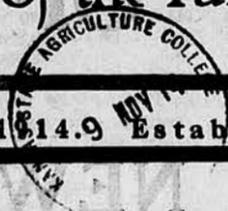


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KANSAS FARMER

For the improvement  of the Farm and Home

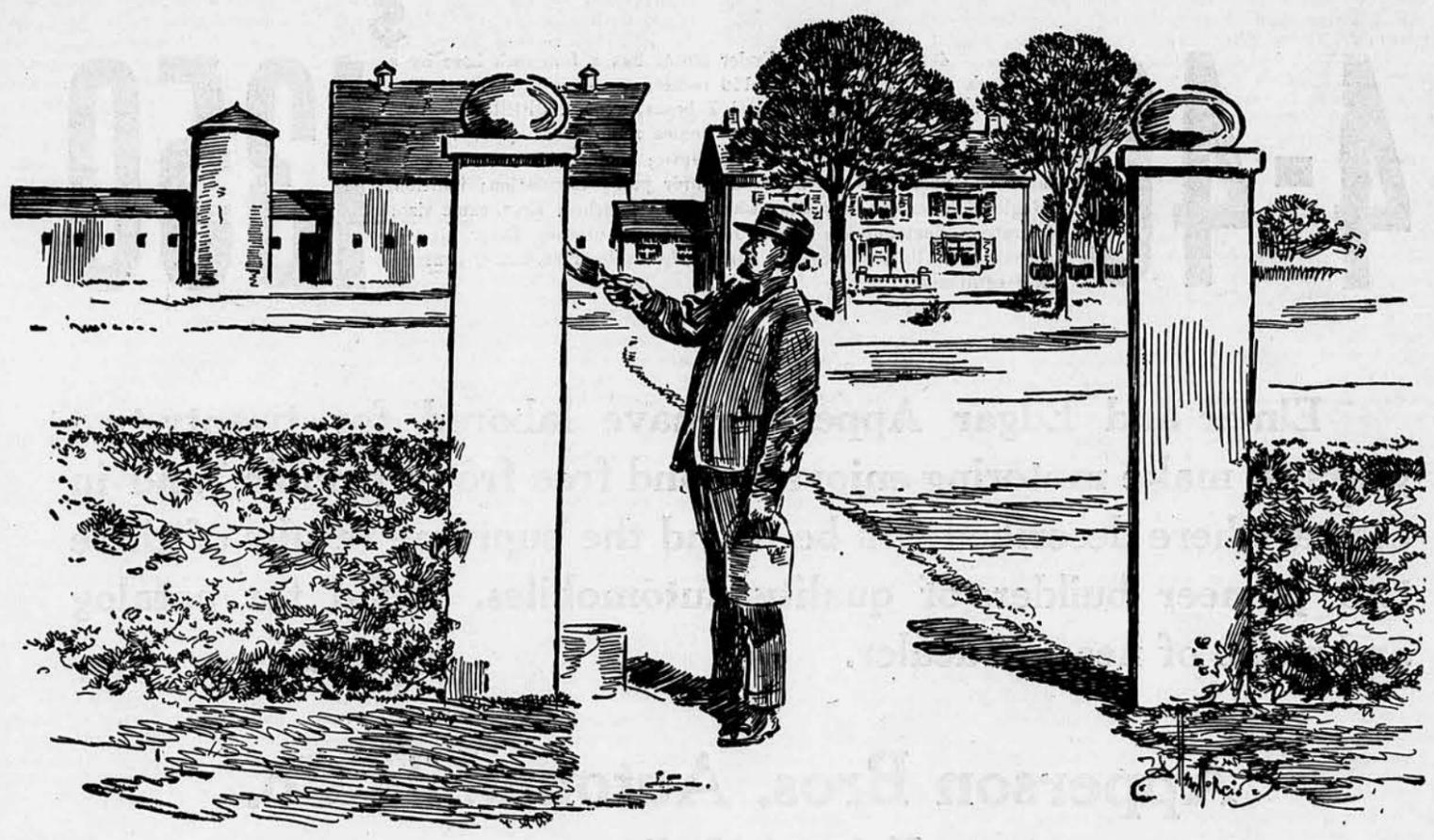


Volume 52, Number 45. TOPEKA, KANS. NOVEMBER 7, 1914. Established 1863. \$1 a Year

NATURE keeps her brush a-going. Look abroad and note the scene—gorgeous red of sunset glowing, landscape ever fresh and green, sky of azure, harvest golden, angel white of snows that drift—never did the masters olden have such rare and perfect gift.

Nature paints, with patient labor, field and woodland, glen and tarn; but there's work for Man, her neighbor—he must paint the house and barn. Man to oft neglects that duty. In the hurry and the rush he forgets the wealth and beauty he could get from paint and brush.

Good old paint! The home it brightens, keeps the buildings from decay, every care and burden lightens, drives dull gloom a mile away. Let's get up and quit our grumbling, let's do what belongs to Man. Fences down and sheds a-crumbling bring reproach to Nature's plan. "Brad"



*"Good Old Paint! The Home It Brightens
Keeps The Buildings From Decay"*

THE AUTOMOBILE CLIMAX OF THE YEAR

THREE NEW APPERSON MODELS

6-48

Model 6-48—the six-cylinder motor has a 3½-inch bore by a 5½-inch stroke; wheel base, 126 inches; seven-passenger streamline body; axles, front, solid forged I beam; rear, APPERSON shaft driven demountable floating type, axles removable; clutch, famous APPERSON compression band, noiseless and positive; springs, front, semi-elliptic; rear, three-quarters elliptic; cooling, "V" shaped radiator and pressed steel fan with water pump circulation; ignition, single high tension magneto; control, left side drive, center control; Bijur starting and lighting system; Timken bearings. Firestone demountable rims. Rayfield carburetor; full equipment.

\$

1585

6-45

Model 6-45—The six-cylinder motor has a 3½-inch bore by a 5-inch stroke; wheel base 122 inches; five-passenger streamline body; axles, front, I beam; rear, APPERSON shaft drive demountable floating type; springs, front, semi-elliptic; rear, three-quarters elliptic; cooling, "V" shaped radiator and pressed steel fan with water pump circulation; ignition, high tension magneto; Bijur electric starting and lighting system; Timken bearings; Firestone demountable rims; Rayfield carburetor. Full equipment.

\$

1485

4-40

4-40—The four-cylinder motor has a four-inch bore by a five-inch stroke; wheel base, 116 inches; five-passenger streamline body; axles, front, solid forged I beam; rear, APPERSON shaft driven, demountable floating type, axles removable; springs, front, semi-elliptic, rear, three-quarters elliptic; cooling, "V" shaped radiator and pressed steel fan with water pump circulation; ignition, single high tension magneto; wheels, 34 x 4 inches; tires, same size; Firestone demountable rims; Rayfield carburetor; Bijur electric starting and lighting system; control, left side drive, center control; full equipment.

\$

1350

Elmer and Edgar Apperson have labored for twenty-two years to make motoring enjoyable and free from trouble, and in the cars here described will be found the supreme results of these two pioneer builders of quality automobiles. Send for catalog and name of nearest dealer.

Apperson Bros. Automobile Co.
Kokomo, Indiana

KANSAS FARMER

The Standard Farm Paper of Kansas

ALBERT T. REID, President
S. H. P. CHER, Secretary

T. A. BORMAN, Editor in Chief
G. O. WHEELER, Live Stock Editor

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MORE FARM MANAGEMENT.

It must be remembered that the inauguration of a profitable system of farm management is a thing which must be determined for the individual farmer and for the specific farm. In other words, no definite method of farm management can be prescribed for a state, county or community. This being the fact, it is necessary that farm management surveys be made in various sections of each state if the surveys are to be of value. In KANSAS FARMER a few weeks ago was printed an article revealing figures of income and methods employed on eighty-six farms in Allen County, and on another page was an editorial comment referring to the above-named survey. These articles have brought many inquiries from subscribers asking whether or not farm surveys will be made in other sections of the state.

It is with a great deal of satisfaction that announcement has been made by the Kansas Agricultural College that P. E. McNall, employed co-operatively by the college and the Federal Department of Agriculture, will make surveys of typical communities of 75 to 100 farms in each county where there are county agricultural agents. When this work is completed it is expected that the survey will be extended into other counties. Mr. McNall has been spending the last month in New York State with several other appointees of the Federal Department of Agriculture, there receiving competent instruction in farm survey work. He is in company with appointees from various other states who are also being instructed along the same lines. He will later go to Washington for further instruction and will return to Kansas to take up the work here.

His first work will be that of taking the records of the Allen County survey and work these over carefully with a view to emphasizing the important points. When this summary is completed he will return to Allen County and convey to the owners of the farms surveyed the summaries of the individual farms and the average of the summaries of all farms surveyed. In this way each farmer will get a comparison of his own business with that of the average farmer in his community and the points in which the particular farmer is strong or weak will be pointed out to him. The farmer will then be asked to revise his farm organization or practice along such lines as are found most effective.

We believe this method of doing demonstration work in farm management will be as effective as any method yet devised. It is to be hoped that those farmers in the communities in which surveys are to be made, will co-operate in the work, that they will be open-minded and susceptible to such revision of farm methods as the practice of the most successful farmers in the community may commend to them.

NEEDS OF THE PHILIPPINES.

"There is not a word in the address delivered today by President Waters of the Kansas Agricultural College to the Manila City Club which is not worthy of earnest attention," begins an editorial in the Manila Times reviewing an address by President Waters. "His position as head of a great institution, and as the leader in a work which has made Kansas notable among the agricultural states, lends to his opinions on the agricultural possibilities of the Philippines an authority which compels respect. Moreover, as was to be expected, he has used his comparatively short time in the Philippines to excellent advantage. His conclusions carry conviction, and his suggestions have the merit of the practical."

"Broadly speaking, he finds that the standard of productivity here is low, as compared with that of other oriental countries, but he is in entire agreement with those who have studied and investigated conditions as to the immense possibilities which are here unrealized. The problem which his address is an attempt to solve is thus the squaring, as nearly as humanly may be, of performance with possibility. 'If the farms of the Philippines were as efficiently managed as are the farms of Japan,' he

says, 'the seven million acres now in cultivation would produce food enough to support forty million people instead of eight million.' How to correct this condition is the country's greatest problem, and Doctor Waters believes in a general policy. He has a wise word to say on the question of concentration on staple crops—a word, by the way, which will be welcomed by those who have for years past deplored the waste of the activities of the bureau of agriculture on what may be described as agricultural side lines. He finds the hope of the future in the schools, and we imagine that there will be none to disagree with his dictum that 'you cannot hope to have an efficient farmer on the land and a competent wife and mother in the home unless you first give them a sound and practical education.'"

Do not overlook doing some fall plowing. The kafir and cane fields should by all means be plowed this fall. The action of the elements on this ground will result in its being in perfect condition for crops next spring. The rains and snows will sink into this plowed land and the moisture stored therein will help in making next year's crops. The sorghums leave the land dry and soddy. This is the condition which leads many people to the belief that these are "hard on the land." It is, in fact, only a poor physical condition which, if plowed, will have wholly disappeared by the time spring planting arrives. In the West, where there is danger of blowing and in which section a large sorghum acreage is grown, listing will take the place of plowing. The listed furrow will catch the rains and will hold the snow and, if done east and west, which is at right angle to the prevailing winds, there will be little if any damage done from soil blowing.

WESTERN KANSAS FAIRS.

The permanency of agriculture in Western Kansas depends very largely upon the extent to which live stock husbandry is taken up by the farmers of that section. The fairs or stock shows held should by all means recognize this fact and yet many look upon the live stock interests of the fair as a matter of minor importance.

We have in mind a fair held for the first time in a western county this fall where almost no consideration whatever was given to live stock. The fair was practically turned into a sporting event and, while it was successful financially, very little encouragement was given to the interests which must of necessity be the foundation of the prosperity of the county. This county already has small pure-bred herds of the leading breeds of cattle and some pure-bred horses. No premiums were offered for the showing of these animals, however, and only by making special efforts was it possible to have any live stock shown at all, and the whole show consisted of four horses.

Fair managers should try to gain a little deeper insight into the future and so handle such affairs as to bring permanent benefit to the country.

It has been said that 39 per cent of the total value of corn, oats, barley and hay used on the farms of the United States is consumed by horses, 17 per cent by swine, 16 per cent by milk cows, 12 per cent by other cattle, 4 per cent by sheep, 3 per cent by poultry, 2 per cent by humans, and 2 per cent for seed, and 5 per cent for other purposes. It is worthy of note that the percentage of grains and hay consumed by milk cows, other cattle, hogs and poultry, lacks 2 per cent of being equal to the amount consumed by horses. These, better than any other figures we have seen, present the real live stock situation in this country and account for the comparatively small revenue we derive from the sale of live stock and live stock products. A large percentage—possibly 90 per cent—of the horses kept on farms are maintained for the farm work. These horses consume almost 40 per cent of the corn, oats, barley and hay produced. With less than 40 per cent consumed by other animals and which is sold in one form or other of animal

products, it is easy to observe that the horse labor is not yielding for the farmer as large an income as it should. Of the hay, horses and mules consume 36 per cent, milk cows 23 per cent, other cattle 15 per cent, sheep 5 per cent, and 17 per cent is not used on farms.

A campaign now under way and which deserves the support of every Kansan, is that undertaken by W. D. Ross, State Superintendent of Public Instruction, whereby he hopes to place a small library in every Kansas schoolhouse. There are now 3,000 school districts without a book of any kind belonging to the school and a considerable number of districts which report libraries have only a dictionary and a set of two or three volumes of encyclopedias. Every school needs a small library. Therein should be books of general interest to all pupils in or above the seventh grade. For country schools the library should run largely to books dealing with agriculture and animal husbandry. There are books now on these subjects which are interesting as well as instructive and as general reading cannot be excelled. Ten years ago books on these subjects were dry—just as dry as you find books—but now they are written attractively and read like fairy tales, but giving the information needed.

The holding of the Topeka and the Hutchinson fairs the same week this year brought about an awkward condition in so far as exhibitors were concerned and resulted in an unnecessary situation to the fair managements and the public in general. Numerous inquiries have been made as to why the fairs were held on the same dates and an explanation may be of interest. The Breeders' Gazette, a most worthy and widely read publication of Chicago, asserts that the conflict in dates was due to the failure of Topeka to claim the dates for her fair. This is not correct. Topeka's dates were claimed at the National Association of State Fairs and Expositions of which the Topeka and Hutchinson fairs are members. The dates of each were claimed at the same meeting of the association and at practically the same time, as is shown by the published reports of that association. Topeka claimed her dates in the same succession in the Southwestern Circuit of fairs as she has held for a number of years.

Do not forget the American Royal Live Stock Show at Kansas City, November 16 to 21. This show is looked forward to with much interest by breeders of cattle, horses, mules, hogs and sheep, as it will be the first time this season that the leading show herds of the several breeds will come in competition with each other. During the past two months some of the show herds have been making the eastern state fairs, while others have confined their operations to the western or southern circuit. The American Royal is always a show of prize winners from the state fairs, and there is much speculation as to where the honors will go when the leading prize winning herds of the different circuits try conclusions at the November show.

While we are reading so much about Germany and are amazed at the strength she has shown in the war, it will prove interesting to know something of her agriculture. Germany has an area less than that of the state of Texas. Her land is divided into as many farms as there are in the entire United States, and the harvest from her cultivated acres is three times as much per acre as that harvested in this country. If the United States had grown as much wheat to the acre in 1913 as did the Germans, our crop would have been two and one-half billion bushels instead of three-quarters of a billion.

It is said that since the meeting of the International Dry Farming Congress at Wichita, agricultural books have been in demand at the public library of that city, whereupon the Kansas Industrialist remarks: "It should not, how-

ever, be necessary to have a farm congress in a Kansas town in order to produce a demand for agricultural books. The leading industry of Kansas is agriculture, and every man and every woman in the state should take an interest in it. Knowledge of modern agriculture will enable one to understand better the things for which the state stands. It will give one a more intelligent appreciation of the problems of the state."

AMERICAN-BRED HORSES.

The front page of the October 10 issue of KANSAS FARMER was meant to direct the attention of our readers to the condition of the horse importing and breeding business as influenced by the war in Europe. Our observation of conditions leads us to believe that the time is ripe for getting away from the idea that only through the use of imported animals can continued breed improvement be brought about in this country.

For a long period of time there has been a sort of fascination attached to the word "imported." Imported stallions would sell for perhaps \$2,000 where equally good American-bred stallions would not bring to exceed \$1,200 or \$1,500. Information just sent out from the United States Department of Agriculture confirms our view of the present horse-breeding situation in this country as expressed on our front page of October 10. The information furnished through this source is that we have been importing draft stallions and mares for breeding purposes for several years at the rate of 2,500 to 4,000 head annually. In the opinion of the experts of the United States Department of Agriculture, the standard of draft horses produced in this country need not suffer in the least as a result of the cutting out of these European importations. We have an abundance of pure blood in the country at the present time and it only remains for the American breeders to demonstrate their ability to properly use the foundation breeding stock they now possess. In the last year or two we have had ample evidence that American-bred draft animals are being produced fully equal in quality to those imported.

In this country the Percheron breed outnumbers all other draft breeds combined. The grade Percheron produced by crossing the pure-bred stallions on ordinary mares has proven very popular in the horse markets. The Belgian has of late years been making great strides, but is even yet a comparatively new breed in this country. Very few really good Belgian mares have been imported and breeders possessing good individuals of this breed should certainly consider themselves extremely fortunate and should make the best use possible of this foundation stock. The Clydesdales and Shires have not been so popular in this country, though there is some demand for Clydesdales where considerable style and action is desired, as is the case in some of our cities. It is likely that a limited number of Clydesdales and Shires may be imported, but importations from the continent have practically stopped and in all probability large numbers of valuable breeding animals will be destroyed in Europe as a result of the demand for horses for war purposes.

We have for some time been independent of England and Scotland in the matter of beef cattle. Only to a very limited extent have American breeders in recent years found it necessary to import Shorthorns, Herefords or Angus cattle to any great extent. American breeders of beef cattle have demonstrated their ability to produce animals equally as good if not superior in some cases to the English cattle.

There is really no good reason why the same thing should not take place in connection with the production of draft horses in this country.

We have an order for patterns from Courtland, Kansas, dated October 28, 1914. Numbers 6464, 8; 6716, 36; 6865, 38. No name was signed to letter or on outside of envelope. Please send in name and address and patterns will be forwarded at once.

GENERAL FARM INQUIRIES

Something For Every Farm—Overflow Items From Other Departments

SUBSCRIBER D. S. D., Osborne County, writes that he proposes to this winter construct a pit silo that he may have it ready for use next summer or fall. He desires to know why a square silo is not as satisfactory as a round silo.

