

KANSAS FARMER

S. C. Libr

FOR THE IMPROVEMENT



OF THE FARM AND HOME

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SANITY is best shown by appreciation of the home, while domestic happiness is the only bliss of Paradise that survived the fall.

The wilderness is quelled, nations are built and wars are fought that men may have homes. Tribes exist without them but civilized man can not and the home is the index of the man. The world centers in the home and man's greatest efforts are made in its behalf; yet woman dominates it, controls it, makes it.

As she is man's supremest incentive to achievement, as she husbands his worldly goods and as she trains the future man so is she worthy of all that culture and refinement can give. Of right she is entitled to a proper training for her sphere in life. Her work is most potent for good and her influence immeasurable.

Girl culture is a fine art, not fully understood yet its product is the most beautiful of all created beings.

—I. D. G.



The Home Maker Of The Future

Seed Wheat And When To Sow

Turkey red is the standard hard winter wheat for Kansas, Nebraska, Iowa, Oklahoma, Colorado and Texas. It furnishes the highest quality of flour and yields the greatest number of bushels per acre of all varieties known in the wheat belt. It is the variety used by the northern and eastern mills for blending with hard spring wheats to secure the greatest number of pounds of bread from a barrel of flour and the best flavored bread. There are several strains of Turkey red—Kharkoff, Malakoff, the Crimean, etc. Full information as to the adaptability of the different strains to various localities may be obtained from the Kansas State Experiment Station.

Standard varieties of soft wheat are the Fultz, Fulcaster, Mediterranean and Zimmerman. Growers should get from the experiment station advice on which is the most profitable variety to grow.

Blue stem and Fife are standard hard spring wheats, each having many strains. The work of the Minnesota experiment station in developing new strains of hard spring wheat has added millions annually to the income of Minnesota wheat growers.

Extensive advertising has been given a variety known as the iron clad, which has been introduced in some sections of Kansas and Oklahoma. While it is a handsome appearing wheat and has a large, plump berry, it is worse than worthless. Its milling qualities are very poor when ground by itself and when mixed with other varieties in the grinding it seriously impairs the quality of the flour.

In sections where there is some iron clad wheat farmer should be careful about using a threshing outfit that has threshed this variety. The machine should not be used by the next man until it has been thoroughly cleaned in every part and every grain of iron clad removed. There are some localities in the southwest where iron clad has been so generally sown that millers refuse to accept wheat from those points. Wheat growers and business men should unite to get rid of iron clad wherever it has made its appearance.

Every grower ought to have a machine that will grade both size and weight and remove all trash, dirt and weed seed. Heavy seed wheat has given increased yields per acre over light seed at various experiment stations, as follows: Kansas 1.9, Minnesota 4.6, Ontario 4.9, and Nebraska 5.1 bushels. Seed that is uniform in size and weight drills evenly and usually results in a good stand. Strong vigorous plants usually come from plump, heavy seed.

But in favorable seasons, with soil and moisture conditions just right, shrunken seed, if from well bred strains, will often give as good returns as heavy seed. This, however, is not the rule for the more unfavorable the season the greater the odds in favor of graded, heavy seed.

The fanning mill should be selected with a view to secure efficiency in separation of the heavy, large seeds from the light large seeds, because weight as well as size determines the value of seed. This is accomplished, usually, by heavy air blast in the machine and is an addition to the process of separating chaff, dirt and small kernels from the large grains. With a good hand mill two men can easily grade and clean enough wheat in an hour to sow 40 acres. It pays, because choice seed on this acreage will give an increase over light seed of from 76 to 104 bushels—good pay for an hour's work of two men.

In all wheat growing sections the weeds are a great nuisance, weed seeds being sown year after year with the uncleaned wheat. Just taking out the weed seeds is sufficient to pay for cleaning and grading.

The most practical method of seed selection of wheat for the average farmer is to secure a high yielding strain from the nearest agricultural college as a starter. Then each year select for seed from that portion of the field which yields the highest and in which the grain is of the best quality. The crop from this area should

be stacked separately, threshed separately and then graded up with a fanning mill. Thus plump, heavy seed is obtained from the best yielding plants and if this plan is followed year after year a prolific strain gradually developed, well adapted to this particular farm. This plan of seed selection, combined with the methods of tillage, will give the grower, without changing seeds, both wheat and larger yields in 15 or 20 years than he had when he started.

Taking seed from the bin has serious objection, even though the seed is thoroughly graded. As a rule portions of the field where the soil is thin and the plants have stooled, the heads and grains are large. In grading from the bin these large seeds from the thin stands and lightest yielding part of the field are selected.

