every one offered in the sale has a ribbon back of it. See sale ad on another page and send for a catalog and arrange to attend this sale. Remember the date is Nov. 20 and Sharon, Kan., the place. Kindly mention the Kansas Farmer when you write.

Last Call for Drybread Sale.

On Nov. 10, Sam Drybread, of Elk City, Kan., will sell one of the best lot of Durocs ever sold on the Drybread farm. In this offering there will be some valuable brood sows including a good Hanley sow, and a Model F sow. This richly bred lot of Durocs includes the blood of Ohio Chief, Kant Re Best, Red Wonder, Inventor, Choice Goods, Bells Chief, Hanley, Proud

Advance, G. C.'s Col., King Wonder 5th. The entire offering is in fine breeding condition they have not been pampered and over fed but kept growing. They are just right to make the purchaser money. Don't fail to send for a catalog and attend this sale and buy some of these good bred sows. Kindly mention Kansas Farmer when you write.

Good Red Polled Herd.

A Kansas Farmer fieldman recently visited the good herd of Red Polled cattle belonging to the Auld Bro., of Frankfort, Kan. This herd was established about seven years ago, with stock purchased from the leading herds of the west. The present herd bull is Calon 14208. The cow herd consists of some very nice animals, very well bred and good individuals. Among them are Beauty 14465, Upshot 27069, and Kansas Girl 18447. The bull used before the one now heading the herd, and the sire of the young bulls and heifers was Duke 13386 by Gold Bug, and his dam was Tilda Jane, descendant of the great cow Mayflower. Duke was a 2,200 pound bull. In the advertisement appearing elsewhere, Auld Bros. are offering for immediate sale three choice bulls. Write them for description and prices.



E. G. BETZ, President Independence Business College, Independence, Kan.

A Leading Educator on the International Live Stock Exposition.

Here is what Dean Davenport at the Illinois Agricultural college says of the International Live Stock Exposition of Chicago, which is to be held at the Union Stock Yards from Nov. 27 to Dec. 19: "Not one, not even those responsible for its development, has adequate conception of the influence of the International upon American live stock interests. As a practical educator it cannot be surpassed; as a stimulus to trade, it has no equal; as a means of shaping policies and correct ideals, its influence is supreme. A decade or two ago such a thing would not have been possible in this country. It seems incredible now that a company organized primarily for business, should see its way to expend so much time, energy, and money in the establishment of such an exposition. That it will pay there is no doubt. The pay will come in a thousand ways. The live stock interests will be more prosperous; the individual farmer who lives by it will be more successful, and the multitude of interests that depend upon live stock will thrive the better for it. The marvel of it all is that such a thing could be at all. It shows the breadth of the commercial spirit in this country, the generosity of live stock men, and the readiness of the American farmer to respond to modern methods and conditions.

Percheron's at Kirksville, Mo., Nov. 15.

This week's Kansas Farmer contains the announcement of S. J. Millers big sale of imported stallions and mares to be made at Kirksville, Mo., Monday, Nov. 15. On this occasion Mr. Miller will offer to the public the best lot he has ever offered consisting 20 mares and 10 stallions. Mr. Miller visited France and selected and bought these horses especially for this sale

WOODSON COUNTY EASTERN KANSAS LAND.

620 acre farm, 400 a. creek bottom in cultivation, well improved, all fenced hog tight, 6 miles to good town, \$40 per acre. ... 240 acre farm, 130 a. in cultivation, alfalfa, clover and corn land, well improved, close to town, price \$50 per acre. ... 160 acre farm, 70 a. cultivation, fine improvements, one mile to town, \$35.00 per acre. ... 160 acre meadow, can all be plowed, limestone soil, 5 miles from town, \$30 per acre. 80 acres, 5 a. in cultivation, well improved, 4 miles from town. Price \$45.00 per acre. Write or come at once.

WOODSON COUNTY REALTY CO., Yates Center, Kansas.

WILSON COUNTY BARGAIN.

206 acres all tillable, 6 miles from three different markets, 8 room house, barn 50x150, 3 hog sheds, 4 hen houses, 4 miles hog fence, fenced and cross fenced, 5 good wells of water, fair fruit, all in cultivation, all in tame grass except 15 acres good black soil, 1 mile to school and church. Price \$50 per acre for 40 days.

C. S. EKLUND, Chanute, Kansas.

Manitoba Farm For Sale

180 acres. Price, including horses, stock, implements, \$30,000. In one of the most choice districts in southern Manitoba, 100 acres plowed and ready for crop season of 1910. Good buildings. Well fenced. Abundant supply of water and fuel. Beautifully situated. For further particulars apply to

HARRIS & CHISHOLM, Insurance and General Agents, 503 McGreevy Block, Winnipeg, Man.

SHORTHORN CATTLE

FOR SALE. 12 bulls, 12 to 18 months; 30 cows and heifers for sale. SHAW BROS., Glade, Kansas.

HUMBOLDT NATIONAL STOCK FARM

Shorthorn cattle, large type Poland China hogs, young stock for sale at all times. Write me your wants. I meet parties at trains. We can do business. Come and see me.

H. F. PELPHEBY & SONS, Humboldt, Kansas.

FOR SALE.

10 choice young bulls from 8 to 12 months old, part straight Scotch. Choice yearling and short two-year-old heifers. Good colors, bright red, priced right.

C. W. TAYLOR, Pearl, Kan. Address Mail R. F. D. 2, Enterprise, Kan.

ALYSDALE SHORTHORNS—As I cannot longer use my two herd bulls, I offer them for sale at much less than their value. "Prince Consort No. 187008," beautiful dark red, 8 years old; sired by imported "Prince of Perth," dam full sister to "Lavender Viscount," is a straight Scotch bull of the finest breeding. "Master of Alysdale No. 241519," handsome roan 4 years old; weighs in only fair flesh about 2,000 pounds. Sired by "Dictator No. 132425." He is a magnificent animal. His dam Nellie Cundiff was one of the best cows in my herd, and a great milker. Also cows and young bulls for sale. Come and see them. CHAS. W. MERRIAM, Columbian Building, Topeka, Kansas.

RENO HERD SHORTHORN CATTLE

Bulls in service, Forest Knight 226084 and Victor Archer 264156. Breeding stock for sale.

Stewart & Downs, Hutchinson, Kan.

Evergreen Home Farm.

Milking Shorthorn Cattle, Bred Hornless, Berkshire Hogs, Oxford Down Sheep, Bourbon Red Turkeys.

LATHROP, MISSOURI

JEWEL SHORTHORNS

A young herd of up-to-date breeding. Also Percheron and Standard bred horses. In stud, the Percheron stallion Marquis De Wierre (Imp.) Also the Standard bred stallion, Red Seth \$1185. Farm adjoins town. Come and see us.

Jewell, W. T. LOWE, Kansas.

GREENDALE STOCK FARM

25 YOUNG BULLS by Imp. Ardathian Mystery and Best all for sale at bed rock prices. Can also offer some good Berkshire swine and Shropshire rams. Correspondence solicited.

COL. ED. GREEN, Prop., Florence, Kansas.

GLENWOOD HERD.

The home of the Scotch bulls Prince Pavonia 207316 and Seachlight 292031. Large type Poland China boars, Designer \$9199 and Major Look 48039. The original Designer kind—choice herd boars, now ready for shipment. The Designer kind that grow big. See my cattle exhibit at the leading fairs this fall. Write your wants.