If care is exercised in the filling of a square silo it will preserve silage as well as does the round silo. In filling the square silo, however, it is necessary that the corners be kept full and that the silage be as thoroughly tramped in the corners as in the center. This is a thing not difficult to do, but it is rarely done as it should be. Failure to properly pack the silage in the corners will result in a loss which is unnecessary and which the farmer cannot afford. It costs no more money and is no more difficult to dig a round hole than a square one. The fact is that the round pit silo is not only more easily and more successfully filled, but it is likely to stand better; that is, be less liable to damage from the settling or caving of the earth, than a square silo.

Will Not Find Sale for Inventions.

Subscriber J. P. McC., Marshall County, writes that he has read that the Kansas Agricultural College will assist inventors in marketing their inventions and desires to know the facts.

It is not the purpose of the above-named institution to undertake to market inventions, but rather to give inventors such expert advice as is necessary to perfect their inventions. Here is the statement pertaining to this matter as printed in the Industrialist, the official college paper:

"Kansas inventors are invited to send their inventions to the engineering laboratory in the Kansas State Agricultural College, where they will be tested and advice given as to their value. The engineering laboratories are equipped with all the latest testing equipment and the inventor will receive the benefit of advice from leading engineering experts. The department will assist the inventors in patenting inventions considered of value."

Prices Forty Years Ago.

Subscriber L. A. H., Chautauqua County, writes that he recalls that some forty years ago corn was selling at 75 to 85 cents a bushel and that hogs and cattle were selling at the same time for 5 cents, and asks if we can give him the prices of some of the staples at that time as compared with today.

In 1874 old corn was quoted on the Kansas City market at 85 cents a bushel and new corn at 80 to 65 cents. During the past week old corn on the same market has been quoted at 73 to 77 cents and new at 68 to 70. Recently the Kansas City Star gave a list of commodities, giving present-day prices and those prevailing in 1874. From that list the following is taken:

	—1874—	—1914—
Wheat, bushel . . . . .	.95	\$1.06 @ 1.07
Oats, bushel . . . . .	.48	.42 @ .47
Hogs, cwt.	\$4.00 @ 5.00	6.50 @ 7.35
Native steers, cwt.	2.75 @ 5.25	5.75 @ 10.75
Texas steers, cwt.	2.25 @ 2.85	4.75 @ 7.50
Butter, lb. . . . .	.18 @ .25	.25 @ .27
Eggs, dozen . . . . .	.19 @ .20	.22 @ .24
Sugar, lb. . . . .	.12 1/2	.08

Screen Protects Trees from Rabbits.

J. D. W., Sumner County, inquires how he can best protect the trees of his newly-planted orchard from rabbits.

The most effective protection is that afforded by the use of wire screening. If the screening is galvanized and is carefully and properly placed around the trees, it will give good service for several years. The screening should be fastened with wires and should extend from the lower branches to five or six inches below the ground. The extension of the screen into the ground will prevent damage from field mice, and several trials at the Agricultural College indicate that the screening so placed will protect trees from borers.

There are farmers of the present day who are endeavoring to protect trees from rabbits by applications of various solutions and which are designed to make the bark unpalatable to rabbits. These solutions are always of doubtful effect and the man who has a young orchard cannot afford to take chances with them.

Heifer Gives Bloody Milk.

D. R. V., Ellis County, writes that a heifer just fresh gives bloody milk and asks for a remedy.

Our subscriber need not be uneasy. It is altogether probable that the conges-

tion of the udder has caused the rupture of small blood vessels. External injury to the udder frequently has the same effect. In either case the ruptured vessels will gradually heal and resume normal conditions and the blood will disappear from the milk. The udder should be handled carefully and milking should be gently done. If the udder is badly congested, it will be well to withdraw stimulating milk-producing feeds for a few days until the congestion has subsided. The bathing of the udder with cold water three or four times daily will remove the congestion. It is not necessary, we think, to give the animal medicine.

Western Kansas for Pork Production.

G. E. F., Thomas County, asks what we think the possibilities are for profitable pork production in his section of Kansas.

We hold that there are great possibilities for the economical, profitable and successful production of hogs in that section. Hogs, of course, cannot be grown without plenty of feed of the right kind, and our statement first above made implies that in our opinion the

Even grain purchased at the market price has frequently shown a profit of 100 per cent by feeding to hogs either upon alfalfa pasture or with alfalfa hay fed in the rack to supplement the corn or other grain ration. Wheat and rye used as a winter pasture with alfalfa hay and a very small grain ration has proven a most economical method of wintering brood sows and approaches in cost a full year pasture season, but it can only be used where wheat or rye makes a satisfactory growth in the fall months. The North Platte Station farms upland and has about the same rainfall as Thomas County, Kansas.

We would not have it understood that we think the making of a lot of money with hogs each year is certain for the northwestern farmer, but if he will set about persistently and consistently to grow such of those crops as are adapted to his section and which are required in profitable pork production, he has, in our judgment, a good chance to work out a plan which will make hog growing just as profitable year after year as the farmer farther east is able to do. The farm so situated as to be able to grow ten or twelve acres of alfalfa can cer-

tainly produce hogs to a good profit and with reasonable year-after-year certainty.

Anti-Freezing Radiator Mixture.

Numerous automobile owners have within the past week inquired for a mixture which will not freeze in their motor radiators. This is a good time to take such precaution as will prevent freezing. At this season of the year the motor owner is likely to take unnecessary risks. There are many mixtures sold by the garages which are highly efficient and which probably will give better results than any home-made compound. However, denatured alcohol in proper proportions will give the desired effect. For example, 10 per cent of denatured alcohol added to the water will protect the radiator at 25 degrees; 15 per cent at 20 degrees; 20 per cent at 15 degrees; 25 per cent at 8 degrees; 30 per cent at 5 below zero, and 33 per cent at 15 below zero. However, the denatured alcohol evaporates and the mixture becomes gradually weaker, so that it is necessary to add alcohol from time to time that the strength of the mixture may be maintained. The formulas for the anti-freezing mixture sold at garages are not known to us.

Grew Many Varieties for Show.

Our subscriber, C. H., Republic County, made a show of 140 kinds of agricultural products at the Republic and Cloud County fairs this season. He sends us a complete list of these, also a photograph of his display, but space forbids printing the list here. The greater proportion of the varieties was grown in only small amounts and for exhibition only. His comment on several crops and varieties of each will prove interesting.

"I grew the following corn varieties: Reid's Yellow Dent, Kansas Sunflower, Boone County White, Iowa Silver Mine, White Pearl, Stooling Flour, Bloody Butcher, Yankee, King Phillip and Calico. Boone County White is medium late and in my opinion it is the best corn for bottom ground in this county. White Pearl is 100-day corn and has medium-sized ears. Stooling Flour corn, as the

name indicates, is inclined to stool and one grain in many instances will produce several stalks, each stalk bearing two or three ears nine to twelve inches long. This corn produces an abundance of fodder and is, in my opinion, the best for silage. Bloody Butcher resists the dry weather better than other varieties. This corn was planted May 8 and we had good roasting ears July 20.

"Of the grain sorghums I planted milo, brown durra, Jerusalem corn, feterita and California rice corn, sometimes called shallu. All of these were planted the same day in the same field and they ripened about the same time, except the rice corn, which was about ten days later. It yielded more grain to the acre than any of the others, and we consider it the best chicken feed, as the seed is small, thin-shelled and little chicks can easily eat it.

"I also grew New Era and Whippoorwill cowpeas. I regard the New Era as the better variety for this part of Kansas. We feed the hay to our milk cows. The horses also do well on the hay.

"The varieties of grasses grown were timothy, red clover, white clover, sweet clover, Kentucky and English bluegrass, German millet and alfalfa. Besides these, I had sixty kinds of wild grasses in the exhibit and the names of many of which I do not know."

Capacity of Silo.

One of our readers in Sumner County sent in a problem in estimating the amount of silage contained in a silo. This reader constructed last year a pit silo twelve feet in diameter and twenty-two feet deep. This year he has added to this pit a cement plastered metal lath silo thirteen feet in diameter and thirty feet high. This gives a silo with a total depth of fifty-two feet. This silo was first filled with kafir and has settled six feet. This remaining six feet of space is now being filled.

Apparently the chief reason for determining the capacity of this silo is as a basis for paying the cost of filling. It is a difficult matter to determine accurately the number of tons in a silo, since the character of silage varies to a considerable extent. According to the figures commonly used in determining the capacity of silos, this silo contained in the neighborhood of 133 tons at the first filling. This is based on the computed weight of silage of well-matured corn after two days of settling. In filling the remaining six feet, if the material is tramped enough and heaped up so that when it is through settling the silo is practically full, it should be possible to get in an additional twenty to twenty-two tons. If after settling the silo still lacks a couple of feet of being full, the additional silage will be about fourteen tons.

Of course, the fact that the lower part of the silo is a foot smaller in diameter than the upper part, will have some effect on the settling of the silage. This six-inch shoulder has undoubtedly been rounded off with cement so that its effect in retarding the settling will be minimized.

Feed Consumed by Horses.

It will probably come as a surprise to many farmers to learn that horses consume the largest portion of the feed produced on the farms of the United States. According to government figures, horses consume nearly 39 per cent of the total corn, oats, barley and hay produced; swine consume 17 per cent; milk cows, 16 per cent; other cattle, 12 per cent; sheep, 4 per cent; poultry, 3 per cent, and human beings, 2 per cent. About 2 per cent is required for seed, and the remaining 5 per cent is used for various unspecified purposes.

The large amount of feed required for the horses on the farms offer a strong argument for studying the farm business most closely so as to get the maximum labor returns from the horses kept. On many of the farms the small number of hours the horses perform work during the year would be cause for another surprise. Farm management studies have pointed to this defect in the management of many a farm. It is a difficult matter to secure reasonable labor returns from the horses through the whole year. This is one most excellent reason for trying to make the growing of colts a part of the horse business of the farm. By using mares for work and raising colts, the excessive cost of maintaining the horses can be offset to a considerable extent.



TRACTION PLOWING IS FUN FOR THE WHOLE FAMILY, INCLUDING THE "MISSUS"

necessary feed can in Northwest Kansas be grown. On farms which have some bottom land, alfalfa can be grown and this with the grain of the sorghums will afford a combination which will grow hogs rapidly and which will fatten them profitably. On those farms on which alfalfa cannot be grown for pasture and hay, the feeding situation is not so simple. However, pasturage on green sorghums will largely take the place of alfalfa pasture. The sorghums, though, produce small gains on hogs, but their conditioning effect is such as induces the use of other feeds at their maximum value. Wheat and barley pasture can be successfully used also. These are not so rich in protein as alfalfa and of course will not prove equal to alfalfa. However, there are cowpeas, sweet clover, Spanish peanuts and soy beans which hold considerable promise of producing in that section the protein needed to grow and fatten hogs. These latter-named plants deserve a trial on the farms of the Northwest. It is already pretty well established that these will afford protein pasture and hay and grain in profitable quantities under light rainfall, and it is now largely a matter of the general farmer adapting them to his needs. Feterita and milo will afford the grain needed to grow and fatten hogs. When a sufficient acreage of these is planted and the farmer has come to depend upon these for his principal grain feed in the place of corn, then he will be in position to carry grain from one year to another as a protection against a possible season of total failure. Wheat and barley, each well adapted to this section, can most years be fed to hogs with greater profit than when sold on the market.

The North Platte, Nebraska, Agricultural Experiment Station, located about 150 miles directly north of Thomas County, has made a remarkable success in the growing of hogs and the marketing of pork. This station markets about three carloads of hogs a year and its operations in hogs have shown a greater profit upon the investment in growing pork than any other farm operation.

INCREASED MEAT PRODUCTION

Cattle-Growing Especially Adapted to Sub-Humid Regions—Hogs Offer Key to Solution of Meat Shortage Problem—G. C. Wheeler

It would seem that in view of the conditions existing at the present time, there should be every incentive to get back into the cattle business on the farms. In years past farmers went out of the cattle business because it did not pay under the conditions prevailing. They will be induced to get back into the cattle business again because it is now offering a most profitable means of marketing farm products, and especially the kind of farm products most surely grown on the farms in regions of uncertain rainfall.

There is no question as to the world-wide shortage of wheat products which exists. The deficiency in the national meat supply was a subject of paramount importance at the convention of the American Meat Packers' Association which was recently held in Chicago. A year ago, at its annual meeting, this same association was very much concerned over the scarcity of live stock and even went to the extent of passing a resolution appropriating \$500,000 to encourage live stock production in the United States. Nothing further came of this propaganda, however.

The supply of live stock coming to the central markets has steadily decreased during the past year. Statistics from the stock yards of Chicago and Kansas City alone show that since January 1 there has been a decrease of 42,000 carloads of cattle, hogs and sheep received, as compared with the same period of 1913. Conditions existing in Europe at the present time tend to still further deplete the world's visible meat supply. It takes enormous food supplies to maintain the huge armies engaged in warfare. The needs of the situation are such that no consideration whatever will be given to the value of the breeding herds, and they will be ruthlessly destroyed.

The general trend in this country is toward rehabilitating the cattle business. There has been a growing interest in good cattle and in the study of methods for utilizing in the production of beef much of the low-grade feed which has to a large extent been neglected in the past. At one of the recent sales of pure-bred cattle all previous records were broken in the matter of attendance. This also established a price record for sales held by this breeder. A bull sold for \$1,800 and twenty-six bulls averaged \$498 each, while twenty-nine cows averaged \$493. Similar results at other sales of pure-bred cattle indicate the interest being taken in getting back into the production of beef. At a recent large sale of beef cattle in Kansas, grade cows averaged as high as \$75 per head.

Some Missouri cattlemen of Clay County have recently invested \$150,000 in cash for 5,000 head of beef-bred calves from Texas. Their purpose and aim is to grow out these calves and finish them for beef on the farms in Clay County. That it is possible to produce beef at a profit on the high-priced lands of the corn belt, is being demonstrated in numerous instances. In an interview in the Daily Drivers' Telegram, S. M. Summers, of Illinois, where farm lands are as high in price as anywhere in the United States, reported that he bought on the Kansas City market last September, twenty-five cows which cost him, laid down at his farm, \$55 per head. These cows produced twenty-one calves which were allowed to run with the cows on good bluegrass pasture. He began feeding these calves the middle of August, 1914, a little ground corn and cob meal, gradually decreasing their milk as the grain was increased. These calves are worth not less than \$38.00 per head at the present time.

Mr. George Tannehill, of Jackson County, Kansas, reports buying a bunch of twenty cows in Kansas City a year ago, every one of which has raised a calf worth \$25. These cows were roughed through the winter on forage which would otherwise be worthless.

There is probably no more important problem at the present time than that of working out the most profitable and best system of handling the cattle business under the changed conditions. The introduction of the silo has been a most important factor in utilizing the low grade feeds to good advantage. Many farmers could greatly increase the cattle-

carrying capacity of their farms by the use of silos. A breeder of beef cattle from Elk county called at the KANSAS FARMER office recently and in the course of conversation it developed that he was finding it a profitable business to gather up pure-bred Hereford bulls from smaller breeders not in a position to carry them through the winter conveniently, and grow them out on his farm. The use of a silo was an important part of the methods he was following. He found that he could profitably feed during the winter more cattle than he could handle conveniently during the summer season. This breeder made \$4,000 in profits last year in wintering and growing out pure-bred Hereford bulls gathered up in this manner. A ready market was found for the bulls among the cattle men farther west.

The work being done at the Kansas Experiment Station along the line of working out the best methods to follow, has already developed much of value to the cattlemen. Professor Cochel, who made an address recently at the Dry Farming Congress at Wichita, discussed at considerable length this matter of developing the business of producing beef cattle on the farms of Kansas. In connection with his report on the work



GOOD CATTLE PROFITABLY USE LARGE QUANTITIES OF LOW-GRADE FARM FEEDS. THIS BUNCH WAS WINTERED ON THE FIELDING & SONS' FARM NEAR MANHATTAN.—THEY ARE IMPATIENTLY WAITING TO BE TURNED OUT ON PASTURE.

being done by the experiment station, Professor Cochel is quoted as follows: "This series of experiments indicates that the maintenance of beef breeding herds and the production of stockers and feeders is a business peculiarly adapted to the sub-humid areas, because of the fact that such production permits the utilization of the by-products of crops usually grown where rainfall is deficient. The data presented coincides with careful observation of the general farm and ranch practice in the same area, in that the live stock farmers are the most prosperous, their farms are more productive, their homes are more modern, and their credit is better than that of their neighbors who have attempted to farm without live stock."

The cost of producing beef, as determined by the experiments already completed, formed a most interesting point of this discussion. For three years the breeding herds of cows at the Hays Station have been maintained in a most excellent condition during the winter season on twenty pounds of silage, all the wheat straw they would eat, and one pound daily per cow of cottonseed or linseed meal. During the winter of 1912 for a period of one hundred days the cost of maintenance amounted to \$4.44 per head, straw consumed being valued at 50 cents per ton, the silage at \$2.66 per ton, and the cottonseed meal at \$30 per ton. Based on this 100-day period, the cost for the whole winter per cow would have amounted to \$6.66. The cost of grazing per cow was estimated at \$7.50 for the season, or a total of \$14.16. With an 80 per cent calf crop, the calves would represent a cost of \$17.70 per head. Adding to this a fee of \$2.00 for bull service gives a grand total of approximately \$20 per head as the cost of producing a well-bred beef calf.

The following year these same cows were wintered as cheaply in spite of the great shortage of feed which existed. Owing to the shortage of feed crops,

kafir silage was charged to the cows at \$4 per ton, straw \$1 per ton. During this season the cows were fed a limited amount of silage and the wintering was estimated to have cost at the rate of only \$5.46 per head. With the same charge of \$7.50 per head for grazing and \$2 for bull service, the total amounted to \$14.90 for the year, making the cost of the calf, on the basis of an 80 per cent crop, amount to \$18.70.

As a result of these tests it would appear that beef calves could be regularly produced at this cost. Professor Cochel in the course of his address called attention to the fact that due allowance should be made for the following considerations.

"In every instance, sufficient allowance is made to insure a profit in the products used directly for feeding purposes.

"A market was furnished for kafir stover at \$2 per ton and for straw at \$1 per ton in the stack, both of which were produced in 1912 when no other market at any price could be obtained.

"An allowance for labor in winter was made at 17½ cents per hour for man, or 40 cents for man and team at a time when little opportunity for employment is offered.

"The possibility of diversified farm-

riods, he was politely but emphatically turned down. "One thing is certain," said Mr. Poole, "unless some means other than those now available for financing the cow man is furnished, an adequate supply of young cattle cannot be provided."

Just at present farmers of Kansas are cashing in a wheat crop which, both in yield and in price received for it, is far above the average. This means that a supply of ready money will be on hand far in excess of that available for a good many years. This money will be used for a great many purposes. First of all, burdensome debts will be paid off or reduced in amounts; then perhaps various conveniences long foregone will be purchased. When it comes to new ventures it would seem that the lessons of the past and conditions at present would surely induce the man with a little money to spend to make the effort to break away from the one-crop idea and invest a little of the reserve in some live stock. Of course it has sounded very fine to theorize about getting into live stock, but when every dollar received for the crop, year after year, had to go to pay debts incurred, there was no way by which the theories could be worked out.