A good grower always uses a drill and never sows broadcast. The type of drill for all conditions is with single discs and easily removable press wheels coupled in pairs, each pair working independently. In soils the use of press wheels is the only way of getting a stand. Work out them the loose, dry soil around the seed will retard germination sometimes for months. In spring seeding, when the soil is damp enough, the press wheels should be moved. In buying a drill test it with small, oily seed like millet. If it can be set to sow evenly small, oily seed and see if the feed can be closed so that the seed will not be jarred out when the drill is driven from one field to another. Then test the drill with large kernel corn, seeing that it will distribute corn evenly, either with heavy seeding or light and that the force does not crack the kernels.

If a drill will seed well both small and large corn, the owner will find that he is using it to plant most his crops—wheat and other grains well as forage crops. Such a drill will be much more profitable than one that will sow only wheat.

Winter wheat should be sown late as possible to get a good ground before the ground freezes. Late seeding is the best insurance against damage by the hessian fly. Prof. Headlee of the Kansas Experiment Station states in a bulletin that wheat sown after October 15 in southern Kansas, after October 7 in central Kansas and after September 30 in northern Kansas was almost entirely free from infestation by the hessian fly. There are two essentials in wintering late seeding profitable: Well prepared soil to insure quick germination, and large, heavy seed.

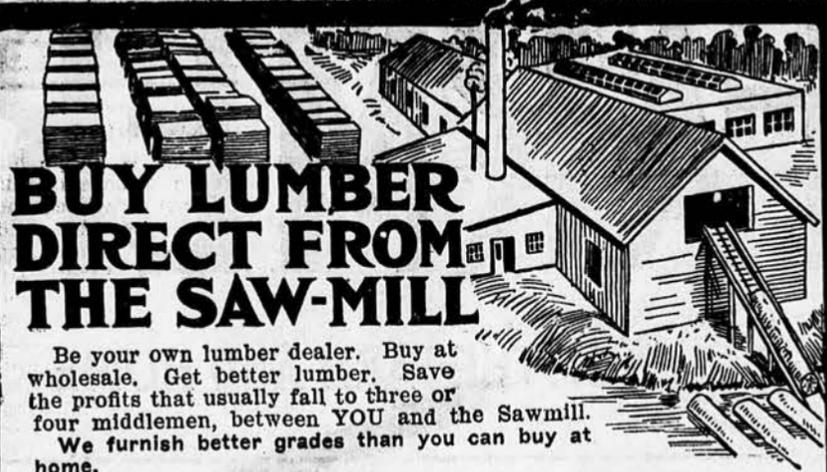
Volunteer wheat should be destroyed as fast as it appears. It comes early and furnishes a good home feeding place for the hessian fly. The regular seeding is ready to be tacked. It is responsible, also, much of the mixing of varieties lowers the price at the mill.

One bushel of large, heavy, vigorous seed per acre will give a stand if sown on ground that is prepared and in good condition. If the seed is weak or shelled or contains shaff or the soil is cloddy or dry, heavier seeding will be necessary. The average grower with the average preparation of soil and using seed cleaned by the threshing machine, usually gets the best results by sowing five pecks to an acre.

In dry farming sections three pecks of well graded choice seed is ample. Prof. H. M. Cottrell, Chicago.

Turning a grindstone is hard but cranking an automobile is walking to the street car is a but climbing a mountain is a Spading in the garden is a wear of the flesh but digging bait is luted pleasure. It all depends the point of view.

The farmer's flock of poultry should be composed of choice specimens only, the very best of the season raising. Why should we save the wheat, the best corn and the best potatoes for seed, and not select the best fowls for breeding purposes?



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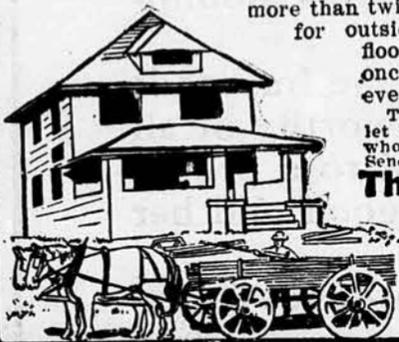
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GOOD TO LAY, GOOD TO EAT, AND GOOD TO LOOK AT. White P. Rocks hold the record for egg laying over all other breeds. 289 eggs each in a year for eight pullets is the record, which has never been approached by any other variety. I have bred W. P. Rocks exclusively for 20 years and have some fine specimens of the breed. I sell eggs at "live and let live" prices, \$2 per 15, \$5 per 35 and I prepay expressage to any express office in the United States.

THOMAS OWEN

Sta. B,

TOPEKA, KAN.

FARM COOPERATION.