C. S. NEVIUS, Chiles, Miami Co., Kansas.

20 Shorthorn Cows and Heifers

All are bred or have calf at side. 3 GOOD YOUNG BULLS that I am sure will suit. Everything nicely bred and in good condition. Moderate prices.

D. H. FORBES & SONS, Topeka, Kan. R. F. D. No. 8. Bell Phone 31.

Prospect Farm Shorthorns

The oldest Shorthorn breeders in Kansas. The largest herd of Crutchanks in Kansas. Herd headed by Violet Prince 145647 and Orange Commander 220590. Young stock of both sexes and some cows for sale. Quality and prices right.

H. W. McAFEE, Topeka, Kan. Bell Phone 59-2.

Spring Hill Shorthorns

300 Head Scotch and Bates Pedigrees

C. G. COCHRAN & SONS, PLAINVILLE, KANSAS.

SHORTHORNS.

Will sell 12 cows with calf at foot and rebred at \$75 each. Some heifers and bulls cheap. First reasonable offer will buy them all. 37 head. They are Reds, all registered. Am closing out for other business. Write or come and see J. E. WELLER, Faucett, Mo.

Center Grove Stock Farm

Scotch Shorthorn cattle and large type Poland China hogs. Young stock for sale at all times. Come and see my herd or write me what you want. No trouble to answer letters. Bell phone.

J. W. PELPHEBY & SON, R. D. 8, Chanute, Kan.

SHORTHORN CATTLE

BARGAIN IN SHORTHORNS—8 cows with calves at foot, 2 year old heifers, 3 yearling heifers. Those old enough in calf. Young Mary breeding, oldest cow six years old. All reds; price for lot, \$1,100. A. R. ENOS, Lost Springs, Kan.

Sunrise Stock Farm.

Having sold my farm, will price my cattle at bargain prices. Some good bulls, cows, and heifers from 1 head to 3 car loads. 1 extra show cow. J. W. TOLMAN, Hope, Kansas.

GUERNSEY CATTLE

REGISTERED GUERNSEY CATTLE. Herd headed by Eminence of Berchwood, whose ancestors have butter fat records of 468 pounds to 714 pounds per year. Herd tuberculous tested. Write for prices. FREDRICK HOUGHTON, Galva, Kansas.

AUCTIONEERS

R. L. HARRIMAN, AUCTIONEER, Pedigreed live stock. Write me for dates. Bunceton, Mo.

COL. ESSIE CRAVEN, NORTH BRANCH KAN Live Stock and General Auctioneer. Ask about him.

COL. JOHN D. SNYDER, Winfield, Kan., LIVE STOCK AUCTIONEER. Sales made everywhere. Write or wire me for dates. Prices reasonable.

A. C. Manifold, Tarkio, Mo. Live Stock Auctioneer. Selling for the best breeders in Western states. Still have a few open dates for fall.

W. C. Curphey,

LIVE STOCK AUCTIONEER. Write, phone or wire for dates. Abilene, Kansas.

H. R. LITTLE,

LIVE STOCK AUCTIONEER MANCHESTER, KANSAS. Good service at reasonable charges.

T. E. DEEM, Auctioneer.

Pure bred sales a specialty. Get my open dates. Terms low. Address CAMERON, MISSOURI.



LAFE BURGER

Live Stock Auctioneer Write or wire me for date. Wellington, Kansas.

Residence Phones Office Phones Mutual 114; City 528. Mutual 134; City 626

W. WEIDMIR,

Experienced Live Stock Auctioneer. Terms reasonable. Big tent free. Write or wire me for date. Cameron, Mo.

Jas. W. Sparks

Live Stock Auctioneer. Marshall, Mo. Twenty years selling all breeds.



J. H. Moorman

Live Stock and general farms sale auctioneer. Satisfaction guaranteed. Long distance phone connections. SOLOMON, KANSAS



A. L. Albright

Live Stock and General Farm Sales Auctioneer. Square dealings and persistency my motto. Correspond with me. Address

Waterville, - Kansas

LIVE AND LET LIVE

is my motto. Reasonable charges and good service. Choice of dates if you write early.

JAS. T. McCULLOCH

CLAY CENTER, KANSAS.

and in doing so spared neither time, energy or money in getting hold of what his judgment told him was the sort that would be appreciated by the wide-awake farmers and horsemen of Missouri and adjoining states. Among the mares are animals weighing more than a ton, all of them are young and wonderful individuals. The stallions are as well bred as is possible for Percherons to be, many of them carrying many crosses of the noted Brilliant and Besique blood. Included in the stallion offering are Harpeau and Hardi both winners at the Paris show this year. Among the great mares are Candie and Xironquette, both rich in the blood of old Brilliant. The last named was a first prize winner at the Paris show three years ago. She will be sold weighing almost a ton. Lack of space makes it impossible for us to go into detail regarding the different great stallions and mares. Write for catalog mentioning Kansas Farmer.

E. J. Heisel's Sale of Percheron Mares. E. J. Heisel, Fremont, Mahaska county, Iowa, has something of interest to every lover of Percheron horses in our advertising columns this week. He announces a sale of imported Percheron mares at his barns in Fremont, on Wednesday, November 10. Mr. Heisel is one of the foremost importers of this country, and the quality of the stallions and mares brought over in his frequent importations is of more than average merit. Mr. Heisel does not claim to be the largest importer, nor does he claim that he brings over all of the good ones; but he does claim to be able to prove that his animals are the best that can be bought in the breeding districts of France. His offering of thirty-five mares is of a fine type of drafters, with solid colors and plenty of bone, feet and constitutional vigor. Heretofore, farmers have been taught by importers to believe that it is only necessary to buy good stallions in order to produce the best foals. Now, they know better, and in the present condition of the horse market there is perhaps nothing in the way of live stock that is more profitable than a good Percheron mare. She will earn money for her owner every day of the year, and will produce a colt that is so superior in quality to the ordinary grade that she becomes doubly valuable. Remember the date and ask for a catalog.

Berkshires at Auction. Tuesday, Nov. 16, Frank T. Hadachek will sell at auction at his farm near Wayne and Talno, Kan., one of the best bunches of Berkshires boars ever driven through a sale ring in central Kansas. There will be fifteen great, big, strong, husky last fall boars and 13 of spring farrow. Mr. Hadachek has also decided to offer the herd boar Kansas Longfellow. About half of the fall boars are sired by the large type sire Wayne Duke. These are very large and rather inclined to be rangy, but just the trick for the farmer wanting to make a cross on Poland or Duroc sows. The other fall boars and the spring boars have more finish and still lots of size. They have the short, wide heads that Berkshires breeders have sought for years to develop. They are by the splendid herd boar Black Premier by Lord Longfellow. Among the dams in the offering are the excellent sows Pawnee Girl 98370 by Charmer's Duke, he by Baron Lee 4th. Her dam was Pawnee Princess, by granddaughter of old Lord Premier 2nd. Charmer Lady 108759 tracing to Baron Lee 4th, Broadway Lass and Broadway Girl both very large and handsome sows. The offering is a good one in every respect. The pigs have been fed and handled just the way breeding stock should be handled. If you want Berkshires don't fail to come. Write for a catalog, mentioning Kansas Farmer. Bids may be sent to Jesse Johnson in Mr. Hadachek's care at Wayne, Kan.