The man who now has a little reserve available might well consider making some sacrifices in order to make the change from straight wheat farming to diversified or live stock farming. The danger is that the old way has been followed so long that it will require the overcoming of too much natural inertia to make the break, now that the opportunity has come.

In view of the difficulty of financing cattle operations as set forth above, the production of pork especially commends itself at the present time. The hog is certain to be an important factor in taking care of the widespread meat shortage which now exists. The hog has ever been the poor man's friend. While the cattle farmer must necessarily have considerable capital invested for a long period of time before his profits begin to come in, the poor man can take the hog and have a meat-producing animal producing its young in whole litters and at the rate of two litters per year. Properly handled, these meat-producing animals can be made ready for market in a few months.

From the standpoint of capital invested and the rapidity with which the returns begin to come in, sheep offer similar advantages to hogs. The small farmer with limited capital can most effectually use sheep to consume the class of farm feeds commonly fed to cattle. Sheep will do more even than cattle, since they can be used to consume waste feed in many places where cattle could not be so used.

It may truly be said that the hog offers the key to the solution of the meat shortage problem. This is apparent to many close observers, and ample rewards are sure to come to those who will take up in a careful, persistent manner, the growing of grain crops and the feeding of these crops to hogs. This is especially true of those who have neglected pork production because of the long-accepted belief that hogs were adapted only to a country where corn was a sure crop.

It has been amply demonstrated, both by our experiment stations and by farmers here and there over the grain sorghum country, that these grains can be used in pork production and give results, pound for pound, very close to the results secured in feeding corn. There is no field open to the live stock farmer offering greater possibilities at present than that of pork production from grain sorghums. These crops can be so handled as to insure an abundance of grain practically every year. This is more than can be said of corn, even in the eastern half of our state. Pork production, which requires but little capital, can be put on an absolutely permanent basis by the farmer who will seriously take up the matter of making the grain sorghums the chief grain crop of the farm. Here is a splendid opportunity for the wide-awake young farmer wishing to take advantage of existing conditions.

While there is every incentive to get back into the beef business, this type of live stock production calls for a considerable investment of capital in cattle and equipment. Many a farmer possesses the ability and equipment to grow the crops required, but by lack of working capital is absolutely prohibited from utilizing these crops in the production of beef. As was stated by J. E. Poole in an address before the American Meat Packers' association recently held in Chicago, "The cornerstone of the live-stock industry is credit." He stated that it was comparatively easy for the steer man to secure short-time loans but when the cow man approached the banker and requested money for much longer pe-

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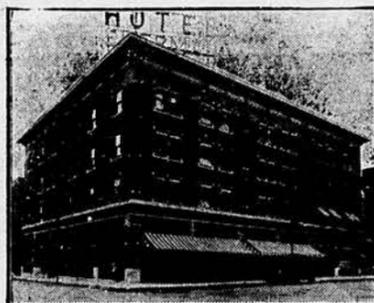
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Movable Agricultural Schools.

The first two movable schools in agriculture under the auspices of the Extension department of the Kansas Agricultural College will be held in Louisville, November 30, and in Oswego, December 7.

The school at Louisville will have three instructors, and the subjects of crops and soils, dairying, live stock, and farm management will be given. At Oswego the subjects of crops and soils, dairying, live stock, cooking and sewing will be treated. Five instructors will be present for five days, and special lecturers will address some of the general assemblies.

African Kafir in Oklahoma.

The showing of this year's importation of African kafir seed and the crop grown therefrom, has not been better in Oklahoma than in Kansas. The same uneven height, unevenness of head type and ragged appearance prevails in Oklahoma as in Kansas, according to George Bishop, western editor of the Oklahoma Farm Journal and who has carefully observed this season the performance of the seed from Africa. He adds to the general fund of information relative to African kafir, by stating that at the Amarillo station in Texas, where it has now been grown for five years, "it is still a very sorry performer compared with improved native strains. I saw it growing at Chillicothe, Amarillo, Dalhart, Texas, and Goodwell, Oklahoma, and in each place it was late and had a ragged head formation. There was absolutely nothing to recommend it that I could see, and those who grew it said the same thing. I am more than ever convinced that the basis we have laid down for seed selection, observing the inside formation of the head, is the surest and quickest route to a higher-yielding strain of kafir."

Immunizing Pigs.

We have an inquiry from C. E. H., one of our readers in Bourbon County, regarding the immunizing of young pigs against cholera. This reader has some brood sows which have been immunized by the simultaneous method of vaccination. These sows are now suckling pigs. He has been informed that sows so immunized always have the cholera germs present and that their pigs or any other hogs coming in contact with them are likely to become infected with cholera unless previously immunized.

He wishes advice as to how to proceed with pigs now suckling these sows in order to protect them. Dr. R. R. Dykstra of the Agricultural College furnishes the following information regarding this inquiry:

"If the sows referred to have been immunized by the double treatment, the pigs will be immune to cholera until they are weaned. As soon as they are weaned, if they weigh less than fifty pounds, they should be given the proper dose of serum-alone which will make them immune for a period of from thirty to ninety days. By the time they weigh fifty pounds they should again be vaccinated with serum and virulent blood, which will make them permanently immune.

"The statement that sows vaccinated by the double treatment always have the cholera germs with them is erroneous. Such animals, if the vaccination has been properly performed, are entirely free from cholera germs three weeks after vaccination."

Pit Storage Fruits and Vegetables.

Don't place apples, potatoes and root crops in the same pit for winter storage. Better still, use the cave for storing fruits and vegetables, says D. E. Lewis, assistant in horticulture in the Kansas Agricultural College. A large per cent of the caves on farms are suitable for storing fruit if a ventilating system is installed. The best ventilating system consists of three openings made of tile in the roof and covered with A-shaped boards to keep the rain out. To perfect this manner of ventilation there should be openings in the floor which connect with a tile running to the outer air.

Maintaining a constant temperature of about 33 degrees Fahrenheit will give

the best results in such a cave. The cave should be located upon ground which is well drained and a northeast front is preferred, although an east front is better than a west or south front.

Apples, root crops and potatoes should never be stored in the same pit. If the pit type of storage is used, the location should be carefully selected where the pit will have good drainage. In preparing the pit, it is best to dig from four to eighteen inches into the ground, as this will give a more even temperature than if the vegetables are placed on the top of the ground. The rick style of pit is best adapted for storing large quantities. A trench should be dug around the pit which will carry off surface water.

Never put spoiled or wormy products in the pit. The fruit or vegetables should be covered with enough straw or grass to form two inches of insulation after the soil is in place. If the pit is filled early in the year, it is best to use slough grass or cane fodder to shed water. Part of this should be removed when the earth is put on. Enough dirt should be used to prevent freezing. A two-inch pipe should run from the outside to the bottom of the pit to serve as a ventilator. It is better to have this pipe in place when the fruit is first placed in the pit than after the fruit has been stored for some time.

Hogging Off Corn Profitable Practice.

Hogging down corn has proved profitable where rightly managed, and is being more widely practiced each year.

The advantages secured are: Labor saved because husking and storing are eliminated; larger and cheaper gains than by feeding in the dry lot, less waste in harvesting, if younger shoats or brood sows pick over the field after the fattening hogs are removed; conservation of fertility; even distribution of manure.

The following is taken from Minnesota Bulletin 104:

One lot of pigs hogged down corn in the field, one lot was fed on snapped corn (unhusked) in the yard, and a third was fed ear-corn in the yard.

	Hogged-Down Corn	Fed Snapped Corn	Fed Ear Corn
Number pigs	32	8	8
Av. beg. wt.	112.6 lbs.	137.5 lbs.	137.5 lbs.
Av. final wt.	118 lbs.	196 lbs.	196 lbs.
Av. daily gain	1.44 lbs.	1.11 lbs.	1.09 lbs.
Length of experiment	52 days	52 days	52 days
Grain consumed for pound gain	6.35 lbs.	6.44 lbs.	6.77 lbs.

The grain weights are on a basis of shrinkage to December 29. The pigs hogging down corn made more rapid gains than either of the groups fed by hand. Averages for 1905 and 1906 experiments show that 1.24 pounds less of feed (corn and shorts) were required to produce a pound of gain when corn was hogged off.

The Iowa Station Bulletin 143 found the practice of hogging down corn profitable. Farmers to the number of 153 reported an average saving of 6.89 cents for every bushel hogged down. The Iowa Station advises feeding some protein with the corn. This is provided by seeding rape in the corn or by feeding tankage or oil meal in troughs. In 1911, gains at the Iowa Station cost to the hundred weight, on standing corn only, \$3.14; on standing corn and soy beans, \$2.87; on standing corn and tankage, \$2.43.

One acre of corn, yielding 35 bushels to the acre, shrunk to January 1, will keep twenty pigs of 125 pounds weight 13.1 days.

When hogging down corn: Use pigs weighing from 100 to 150 pounds. Turn them into the corn when it is well dented. Have the hogs on full feed before turning them into the corn. Feed some protein supplement unless rape or rye was seeded with the corn. Use small field—many farmers prefer ten acres or less. Let the brood sows clean up after the fattening hogs. Use twenty-six woven wire for temporary fences.

Potash in Fertilizers.

Kansas is each year buying more and more commercial fertilizers. The European war is having its effect on the fertilizer industry of this country, through inability to import potash, accordingly fertilizer concerns are endeavoring

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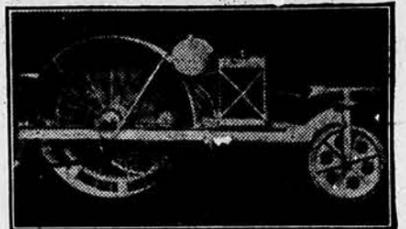
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oring to make the potash on hand go as far as possible by selling for the present brands of complete fertilizers containing only 2 or 3 per cent of potash and withholding from sale brands containing larger amounts.

The suggestion that some or all of the potash be replaced by phosphoric acid is absurd. One plant food cannot take the place of another. There are some indirect fertilizers, such as lime, gypsum and salt that can release a limited amount of potash from some soils.

The residue of soda left in the soil by nitrate of soda is more effective in releasing potash than is gypsum and hence goods in which the nitrogen is largely in the form of nitrate of soda, may have a special value in the present emergency. It is often stated that decaying organic matter releases potash from the soil, but there seems to be no direct evidence of this.

There is danger in the statement that farmers have been using an excess of potash. Crops use on the average about two and one-half times as much potash as phosphoric acid, while the average fertilizer sold contains only half as much potash as phosphoric acid; yet no one claims that we are using too much phosphoric acid. The potash remaining from previous fertilization is practically nothing except in the limited areas where a ton or more of fertilizer has been used per acre on truck crops. Very rarely is half as much potash applied to the wheat, oats, corn or cotton crop as the crop removes.

The potash mines are so numerous and the stocks on hand so large that supplies can be promptly sent forward, as soon as European conditions permit freight shipments to be resumed.

Second Growth Feterita.

A. L. B., Labette County, writes that he has a small patch of feterita which has made the second growth and desires to know if it will be safe to cut this for forage feed.

We see no reason why this should not be cut and fed as the forage of any other roughage crop. However, there is no evidence that the second growth of feterita is likely to be free from prussic acid any more than is the second growth of kafir or cane. This same question was asked us the other day relative to the second growth of Sudan grass. This is a sorghum and what is here said should be understood as applying to all sorghums and not to feterita alone.

The feeding of the second growth of all sorghums should be attended by caution. This because of the mystery which surrounds the development of prussic acid poisoning. We believe that in times past it has been considered that the second growth of sorghums is more likely or is more frequently possessed of prussic acid in dangerous quantities than the first growth. This opinion has long been held by farmer folks. We believe that it is because the second growth is likely to be made under more adverse growing conditions than the first growth and that because of the slow growth and likelihood of stunting prussic acid is likely to develop. However, when second growth of the sorghums is produced under favorable growing conditions it would seem that there was no more likelihood of prussic acid poisoning than in the case of the first growth produced under similar conditions.

It is a fact, however, that the second growth of sorghums is harvested throughout the state and fed dry and rarely are there reports of loss of stock from prussic acid poisoning. While this is true, caution should be exercised in the feeding until such time as the farmer has established to his own satisfaction that there is no danger from feeding. If there is danger in feeding the second growth of those sorghums which make a second growth of feed worth while, then the possibility of poisoning will mitigate against the use of those crops, namely, Sudan grass and feterita, because for these profuse claims are made as to the value of second crops. Most Kansas folks should be satisfied with one good growth of any crop except alfalfa in a single season. The second growth of sorghums is certain to be of value if plowed into the soil on the field in which it grew. So to do is, in our judgment, the safest and best way to dispose of the second growth. The soil needs the green manuring.

Milo and Kafir for Fattening Hogs.

There is certain to be increasing interest in the use of a greater variety of grains in the fattening of hogs. The Hays Experiment Station of Kansas, in a recent bulletin on the subject of "Kafir in Field and Feed Lot," reports some interesting results in the fattening of hogs under conditions prevailing in the part of the state in which this

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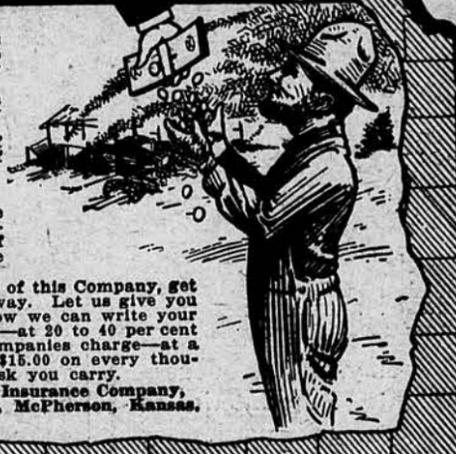
How would it sound to you to hear us say, "Here's your money," within a day after a score or more of your fine cattle had been struck down by death-dealing lightning?

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Remember, we have been doing this for over twenty-six years. We have been doing it in practically every county in the state. Think what that means—to you and to every farmer who is looking for good, safe, solid, protective insurance. Send to us today for a list of losses we have paid in your county. Then you can go to those friends and find out how well we took care of them.



If you aren't a member of this Company, get in touch with us right away. Let us give you the full particulars of how we can write you insurance for you at cost—at 20 to 40 per cent less than the old line companies charge—at a saving of from \$5.00 to \$15.00 on every thousand dollars worth of risk you carry.

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station is located. The hogs used in these tests were bred and raised at the Hays Station, but were shipped to Manhattan for the reeding test involving the use of these grain sorghums.

In this test the cheapest gain was made on a lot fed ground corn and alfalfa hay. While the gain on this lot was cheaply made, it was considerably smaller than the gain made in the lots where shorts and tankage were used as supplemental feeds. The lot receiving a ration consisting of 62 per cent ground milo, 30 per cent shorts and 8 per cent tankage, produced gains at the rate of \$4.45 per hundred pounds. A similar lot in which ground kafir was substituted for the ground milo produced a hundred pounds of gain at a cost of \$4.50. One lot was fed ground cane seed in the same proportions. In this lot the cost per hundred pounds of gain was \$4.95.

As a result of these hog feeding tests which have been carried on by the Hays Station through a period of four years, the experimenters have concluded that it is more profitable to full feed hogs of medium age and weight for a short period of approximately seventy-five days than to full feed old or very young hogs for longer periods.

It was noted that an addition of a few sugar beets to the kafir ration was very desirable, reducing the amount of grain required, increasing the daily gains and making them at less cost per pound. The conclusion was drawn that when kafir and milo are fed with the proper supplement, they are entirely satisfactory feeds for fattening hogs, being but slightly inferior to corn for this purpose. The results of these tests indicate that there is little difference between kafir and milo as hog feeds. None of them were efficient feeds except when a feed rich in protein, such as tankage, was used as a supplement. Even sorghum seed was found to be of considerable value as a hog feed when properly supplemented with tankage and shorts. It is not, however, equal to either milo or kafir.

The value of these grain sorghums for hog feeding purposes is a matter of a great deal of practical importance to every practical farmer of Western Kansas and in fact to farmers all over the state. The results of these tests will well repay careful study.

Gasoline Engine Speed.

Is your gasoline engine running at the right speed? Are your belt pulleys the correct size? Excessive use of fuel in a gasoline engine, of the throttling lever type, may sometimes be traced to its slow speed, the engine being run slowly to give the machine it is driving the correct speed. It should be remembered that the engine is intended to run at the speed which is usually stamped on the name plate. If the driven machine runs too fast with the engine running at the proper speed, do not slow down the engine, but change one of the pulleys, using a smaller one on the engine or a larger one on the driven machine.

An engine driving a silage cutter at the Nebraska Agricultural College farm this fall was run at a slow speed for several days, a record being kept of the gasoline used and tons cut. A larger pulley was then put on the cutter and the engine speed increased to give the same speed of cutter. As a result the gasoline used by the engine was decreased over 25 per cent. The saving in fuel paid for the new pulley in about three days.

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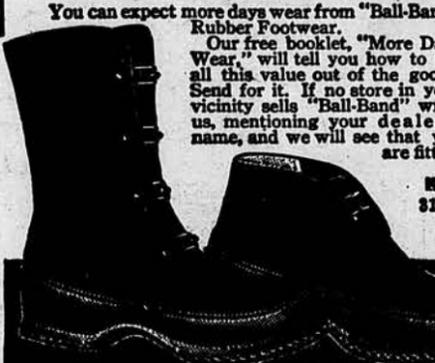
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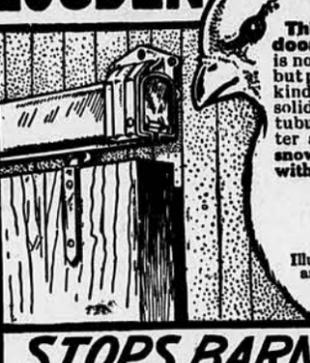
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DAIRY



The leading herd of the Dickinson County Cow Testing association was dispersed at Abilene, October 15. This was a herd of grade Holsteins owned by A. B. Wilcox, a dairy farmer. Mention of this herd and of Mr. Wilcox's method of breeding, handling and feeding, has numerous times been made in these columns. The sale was regarded as a complete success. That is, buyers were plentiful, competition active and good prices paid. The sale netted \$6,700 for seventy-eight animals and every cent of the money was paid in cash. When we say "good prices" we make reservation. We mean good prices compared with the way milk cows sell generally. We do not mean that Mr. Wilcox's offering brought the money it was worth, because we hold the opinion that many of the cows sold dirt cheap in comparison with a valuation upon which the annual product in butter—to say nothing of the calf and skim milk—will return a satisfactory income on investment, feed, labor and allowing for depreciation. When a cow during the first twelve months of her lactation period, produces 16,458 pounds of milk and 736 pounds of butter, sells for \$225, we contend that she does not sell for what she is worth. True, this was only a grade cow, but her ability as a producer excels that of thousands of pure bred cows and which sell for \$500 and upward. This cow will pay, according to Mr. Wilcox's method of figuring, 10 per cent a year on \$2,000. In the same sale a cow which during the first six months of her lactation period produced 9,549 pounds of milk and 483 pounds of butter, sold for \$287.50. This was another cheap cow. We might go through the list and point out other instances in which mature cows sold for less money than they were worth.

The buyer at this sale cannot be blamed for buying as cheap as he could. So to do is one of the essential points in good buying. At an auction sale the buyer always has this advantage over the seller. The fact is that we in Kansas have not yet come to realize the value of a first class milk cow. We do not recognize her value from the standpoint of her product, neither do we realize her value as a foundation from which to build a profitable herd—a herd which during all the years of a lifetime will increase in its profitableness in the proportion that it is intelligently bred, selected, fed and handled. The men who bought the above named cows would have paid considerably more money for cows of the same quality bought in Wisconsin, Ohio, New York or other states in which there are dairy cow breeding centers. That this is so is indeed discouraging to the man in this western country who seeks to engage in the breeding and sale of dairy stock. The sale of these animals at these prices probably paid Mr. Wilcox well. It must be remembered, though, that he discovered these animals through the use of the Babcock test as applied by his testing association and by careful handling and good feeding developed them to the point at which they became valuable animals. He found "diamonds in the rough." It is certain, though, that he cannot replace this herd, as he intends to do, with pure bred animals at anything like the money received at the dispersion sale.

Mr. Wilcox's cows would have sold for more money if they had been of pure breeding. Pure bred stock would have attracted another class of buyers and they would have been willing to pay for pure blood, which blood is not more expensive to feed and handle after the foundation stock has once been obtained. It is because Mr. Wilcox realizes this condition that he proposes to maintain hereafter only pure bred stock. It is this point of refinement in breeding which costs money to obtain in the first instance and which in the second instance sells for money. We know just how Mr. Wilcox feels. The writer of this has stood in his shoes. While he knows that his animals sold for higher prices than had ever before been obtained for similar animals in his county and is satisfied with the prices paid, he must know that from the standpoint of milk production alone and the opportunity for growing large producing grade calves from these animals, they sold at a low price. Be it understood that we have not heard a word of complaint relative to his sale, either from Mr. Wilcox or others, but knowing that human nature is about the same everywhere and having had just such experience, we feel justified in forecasting his feelings. The ten highest priced cows in Mr. Wilcox's sale brought \$1,875. The average for all animals above four months of age was \$102. These figures are mentioned to give the reader an idea of the prices at which grade Holstein milkers and young stock will sell at public action in Kansas at this time. Compared with the sale of pure bred animals of the same breeding or with pure bred, high class beef animals, the prices for which this herd sold do not seem large or extravagant. They are such prices, however, as we consider paid Mr. Wilcox very well indeed for the intelligence used in the handling and feeding of the herd. A two-year-old heifer fresh about six weeks and which gave 594 pounds of milk and 30 pounds of butter in thirty days, sold for \$127.50. A heifer of about the same age, just fresh, sold for \$132.50. Others sold at similar figures. These are mentioned to give KANSAS FARMER folks some idea of what buyers will pay for young cows, the producing ability of which is apparent or is known as in the case of the first mentioned heifer. These heifers were from some of the good cows in Mr. Wilcox's herd and were sired by animal the antecedents of which were large producers.

It should be apparent from the above that the surplus of a good milking herd can be sold at good prices—that it is profitable to grow heifers from good parentage until two years of age or until they are fresh and sell them. This is a phase of farm dairying which is given too little attention. Too often the farm dairyman looks only to the income from milk alone as the source of his profit. In most instances farm dairymen have a feeling that the surplus calves must be sold for little or nothing and in too many instances this is done. There is no animal grown on the farm which will bring to its owner a larger income for feed and labor than a well bred—even though it be a grade—heifer calf. Farm dairymen should seek the largest profit possible through the actual milking of cows, but they should not forget that the rearing and the sale of the surplus from their herds will return as much or more profit than that from milking. Further evidence of the soundness of the above argument is that afforded by the sale of forty-three heifers ranging in age from one to three years, bred to registered sires and from heavy milking cows, which sold at prices ranging from \$50 to \$167.50. To grow these animals did not cost more money than to grow common cattle, and while the prices of the heifers last above named are not high and the heifers probably would have brought more money at private sale, they are prices which should prove encouraging to the man who has a feeling that heifer calves of dairy breeds and in excess of those which are needed to maintain his herd are of little or no value and that there is no demand for them.

It is safe to say that even with this class of animals they would not have sold at the prices brought had the producing ability of the milking cows not been known. Mr. Wilcox has for two years been a member of the Dickinson County Cow Testing association, the first organization of the kind in Kansas. He joined with his neighbors in the testing of cows, the primary object being to know those cows which were profitable or unprofitable and with this knowledge build up a herd of actual money-makers. Mr. Wilcox asserts that the testing of his cows had its effect on the prices paid for the young stock. Those heifers from cows with good records sold for more money—double in some instances—than was obtained for equally good looking calves from cows with lower records. Of course, those cows with the best record of production—other things, such as age, general appearance, etc., being equal—brought better prices

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than those of lower production. Mr. Wilcox is probably the first members of this testing association to sell his herd in this way, but the fact is that every member of the association has benefited to the same primary extent as has he and whether they have exercised the same skill in handling their herds and in cashing in on the benefits of the association, is a matter of their own choice. It is certain, though, that the value of every good cow listed on the records of the association has been increased as a result of the testing. In an auction sale or at private sale, when the owner can produce the record of the actual performance of a cow, he has reason to expect a better price for that cow than if her ability as a producer was not known. When a man goes out to buy a cow these days he wants to know in pounds of milk and butter what that cow has produced. The old story of the cow filling a three-gallon pail with milk twice a day for five or six months of the year, does not go now. The guess of the man who has a cow to sell is unsafe. More bad guesses are made in milk production than in any other line on which the farmer is called upon to guess. The expert judge in the absence of a milk record, can make a much better guess based on conformation and general appearance, than can the average man who milks the cow. Enough has been said, we believe, in the above to show wherein it will pay to grow high grade, heavy milking cows—wherein it is worth while to test and know the ability of such cows because of the effect upon the value of the offspring—and wherein the cow testing association will prove to great value to every locality.

It is to the shame of Dickinson County—a county in which the general interest in dairying probably exceeds that of any other county in the state—that only twenty-two of the seventy-eight head sold by Mr. Wilcox were bought by residents of the county. Mr. Wilcox's neighbors bought mostly calves and none of the high-priced animals. This county in which there is more than the average of intelligence and interest in dairy matters and much more than the average of Kansas counties in money per capita, allowed outside buyers to take from the county the choice animals of this herd. The men of Dickinson County will pay in Wisconsin and in other states more money for cattle or poorer quality than those sold by Mr. Wilcox. In fact, some Dickinson County men have already done this very thing. The county has slipped back a notch in its progress as a dairy center by not retaining in the county the animals of the Wilcox herd. It is to be remembered, though, that this is not an exceptional or unusual occurrence. There is an old saying that "a prophet is without honor in his own country" and we have no doubt there is a feeling in the county that Mr. Wilcox's animals were not as good as they really were. Distance lends enchantment and it may be that because a cow is purchased in Wisconsin or some other far-off state she may be classed among the elite and because of her far off associations have a greater value. Value in milk cows is based upon what the cow is able to do in returning a profit to her owner for feed consumed and labor expended in her care. Our interest in Dickinson County and its people causes us to wish that the Wilcox herd had been retained in the county.

Mr. Wilcox writes that if it had not been for his neighborhood testing association he would not have been enabled to get together as good a herd of milking cows and young stock as he was able to offer at this sale. The records made by the tester of the association instilled confidence in the buyers. He thinks buyers would prefer to pay \$300 for a cow which had produced \$200 worth of product a year, than to pay \$75 for an equally good cow on the basis of somebody's say-so or at the production of which cow it is necessary to guess.

He says: "I intend to remain in the dairy business with pure bred Holsteins and hope to get together as good a herd as I had of grades. I know this will be a difficult task but a lifetime of experience should help some. Others may milk the average Kansas cow at the profit she will give, but I am not looking for the job."

Kansans Win Honors.

Kansans have reason to be proud of the instruction their boys and girls can receive in dairying at the Kansas Agricultural College. The dairy stock judging team of that institution took second honors in judging dairy cattle in the

contest at the National Dairy Show in Chicago last week. This is not the first time, either, that a Kansas team has taken high rank in this contest. The team this year won two silver loving cups and one gold watch fob. The team took first in judging Ayrshires. The team was composed of Victor Stuewe, Alma; James Linn and A. W. Aichers of Manhattan. Stuewe was high man on the team, placing fourth in individual rank. Linn was third in judging Guernseys. Sixteen teams entered the competition. J. B. Fitch, instructor in dairy husbandry at the college, coached the team and accompanied it to Chicago. Before entering the contest the team took an extended trip through Iowa and Wisconsin, visiting the dairy herds of many prominent breeders.

Breed Butter Production.

"There is no question of greater interest in dairying than that as to which breed is the greatest producer of butter. On this one factor the comparative merits of the different dairy breeds are more largely judged by the breeder than on all other factors combined, as it has now been proven by numerous experiments and tests that a cow is profitable in direct accordance with the amount of butter she produces in a year," writes Harold McAllister of California, in a series of articles making comparisons of the production of the several dairy breeds. The importance attached to large producing cows and as evidenced by breeders as well as by farm dairymen, is shown by the tremendous growth of cow testing associations and the great emphasis each dairy breed association places upon its official records. McAllister has gone into all the available records of the various breed associations and the results of the figures compiled by him indicate that the officially tested Holsteins are producing sixteen per cent more butter than the Guernseys; twenty-one per cent more butter than the Jerseys; and thirty-eight per cent more butter than the Ayrshires. It must be remembered in connection with these figures that many more Holsteins have been officially tested than of other breeds and the figures reported should be considered as a comparison of the officially tested animals of the breeds and not as representing the performance of each breed as a breed. It must be remembered, too, in the selection of a dairy breed that there are conditions of climate, feed, and also of environment which must be considered. That is to say, that a cow or breed which might produce the most butter might not be so profitable as a breed or cow producing somewhat less butter. This phase of selecting a dairy breed has many times been discussed in KANSAS FARMER.

Breeders Demand Relief.

The case of the National Society of Record Associations before the Interstate Commerce Commission has been set for hearing on November 20 at Chicago. In this case the breeders of pure-bred live stock of the United States, through their national organization, are attacking the present requirements of railroads relative to less than carload live stock shipments.

Breeders of pure-bred live stock have long been handicapped by the unfair rulings in effect, and an attempt will be made through this appeal to secure relief from the present excessive rates imposed on shipments of live stock under declared values in excess of the limited liability. The breeders also ask that instead of the present rule providing for an increase of from 10 per cent to 50 per cent of the rate for each increase of 100 per cent of the value, there be substituted a provision for 2 per cent increase of the rate for each 100 per cent increase of value.

The breeders and shippers of pure-bred live stock all over the United States will be affected by the decision of the commission. The requirements and provisions relative to less than carload live stock shipments on every railroad will be considered at this hearing. The assistance and co-operation of all breeders is necessary to place before the commission fully the facts showing the present situation in each part of the country. Shippers able to furnish information relative to actual shipments, the rates and weights charged and additional expenses caused by requirements for attendants, are requested to send the same to Wayne Dinsmore, Secretary-Treasurer of the National Society of Record Associations, Union Stock Yards, Chicago.

If poultry raisers would provide warm quarters for their laying hens, there would be no reason for the hens to stop laying on the approach of each cold spell.

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Built Like a Good Bull

He's as strong as an ox—look at his inner vest of tough implement steel, and his outer shield which serves also as his bell.

He puts in a full 24-hour day without a grumble—and he'll go 36 hours at a stretch without rewinding.

He's been working steadily for five years now and he's never worn out, so far as is known.

Hitch him to your sleeping schedule and see how much better the whole farm runs.

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His hands and numerals are big

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In fact, his makers think he's the prize clock—the American People certainly have pinned the blue ribbon on him. \$2.50 is his price—a pretty small price for a grand champion.

He's on exhibit at your jeweler's. If yours hasn't him, send a money order for 2.50 to Westclox, La Salle, Illinois, and Big Ben comes prepaid to any address in the United States.

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are made in sizes from 1 1/2 h. p. to 50 h. p. and in both single and double cylinders. Burn Gasoline, Kerosene, Gas or Distillate; have inverted cylinders, guaranteed to give double the power of other engines of same weight; are easiest to move from one job to another; take up least space; start easiest and run with greater smoothness, saving violent vibrations and wear and tear on machinery. Crank shaft is above cylinders giving perfect lubrication by gravity. Every part easy to get at for adjustment without taking engine apart. Don't buy any gasoline engine until you get our Free Catalog Folder quoting low easy-to-pay factory prices. Write today.

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It's new and different. Listen! Don't buy an engine of any make, kind or at any price until you first get my new 1915 proposition and sliding scale, price reducing schedule. It's an eye opener—a profit sharing surprise to everybody. The more we sell, starting in September 1st, 1914 and ending September 1st, 1915, the more we still reduce our price from this already low figure and you get the benefit.

Ask For My Free Engine Book

Send a postal now for our new 1915 proposition and valuable engine book that is full of engine information, pictures and letters from satisfied customers that tell the absolute truth about Galloway engines. It's yours for the asking. Wm. Galloway, Pres., The Wm. Galloway Co., 215 Galloway Station Waterloo, Iowa

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Double ball type governor; Hercules cylinder head, extra large cooling surfaces around cylinder and cylinder head; larger water pump, than ever, easily drained, frost proof, a low speed, heavy duty, heavy weight, big bore and long stroke engine; elevated main bearing grease cups, heavy cast bracket supporting gas tank, cast iron gears over crank shaft, special designed Economy Carburetor (easy to start in cold weather) improved piston lubrication and gear driven built-in magnets (extra) but one wire from magnets to igniter.

LIVE STOCK



Sheep for the Small Farmer.

Over in Missouri, W. D. McKee, one of the farmers' institute workers of the state, has introduced and stands sponsor for the slogan of "Sheep on every farm." He maintains that fewer army worms and other farm pests would be heard of in Missouri if every farmer kept a small flock of sheep and cleaned up the waste places of the farm which offer such admirable winter quarters for many of these pests. Kansas farmers might well adopt a similar slogan. Sheep, like hogs, require the investment of but small amounts of working capital and the profits begin to come in quickly. To the farmer of small means, sheep will furnish the same kind of service in consuming low-grade feeds for which cattle have commonly been used.

Now Use Sterilized Meat.

The high prices of meat and the present shortage has brought about a provision whereby packers can sterilize certain classes of meats formerly condemned and destroyed and sell the product in sealed cans labeled plainly, "Second Class, Sterilized." It has been

March, Mr. Saunders gave a half day to this class on the last Saturday of each month until September. Seventeen young men and boys enrolled in the class and only a few of them were absent from any of the meetings.

Special classes of this kind have from time to time been conducted by representatives of the Agricultural College, but it is an entirely novel idea for a stallion owner in a community to do this kind of work. It is a plan that might well be carried out by many a good horseman in our state. If every stallion man in the state would organize a class of this kind and give careful instruction in the matter of horse judging, there would be much greater interest in this subject than there has been heretofore.

The man attempting this kind of work should post himself as fully as possible on the subject. He should not only be a good judge of horses himself, but should make some effort to prepare himself so that he may be able to impart his knowledge to others. Score cards, bulletins and other matter should be secured. Mr. Saunders reports that he



AN AFTERNOON IN HORSE JUDGING.—CLASS CONDUCTED ONCE EACH MONTH DURING PAST SUMMER BY BRUCE SAUNDERS, HOLTON, KAN.

made clear that large amounts of meat have been condemned because of strictly local cysts or lesions. These cysts and lesions are cut away and the balance of the meat is saved by this sterilization process. Such methods have long been practiced in Europe.

This measure is but another evidence of the acute condition which exists as to the available meat supply of the country. With an abundance of meat products available no one in this country would have even considered the use of this class of meat.

Carlot Exhibits at American Royal.

Liberal prizes are offered for the carlot classes at the American Royal this year. The first prize load of fat cattle will win \$125; the champion load of feeders will win \$115, and the champion earload of range cattle will win \$150. An abundance of feed is available in the corn belt and the indications are that the carlot department of the show will be larger than ever before. The change in date so that only a week intervenes between the Royal and the opening of the International makes it possible to show conveniently at both places. This fact should increase the size of the Kansas City carlot showing. In the regular breeding classes forty-three Hereford exhibitions have already been entered, as against twenty-three last year.

Horse Judging Class.

The ability to recognize instinctively the good points of a horse comes naturally to some individuals. Most boys and young men, however, must have the right kind of instruction as they are growing up or they will never appreciate what constitutes true excellence in horse conformation.

For the benefit of those who might have no other opportunity to gain a little of the right kind of information regarding horses, a progressive young horseman, Bruce Saunders, of Holton, Kansas, started a horse-judging class last spring. Beginning with the last Saturday in

found this class which he conducted to be of considerable benefit to himself, as it kept him studying each month to keep ahead of the boys.

The cut on this page is from a picture taken during one of the sessions of Mr. Saunders' judging class.

Regarding Live Stock at Frisco.

"The buildings prepared for the exhibition of live stock at the Panama-Pacific International Exposition are widely different from those that have ever been used at any former exposition," writes I. D. Graham, assistant chief in the live stock department of that exposition. "Heretofore the stalls have been arranged at right angles to the mangers so that the visitors who passed in the rear of the animals had but a meager chance to see more than the tail end of the animals in their stalls. Except when these animals were led out to the show ring, or for exercise, it was impossible for the visitor to get any adequate idea of their conformation and appearance as a whole. In so placing these stalls the chief motif of the plans has been educational; and the stalls at an angle of 45 degrees will enable the visitor to see and study the characteristics and points of excellence of the different breeds, and to compare these with each other, and with the different types of the same breed.

"In preparation for the care of the different breeds of cattle there has been purchased and stored a very large supply of the finest hay, and there is now being prepared about 600 tons of very high-class corn silage, both of which, together with the needed grains, alfalfa and root feeds, which will be in storage in the building especially provided for this purpose, will make any kind of feed readily available for the exhibitor of any class of live stock.

"It is not required that the exhibitor shall purchase his feed from the exposition, but this feed will be stored in anticipation of his needs and will be sold to him by the Department of Live Stock without profit."



The General says—

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guarantees 15 years' service. No test for toughness, pliability or anything else can give you adequate knowledge of how long a roof will last. Roofs don't wear out—they dry out. Let the three highest mills in the world guarantee the roofing you buy.

Your dealer can furnish **Certain-feed** Roofing in rolls and shingles—made by the General Roofing Mfg. Co., world's largest roofing manufacturer, East St. Louis, Ill., Marseilles, Ill., York, Pa.

Warm and Dry RUST PROOF

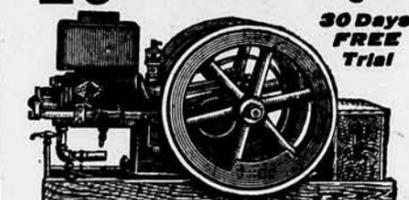


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Simple, durable, powerful. Carefully made to give satisfaction. 34 sizes and kinds. Shipped anywhere on trial. Fully guaranteed. Send for Big 48 page Catalog. It will help you to buy a better engine for less money.