George Smith's Sale of Poland Chinas. Geo. W. Smith, of Pawnee City, Neb., recently held a sale of his big Poland Chinas which was quite successful. The offering was one of the best and most uniform of the season, and the prices while not extremely high, were even and very satisfactory. Henry Kramer of Seneca, Kan., topped the bear sale at \$34, and A. B. Garrison, of Beatle, Kan., bought the highest priced gilt, No. 24, paying \$34 for her. Below is a list of buyers: Jas. Barker, Pawnee City, Neb. \$22.00 Henry Kramer, Seneca, Kan. 34.00 Wm. Glenn, Summerfield. 21.00 Sam Turnhough, Burchard, Neb. 20.00 Robt. Cool, Cook. 26.00 Herman Cook, Pawnee City. 21.00 Jeff. Menehan Burchard. 20.00 John C. Holderman, Furchard. 23.00 Canett Bros., Phillips. 31.00 Sam Small, Burchard. 34.00 Wm. Tegmeyer, Steiner. 26.00 Geo. Avery, Burchard. 24.00 Pat Glenn, Burchard, Kan. 22.00 Homer Skeogen, Pawnee City, Neb. 24.00 Henry Intz, Tecumseh, Neb. 25.00 Sam Holesworth, Pawnee City, Neb. 23.00 Wm. Scott, Pawnee City. 27.00 C. A. Garrison, Summerfield. 34.00 A. B. Garrison, Seneca, Kan. 27.00 Bob Barely, Burchard. 20.00 C. Retterman, Seneca, Kan. 28.00 R. M. Young, Cook, Neb. 22.00 H. B. Walter, Effingham, Kan. 28.00 Harman Groniger & Son, Bendena. 21.00 Ira Walker, Pawnee City, Neb. 26.00 T. M. Willson, Lebanon, Kan. 26.00 F. F. Orley, Oregon, Mo. 33.00 Alex. Encht Burchard, Neb. 22.00 Summary: 25 boars, averaged \$24.08 20 gilts, averaged 21.05

Noted Jersey Cattle Auction. One of the greatest opportunities of the season to buy good Jersey cattle will be at the Robt. J. Young sale to be held at St. Joseph, Mo., Tuesday, October 9. Mr. Young is an old breeder, a man of recognized ability as a breeder and a man of sterling integrity and high ideals and it is extremely doubtful if any statement made by the fieldman for any paper could be of as much interest and half as instructive as Mr. Young's own statement. Here it is: "There never was a great man that did not have a great mother. What is true of the human family holds good in the bovine family. There never was a great bull or great cow that did not have a great dam. Jacoba Irene 146443, the great cow that holds the world's record, producing 17,253 pounds of milk yielding 3,121 pounds of butter in one year, did not, by any means, come by chance. She had for her dam the great cow Poels Irene 2d 146135 that gave 11,000 lbs. of 5 per cent milk in one year. Gretchen's Prince 28979 sire of Poels Irene 2d 146435, had for his sire the noted bull Turbico 18208, had for the great son of Tormentor 2533, but to carry out and verify our theory, his dam was the greatest producing cow that ever lived. Gretchen of Penely 46825, test 15 lbs. 5 1/2

Mitchell County Breeders' Association

O. B. KERN, President. J. F. HOWARD, Secretary. Nothing but first class animals offered for sale for breeding purposes.

SHORTHORN CATTLE. SHORTHORN CATTLE—50 head registered cattle. Herd headed by Royal Goods 28825, by Select Goods by Choice Goods. Young bulls ready for service. For sale. MEALL BROS., Cawker City, Kan.

SCOTCH AND SCOTCH TOPPED Shorthorns. 40 head. Herd headed by Popular Knight, by Galant Knight. Some choice bull calves of fancy breeding for sale. JOHN STROH, Cawker City, Kan.

ELMVALE STOCK FARM, Shorthorn cattle and Percheron horses. For sale 7 yearling Select Goods heifers; also a few bulls of same age. Write for description and prices. FRANK P. COOKE, Beloit, Kan.

DUKE OF DUNDEE 285352, by Archer 205740, dam by Gallant Knight is at the head of my herd. 6 cows by Rose Duke and some by Scotchman. Inspection invited. CHAS. S. McCLEARY, Beloit, Kan.

UPLAND HERD OF SHORTHORNS. Headed by the Scotch Duchess of Glaston bull Dreadnaught. 1 red bull 20 months old out of a Lord Mayor dam for sale. GEO. W. BEEMIS, Cawker City, Kansas.

LOCUST GROVE SHORTHORNS—Herd headed by the pure Scotch bull Glaston's Model 287840. Three Scotch topped yearling bulls for sale. Also a few cows with calves at side. ELMER C. OBERTZ, Beloit, Kan.

A YOUNG HERD of up-to-date breeding. Everything recorded. Our herd bull Alfonso by Magnet has produced us some great calves this season. BRINEY & BRINEY, Beloit, Kan.

BOOKDELL STOCK FARM. Shorthorn cattle. Poland China hogs. Silver Laced Wyandottes. E. E. BOOKER & SON, Beloit, Kan.

JENNINGS' SHORTHORNS—Some young bulls for sale by Senator by Hedgewood. Also a few got by Spartan Viscount. Prices right. 2 miles north of Simpson, Kan. S. G. JENNINGS, Simpson, Kan.

FOR SALE—A few young Shorthorn cows and some young bulls ready for service. Best of breeding. Write for information and prices. VINTON A. PLYMAT, Barnard, Kan.

HEREFORD CATTLE. A FEW HEREFORD bull calves got by Hobson 97721 and out of dams tracing through Lamplighter to Anxiety 4th, priced later. Berkshire boars, spring farrow, for sale. W. B. & J. M. RODGERS, Beloit, Kan.

50 HEREFORD CATTLE comprising the H. B. Woodbury herd. Some famous cows in this herd. 8 young bulls of serviceable age for sale. 4 miles from Tipton, Kan. 8 from Cawker City. JOHN SCHMITT & SONS, Tipton, Kan.

100 HEAD OF HEREFORDS. The home of Castor 269475, the winner in every big show he was ever in. A few choice young heifers and cows for sale. F. L. BROWN & CO., Sylvan Grove, Kan.

ANGUS CATTLE. ABERDEEN-ANGUS CATTLE—A young but fashionable bred herd. Some fine spring calves to price later. ROY C. BIRT, Beloit, Kan.

ANGUS CATTLE, the feed yard and show yard type. Young bulls for sale this winter. Inspection invited. HARRY BARNES, Beloit, Kan.

ounces in seven days, and dam of Grethen Girlie 128560, test 21 lbs. 5 1/2 ounces in seven days. We make the statement without fear of contradiction and stand prepared to back up our assertion, that no cow living or dead can lay claim to leaving behind her so many great, useful animals as the old queen Gretchen of Penely 46325; and we are proud to say that we have in our herd more of her immediate offspring than can be found in any herd in the world. But, lest you forget, we wish to call your attention to the fact that Companion's Tormentor 47650 once stood at the head of this herd. This great bull had a great dam, namely: Ida's Dream 2d 92217, test 28 lbs. 6 oz. His granddaughter, Lullie Kabo 177025, test 21 lbs. in seven days, is the cow shown as a two-year-old heifer at the World's Fair, St. Louis, 1904, milked four times as much milk as the best heifer next to her in the ring. She is not for sale, but she has a young son in the sale that is worth looking after. He will make a great sire some day, and he will have to his credit the fact that his dam is one of the best cows in Missouri. There's where Jacoba Irene and her dam were born! An old chestnut reversed. 'We can show you' the sire of this young chap is no less a personage than Young's Golden Lad 68361, a grandson of the great bull Golden Lad. There are in the sale daughters of Companion's Tormentor, Young's Golden Lad, Gretchen's Prince, Tonopah, Nauida's Prince, Will's Exile, and other great bulls."

The DeClow Sale. W. L. DeClow, the big horse and jack importer of Cedar Rapids, Iowa, writes: "In my imported Percheron mare sale of October 28 I did not consider the attendance very good. I started up and sold a few mares, and thought the prices would not justify me in selling any more, and feeling that I was holding this sale at the wrong time, and that I could do much better in December, I concluded to hold the stock over for the Dec. 9 sale, which has been announced for some time. I also believe this announcement was detrimental in se-

PERCHERON HORSES. REGISTERED PERCHERONS—The home of Vidoque (Imp.) 40403, also the brood mare Risette (Imp.) 51115. Inspection invited. Farm adjoins town. E. N. WOODBURY, Cawker City, Kansas.

REGISTERED PERCHERON HORSES—In stud; imported Rabelais 42529 by Cosaque by Theidus, who sired Callipe and Casine. Visitors welcome. C. J. JOHNSON, Solomon Rapids, Kan.

THE HOME OF JACQUE W. 41659 by Tiatrey, dam imported Risette. Inspection of my Percherons invited. RALPH G. MCKINNIE, Glen Elder, Kansas.

COLEDALE STOCK FARM—The home of three first prize winners at the International. Nothing but the best in this herd. Come and see us. FRANK A. COLE, Barnard, Kan.

GRANITE CREEK STOCK FARM. Percheron and Standard-bred horses. Make known your wants to M. A. SMITH, Supt., Cawker City, Kansas.

COACH HORSES. LAWNDALE STOCK FARM—Oldenburg German Coach horses. International prize winning stock. A tried stallion for sale. Inspection invited. JOSEPH WEAR & SONS, Barnard, Kan.

POLAND CHINAS. EUREKA HERD POLANDS—Durocs. I breed both and have a nice lot of serviceable boars of both breeds for sale and a few choice gilts. Priced right. W. H. SALES, Simpson, Kan.

LEBAN CREEK STOCK FARM—Poland Chinas. 100 spring pigs both sexes, for sale at private treaty. Also a few yearling sows bred for October farrow. LOGAN & GREGORY, Beloit, Kan.

DUROC JERSEYS. GOLDEN RULE STOCK FARM—Gilt edged Duroc Jerseys. 40 spring pigs, both sexes for sale at private treaty. Farm adjoins town. LEON CARTER, Asherville, Kan.

ALFALFA STOCK FARM. The home of the best in Duroc Jerseys. Choice boars, fall sows, in fact, most anything you want. PEARL H. PAGETT, Beloit, Kan.

HAMPSHIRE. HAMPSHIRE HOGS. 40 spring pigs, both sexes, for sale. Write for prices. A. B. DOYLE, Rural Route 1, Beloit, Kansas.

OHIO IMPROVED CHESTERS. O. I. C. SWINE tracing to the famous Kerr families and the Big Mary family. Pigs of both sexes for sale. Write T. C. WRENCH, Beloit, Kan.

AUCTIONEERS. COL. H. H. VanAMBURG, General and Live Stock Auctioneer. Phone 434. BELOIT, KANSAS.

COL. F. L. SMITH, General and Live Stock Auctioneer. Phone 943. BELOIT, KANSAS.

curing a crowd for this sale. Besides, some of the horses had not yet recovered from their journey across the sea, having been here about two weeks. The sales were as follows: Percheron mare, Mike McGrath, Marion, Iowa. \$825.00 Percheron mare, Mr. Dickerson, Lake Geneva, Wis. 600.00 Percheron mare, Mr. Dickinson, Lake Geneva, Wis. 635.00 The prize winning Percheron mare, Glorietta, that won so nobly in the French shows this season, Mr. Dickinson. 950.00 The finest pair of black Belgian mares, I believe, that have been imported this year, very blocky, wide, thick, high-headed, vigorous type of brood mare, Mr. Dickinson, each. 1000.00 Sorrel Belgian mare, R. B. Talbot, Rochelle, Ill. 805.00 Roan Belgian mare, G. W. Ash, Edgewood, Ia. 800.00 Sorrel Belgian mare, Chris. Lund, Elywood, Ia. 800.00 syle, dark dapple gray and a masterpiece in Percheron elegance. W. B. Merriam, Dixon, Ill. 1325.00 Black Percheron mare, W. E. Throckmorton, Novelty, Mo. 650.00 Percheron mare, Mike McGrath, Marion, Ia. 700.00 Roan Belgian mare, Chris. Lund, Elywood, Ia., the first premium championship winner at the St. Joseph Exposition two weeks after her arrival in the United States, and the only show at which she was shown in America. 950.00 Three private sales, on very fine Percheron mare to Mr. J. R. Hughes of Mt. Pleasant, Ia., for. 145.00 Two very fine Percheron mares, Harry W. Marshall, Stronghurst, Ill. 1800.00 Percheron stallion, just imported, of superior quality, great weight and style, dark dapple gray and a masterpiece in Percheron elegance. W. B. Merriam. 1325.00 I am now preparing 40 head of big, heavy

DUROC JERSEYS

FARMINGTON DUROCS—45 choice spring pigs, both sexes, sired by the great boar, West's Duroc Faragon and Kantbeats Heir by Kantbeats, out of Orion, Tip Top Notcher and Improver 2d dama. G. F. Keesecker, Washington, Kan.

DUROC JERSEY BOARS AND GLITS. The tops of my spring crop. Sired by the Champion Chief Tattarrax and G. M.'s Carl Col. Dams of the richest breeding. Reasonable prices.

GEO. M. HAMMOND, Manhattan, Kan.

SOLLENBURGER'S DUROCS.

Breeding of the very best. Choice boars and glits of March and April farrow for sale. Write at once if interested.

R. G. SOLLENBURGER, WOODSTON, KANSAS.

PERFECT IMPROVER AT HEAD OF HERD.

Duroc glits and spring boars for sale. The best lot of pigs I ever raised. Have over 100 head spring pigs, mostly sired by Perfect Improver, the largest Duroc boar in Kansas. Write for prices. A few bred glits for sale.

J. U. HOWE, Wichita, Kan.

WHITNEY'S DUROCS.

Spring boars and glits of choice breeding for sale. Write for prices and description.

W. C. WHITNEY, Agra, Kansas.

GOETHE'S DUROCS.

25 spring boars for sale sired by my herd boars Attractive Chief, Big Crimson, Walnut Wonder and others and out of sows by Ohio Chief, Kant Be Best, Nebraska Wonder, Model Chief Again and King of Col's II. Write me.

T. R. GOETHE, Leonardville, Kansas.

CROW'S DUROC JERSEYS.

Herd headed by Climax Wonder, he by Missouri Wonder. 100 head to select from. Prices reasonable. The electric car runs within three blocks of farm. Come and see my herd at any time.