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Lightest Running Feed Mills

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FREE A folder on Values of Feeds and Manures.

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TRADE MARK REG. U.S. PAT. OFF.

Reduces Strained, Puffy Ankles, Lymphangitis, Poll Evil, Fistula Boils, Swellings; Stops Lameness and allays pain. Heals Sores, Cuts, Bruises, Boot Chafes. It is an **ANTISEPTIC AND GERMICIDE** (NON-POISONOUS)

Does not blister or remove the hair and horse can be worked. Pleasant to use. \$2.00 a bottle, delivered. Describe your case for special instructions and Book 5 K free.

ABSORBINE, JR., antiseptic liniment for mankind reduces Strains, Painful, Knotted, Swollen Veins, Milk Leg, Gout. Concentrated—only a few drops required at an application. Price \$1 per bottle at dealers or delivered.

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Simon Pure, Time Cured In The Hand **Kentucky Leaf**

If you are a judge of real leaf tobacco you will appreciate this hill-grown Kentucky Leaf.

4 lbs. - Parcels Post - \$1.10
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Either Smoking or Chewing, state which you want when ordering. Try a 4-pound box and you will club with friends and buy in 100-pound lots or more, at special price. Write for Booklet that explains.

Kentucky Tobacco Co., Dept. M Patesville, Ky.

MAKE BIG MONEY SHIPPING FURS

Biggs at K. C. pays highest prices and sends you money by return mail. Nothing deducted for commissions. Honest grading. Fur shipments held separate on request and sent back at once if our returns are not O. K. Guaranteed baits, each package containing special guide for trapping the animal bait is made for. Traps and supplies at factory cost.

FREE Catalog of supplies and Trapper's Guide, with special fur price lists.

E. W. BIGGS & CO.
Chief and Largest Dealers in Hides and Furs in Southwest.
233 Biggs Bldg., Kansas City, Mo.



“Not the Cure, But the Prevention, of Hog Diseases Is Your Big Problem.”

GILBERT HESS,
Doctor of Veterinary Science. Doctor of Medicine.

You'd scarcely believe the figures if you knew the tremendous money losses that hog diseases are causing the farmers of America. It runs into millions of dollars. Swine epidemics are constantly playing havoc in different parts of the country. Be on your guard.

It's bad policy to wait until your hogs are stricken with disease—it's a mighty ex-

pensive job to *cure* a herd—it takes very little effort and trifling cost to keep a herd sound and healthy. My message to you is *Prevention*. And almost the whole secret of prevention lies in proper feeding and sanitation. Keep your hogs toned up and free from worms—keep the animals, pens, troughs and runs clean and disinfected and you'll have very little trouble raising healthy, weighty stock.

DR. HESS STOCK TONIC

Makes Stock Healthy and Expels Worms.

Dr. Hess Dip and Disinfectant

Destroys Germs—Deodorizes—Cures Skin Diseases.

These two preparations are the result of my life-time experience as a doctor of veterinary science, a doctor of medicine and a successful stock raiser. Dr. Hess Stock Tonic will put your animals in a thriving condition, make the ailing ones healthy and expel the worms. Contains *tonics* to aid digestion and appetite; *blood builders* to enrich and tone up the blood; *laxatives* for regulating the bowels and *vermifuges* to expel worms. My Stock Tonic will not only rid your stock of worms, but put your animals in such a clean, healthy, toned-up condition *as to make worm development impossible*. My Stock Tonic is good alike for hogs, horses, sheep and cattle.

I want to insist, however, that sanitation is of prime importance in dealing with hog and general stock diseases. In this I am supported by the leading veterinarians, scientists and government experimental stations throughout the country. Sanitation has been my constant message to you for many, many years, through the agricultural

press, as being an absolute necessity for the prevention of disease.

Dr. Hess Dip and Disinfectant destroys disease germs, foul odors, and is an effective remedy for parasitic skin diseases. For prevention of hog diseases I certainly recommend the use of Dr. Hess Dip and Disinfectant. Sprinkle or spray around the premises, on the floors, bedding, feeding places and troughs. Put it in the hog wallow. Dip the hogs occasionally if possible. Where this cannot be done, sprinkle or spray them. It will not only kill the germs of disease, but the lice as well.

Bear this in mind: whenever an outbreak of disease strikes a locality only the fittest survive; the strong, healthy, toned-up animal housed in clean, germ-free quarters will weather the storm. The use of Dr. Hess Stock Tonic and Dr. Hess Dip and Disinfectant will put your stock in this class.

Now read every word of this broad statement:

So sure am I that Dr. Hess Stock Tonic will put your animals in a thriving condition, make the ailing ones healthy and expel the worms—that Dr. Hess Dip and Disinfectant will destroy foul odors and disease germs, prevent and cure skin ailments and keep your premises clean and sweet smelling—that I have authorized my dealer in your town to supply you with enough for your stock, and if these preparations do not do as I claim, return the empty packages and my dealer will refund your money

The above dependable and scientific preparations are never peddled—sold only by reputable dealers whom you know. I save you peddler's wagon, team and traveling expenses, as these prices prove: Dr. Hess Stock Tonic, 25-lb. pail \$1.60; 100-lb. sack \$5.00. Smaller packages as low as 50c. Except in Canada, the far West and the South. Dr. Hess Dip and Disinfectant is sold in pint bottles, quart and gallon cans, also in barrels.

I have a book about Dr. Hess Stock Tonic and Dr. Hess Dip and Disinfectant that you may have for the asking.

DR. HESS & CLARK, Ashland, Ohio

Dr. Hess Poultry Pan-a-ce-a

A splendid poultry tonic that shortens the moulting period. It gives the moulting hen vitality to force out the old quills, grow new feathers and get back on the job laying eggs all winter. It tones up the dormant egg organs and makes hens lay. Also helps chicks grow. Economical to use—a penny's worth is enough for 30 fowl per day. 1½ lbs. 25c; 5 lbs. 60c; 25-lb. pail \$2.50. Except in Canada and the far West. Guaranteed.

Dr. Hess Instant Louse Killer

Kills lice on poultry and all farm stock. Dust the hens and chicks with it, sprinkle it on the roosts, in the cracks and dust bath. Also destroys bugs on cucumber, squash and melon vines, cabbage worms, etc., slugs on rose bushes, etc. Comes in handy sifting-top cans. 1 lb. 25c; 3 lbs. 60. Except in Canada and the far West. I guarantee it.

Make the Lazy Hens Lay



Just as easy to get eggs in cold weather as in spring. Winter should be the best laying, best paying months—will be if only you will start at once feeding

Poultry Regulator

Pratt's

Nature's own perfect tonic and conditioner. Your hens should be entirely through the moult. If they have not begun to lay, it is a sure sign that they need Pratt's Poultry Regulator—the one tonic that stirs up your idle, lazy hens, makes them hunt a nest and get busy producing eggs.

Don't delay. Go to your dealer's at once and ask for Pratt's. Makes no difference whether you have ten hens or ten thousand—they need Pratt's. A record of 42 years back of every package and sack. Satisfaction guaranteed or your money back. In 25c packages up, big 25-lb. pails at \$2.50. At 40,000 dealers. Pratt's Roup Remedy is a guaranteed cure. Now is the danger season for Roup and Colds. Don't risk losing your laying birds, but get a box of Pratt's, 25c and 50c.

PRATT FOOD COMPANY
Philadelphia Chicago Toronto

BOYS and GIRLS KANSAS FARMER GIVES AWAY SHETLAND PONIES

Would you like to have a nice young gentle Shetland pony to ride and drive? Well, Kansas Farmer—the big paper you are reading now—has given away over 100 fine Shetland ponies and outfits to Kansas boys and girls, and now we are going to give away some more. It is easy to get them. The other boys and girls who got them said it was easy and that they were mighty glad they sent us their names so we could tell them all about it, and you can SURE win a fine camera, gold watch, telescope, games, money and many other fine prizes. It won't take hardly any of your time and any boy or girl can easily do it. This time we are going to give away "Colonel," a fine young spotted Shetland pony and a dandy new four-wheeled pony runabout and harness for first prize, and two other fine Shetlands, "Prince" and "Dude," with saddles and bridles, will be two other fine prizes. If you would like to have a Shetland pony of your own, write your name and address on the blank below and mail it in a letter or paste it on a post card and send at once to The Pony Editor, Kansas Farmer, 625 Jackson Street, Topeka, Kansas. Then we will send you pictures of several of our ponies and tell you how the other boys and girls got theirs. You never will know how easy it is until you send us your name and address.



"Colonel" is a Fine Spotted Shetland Like This One.

You Don't Send Any Money—Just your name and address—to find out all about the ponies we give away and how you can get one. And sending your name and address places you under no obligation to us whatever. You don't even need to be a subscriber to Kansas Farmer. We had never heard of any of those other boys or girls who got our ponies until they sent us their names and addresses. So you see the first thing to do is to fill out this blank and mail it.

Every boy and girl that sends us their name and address and takes part, will receive a pony prize or be paid in cash in proportion to the work done. You cannot lose as you are sure to get something for the work you do.

SIGN THIS BLANK AND MAIL TODAY.
Pony Editor, Kansas Farmer,
625 Jackson St., Topeka, Kansas.
Please tell me how I can become the owner of "Colonel," "Prince" or "Dude."

Name.....

P. O.

Street or R. F. D.

Father's or Mother's Name.....

Poultry Book—Contains articles on building poultry houses and plans; pictures of our farms and poultry. This book is worth dollars, sent for 10¢ cash or stamps. We are the largest breeders of poultry in the world. Stock and eggs for sale.
UNITED POULTRY FARMS, BOX 19 WOPE, IND.

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Was One of the Worst Cases of CLUB FEET On Record!

The case was that of Frances Campbell, 13 years old, daughter of Mrs. J. A. Campbell, 3819 Western Parkway, Louisville, Kentucky. The upper photograph shows exactly how her feet looked July 7, 1913, when she came to us for treatment. Notice that they were twisted nearly completely backward. The lower photograph shows the feet as they now appear after treatment at this Sanitarium. This deformity was corrected without Chloroform. Ether or any General Anesthetic. Plaster Paris was not used. Write Mrs. Campbell, The

L. C. McLain Orthopedic Sanitarium

is a private institution, devoted exclusively to the treatment of crippled and deformed conditions, especially of children and young adults. Write us freely regarding Club Feet, Spinal Diseases or Deformities, Infantile Paralysis, Hip Disease, Bow Legs, Knock Knees, Wry Neck, etc. We will send you descriptive literature and advise you fully. Ex-patients as references everywhere.

THE L. C. McLAIN Orthopedic Sanitarium
989 Aubert Ave. St. Louis



ARE YOU GETTING LOTS OF EGGS?

Or, do your hens lay only when eggs are cheap? Get the eggs this winter by starting to feed

CONKEY'S POULTRY TONIC

now. It doesn't force the hens but makes them want to lay because they are well nourished and strong.

Conkey's Poultry Tonic is an all round tonic that helps nature do its work—For this reason it is fine for every bird you own—young chicks, growing stock, molting fowls or laying hens.

Tell your Dealer you must have Conkey's—and write us if he cannot supply you. Remember, Money Back if a Conkey Remedy or Tonic ever fails to satisfy you.

GET THIS BOOK—and learn to laugh at poultry diseases. It will make you an expert. I have bred White Rocks exclusively for 20 years and have them as good as anybody. Eggs from three high-scoring pens, \$2.00 per 15; \$5.00 per 45, delivered free by parcel post or express. Safe delivery guaranteed. A limited number of eggs from a specially fine mated pen, \$5.00 per 15. You will get what you order, or money refunded.

THE G. E. CONKEY COMPANY
130 Conkey Bldg., Cleveland, Ohio.

White Plymouth Rocks

Again prove their superiority as egg layers in the National Egg-Laying Contest, one White Rock hen laying 281 eggs; 645 hens competing. I have bred White Rocks exclusively for 20 years and have them as good as anybody. Eggs from three high-scoring pens, \$2.00 per 15; \$5.00 per 45, delivered free by parcel post or express. Safe delivery guaranteed. A limited number of eggs from a specially fine mated pen, \$5.00 per 15. You will get what you order, or money refunded.

THOMAS OWEN,
Station B. Topeka, Kansas.

POULTRY



So far this fall the weather has not been severe enough to retard the hens in their laying.

Consequently eggs are cheaper than usual at this time of the year—only 20 cents per dozen at retail in Topeka.

But the first cold snap will keep hens from laying and prices of eggs will go up as a matter of course.

Fresh eggs at 20 cents per dozen are cheaper than any kind of meat that can be bought at any retail butcher's establishment, and those having no hens ought to buy a supply while they are cheap, and pack them down.

It is an easy matter to pack away a few dozen eggs to last over winter. Take a crock or barrel and place a layer of salt in the bottom, then put eggs on this—not close enough to touch each other—then pack salt around and over them until they are covered, then put more eggs and salt alternately until the receptacle is full.

Coal ashes are most excellent for chickens of all ages. If you will give them access to these you will be surprised to note the quantities they will consume. There is a certain amount of lime and grit in ashes which often take the place of grit and oyster shells. The lime makes the shell for the eggs and the hens pick up the particles of sharp cinders, which they use for grit. Wood ashes are also good for fowls, as they can pick many a piece of charcoal out of them, and there is nothing better to keep the hen in good condition than plenty of charcoal. In the winter time the ashes can be carried to the poultry house and scattered on the floor, but care must be taken that there are no live coals among the ashes or there is danger of a fire in the house.

Early Layers.

The Missouri State Poultry Experiment Station has fifty or more pullets which have been hatched this year that began to lay when they were about four months old or a few days over that age. In every case, no matter what variety of poultry it happened to be, the first pullets of that variety to begin to lay came from the highest laying hens of that variety of hens among the highest layers. We have never had an early maturing and early laying pullet come from a medium or poor laying hen. In every case thus far, no matter what variety it is, the pullets which began to lay when they were from four to five months old were bred from the high laying hens of that variety.

The thirteen which began laying first were: 3 Buff Leghorns; 2 Barred Plymouth Rocks; 4 White Leghorns; 1 Ancona; 1 Campine; 1 Rhineland; and 1 White Orpington. The Barred Rocks and White Orpington weighed from three and one-half to four pounds each, while all others weighed from two and one-half to three and one-fourth pounds each. The first eggs weighed from one to one and one-half ounces each. The eggs are practically perfect in development. A Buff Leghorn pullet weighing two and three-fourths pounds began laying at four months and five days old, and a Barred Rock pullet weighing three and three-fourths pounds began laying at four months and nine days old. These were the first two pullets to lay. The pullets are fed good, wholesome food, but not forced or stimulated. The food given consists of equal parts of cracked corn and wheat as a grain feed, and equal parts of corn meal, wheat bran and shorts fed in hoppers, and we mix one pound of fine salt to every hundred pounds of the mash. The colony houses are kept along the edge of a corn field or on fresh ground in an orchard. We give the young stock sour milk or buttermilk if it is available, and if not, we add ten pounds of dry beef scraps to every hundred pounds of their dry mash. At three or four o'clock in the afternoon we feed a moistened mash, all birds will clean up in twenty or thirty minutes. We use the same dry mash as we feed in the hoppers, but moisten it with sour milk or water. We, of course, supply

grit, oyster shell, and charcoal by mixing them with the feed or by feeding separately. Pure water is before them at all times. Recently in culling 6,000 head of young stock raised in this way to an age when the pullets had begun to lay, we found only two birds that appeared to be anything like out of condition.

From our observation and records we have concluded that the season of the year in which a chicken is hatched has much to do with its growth and development, and the length of time that it will require for a pullet to mature and begin to lay. That is pullets hatched in early spring when the trees are budding, the grass beginning to grow green, the crops growing, and the birds mating, in other words, when the whole earth seems to be putting on new life, pullets hatched at this season will begin laying in a shorter length of time than the full sisters to them hatched in the summer or fall. We believe that pullets hatched in February, March and April will begin laying in a shorter length of time than their full sisters hatched in May, June, July in this climate.

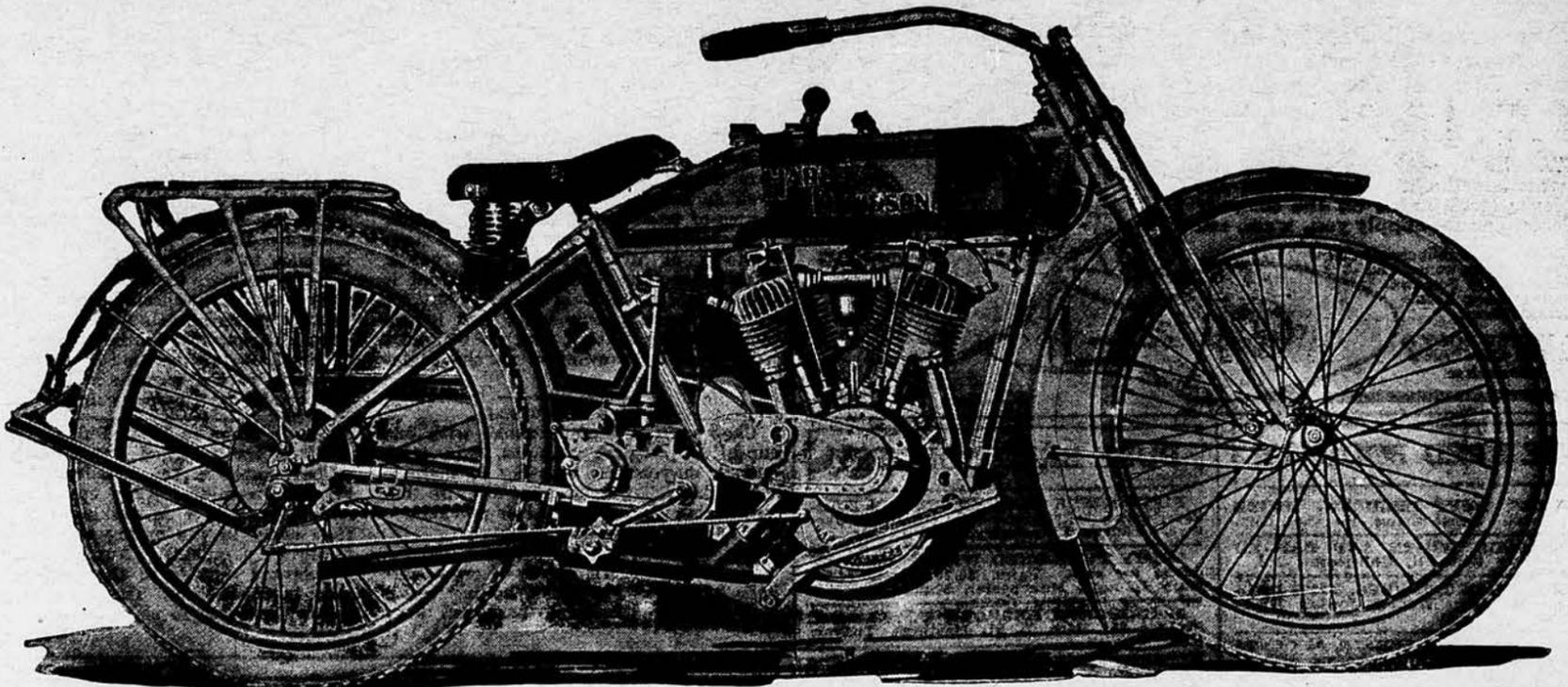
The smaller varieties will begin to lay a little earlier or mature a little quicker than the large varieties, as a rule, but by using good judgment, a breeder of any variety can so regulate his hatches so as to have them mature just in time to make good winter layers. A poultryman can so select and regulate the breeding of his flock and so regulate his hatches that his pullets will bloom or begin to lay something near a certain season, just as the florist has his chrysanthemums bloom at Thanksgiving and his lilies bloom at Easter. By all means, have them begin to lay before the winter season for if they do not, they will more likely not start laying before spring. Such pullets are a dead loss for several months. The margin of profit in the poultry business is so small that it will not stand such a loss.