W. E. CROW, Hutchinson, Kan.

DUROCS "GROWN IN THE OZARKS."

Ohio Chief and Col. blood. Litters by Muncie Chief, Model Prince, King of Models, Inventor, the King, I Am Advance; several by Col. Carter, my leading bred boar. They are grown right, are good, and we answer all letters of inquiry.

C. L. CARTER, Cabool, Mo.

STANFIELD HERD DUROC JERSEYS.

Choice young stock for sale, sired by Kansas Kant Be Best and Jersey Wonder. My sows are of best breeding and good quality all in the 500 pound class. I can please you.

H. C. STANFIELD, Buffalo, Kansas.

BOARS! BOARS! BOARS!

February farrow that are the large, smooth kind at \$20 each. The second prize yearling at St. Joseph \$40, and others by Buddy, K 4th. Also 60 sows and glits. Write your wants to.

J. E. WELLER, Faucett, Missouri.

CEDAR LAWN HERD.

Offer Long Wonder fall glits open or bred or can breed them to either of my young herd boars to suit purchaser; also offers spring boars and glits by such sires as Long Wonder, Belle Chief, Belle's Top Model and High Notcher at farmers' prices. I can please you. F. M. BUCHHEIM, Prop., R. F. D. No. 3, Lecompton, Kan.

PLEASANT VIEW HERD.

Spring glits and herd boar prospects for sale. Sired by Tattarrax, the Kansas and Oklahoma champion. College Lad and Pleasant View King. Out of such sows as Pleasant View Queen, College Girl, John's Choice and Bob Orion. Prices reasonable.

R. B. MARSHALL, Willard, Kan.

GILTS RESERVED FOR MY FEBRUARY 2 BRED SOW SALE.

Big growthy spring boars for sale at bargain prices. Bred right and fed right, priced right.

E. M. MYERS, Burr Oak, Kansas.

50 DUROC JERSEY BOARS KING OF COL. 2ND BLOOD 50

I have decided not to hold fall sale and these are for sale privately. They are out of as good sows as the breed affords, and we have them by King of Col's 2nd, P. C.'s Col. and other good boars. Plenty of herd boar prospects.

FRANK ELDER (Successor to Grant Chapin, Green, Kansas.)

25 GOOD BOARS—25 SELECT GLITS.

Durocs by King of Col's 2nd, G. C.'s Col. and G. C.'s Kansas Col., excellent individuals and out of daughters of Model Chief Again, W. L. A.'s Choice Goods and other like sires. Also an extra yearling by King and out of an Ohio Chief sow.

CHAPIN & NORSTROM, Green, Kansas.

ELK CREEK STOCK FARM DUROC JERSEYS

Two valuable mature herd boars for sale. 100 spring pigs to select from. Best of breeding and individuality. Always something for sale. Come and see my herd or write me.

J. E. JOINES, Clyde, Kansas

ALFALFA STOCK FARM DUROC JERSEYS

Bonney K 47075 Put's Model 61863 Lincoln Chief 77685 I have a number of extra good early spring boars for sale. Also a few choice spring glits. I will be pleased to make you prices. I guarantee everything just as represented.

PEARL H. PAGETT, R. R. 2, Beloit, Kan.

Remember the Pagett-Sollenburger sale of high class bred sows Feb. 1.

DUROC JERSEYS

SPRING BANK HERD DUROCS

Herd headed by W. H.'s Colonel, the first prize junior yearling boar at Hutchinson fair 1909, and Chief's Orion, the third prize aged boar, at Kansas State Fair 1909. A few choice spring boars and sows bred to either of above named boars for sale. W. H. WILLIAMS, Raymond, Kan.

Grandview Duroc Jersey Herd

Headed by Standard Model 80485. Tom Davis 42009, and Crimson Monarch 80429. Fine lot of spring pigs by these sires and out of great dams.

O. A. TILLER, Pawnee City, Neb.

Fitch's Kant- Chief Improver

A nice line of March and April boars to price worth the money after August 1. Write any time for prices and information.

W. T. FITCH, Minneapolis, Kansas.

R. & S. FARM

is the home of the best in Duroc breeding. Always something for sale. Our bred sow sale is February 3rd. A large part of the offering will be safe to the service of King of Kant. A lot of young sows by Golden Ruler.

RINEHART & SLAGLE, Smith Center, Kansas.

Hanley Strain of Durocs

Write for prices. PAUL B. JOHNSON, Leavenworth, Kan.

The Chester Thomas Durocs

I am now offering 80 head of choice Duroc Jersey boars for sale. Mostly the get of Nebraska Wonder. Herd is very strong in Crimson Wonder blood. Prices right. Call or write.

CHESTER THOMAS, Waterville, Kan.

HOLSTEIN CATTLE

BRAEBURN HOLSTEINS.

Bull calves from dams yielding 10,000 pounds of milk in a year, and upward.

H. B. COWLES, Topeka, Kan.

EAST SIDE DAIRY HOLSTEINS.

Our present supply young service bulls in running short, but several the best ones still on hand, better get particulars about them. Nothing will improve your Dairy herd quicker than one of these youngsters.

F. J. SEARLE, Prop., Oskaloosa, Kansas.

HOLSTEIN BULLS

at bargain prices for 30 days. Bulls of serviceable age \$75 and up. Bulls 5 to 12 months \$50 and up. Bull calves 1 to 5 months \$30 and up. A few females to spare.

"ROCK BROOK FARM," Sta. E., Omaha, Neb. Henry C. Gillsman, Prop.

DUROC JERSEYS

COFFINS CREST HERD DUROC JERSEYS. For sale, a few choice spring boars and one yearling. These are sired by Royal Improver, Perfect Improver, Chief Tattarrax and King Ingomar. Priced right and all first class herd headers.

H. A. J. COFFINS, Potwin, Kan.

Percheron mares of superior quality, the very best to be had in France for the Dec. 9 sale. The total of those sold at public sale was \$11,215 and the three at private sale, \$3,250, making a grand total of \$14,465.

Tattarrax Boars.

G. M. Hammond at Manhattan, Kan., has the kind of boars that win at leading fairs. Let him price you a boar by the noted Chief Tattarrax.

Goethe's Durocs.

Correspond with T. E. Othe, at Leonardville, Kan., about a boar sired by some one of his good herd boars.

Amcoats' Polands.

S. B. Amcoats, at Clay Center, Kan., has purchased of B. M. Bell a choice line bred Expand boar for use in his herd. Remember Mr. Amcoats can sell you a good boar or gilt worth the money.

Chester Thomas Durocs.

Chester Thomas, of Waterville, Kan., is offering thirty choice Duroc boars, mostly by the great boar, Nebraska Wonder. The Thomas herd is noted for extra scale, backs and other very essential points. Write Mr. Thomas about these and mention Kansas Farmer.

Walter's November 10 Sale.

The forty boars and glits that go into H. B. Walter's November sale are what was left after the culled had been taken out. They are certainly big and smooth, and carry the blood of large, well finished sires and dams. They are by Judge Taft and Logan B., and the dams are by such sows as Expansion, by Expansion, Jumbo U. S., etc. Walter knows how to mate them for best results and how to feed them so they will make good in the new owner's hands. Better plan to attend this sale if you want what is described in Mr. Walter's catalog.

Eckles' Angus Sale Nov. 23.

The Aberdeen Angus sale to be made by W. F. Eckles of Green City, Mo., Nov. 23, will be a sale of attractions. Mr. Eckles writes that the bulls are the best that have ever gone into one of his sales. They will make ton bulls. There will be ten cows with calves at foot, and nearly every one of them have been rebred. No. 2 in the catalog sells with the best bull calf that ever left the farm. Nos. 6 and 7 are attractions in the cow division. No. 14 is one of the choice cows on the farm and will be near calving sale day. No. 19 bull is certainly one of the best Queen Mother bulls that will be sold this year. He will make a bull of immense size and is chuck full of quality. It will be remembered that Mr. England consigns a few head and special attention is called to Nos. 26 and 27 in his offering. It is doubtful if a better lot of Angus cattle will go through any sale this season. Write at once for catalog, so you will have ample time to make arrangements to attend the sale. Mention Kansas Farmer when you write.

Webb's Big Polands at Auction.

Every breeder and farmer who wants hogs because they grow big and carry a large per cent of high priced meat should be interested in W. R. Webb's Poland China sale, to be held at the farm close to Bendena and Denton, Kan., Wednesday, Nov. 10. This will be one of the best chances a Kansas or Missouri hog man will have to get the kind we are talking about, for if any breeder has sought after this type Mr. Webb certainly has. Some breeders would buy forty boars while Mr. Webb is looking over one. In other words the best is none too good for him, and the price cuts but little figure if the animal suits. The offering which is described in the advertisement which appears elsewhere is first class, sired by boars like Expansion, Union Leader, Capt. Hutch, Prince Hadley, etc. The writer has inspected the offering and it gives him real pleasure to say that a farmer or breeder can make a mistake by buying here. Nearly every big strain is represented and the pigs are large and well formed. If unable to be present send bids.

The Right Way to Buy a Farm Scale.

It should be a pitless scale for plenty of good reasons. It saves digging, saves walling, saves lumber and it's the only kind of scale that you can depend on to be always in order. There's nothing better in that line than this scale. It is the widely known Indiana Pitless Scale, made especially for farm use and sold direct from the factory to the user at factory prices. That means a very low price indeed. The price is for the scale delivered at your railroad station. The factory pays the freight. The saving on the first cost of the scale is \$25 to \$50 no matter where you live. But price, low as it is, is not the chief attraction in this Indiana pitless. It is a ball-bearing scale, the only one of the kind so far as we know. It is guaranteed to show United States standard weights. The makers are willing to send it out on 3 days free trial. You can test it at home and know all about it before you close the bargain. If you buy it, a ten years' guarantee goes with it. You can get all the particulars by writing to the Indiana Pitless Scale Company at New Castle, Ind. Better write your letter or card today.

H. B. Vanhooser's Sale Average \$30.

On Saturday, October 30, H. B. Vanhooser, owner of the Vanhooser stock farms, at Eldon, Mo., pulled off one of the good sales of the season. While the prices were not high, cash was received for the entire offering. Several states were represented, either by breeders or mail bids. G. W. Roberts of Larned, Kan., topped the sale and landed several good bargains. The sale was conducted by Col. H. O. Correll and Col. Lefe Burger. Following is a report of animals selling for more than \$20:

- 1 W. A. Music, Bass, Mo. 77.00
2 J. Walt Garvey, Thayer, Ill. 77.00
3 G. W. Roberts, Larned, Kan. 70.00
4 Graburger & Mohorry, Beomet, Ill. 68.00
5 Graburger & Mohorry, Beomet, Ill. 58.00
6 W. B. Cully, Buncion, Mo. 51.00
7 G. W. Roberts, Larned, Kan. 48.00
8 B. J. Hunter, Cheaton, Ill. 44.00
9 L. H. Holtz, Beaufort, Mo. 31.00
10 L. H. Holtz, Beaufort, Mo. 27.00
11 C. H. Curry, Cherrvale, Kan. 27.00
12 C. C. Line, Larned, Kan. 26.00
20 A. E. Vonscoyoe, Mt. Ida, Kan. 25.00
25 W. A. Music, Bass, Mo. 50.00
26 L. W. Clark, Conway Springs, Kan. 20.00
22 John Vanhooser, Eldon, Mo. 20.00
57 L. W. Clark, Conway Springs, Kan. 32.50
58 L. H. Holtz, Beaufort, Mo. 38.00
59 A. G. Music, Bass, Mo. 26.00
60 J. N. Leslie, Eldon, Mo. 24.00
61 M. C. McCauslin, Eterville, Mo. 21.00
Thirty-eight head sold for \$1,136, average

RED POLLED CATTLE

COBURN HERD OF RED POLLS. Choice young stock of both sexes for sale; also a few cows.

GEO. GROENMILLER & SON, Pomona, Kansas.

AULD RED POLLS. Herd established 7 years. Choice breeding and individuality. 3 young bulls for sale.

Frankfort, AULD BROS., Kan.

RED POLLED CATTLE FOR SALE.

10 cows and heifers bred to drop calves in spring; all good individuals. One extra good herd bull. Most of the cows belong to the R. two families. Priced right for quick sale.

F. H. SHOEMAKER, Centerville, Kansas.

FOSTER'S RED POLLS. 7 choice young bulls and a few good females for sale. My prices are right. Come and see my herd.

C. E. FOSTER, Eldorado, Kansas.

POLLED DURHAM CATTLE

POLLED DURHAMS.

Young bulls. Cows and heifers bred to Roan Hero, the Double Standard champion. Prices reasonable. Write for terms.

C. J. WOODS, Chillicothe, Kansas.

BELVEDERE X2712--195058

son of the \$1,500 Grand Victor X1685 150366 heads my herd of Double Standard Polled Durhams. A few extra good blocky, thick-fleshed young bulls for sale. Inspection invited. Farm adjoins town.

D. C. VAN NICE, Richland, Kansas.

JERSEY CATTLE

Linscott Jersey Cattle

Established 1878. Registered in A. J. C. C. Any animal for sale.

E. J. LINSCHOTT, HOLTON, KANSAS.

BROWN SWISS CATTLE

BROWN SWISS CATTLE. Some very choice young bulls and bull calves out of particularly strong milking, good testing dams. Close in Mr. Dairyman and get prices Dahlem & Schmidt, Pontiac, Kansas.

HEREFORD CATTLE

9 TOPY HEREFORD BULLS 9

For sale, sired by Loyalty 16239 by Imp. Majestic, Armistice's great bull. Their dams rich in the blood of Anxiety 4th, Cherry Boy, Beau Real, and 2500d. These bulls are good and will be priced to sell.

W. L. WOOD, Strong City, Kansas.

Jacks and Hereford Cattle.

Stocks for sale at all times. Write us what you want.

YATES BROS., Faucett, Mo.

Beau Brummel - 10th 167719. Modern Herefords. Herd bulls Beau Brummel 10th 1 6 7 7 1 9. Beau Beauty 192235 and Protocol 2d 91711. Robert H. Hasford Place, Eldorado, Kansas.

FINE SHEEP

Kansas Agricultural College Sheep

For sale, spring ram lambs. Shropshires, Hampshires, Dorsets and Southdowns. Write for prices. Also choice spring Duroc Jersey boars sired by Wonder Chief, Champion. 1909.