The fourth generation of chickens which have hatched since the Experiment Station was established are now on the farm. The first year we trap-nested a pen of Buff Leghorn pullets which averaged between 90 and 100 eggs each. We selected the best layers from that pen of ten for our next year's breeders and mated them to a cockerel hatched from the best laying hen. We have kept and bred from the best layers and the best cockerels each year since that time. The result is that last year we developed a pen of ten pullets which averaged nearly 200 eggs each and one laid 217 eggs, and now this year we have developed a pullet which began to lay when four months and five days old, and was the first to lay out of six or eight thousand chickens reared on the farm this season. We have kept them practically within the same line of breeding and by careful selection and mating, having practically doubled the egg yield in three years' time.

Another thing, it does not mean that you have to entirely disregard shape and color to breed a good laying strain of any variety. One of our contestants in the Buff Leghorn class from Michigan entered his birds in a good poultry show two weeks before our contest began last year. We now find that some of his highest scoring pullets and some of those which have won the highest honors in the show room, are also those which have made the highest records in the contest by laying the greatest number of eggs. His pen is fine in color and shape as well as leading when it comes to the egg basket. Of course, we all know that after a pullet or hen has laid a large number of eggs, it tells on their appearance for the time being, at least, but that does not necessarily mean that these birds will never be in show condition again, or that their progeny will not be birds good enough to go into the show room. We have been impressed with the show qualities and the beautiful shape and color of one of the New Zealand pens of White Leghorns. This pen comes from a breeder who has won in the contests of that country and is now also making good record here. We are quite certain of one thing, i. e., it is not necessary to breed a flock of mongrels for them to prove to be satisfactory layers.—Missouri Experiment Station.

SEND IN YOUR NAMES, BOYS!

KANSAS FARMER is Going to Give Away the Latest Model 11 F \$275 Harley-Davidson Motorcycle and Six Other Big Prizes—\$500 in All



ITS EASY TO WIN and You MAKE GOOD WAGES BESIDES, WHILE WORKING
E. B. Preedy Richland, Ks. won the Motorcycle Given Away Feb. 28, By Securing only 110 Subscriptions

We Pay You Liberally in Cash For the Work You Do and the Best Worker Wins the Motorcycle. Write Us Today About it IT COSTS YOU NOTHING TO ENTER



Chas. Erbert, Ellis, Kansas, winner of the Motorcycle in the second contest.

Read These Letters from the Three Winners in Our Other Free Motorcycle Contests.

LETTER FROM E. B. PREEDY, winner of Motorcycle in contest which closed February 28, 1914.

KANSAS FARMER, Topeka, Kan. Gentlemen:—I received the Motorcycle and it sure is a dandy. It is easy to handle. I have not found a place it won't pull. I would advise every boy in Kansas to get busy on the next contest, for it is easy to win and everything is straight.—E. B. PREEDY, Richland, Kansas, March 3, 1914.

LETTER FROM C. F. ERBERT.

KANSAS FARMER, Topeka, Kan. Dear Friends:—I received your letter asking what I thought of the contest that you had about a month ago. I will say that the Motorcycle I won was just as represented and the contest was managed in a way that suited every one, as they all were treated alike. I certainly like my machine. The more I ride, the more I want to ride it. Again thanking you for the kind

treatment I received from you people, I remain your friend,
 C. F. ERBERT, Ellis, Kansas.
 December 28, 1913.

LETTER FROM JOSEPH MUCKENTHALER, JR.

KANSAS FARMER, Topeka, Kan. Gentlemen:—The Motorcycle which I won in the first Kansas Farmer contest is surely a dandy. It will climb any hill around here with two on the machine. It is the machine that has the power and it is very simple to operate. It is built for hard road work. The contest in which I won this machine was conducted in the best way possible. About twice a week I got a letter which told me how the contest was and how I was standing in the race. If any of you boys want to get in a contest, try and get in the next one. Kansas Farmer knows how to conduct them and will treat everybody alike, so boys, if you want to win some prizes, better make up your mind and get in on the next contest.—JOSEPH MUCKENTHALER, JR., Paxico, Kansas.



Jos. Muckenthaler, Jr., Paxico, Kansas, winner of Motorcycle in first contest.

Do You Want a Motorcycle?

ONE THAT YOU CAN GET ON AND GO WITH WHENEVER YOU WANT TO, WHEREVER YOU WANT TO GO AND GO IN A HURRY? You CAN have one and without its costing you a single cent of your money. It will pay you to find out all about our **EASY** plan whereby three sons of farmers each won one of these Motorcycles we are giving away and **WON THEM EASILY**—just working during spare time. Send in your name and address today for the next contest which is just starting. This places you under no obligation to us whatever.

You have an opportunity here that you can make worth a good many dollars to you if you will only take advantage of it. Someone is going to win this Motorcycle mightily easily and make money besides. Will it be you? It might just as well be you as anyone and no harm will be done in trying. We are ready to turn over to you **CASH** and **PRIZES** what we would pay others for doing this work for us. This Motorcycle will give you more pleasure than anything else you could own. **YOU CAN'T LOSE** in this contest and you have **EVERYTHING TO GAIN**. It is a fine opportunity to turn spare time into cash and a valuable prize easily earned. You can see what the others

say who won the other Motorcycles. They were **GLAD THEY SENT IN THEIR NAMES** and found out all about it. We had never heard of any one of them before, and none of these three winners had ever taken a subscription before or done anything of this kind. You have just as good an opportunity as anyone else to win this **\$275 MOTORCYCLE**, the latest model and very best machine you could get. Will you try? **IT COSTS NOTHING TO ENTER THIS CONTEST**. You do not even have to be a subscriber to KANSAS FARMER.

The best thing to do is to write at once and we will send you a complete description of the \$275 Model 11F Motorcycle and the six other big prizes to be given away, together with the rules of the contest and our easy plan to secure subscriptions fast and **MAKE FROM \$40 TO \$60 PER MONTH** during spare time. **THIS COSTS YOU NOTHING** and you will be under no obligation to us whatever if, after reading about the plan of the contest, you decide not to go ahead. If you really would like to own a fine, powerful 1915 Motorcycle with the **THREE** speeds, just like an automobile, **ELEVEN** horsepower, and make money while working for it, send in your name and address at once on the blank below. It will entitle you to a **FREE PREMIUM**.

YOU GET PAID EVERY WEEK.

You don't have to wait until the contest is over to be paid for the subscriptions you secure—you get paid every week. Only those residing in Kansas, Nebraska, Colorado and Oklahoma are eligible to be contestants.

You Wont Know How Easy It Is Until You Start

Don't think for a minute that some other fellow has a better chance than you have. **HE HAS NOT**. You will never know how easy it is to win in our Motorcycle Contests, or how much money you can make until you enter and get started, which only requires that you send your name and address for full information about the prizes and the contest. You can have just as much fun with this Motorcycle as you could with an automobile, and you can go just as fast and as far, and just think—**IT WILL BE GIVEN AWAY ABSOLUTELY FREE, FREIGHT CHARGES PREPAID TO YOUR HOME**. Sign and send the blank at once to

The Contest Manager, Kansas Farmer Motorcycle Contest,
 625 Jackson Street, Topeka, Kansas.

THIS IS THE BIGGEST PRIZE LIST WE HAVE OFFERED AND WE PAY YOU CASH BESIDES

THE CONTEST WILL START RIGHT AWAY. A certain number of points will be given with subscriptions secured to KANSAS FARMER for which you will be paid, and the boy or man who has the highest number of points to his credit at the close of the contest, **THURSDAY, DECEMBER 31, 1914, at 6 P. M.**, will be awarded the **\$275 HARLEY-DAVIDSON MOTORCYCLE**. The second highest will receive a **\$75 PHONOGRAPH and RECORDS**. The third highest will receive a **\$30 PHONOGRAPH OUTFIT, CASE and RECORDS**. The fourth highest will receive a **FINE \$30 GOLD WATCH**. The fifth and sixth highest will each receive **\$45 BUSINESS COLLEGE SCHOLARSHIPS**, and the seventh highest will receive a **\$15 GOLD WATCH**. A business or shorthand course may be selected. The Motorcycle is guaranteed to be eleven horsepower, new, and in absolutely first-class condition, by KANSAS FARMER.

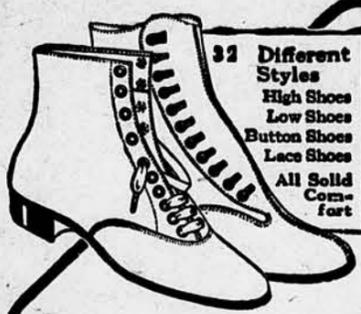
Free Offer Extra To All Who Enter At Once

Don't wait—send in your name and address today on the coupon below and begin making money at once. To all those who send in their names within 20 days A **FREE PREMIUM** will be sent with the free outfit, and **FULL INFORMATION** about the contest and description of the prizes. Also names and addresses of prize winners in our other contests, and a letter telling you just how to proceed. **SO ACT AT ONCE.**

Fill Out This FREE ENTRY COUPON and Mail Today.

Contest Manager Kansas Farmer Motorcycle Contest,
 625 Jackson Street, Topeka, Kansas.
 DEAR SIR:—I desire to enter your Motorcycle Contest. Please send **FREE OF COST** the **FREE PREMIUM** and **FREE OUTFIT** and your special **EASY PLAN** to get subscriptions **FAST**, with full information about the prizes and contest, and tell me how I can win the **\$275 HARLEY-DAVIDSON 1915 MODEL THREE-SPEED MOTORCYCLE** and earn from \$40 to \$60 per month at the same time.

My Name.....
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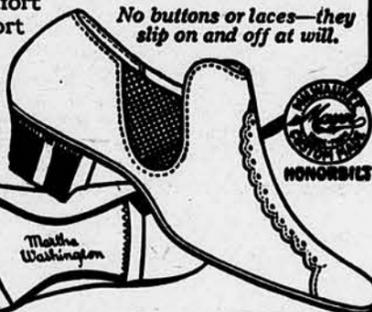
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PURE BARRED ROCK COCKERELS— fine large early-hatched. Price, \$1.50 each. Farm raised. Mrs. H. Buchenan, Abilene, Kan.

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WHITE WYANDOTTE COCKERELS AND pullets, large pure white classy ones, bred from the richest blood lines in America, at one-half their actual value. Exhibition birds a matter of correspondence. N. Kornhaus, Feabody, Kan.

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FORTY PURE-BRED WHITE MUSCOVY ducks for sale. Pairs, \$3.25; trios, \$4.50. Mary Ramsey, Manchester, Minn.

S. C. BROWN LEGHORN COCKERELS, Six for \$5. Mrs. L. H. Hastings, Thayer, Kan.

WHITE INDIAN RUNNER DUCKS— Sixty premiums. Money makers. Prices reasonable. J. Drake, Nickerson, Kan.

HIGHLY-BRED SINGLE COMB RED cockerels, bargains. Winning stock. Karl Spelman, Fredonia, Kan.

PARTIDGE PLYMOUTH ROCKS, KAN- sas State and Pratt County Fair winners. Prices low for the quality. G. T. Dooley, Turon, Kan.

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ORPINGTONS — PRICE LIST FREE. Single Comb Buff Orpingtons, Toulouse Geese, Indian Runner Ducks. Peter Brehm, Harvard, Neb.

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JOHNSON'S GIANT BRONZE TURKEYS—Extra large bone, vigorous, healthy stock; none better. First premium winners Oklahoma State Fair. Jed J. Johnson, Walters, Okla.

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300 SINGLE COMB WHITE LEGHORN hens, fifty cockerels, twelve years trap-nest bred, \$1.25 each; twenty-five or more, \$1 each. Order today. Ackerman Poultry Farm, Rosedale, Kan.

BARGAIN SALE WINTER LAYERS— Camplines, Anconas, Orpingtons, Reds, Rocks, Wyandottes and Leghorns, \$1 up. Catalog free. Mrs. Sophia Benson, Box L, Washita, Iowa.

FOR SALE — SINGLE COMB RHODE Island Reds. A nice bunch of early-hatched cockerels and pullets, also cocks and hens. The best blood, priced right. Moore & Moore, 1239 Larimer Ave., Wichita, Kan.

BARRED PLYMOUTH ROCKS FOR SALE—E. B. Thompson strain. Thirteen years in the business. Satisfaction assured. Write me your wants. Mrs. S. T. Aydelott, Bellflower, Mo.

FOR SALE — FIFTY SINGLE COMB Rhode Island Red cockerels, Tompkins Johnson strain, direct, \$3 each. Every bird a good one. Order early. Chas. Petts, Warsaw, Mo.

TWENTY-FIVE WHITE ORPINGTONS, fifteen Buff Orpington cockerels, worth \$3 to \$5, for \$1.50 each. Have too many to winter. Mrs. Walter W. Love, Mahaska, Kan.

WHITE RUNNER DRACKS, EXHIBI- tion type. Fine breeders. Pure white and of white egg strain. The kind that wins wherever shown. Prices right. W. E. Wilson & Sons, Osawatomie, Kan.

FOR SALE — HIGH-GRADE BOURBON Red Turkeys; hens and toms. Also high-grade Rhode Island Red cockerels and pullets. Write for full particulars. Mrs. Pearl Kern, Springville, Ind.

FOR SALE—SEVERAL WHITE RUNNER drakes, from Mrs. Myers' prize-winning stock, winners of all first premiums at State Poultry Show. Price, \$2.00 each. Thomas Owen, Jr., Route 7, Topeka, Kan.

A FINE LOT OF SINGLE COMB WHITE Leghorn cockerels, 75¢ to \$2. Some pullets and young hens from State Show winners, also Kellerstrass White Orpington cockerels, pullets and hens. Mrs. M. Kettering, Route 4, Wichita, Kan.

COOK'S ROCKS—I WILL SELL FOR THE next 30 days, fine cockerels for the very low price of \$1 each. These birds will weigh about four pounds and will make fine large birds. Better birds at reasonable prices. Chas. J. Cook, Box F, Marysville, Kan.

HOME CIRCLE



Brown boots may be blackened by rubbing the blacking in thoroughly with a raw potato and then polishing.

Half a teaspoonful of ginger added to the grease when frying doughnuts will save the grease.

Few of us realize how quickly habits are formed, and once formed they are like bands of iron, hard to break. Great care should be exercised that the children do not form habits that will be a source of trouble and annoyance in later life. Habits are generally formed accidentally or unconsciously and youth, with its egotism, is apt to think that it can change a habit in a day. But we of more mature years know that it is a most difficult matter, and so we must help them by prevention at the beginning.

Banana Sandwich.

Chop up fine four bananas with one cupful of English walnuts, mix with enough mayonnaise dressing to make a thick paste. Spread the mixture between thin slices of bread or crackers.

For Fleas and Mites.

Dissolve 15 cents' worth of crude carbolic acid in a bucket of boiling water and sprinkle the barn, barnyard floor

Softening Hard Water.

It's carbonate of lime that makes water temporarily hard. Such water can be softened by boiling.

Permanent hardness is caused by sulphate of lime. The only remedy lies in the use of some chemical. Cheapest and best of these are alkalies, as washing soda, borax, and ammonia.

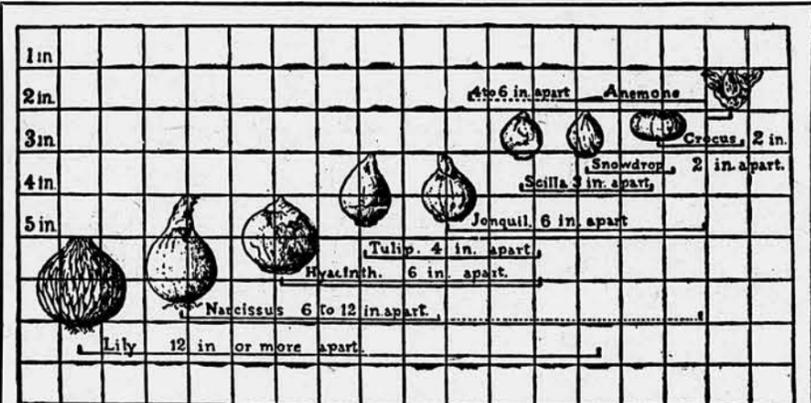
Washing soda, the most effective softener for ordinary use, should be used in the following proportions unless the water is very hard. For each gallon of water use two tablespoons of a solution made by dissolving one pound of washing soda in a quart of boiling water.

Borax is more expensive than washing soda but it is especially good for colored goods and wool.

Iron in water is harder to treat. The only satisfactory method is to add washing soda to the water and let it settle five or six days before using.

Time to Plant Bulbs.

All of the so-called Dutch bulbs have to be planted in the fall, from September to December. They spend the fall and early winter in making roots, and then early in the spring shoot up into flower very quickly. Any of these can be planted outside in the garden or in pots in the house. The drawing given shows the depth to plant them out doors



DEPTH AND DISTANCE APART TO PLANT FALL BULBS.—FROM FIELD'S SEED SENSE.

and henhouse with the liquid until it is wet all over. It is sure death to the insects.

Rejuvenate the Worn Bedspread.

If the fringe on your bedspread has worn off in places, giving the entire spread a worn and ragged appearance, cut off the fringe entirely, make a narrow hem all around, get some wide rick-rack braid and sew the points of the braid to the hem of the spread. This will give a neat, attractive finish to the spread and it will wear for a long time to come.

For the Flower Lover.

Well-rotted manure should be spread over the flower beds and spaded into the soil after they have first been cleared of rubbish.

It is advisable to plant bulbs as early as they appear in the market. They lose their vitality by drying up.

Tulips and hyacinths are the best flowers for formal effects. Iris looks well when planted in masses.

Plant the narcissus and jonquil in the shrubbery and hardy flower beds.

As the peony does best when not disturbed, it is well in planting to work manure at least a year old into the soil to a depth of two feet. The peony does not grow well in contact with fresh manure.