K. J. KINZER, Manhattan, Kan.

GALLOWAY CATTLE

SMOKY HILL RANCH

Galloway Herd, headed by Pat Ryan of Red Cloud 26038, Starlight 2d of Tarrbroch 24473 and Valarius 29038. Bulls and heifers for sale from my herd of 180 registered Galloways.

E. J. GUILBERT, Gill, Kansas.

Twelve Galloway Bull Calves

9 to 12 months old, all extra good ones, good bone and coat of hair, most of them sired by "Imported Randolph." Will sell very cheap if taken within 30 days owing to lack of feed.

S. M. CROFT & SONS, Bluff City, Kansas.

Most all the offering were March and April pigs. They were not large but of quality. Many of them were good prospects for next year.

Geo. M. Hull Has Good Sale. The Poland China sale advertised in Kansas Farmer by G. M. Hull, Garnett, Kan., for October 27 was pulled off as advertised. The sale was well attended and offering sold at a fairly good price. H. F. Pelphrey of Humboldt, Kan., was the highest bidder for a January 19 gilt. The sale at \$69 for a January 19 gilt. A good lively bidder and bought several good fall yearlings. This was the first sale of the large type Poland Chinas ever held in Garnett, Kan. The offering seemed to be appreciated by the local buyers and breeders from a distance. On the thirty-five head sold an average of \$25.75 was made. H. O. Sheldon, Wichita, Kan., was one of the good bidders and took one of the best bargains and topped the bar offering. Mr. Sheldon always a great help and a good buyer in the large type Poland China sales. Following is report of all selling above \$20:

Table listing various Poland China pigs and their prices, including names like Christy, A. Wallace, Barnes, Kan., and prices ranging from \$175.00 to \$350.00.

BERKSHIRES

BRAEBURN BERKSHIRES

Young pigs, high class in quality feeding. H. B. COWLES, Topeka, Kan.

REVIEW BERKSHIRES

2 herd boars for sale. 1 two-year-old Forest King, other males of different ages. Sows and gilts open. MANWARING BROS., Lawrence, Kansas.

BERKSHIRE BOARS AND GILTS

For sale. Long bodied smooth spring pigs. The best breeding and excellent individuals. No culls shipped. Visitors welcome. J. M. NELSON, Marysville, Kansas.

BERKSHIRES OF MASTERPIECE AND PREMIER LONGFELLOW strains

75 bred sows and gilts begin farrowing Aug. 15. Bred for size, bone and milking qualities combined with finish. Good backs and bodies as well as good heads. They are useful as well as fancy. Pork, pigs and profit, not wind. Also offer choice Rambouillet rams. E. D. KING, Burlington, Kan.

BERKSHIRES—OVER 250 HEAD.

To select from. Choice boars and females of various ages. Baron Duke 75000 and Masterpiece 77000. Spring pigs for sale. We guarantee satisfaction. Write LEON A. WAITE, Winfield, Kan.

MR. FARMER

You need a Berkshire boar—buy a good one, it pays. We are offering 50 big boned, growthy fellows ready for business, weighing 125 to 250. Every one a good one. No culls. Order today and get first choice at special prices \$20, \$25 and \$30.00. Satisfaction guaranteed. SUTTON FARM, Lawrence, Kansas.

NEW YORK VALLEY HERDS BERKSHIRES AND SHORTHORNS.

25 years experience with these breeds. Sows bred to and sired by Field Marshal 43200 and Lee's Masterpiece 99715. Young stock for sale. 50 spring and summer boars and gilts at \$25 each; two extra fancy herd headers at \$50 each. Bred sows and gilts from \$35 to \$100 each. Write your wants. Visitors always welcome. J. T. BAYER & SONS, Yates Center, Kansas.

Table listing various cow sales with lot numbers and prices, including names like Robt. Kirk, Maddock Bros., Balden, Neb., etc.

"I enclose copy for a change in my advertisement. I received over 50 inquiries from my advertisement of a Washington county farm. Run my advertisement till I stop it." C. E. Tinklin, Real Estate, Corning, Kan.

Pagett's Durocs Sell Well.

Pearl J. Pagett's sale of Duroc Jersey boars and gilts on Oct. 27, was a big success. The day was ideal and a big crowd was in attendance. Everyone was pleased with the splendid draft of 63 beauties which were offered. It was a great compliment which Mr. Pagett's farmer and breeder friends paid him on this occasion both by their presence in such large numbers and by the fine things said about his herd, and also by liberal bidding when the sale started. The average of the entire 63 head was almost \$24. On about 30 head the average would have been around \$35. The top of the sale was number 3 in the catalog. She was a daughter of Pearl's Golden Rule and was a September yearling. She went to Martin Droun on \$65. The highest price paid for a boar was \$40 which was paid by C. E. McKinnie for a very fine March boar sired by Put's Model. R. G. Sollenbarger, Woodston, Kan., bought a very fine yearling sow by Pearl's Golden Rule for \$50. Below is a list of the buyers:

Table listing names of buyers and their purchases, including names like Wm. Pearson, Simpson, Gifford & Taylor, Beloit, etc., with prices.

The Wilshusen Corn Sled and Disk.

We wish to call the attention of our readers to the advertisement of the Wilshusen Mfg. Co. at Stafford, Kan. This is the machine that made the reputation of the Wilshusen line of implements, and has always been a favorite with dealers and farmers everywhere. While not reversible, it permits of a wide range of adjustments and as a ridge buster it has no equal anywhere. It is simple and strong in construction and never wears out. The sleds first put out seven years ago are still in use, requiring a renewal of some of the wood parts about once in three or four years. The slogan of the Wilshusen sled is "Any Farmer Can Repair Me," and this is literally true. All necessary repairs can be made with the tools and material found on any up-to-date farm. The machine is also made in double-row. The shipping weight of Wilshusen Sleds and Wheel Cultivators, single row, is 250 pounds. We invite our readers to send for sample booklet giving full description of this corn sled and disk. It is a valuable tool on the farm and every farmer should own one. Kindly mention Kansas Farmer when writing.

POLAND CHINAS

OLD HOMESTEAD POLAND CHINAS. Big sires, early growthy pigs, \$20 each. HERMAN MEYER, Washington, Kan.

SHOW PIGS FOR SALE—5 June pigs sired by Mischief-Maker, dam by On and On 2nd; three boars and two gilts. They are extra good show material. Priced right. O. J. MITCHELL, Centerville, Kan.

NOFSEGER BIG POLAND CHINAS. 100 choice spring pigs, sired by Young Hadley by Big Hadley, and other good sires. Dams by Blain's Tec, King Do Do, Johnston's Chief, etc. Reasonable prices. R. NOFSEGER & SONS, Du Bois, Nebraska.

POLAND CHINA TRIO OF MAY FARROW. Headed by a son of Designer out of Chief's Maid 3d. Gilts by Cowles Tecumseh out of Miss Jones, a sow bred by W. A. Jones. F. S. COWLES, Lawrence, Kan.

SPRING BOARS AT BARGAIN PRICES. Out of sows by S. P.'s Perfection, Chief Perf. 2d, Spellbinder and others. These young boars are fine individuals and by sportsman by Correcor and out of a Meddler dam. Write me your wants. JOHN. B. FREESE, Bayneville, Kan.

SNYDER BROS.' HIGH CLASS POLAND CHINAS. Either sex, bred sows and bred gilts, priced right for quick sale. Write your wants. SNYDER BROS., Winfield, Kansas.