The early fall is a good time to divide and transplant the phlox, Sweet William, oriental poppies, gaillardia, hardy asters, and daisies.

The landscape gardener at the University farm advises that the crocus and snowdrop should be planted two inches deep and two inches apart, jonquil four inches deep and six inches apart, tulip four inches deep and four inches apart, hyacinth five inches deep and five inches apart, narcissus nearly a foot apart and five inches deep, lily six or seven inches deep and a foot or more apart.

and the distance apart. It is a safe plan to plant them as soon as you get them in the fall. All are hardy, and will stand the winter freezing and bloom as soon as the frost is out of the ground in the spring.

For blooming in the house, plant in ordinary flower pots, but do not cover deeply as you would outdoors. After potting them and watering well, put them away in the cellar where it is damp and cool and dark to make roots. This will take from six to ten weeks. Then bring them up to the light, and with warmth and water they will come into bloom very quickly.

After blooming in the house, the bulbs can be saved and planted outdoors for another year of bloom.—Henry Field's Seed Sense.

A Little Talk on Soaps.

"It is a common mistake," says Miss Annabell Turner, instructor in home economics, Extension division, University of Wisconsin, "to think that one kind of soap will answer for all purposes.

"If just enough alkali is used in the manufacture of soap to saponify the fat present a neutral soap is produced. If an excess of alkali is used the soap will be medium or strong according to the amount of free alkali left in it. Neutral or mild soap should always be used for woollen materials, delicate colors and frail fabrics. A medium soap is best for durable colored goods, and a strong soap is best for heavy white materials.

Phenolphthalein forms a good test for free alkali. Make a small depression in a bar of dry soap and add a few drops. A red color shows the presence of free alkali, the deeper the color the stronger the soap.

"Turpentine, kerosene, gasoline and paraffine are often valuable substitutes for soap because of their solvent action on fats, though soap is the best all around cleansing agent for laundry use.

"A bleaching agent with little, if any,

harmful effect on the material is found in percol or sodium per borate. It is also useful in washing white or light silks, as it prevents yellowing."

Table Syrup From Apples.

Following extensive experiments begun last spring, the head of the fruit and vegetable utilization laboratory of the Department of Agriculture has applied for a public service patent covering the making of a new form of table syrup from apple juice. This patent will make the discovery, which the specialists believe will be of great value to all apple growers as a means of utilizing their culls and excess apples, common property of any cider mill in the United States which wishes to manufacture and sell apple cider syrup.

The new syrup, one gallon of which is made from seven gallons of ordinary cider, is a clear ruby or amber colored syrup of about the consistency of cane syrup and maple syrup. Properly sterilized and put in sealed tins or bottles, it will keep indefinitely, and when opened, will keep under household conditions as well as other syrups. It has a distinct fruity aroma and special flavor of its own which is described as being practically the same as the taste of the syrupy substance which exudes from a baked apple.

The syrup can be used like maple or other syrups for griddle cakes, cereals, household cookery, and as flavoring in desserts. The government cooking experts are at present experimenting with it in cookery and expect shortly to issue

recipes for use of the new syrup in old ways and for taking advantage of its special flavor in novel dishes.

How to Sew On Buttons.

"I'd rather do anything than sew on buttons," says one young woman who does a good portion of her own sewing. She didn't know how, and that gave her trouble.

This is the way Miss Annabell Turner, instructor in home economics, University of Wisconsin Extension division, says a button should be sewed on.

Take a small stitch, bringing the knot on the right side. Run up through one hole of the button and draw it down just over the knot. Lay a pin across the button and work the stitches over the pin. When the button is firmly sewed on remove the pin. Pull the button out from the material and wind the thread around the threads between the button and the cloth several times to form a shank. Pass the needle through to the wrong side and fasten the thread with several small stitches.

The shank formed makes buttoning easier and lessens the strain on the cloth. The knot is brought up on the right side and under the button to keep it from being worn off.

Tomato Sandwich.

Peel raw tomatoes, remove the seeds and mince the remaining pulp, season with salt and pepper, add a little finely chopped onion and a little mayonnaise dressing and spread between slices of stale bread.

FASHION DEPARTMENT — ALL PATTERNS TEN CENTS

This department is prepared especially in New York City for Kansas Farmer. We can supply our readers with high-grade, perfect-fitting, seam-allowing patterns at 10 cents each, postage prepaid. Full directions for making, as well as the amount of material required, accompanies each pattern. When ordering all you have to do is to write your name and address plainly, give the correct number and size of each pattern you want, and enclose 10 cents for each number. We agree to fill all orders promptly and guarantee safe delivery. Special offer: To anyone ordering a pattern we will send the latest issue of our fashion book, "Every Woman Her Own Dress-maker," for only 2 cents; send 12 cents for pattern and book. Price of book if ordered without pattern, 5 cents. Address all orders for patterns or books to Kansas Farmer, Topeka, Kansas.



No. 6898—Ladies' Apron: This apron is just the thing for wearing around the kitchen, as it covers the entire dress. It fastens at the back and the pattern provides for separate oversleeves. The pattern, No. 6898, is cut in sizes 36, 40 and 44 inches bust measure. Medium size requires 3 3/4 yards of 36-inch material. **No. 6890—Ladies' Dressing Sack:** The yoke of this sack is cut in one piece. The long or short sleeves may be used. Any of the pretty flowered materials can be used to make this sack. The pattern, No. 6890, is cut in sizes 34 to 44 inches bust measure. Medium size requires 2 1/4 yards of 44-inch material and 3/4 yard of ribbon. **No. 6182—Ladies' House Dress:** Many women prefer the house dress to a kimono or wrapper, and here is an excellent pattern for making such a garment. The dress closes at the front and is made with short sleeves and a sailor collar. The pattern provides for a dust cap. The pattern, No. 6182, is cut in sizes 34 to 42 inches bust measure. Medium size requires 5 1/2 yards of 36-inch material and 3/4 yards of 27-inch contrasting goods. **No. 6837—Ladies' Skirt:** This is one of the more unusual yoke-trasting goods. It is usual to employ two materials for these skirts, but one may be used if preferred. The pattern, No. 6837, is cut in sizes 22 to 32 inches waist measure. Medium size requires 1 1/2 yards of 44-inch material with 2 1/2 yards of 36-inch striped goods. **No. 6800—Boys' Russian Suit:** A model giving us a new form of the Russian suit, slightly suggestive of the Norfolk style as well. There is a straight yoke front and back and below this the material is plaited at each side of front and back to form a central panel. The pattern, No. 6800, is cut in sizes 4, 6 and 8 years. Medium size requires 1 1/2 yards of 44-inch material with 2 1/2 yards of 36-inch striped goods. broadcloth or cheviot can be used to make this coat. The coat can be made with the large or small collar and the sleeves can be finished with or without cuffs. The pattern, No. 6148, is cut in sizes 2 to 10 years. Age 8 years requires three yards of 36-inch material.



Good cooking made easy!

Good cooking depends as much on the range as on your skill. A cheap range or worn out stove makes cooking uncertain, and often spoils your best efforts.

Is that fair to you, or to your family, whose health and good humor are effected by what you serve?

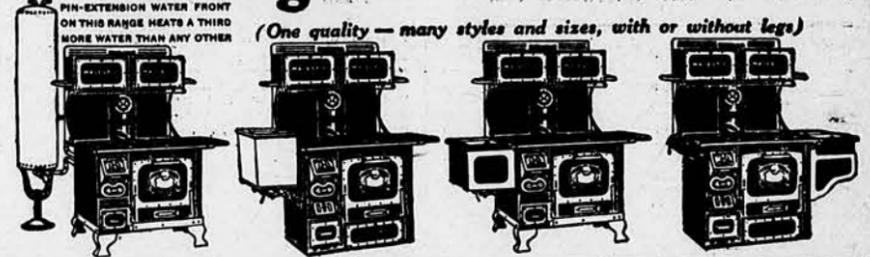
The Majestic makes good cooking easy and sure. Made of charcoal iron and malleable iron; it stands rust and wear three times as long as ranges made of ordinary range metals. Put together with cold-rivets that keep the joints absolutely tight always, (no putty used.) Lined with extra heavy pure asbestos that holds in the heat and reflects it onto oven. Scientifically designed to maintain uniform temperature with least use of fuel; and to circulate heat evenly to all parts of oven. You never have to "turn the baking" in a Majestic.

The cost of a Majestic, in service, is less than that of any ordinary range. The fuel, repairs and work it saves and the years longer that it lasts, more than offset its little extra cost.

If you realized how much the Majestic reduces the work and worry of cooking, you would get one now. Find out! If you don't know the Majestic dealer near you, ask us. (There is one in every county of 40 States.) Write for "Range Comparison" explaining the many Majestic points of superiority.

Majestic Mfg. Co., Dept. 140 St. Louis, Mo.

Great Majestic Malleable and Charcoal Iron Range



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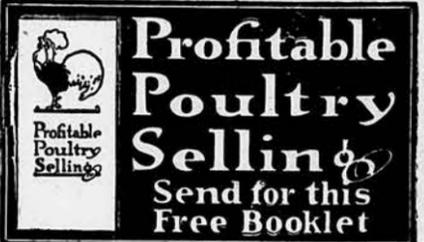
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WHITE ROCKS AND WHITE HOLLAND turkeys, size and quality. Healthy vigorous birds. Satisfaction guaranteed. Write G. M. Kretz, Clifton, Kan.
PARTRIDGE PLYMOUTH ROCK COCKERELS, pure-bred, excellent quality, \$2 each. Fawn and White Indian Runner Drakes, \$1.00 each. Pure White Indian Runner Drakes, \$1.50 each. A. B. Short, Arkansas City, Kan.
FERRIS SINGLE COMB WHITE LEGHORN cockerels, hens and pullets. All bred from 200-egg trap-nested hens. \$1.50 each this month only. Also fifty Light Fawn and White Indian Runners from 250 white egg strain, \$1.50 each, \$4 trio. Frank Fisher, Wilson, Kan.

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The poultry breeder's percentage of profit depends quite a bit on selling costs. These profits are good, sometimes, and sometimes they are not. At the very best the average poultry breeder never got any more than his or her due. Usually it has been less. Not because the breeders don't know their business as breeders, nor yet because they are not good men and women.
No sensible breeder would allow the cost of raising stock to go twice as high as necessary. But sometimes the selling cost is allowed to get too high, because the wrong means of advertising are used.
To select the right selling means for Kansas and adjoining states means money saved to breeders, besides money made in the better prices to be had when using the right means. The booklet, Profitable Poultry Selling, has been written, and is free to poultry breeders everywhere who will simply write for it.
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Topeka, Kansas.

Ask your dealers for brands of goods advertised in KANSAS FARMER.

Classified Advertising

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WANTED—TO HEAR FROM OWNER OF good farm for sale. Send cash price and description. D. F. Bush, Minneapolis, Minn.

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ASK ME FOR PRICES AND DESCRIPTIONS of farms in Elk County, Kansas. You will be surprised at the bargains I am offering. F. D. Greene, Longton, Kan.

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SACRIFICE SALE—320 ACRES, 7 MILES from Wallace, Neb. All level, no sand, good on land, in good farm settlement. Price, \$17.50 per acre. Fred Blake, Jr., Hastings, Neb.

KANSAS CITY BUSINESS PROPERTY, 150x50 feet, corner Fifth and Troost Ave., must be sold to settle an estate. A rare bargain in the fastest growing city in the West. Address K. C. Property, care of Kansas Farmer.

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ON ACCOUNT OF SHORTAGE OF FEED, must sell within the next sixty days, 100 head of large highly-bred perfectly-marked grade Holstein heifers, ages from one to three years. Also a few high bred regis- tered bulls. People wishing the best kind of stock will do well to visit us or write for particulars. Grand View Stock Farm, Oconomowoc, Wis.

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Dec. 17—J. C. Robison, Towanda, Kan.
Jan. 28—Spohr & Spohr, Wichita, Kan.

Percherons and Other Draft Horses.
Jan. 26, 27, 28, 29—C. W. Hurt, Arrow- smith, Ill.

Angus Cattle.
Jan. 21, 1915—Consignment sale, Manhattan, Kan. L. R. Brady, Manager.

Shorthorns.
Dec. 17—A. B. Garrison, Summerfield, Kan.
Jan. 15, 1915—Consignment sale, Manhattan, Kan. L. R. Brady, Manager.

Poland Chinas.
Feb. 2—John Kemmerer, Mankato, Kan.
Feb. 5—Louis Koenig, Solomon, Kan.
Feb. 9—T. E. Knox, South Haven, Kan.
Feb. 9—L. F. Faulkner, Jamesport, Mo.
Feb. 10—E. D. Frazier, Drexel, Mo.

Durocs.
Nov. 28—Samuel Drybread, Elk City, Kan.
Dec. 16—J. D. Shepherd, Abilene, Kan.
Feb. 12—Howell Bros., Herkimer, Kan.

Duroc Jerseys, Polands and Berkshires.
Feb. 9-10—Agricultural College, Manhattan, Kan.
Feb. 18, 1915—Buskirk & Newton, Newton, Kan.

We wish to call the attention of our read- ers to the kafir header advertised in Kansas Farmer in issue of October 31. This is one of the best machines on the market and is simple and easy to operate. It can be put on any wagon and gives perfect satisfaction. Please read ad and write for price and guar- antee, mentioning Kansas Farmer.

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Ten acres highly improved irrigated land at Richland, Benton County, on the Colum- bia River, in the early fruit belt of the Northwest. Eight and one-half acres in commercial apple orchard, eleven with 200 peach fillers, all in bearing. The place is well fenced, flumed and leveled, the land very productive; 6½ acres of orchard in alfalfa, 1 acre in strawberries, 2½ acres ready for planting early potatoes. No buildings. Trees are in fine condition. Trade for Kan- sas land near Topeka. Owner, J. KLEIN, Kansas Farmer, Topeka, Kan.

herd improvers should attend. On Novem- ber 12 Mr. Wales will sell one of the best offerings of the season, consisting of twenty-one tried sows, twenty-three spring gilts, six fall yearling gilts, eleven fall boars and twenty-four spring boars. The tried sows were sired by such boars as Big Missouri Chief, Wales' Missouri King, Pan- orama's Son, and Big Logan Ex. The spring pigs were sired by Wales' Missouri King and Royal Chief. The entire offering is immune. Send at once for catalog. Please

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Ten Miles East of Leavenworth, Kansas.

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26 Head - Registered Holstein Cows - 26 Head

All have A. R. O. records; A. R. O. dams or grand-dams. Two years old and up. Nearly all freshen in next three months. All bred to grandson of Pontiac Korndyke. Will sell one to fifteen of these, buyer to have the pick of the herd, \$150 to \$600. Four-year-old herd bull for sale cheap, a grandson of Pontiac Korndyke, gentle, sound, sure breeder, seven-eighths white. Have thirty of his daughters to breed and must change bulls. All these will be given an A. R. O. test when they freshen. On bull will consider a trade for span of young draft mares or registered Holstein heifers or heifer calves. Also have three young bulls five and six months, nothing older. A. R. O. dams or granddams.
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BULL CALVES FROM A. R. O. COWS.
Sired by Sir Korndyke Imperial 53483.
Calves suitable for heading registered herds.

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Well bred cows, two-year-old heifers and 25 choice heifer calves, all good colors. Prices reasonable.
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Prince Hadria at head of herd. He has 26 A. R. O. sisters, 21 brothers and several daughters. Extra choice young bulls for sale out of 600-pound A. R. O. dams. Farm near town.
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Forty-two cows and heifers in herd average over 20 pounds A. R. O. Young bulls for sale and a few cows and heifers. We have been breeders for 30 years.
Correspondence and inspection invited.
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ROAN HERO 3613 - 229963

THE INTERNATIONAL CHAMPION heads my herd of Double Standard Polled Durhams. Few choice young bulls for sale. Mo. Pac. Railway 17 miles southeast of Topeka, Kansas. Farm adjoins town. Inspection invited.
D. C. VAN NICE, Richland, Kansas

POLLED DURHAMS

FOR SALE Herd headed by Roan Choice and Matchless Avon. Young stock, both sexes, for sale. Prices reasonable. Come and see my herd.
C. J. WOODS, CHILES, KANSAS.

ANGUS CATTLE

"BLACK DUSTER" heads our herd of richly bred cows. Choice cows with calves at foot and re-bred. Also young bulls. Berkshires.
GEORGE McADAM, Holton, Kan.

ANGUS BULL BARGAIN.
Choicely-bred three-year-old. Cannot use longer. Priced right. Would exchange for good bull. Also offer some extra good bull calves. Write for prices and descriptions.
IRA RADCLIFF, Carbondale, Kansas.

HEREFORD CATTLE

HEREFORD COWS, 3 to 7 years. Bull calves, a bargain. Duroca, both sexes. Black registered Percheron yearling stallion, weight 1,300.
M. E. GIDEON, Emmett, Kansas.

HEREFORD COWS.
Will sell reasonably, 100 head pure-bred Hereford cows, all bred to registered Hereford bulls. Also 100 head weaned and vaccinated heifer calves from above cows. All look alike. Address Owner, Box 35, Hillside, Fremont Co., Colo.

MULE FOOT HOGS

GRAFF'S MULEFOOT HOGS.
April and May boars and gilts, choice bred sows, priced cheap.
E. E. GRAFF, Route 2, Rosendale, Mo.

A Place for Sheep on the Farm

The initial expenditure in getting started with a few sheep is small. The returns come quickly, the wool clip and lamb crop being salable annually. Expensive buildings are not a necessity. A warm lambing pen is required, but aged sheep require only a good open shed for winter shelter.

The sheep breeding season is now on and the United States Department of Agriculture is urging the desirability of maintaining a small flock of sheep upon every farm. With proper care and attention, a flock of twenty-five or thirty ewes can be kept at very little expense, and they will prove of inestimable value in freeing the farm from weeds, and adding something to the farm income. In addition to providing a considerable supply of delicious wholesome food for the farm table, there will be a surplus for sale, and an additional item of revenue in the form of wool.

Many farmers make a practice of buying ewes in the fall, breeding them and selling the lambs the following summer. Such ewes can be carried through the winter on wheat and rye fields if not pastured too closely, or on alfalfa or clover hay with some roots or silage and a little linseed meal. If the alfalfa or clover hay is not available, corn fodder may be used as roughage, in which case it should always be supplemented with bran or linseed meal. Lambs should come early and should be taught to eat as soon as they are old enough. Give lambs access to corn by providing a creep through which they can go without allowing the ewes to follow.

Ewes can be purchased at the present time at prices ranging from \$3 for common, inferior sorts, to \$7 for good fairly well-bred ewes. For farm purposes the black-faced ewes are more popular than the others, although good results can frequently be obtained from the white-faced ones. In buying ewes, be sure that they stand well on their feet, have good straight backs and good mouths. Ewes that have broken teeth, or teeth that are badly worn down, should not be bought. As a rule, a sheep has one pair of permanent incisor teeth when it is one year old, and three pairs, or a full mouth, when it is three years old. A full mouthed ewe, if the teeth are in good condition, can be used for breeding with good results, although she may be as much as five years old. Never buy a ewe that has a broken mouth; that is, with teeth that have been broken off or lost.

None but a pure-bred ram should be used. It is not necessary to have a show animal, but a strong, vigorous ram is essential. Shropshire, Oxford, South-down and Hampshire rams sire excellent mutton lambs and these breeds are recommended for the farm states. A suitable ram can be bought for from \$8 to \$20.

The two principal drawbacks to the sheep industry in the farm states are dogs and stomach worms. The dog nuisance can be obviated to a great extent by placing dog-proof fences around the pastures. The United States Forest Service has had excellent results in protecting sheep from coyotes and wolves by building fences constructed in the following manner: A barbed wire is first stapled to the posts right on the surface of the ground. Three inches above this is placed a panel of close woven wire, 36 inches high, and above this two strands of ordinary barbed wire. Care should be taken to see that there are no openings between the ground and the lowest barbed wire. An enclosure made in this manner, into which sheep may be turned at night, is inexpensive, and dogs will not get through it. Most of the damage by dogs is done at night.

The presence of stomach worms is a very serious drawback. The young lambs become infested with them by eating grass to which the worms have attached themselves, the eggs being deposited by the mature sheep. It is therefore desirable to keep the lambs on land on which the mature sheep have not run, and if possible in cases of bad infestations to keep the lambs away from the mature sheep as much as possible.

The Oklahoma Farm Journal recently published some figures on sheep raising secured by one of the banks of Western Oklahoma. These figures set forth the results secured by six of the farmer customers of the bank who have handled small flocks of sheep. The figures have been prepared on a debit and credit basis and show profits on the investments of from 48 per cent to 121 per cent.

The detailed statements of the results secured by these farmers, as published

POLAND CHINAS

FRAZIER'S BIG POLANDS

Fifty choice spring boars for farmers and breeders. Will not hold a fall sale. Will offer my best boars and a few gilts at very reasonable prices. One fall boar. Can furnish pairs or trios. Herd boars, Frazier's A Wonder and Expansion Hadley. Come and see me.
E. D. FRAZIER, Drexel, Missouri.

POLAND CHINA BOARS

Fifteen choice early spring boars—big husky fellows, ready for use. Priced, \$25.00. First check gets choice.
L. V. OKEEFE, BUCYRUS, KANSAS.

MT. TABOR HERD POLAND CHINAS.
Pairs not related, get of four boars, 150 spring pigs by Big Mogul, son of Mogul's Monarch, out of Expansion dams. Bred sows and gilts, four yearling boars. Bargain prices next sixty days.
J. D. WILLFOUNG, Zeandale, Kansas.

DODSON'S BIG SMOOTH KIND.
Herd boars Sunny Colossus, Orange Chief, mated to sows with size and quality. Bred sows and spring pigs. Prices right. Description guaranteed.
WALTER DODSON, Denison, Kan.

Stryker Bros' Prize Polands

For sale at all times, a choice lot of Poland China hogs and Hereford cattle; show winners. Write us your wants.
STRYKER BROS., Fredonia, Kan.

BEN FRANK'S POLANDS

One hundred Poland China spring pigs, the big type or the big medium type. I have the hogs and prices to please you.
BEN FRANK, Route 3, Jefferson City, Mo.

Poland Chinas That Please

Fall and spring boars fit to head herds. Sows of all ages, open or will breed. Prices reasonable. Write us your wants.
P. L. WARE & SON, Paola, Kansas.

POLAND CHINAS

Both sexes, of breeding age, sired by Jumbo King 64655, Sir Bredwell 67036. Also pigs. Sow herd represents the best blood lines. Farmers' prices.
R. F. HOCKADAY, Peculiar, Mo.

COLEMAN'S BIG SMOOTH POLANDS.
150 in herd. Herd boars, O. K. Lad, Hadley C, Expansion, Price We Know, Mastodon and Mogul sows. Herd has tops from many sales. Choice boar pigs, also Jersey cattle.
JOHN COLEMAN, Denison, Kansas.

Faulkner's Famous Spotted Polands

We are not the originator, but the preserver, of the Old Original Big-Boned Spotted Polands. Write your wants. Address
H. L. FAULKNER, Box K, Jamesport, Mo.

BIG-BONED SPOTTED POLANDS

Few good boars left at \$20. Fall pigs, either sex. Booking orders for gilts and sows to be bred for next spring farrow. Four great boars in service. Write your wants and ask for circular.
THE ENNIS FARM, Horine Station, Mo. (Just south of St. Louis.)

MOORE & SONS—POLANDS.
For thirty days, special price of \$20 for fine male pigs, herd header prospects included. Sired by Choice Goods and Wedd's Long King, two of the best big-type boars living.
F. E. MOORE & SONS, Gardner, Kan.

MAHAN'S BIG POLANDS have size and quality. Headed by son of Expansion. Sows of unusual size and smoothness. Pigs, either sex.
J. D. MAHAN, Whiting, Kansas.

POLAND CHINA HERD BOARS.
Herd boar Orphan Dan by Dan Hadley, dam by Orphan Chief, champion over all breeds, Allen County Fair, 1913 and 1914. Three April boars by Orphan Dan. Prices reasonable. Write at once.
E. M. CHATTERTON, Colony, Kansas.

BIG-TYPE POLAND BOARS.
Sixteen carefully selected boars. One yearling by Columbus, the Nebraska sweepstakes boar; another by Longfellow by Ideal by Smooth Wonder by A Wonder. Number of choice gilts. Write for prices and descriptions.
Hamilton & Sons, Wellsville, Kan.

METAL UTILITY POLANDS

Eighty spring pigs sired by Good Enough by Gold Metal and Big Ben. Prices most reasonable. Also one serviceable boar by Good Enough. Herd boar prospect.
AUSTIN SMITH, Dwight, Kansas.

AMCOATS' POLANDS.
A's Big Orange March Pigs, both sexes, from sows of big-type breeding. Have lots of stretch and good bone; thrifty condition, will make big ones. All immune.
S. B. AMCOATS, Clay Center, Kan.

FEW GOOD FALL BOARS BY PAN LOOK AND FIRST QUALITY.
Dams, sows of Expansion and Grand Look breeding. Spring boars also.
JAMES ARKELL, Junction City, Kan.

BIG POLANDS—EXTRA QUALITY

Boars and gilts, March and April farrow. Sired by Nobleman 2d and Long King's Model 2d, out of our best sows. Pairs and trios not akin. Priced right.
SULLIVAN BROS., Moran, Kansas.

SPRING PIGS by Major Jim, Blue Valley Buster, A Jumbo Wonder; out of Gold Metal, Major Jim, Model Look, Big Bone Pete and Whats Ex sows. O. B. Clemetson, Holton, Kan.

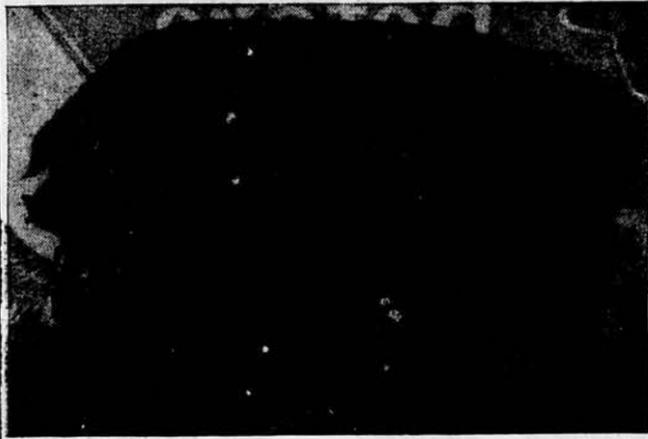
STRAUSS' BIG POLAND CHINAS.
Six fall boars and 18 spring boars sired by Model Wonder and Blue Valley Chief. Write your wants. I can please you.
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BIG SMOOTH POLANDS

To Be Held At

PECULIAR, MO, NOVEMBER 12

Twenty-one tried sows, some bred, some open; six fall yearling gilts; eleven fall boars; twenty-three spring gilts; twenty-four spring boars. The tried sows are sired by Big Missouri Chief, Wales Missouri King, Panorama's Son, Young Hadley, Dan Hadley, Expansion Over, Big Logan Ex. The spring pigs are all sired by Wales Missouri King and Royal Chief and are a nice, smooth, even lot, all immune. November 12th will be a great bargain day at Peculiar. Send at once for catalog. Sale held in town under cover.

Harry Wales, Peculiar, Missouri

Auctioneers—Col. R. L. Harriman, Col. Andy James, and Col. Zack Wells.

TIMBER HILL STOCK FARM

DUROC JERSEY OFFERING

40 Head 20 Spring Gilts 40 Head
12 Spring Boars

Wednesday, November 18, 1914

Sale on farm ten miles west of Parsons and seven miles east of Cherryvale, at Stop 64 on Interurban line.

THIS OFFERING IS UNIFORM AND HAS MANY GOOD PROSPECTS

Herd Boars: Ohio Kant Be Beat No. 69077, Golden Model Again No. 155043, Colonial Col. No. 114465, and Ladore Wander No. 88299.

Herd Dams: Golden Queen No. 362580, Model Queen No. 218434, Buddy's Wonder No. 309922, Miss Billie K. No. 338854, Surprise Good Enough No. 394318, Inventor's Pearl No. 210744, Wonder's Model Girl No. 261416, and Big Wonder No. 372914.

Free entertainment in Parsons and Cherryvale. Hourly interurban cars direct to farm. Write for catalog.

LANT BROTHERS

Dennis

Kansas

SEND BIDS TO O. W. DEVINE, KANSAS FARMER.

Auctioneer—Col. C. F. Beard, Parsons, Kan. Clerk—H. C. Bergman, Dennis State Bank.

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At ordinary prices, farm-raised, registered Percheron studs, 1, 2, 3 and 4 years old. Kind dispositioned because well cared for. You would admire their big bone first, then their immense weights, because they are developing big like their imported sire and dams. And you will receive true old-fashioned hospitality on your visit at Fred Chandler's Percheron farm. Just above Kansas City.

FRED CHANDLER, ROUTE 7, CHARITON, IOWA.

A. Latimer Wilson, Creston, Iowa. Home-bred draft stallions \$250 to \$650. Imported stallions cheaper than anywhere else. Come and see.

JACK TO TRADE for alfalfa. Six years old, black, proven and sound, large bone. Write T. A. BAILEY, Shelbina, Mo.

HORSES AND MULES.



M. H. ROLLER & SON
Circleville, Kan.
Fourteen big jacks, 25 Jennets.
One imported Percheron, one high-grade Belgian stallion.

PERCHERONS FOR SALE.
Write for prices and descriptions.
JAS. C. HILL, Holton, Kansas.

Breeders' Directory

The following classified list contains the names of many of the reliable breeders of pure-bred live stock. They will gladly answer your inquiries. Your name should be in the list. If interested, write Live Stock Department, Kansas Farmer, for further information.

HEREFORD CATTLE.
H. V. Baldeck, Wellington, Kan.

ANGUS CATTLE.
Bert McIlvaine, Lebanon, Mo.

JERSEY CATTLE.
C. J. Morek, Storden, Minn.
Hunkydory Jersey Farm, Fairfield, Iowa.

AYSHIRE CATTLE.
Leveand Farm Co., Omaha, Neb.

FOLDED DURHAM CATTLE.
J. H. Walker, Lathrop, Mo.

BERKSHIRE HOGS.
N. H. Gentry, Sedalia, Mo.

HOLSTEIN CATTLE.
T. M. Ewing, Independence, Kan.
S. E. Ross, Route 4, Creston, Iowa.

SHORTHORNS.
G. A. Laude & Sons, Rose, Kan.
C. H. White, Burlington, Kan.

RED POLL CATTLE.
John M. Goodnight, Fairgrove, Mo.

SHEPHERD SHEEP.
Locust Lawn Farm, Oakland, Ill.

POLAND CHINA HOGS.
F. M. Anderson, Lathrop, Mo.
Wm. Griffee, Mitchellville, Iowa.
Henry Koch, Edina, Mo.
W. A. Prewett, Asherville, Kan.

DUROC JERSEY HOGS.
D. O. Bancroft, Osborne, Kan.
Judah Bros., Hiattville, Kan.

HAMPSHIRE HOGS.
H. D. DeKalb, DeKalb, Iowa.

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175 HEAD OF SHORTHORNS

Consisting of many choice animals carrying the blood of noted sires. Foundation stock purchased from the best breeders. Fifty head must sell in sixty days. Start in the Shorthorn business. All kinds of Shorthorn breeding stock from which to select—cows, heifers and bulls, cows with calf at side, others due to calve soon, grandsons and daughters of such sires as Avondale, Prince Oederic and other noted sires. Write, wire or phone me when to meet you at Peabody, either Rock Island or Santa Fe depot.

M. S. CONVERSE --- --- --- PEABODY, KANSAS

LOOKABAUGH'S SHORTHORNS

250 HEAD IN HERD.

Scotch Herd Bulls—Avondale type and blood.
Scotch Heifers—Not related—the kind to start with and start right.
Milking Shorthorn Cows—The farm cow—fresh now.
Bugged Young Farmer Bulls and Heifers—Good bone and size—one to a carload, either sex, \$75 to \$150 per head.
Two Heifers and a Bull—Not related—\$250 for the three.
H. C. LOOKABAUGH, WATONGA, OKLA.



FIVE CHOICE SHORTHORN BULLS

One four-year-old registered herd bull, one three-year-old registered herd bull, two yearlings—February and May, 1913, calves; one will be year old January, 1914. Younger ones will be registered as sold. Prices reasonable.

WILLIAM F. HOLMES, Parkville, Mo.

BARGAINS IN YOUNG COWS.

Six choice bred young cows, too nearly related to new herd bull to retain. Blood of Searchlight, Payson, Gallant Knight. Also old herd bull, Baron Cumberland. Farm on Strong near Overland Park.

DR. W. C. MARKEY, Lenoir, Kansas.

Cedar Lawn Shorthorns

For Sale—Eight head of big strong farmer bulls, also a few bred cows and heifers, priced reasonably. Come and see my herd.

H. I. GADDIS, McCune, Kansas.

OAK GROVE SHORTHORNS.
Every cow straight Scotch. Herd bull, White Starlight by Searchlight; Choice Goods, dam.
ROBT. SCHULZ, Holton, Kan.

CEDAR LAWN SHORTHORNS.
Seven young bulls, 8 to 12 months of age, by Secret's Sultan. Also younger bulls and some good yearling heifers and cows in calf or calves at side. Prices reasonable.
S. B. AMCOATS, CLAY CENTER, KAN.

Dual Purpose Shorthorns

Splendid red bull, 14 months old, recorded. Dam has a butter fat record of ten pounds in seven days. \$125 gets him.

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COMBINATION JACK SALE

18 JACKS and 25 JENNETS

Will be held Rain or Shine at

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Send at Once For Catalog and Come to Sale
H. BYBEE & SON, Managers, Fulton, Mo.

SHORTHORN DISPERSION SALE

CANTON, KANS., THURSDAY, NOVEMBER 12

ENTIRE HERD, 100 HEAD SHORTHORN COWS, HEIFERS, HERD AND YOUNG BULLS, SOME REGISTERED.

Cows are exceptionally good breeding animals, in good pasture condition and in calf to registered herd bulls True Knight 25921 and Valley Champion 332662.

Sale, 8 1/2 miles south of Canton, Kansas, nine miles north of Hesston. An unusual opportunity for the farmer or stockman who desires to build up a breeding herd.

J. M. Simpson & Son,

For further particulars, write
Canton, Kansas



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"After feeding SAL-VET to sheep, hogs, horses and cattle during the past winter, and found it a reliable conditioner and worm destroyer. My stock never looked so healthy and thoroughly conditioned as now."
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"My hogs are doing finely; have kept SAL-VET before them for two months and while there has been lots of disease amongst hogs in this section, none of mine have been sick."
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 Route No. 20, St. Matthews, Ky.

"I have fed SAL-VET to all my stock; it has put them in fine condition, and improved them wonderfully. The cholera has been killing hogs all around my home, but I have not lost a single one. I have never used so effective a remedy."
SANFORD GERST,
 South Boston, Va.

"I enclose check in payment of the SAL-VET sent recently. Four times this sum would not begin to pay for the benefit I derived from feeding SAL-VET."
W. H. WALLACE, Franktown, Va.

"I have great faith in SAL-VET. Since feeding it, I can certainly see a great improvement in my stock. I have fed a number of different stock foods and remedies, but have never found any as good as SAL-VET. I am recommending it to my neighbors and others who lost hogs with the cholera."
C. G. FIELD, Hiawatha, Kansas.

I Want You to Know The Value of SAL-VET

—I want you to feed it at my risk—I want to prove to you on your own farm that SAL-VET will rid your stock of worms, put them in healthy condition, easier to keep on no more feed—more profitable in every way—and less liable to disease. I don't want you to send me a penny in advance—just mail the coupon. I'll ship the SAL-VET just as agreed, let you feed it 60 days—and if it does not do what I claim, then I'll cancel the charge. Is not that a fair, open offer?



The Great Worm Destroyer

The Great Live Stock Conditioner

—is the medicated salt which contains no antimony, fed just as you would feed common salt. There is no dosing—no drenching—no trouble—all animals need it—take to it readily—and so doctor themselves. You will find animals that you do not suspect of having worms just full of them. Stock that have been run-down will take on new vigor, grow thrifty and profitable. Stock kept free from worms will be healthier; will do better, act better, and be in better condition to resist dangerous diseases. As proof of this read a few of the thousands of letters from stockmen who feed SAL-VET — who depend on SAL-VET to help them make greater profits — and to prevent loss.

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"I am feeding SAL-VET to 750 lambs and about 100 hogs. During this time there has been no sickness whatever among this stock." I consider SAL-VET cheap insurance."
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"SAL-VET is certainly a great medicine. I have been feeding it all winter, so far and since I started, my stock are better than ever before."
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"I had a yearling colt which was not doing at all well. I had fed turpentine, tobacco and other worm remedies, but all failed. On the evening of the 19th of February, I gave this colt a dose of SAL-VET and the following day I had plenty of evidence of its value. It is doing the work, all right."
HARRY BRENNEMAN,
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"I am well pleased with SAL-VET. I never knew a horse could have so many worms and live. SAL-VET surely brings them—big and small. Horses to which SAL-VET is fed, act 100 per cent better, and what we formerly thought was colic and meanness, was nothing but worms and worms."
J. E. TERKEURST,
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"The more I use SAL-VET the better I find it. My sheep and hogs were never so thrifty and healthy as now. We butchered this week, and did not find a single worm, while our neighbors' hogs are wormy and dying. I have been recommending SAL-VET to them and they are now ready to use it too."
WESLEY CHAMBERS, Bussey, Ia.

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100 pounds.....	5.00
200 pounds.....	9.00
300 pounds.....	13.00
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 Shipping Station..... State.....
 Number of Sheep..... Hogs..... Cattle..... Horses.....