SPANGLER'S BIG POLANDS 200 spring pigs out of sows by Mastadon, Gold Coin, Mogul Ex., and others, by such boars as Spangler's Hadley by Big Hadley and Progression by Expansion. Fall boars by Progression. Write J. D. SPANGLER, Sharon, Kan.

BRED SOWS AND GILTS FOR SALE. A few choice sows and gilts for sale bred for fall litters. Write me your wants. I can please you. A. W. SHREVER, Cleveland, Kansas.

MELBOURNE HERD POLAND CHINAS. I have a few choice spring boars and gilts sired by Gold Metal, Hadley Boy and Klever Boy for sale at moderate prices. Let me know your wants. JOHN C. HALDERMAN, Burchard, Neb.

BIG POLAND CHINAS. Headed by my big smooth boar Prince 45889. Our sows are strictly on the big order. 75 big strong early pigs ready to ship. Both sexes. Description guaranteed. J. E. BOWSER, Abilene, Kansas.

STRYKER BROS. HERD POLAND CHINAS. The greatest show and breeding herd in the West. Write your wants and they will please you. Hogs any age at reasonable prices. Buy the best and make the most. They breed the kind that win the kind you want. Address STRYKER BROS., Fredonia, Kan.

CEDAR LAWN FARM. Poland and Shorthorn for immediate sale: 15 choice spring boars sired by Orphan Chief 59966. Priceless King and a good son of Pat Famo. Dams carry the blood of Bell Metal, Logan B, Big Hutch, etc. Also a few good gilts. No culls shipped. S. H. AMCOATS, Clay Center, Kansas.

BIG TYPE POLAND CHINAS. For quick sale few Aug. and Sept. boars, out of grandson of Expansion and Victor K. L., winner at World's Fair, 3 of the boars out of Lady Youtell 4th, the dam of Prince Youtell. Cheap if sold soon. J. H. HAETER, Westmoreland, Kan.

BOLLIN'S POLAND CHINAS. We have for sale some very good spring boars. Write and get our prices on an extra high bred gilt or bred sow. These are representatives of the very best blood strains of the Poland China breed. We give customer satisfaction. Write today for particulars. JOHN BOLLIN, Leavenworth, Kan., R. D. 3.

IDEAL HERD POLAND CHINAS. Pigs in pairs, trios and young herds. Some March boars for farmers, large and from large litters, also 10 bred sows, bred, fed and priced right. Description guaranteed. CHAS. O. PARSONS, Clearwater, Kan.

Voter! Voter! Voter! Fine lot of spring pigs, both sexes sired by the world's champion Voter and out of the best bred dams of the breed. Others by Meddler 3d by Meddler 2nd. Write your wants. A. & P. Schmitz, ALMA, KANSAS.

SOUTH MOUND STOCK FARM LARGE TYPE POLAND CHINAS. Herd headed by Orphan Chief (50986), John Ling (49897), and Logan Ex. (51718), and contains 30 great, strictly large type sows the equal to which is hard to find in one herd; the produce of which I will guarantee to be much larger and with as much quality as any medium type herd. Choice spring pigs and they are very choice, weighing as high as 271 pounds. 90 head of summer and fall pigs ready to ship. Let me know your wants and mention Kansas Farmer. ROY JOHNSTON, South Mound, Kan.

DINGMANS BIG POLAND CHINAS. 15 big smooth boars, the tops of 40 out of such sows as the 735 pound head sired by the 817 pound Voter and sow, Miss G., and the 550 pound Holly. Write and mention this paper. C. W. Dingman, CLAY CENTER, KANSAS.

ANGUS CATTLE. ANGUS BULLS. Sons of Champion Ito (our show bull) a son of Imp. Prince Ito—cost \$9,100—and out of the \$2,500 champion cow, Queen Mother 7th of Drumfergus, and RUTGER MIKADO \$2895, whose get took first prize at the Kansas State Fair last year, and from the best families of the breed. Also a number of females open or bred and some with calves at foot. SHROPSHIRE SHEEP. A few high class Canadian bred ewes with lambs at foot, sired by our imported English show ram. The best you can buy anywhere. Write us your wants or come and see us. SUTTON FARM, Lawrence, Kan.

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OHIO IMPROVED CHESTERS. 75 O. I. C. FIGS. Herd headed by Jackson Chief 2, No. 12285, and Kerr Garnett 2, No. 25438. Boars and gilts not akin for sale. Write or come and see them. W. H. LYNCH, Reading, Kansas.

POLAND CHINAS

POLAND CHINAS. Gilts for sale of May farrow sired by Cowles' Tecumseh. Bred sows and gilts for sale later. F. S. COWLES, Lawrence, Kan.

BARGAINS.

Ten choice big type boars for sale, sired by Prince Hadley and Captain Hutch. W. C. SINGER, Hiawatha, Kansas.

POLAND CHINA BOARS AND GILTS. Herd headed by NOBLEMAN AND SILENT WORM. Sows are large and prolific. 1000—20 sows farrowed 182 pigs, average \$ 3-20; 1909—17 sows farrowed 157 pigs, average \$ 4-7. Boars and gilts for sale. W. B. STAFFORD, Bronson, Kansas.

RICHLY BRED POLAND CHINAS. Spring boars and gilts sired by Jumbo Perfection 2nd, grandson of Chief Perfection 2nd. Sows equally as well bred. Reasonable prices. GEO. W. CROOKS, Clay Center, Kansas.

200 STRICTLY BIG TYPE POLANDS 204. March and April farrow. Bell Metal, What's Ex., Nebraska Jumbo and Cawson head our herd. Sows carry the blood of the biggest sires of the breed. Sale Oct. 25. B. M. BELL, Beattie, Marshall Co., Kansas.

BIG KIND POLAND CHINAS. Write for description of my large boned, growthy pigs, sired by Mammoth Hadley 52628, a worthy son of the \$500 Big Hadley. Sows in herd by Johnson's Chief, Prince Youtell, First Quality Over Chief, Highland Chief and others. Get your name on the mailing list and remember sale date, October 27. GEO. W. SMITH, Pawnee City, Neb.

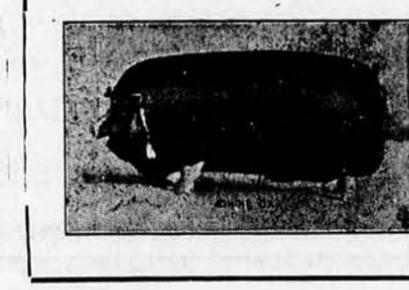
HIGHVIEW BREEDING FARM

DEVOTED TO THE RAISING OF Big Boned Spotted Poland Chinas. I am now booking orders for June and July pigs for September shipment. Pairs, trios, or more not related. Have your order booked early, they will soon be all sold. H. L. FAULKNER, Box K., Jamestown, Mo.

Dietrich & Spaulding's Poland Chinas.

4 herd headers, will sell you choice. 4 bred sows and gilts. 85 spring pigs, individually good breeding the very best. Write us at Ottawa, Kansas.

ALMA, KANSAS. I have for sale an extra choice big type 'SWINHO' POLAND CHINA 'MAMMOTH' 'VAVENHAW' Burchard, Nebraska.



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"I renew my subscription to The Companion," writes a Southern subscriber, "because of my love for it as a youth, my appreciation of it as a man, and my need of it as a father."

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