There is perhaps no subject that is more vital interest to the farmers than that of cooperation themselves. In Johnson County, Kansas, an enormous business has been built up by cooperative action through the Grange, and this in turn now owns the largest business houses in the city of Olathe. In their holdings are a very large retail and wholesale store, a grand opera house and a mail office. There has never been a time so far as our knowledge reaches, that the members of this association receive dividends. In Shawnee the granges have been acting usually but in each case with their importations of kerosene, flour and other bulky commodities in car load lots has netted a very considerable saving they have not as yet attempted in the way of cooperative action. It is stated that the granges in this county made a net saving of \$1 per ton on the coal they used for last winter's use, and other commodities were marked and equally valuable. In the east, where competition is intense than in the middle west, and where cooperative action among farmers has been longer in being obtained. It is told that sixty dairymen near Erie, Pa., had that the milk rates then in force did not yield a living profit, that when each one became a peddler he also became a competitor of every other dairyman and lowered the prices of their products. They entered into an agreement by which they were to act as an individual and cease to do the individual peddling. The ten wagons they had been using were reduced in number to two wagons. A storage plant was erected by the farmers buying shares and their being placed in the building amounted to the amount of \$39,000. The purchases of shares were made in preliminary cash installment, the balance payable in milk. The year's returns amounted to \$100, and ten years later the sales totaled \$225,000, with a reduced cost of production and a proportionate increase of revenue for each member. It does not mean that the patrons pay higher prices for their milk, but by economical methods of production and handling the association is able to make money through other instance from the east is to show that an association of farmers on Long Island with an initial capital of \$12,400 did a business of almost a half million dollars in 1910. This association chartered a ship and shipped their products direct to a salaried agent in the city who acted just as a commission merchant would, but the elimination of the two middlemen meant a profit to the producers without an increase in price to the consumer. In Doniphan county, Kansas, there is a cherry growers' association which last year shipped out something like \$1,000,000 worth of berries at a handsome profit to the producers, and no increase in price to the consumers. It is merely a question of saving.

The curious feature of modern farm business methods is found in the fact that the farmer can sell and ship his cattle to Kansas City and buy the individual animals back in the city of meat from his local butcher for more than if he sold to the butcher himself. The curious feature about this proposition is that the farmer gets more money by shipping his cattle to the big markets than he could get from the local butcher, and the explanation of it lies in the fact that in the big packing houses every animal is economized and nothing is wasted, while the local butcher must waste more or less of waste in the killing of each animal, on account of the lack of equipment. The freight in this case is very much lower than the value of the waste which is necessarily incurred by the local butcher.

KANSAS FARMER

EDITORIAL

FARMING AND LIVING.

The farmer of today is unlike his father. He makes a science of his work, where his father practiced the art only. He studies the soil and learns about plant food, humus and the conservation of moisture. He studies varieties and learns what is adapted to his conditions. He studies methods and becomes an expert mechanist. He studies live stock and knows about breeds and the laws governing their perpetuation and improvement. He studies market conditions and knows what his customers want and how and when they want it. He begins his active life with more of practical knowledge in his head than his father had gained in years of experience in the school of hard knocks, and yet he retains one trait which belonged to his father and his grandfather. He takes his work so seriously that the big iron dollar shuts off his view and appreciation of many of the amenities of life.

It is a part of life to live and a very important part of this living is developed by self-culture. Self-culture involves many things; the reading of books, newspapers and farm journals is a necessary part of it. The beautifying of the home grounds and the keeping in repair of the farm buildings has an educational as well as a money value. The equipment of the house with running water, sewer systems and other conveniences has an immense value both for the farmer and his family. An occasional visit to the State Agricultural College and Experiment Station will bring added pleasure and profits, but perhaps the thing which brings greatest returns for time and money invested is an annual visit to the state fair.

Other state fairs and expositions have an immense value to the visitor and should be visited as opportunity offers, but they do not and cannot compare in real worth with the state fair of the home state.

Pride, patriotism and profit all lie in the success of the home state fair and the knowledge that you have helped to make it. At this great object lesson school the farmer sees what his neighbors have done and learns how they did it. He learns wherein he has failed with certain crops or classes of live stock and the lesson is worth much to him. He may carry away a blue ribbon as the result of his own work and the pride of possession is added to the increase of knowledge which he has gained.

At any rate he touches elbows with his neighbors, experiences a period of relaxation and gains a fund of useful information which can never be taken away from him, but all this is increased and multiplied if he have an active part in the making of his fair a success, even though he show but a single pig, a peck of onions or a few pumpkins.

These things awaken the dormant man in him and his outlook upon life is broader and more optimistic than if he confines himself to his grandfather's particular rut.

By all means make money. This is necessary, but also by all means make life worth while. You have only one chance at it.

GOOD ROADS CORPORATIONS.

Putting the growing popularity of the automobile and the insistent demand for good roads together, Farmer P. W. Hull of Concordia, Kan., predicts that the time will come when the farmer will have no use for wheeled vehicles and that the good roads problem will be solved by transportation companies who will carry either himself or his produce to any point over roads of their own making.

The time will come, he says, when transportation companies will practically control the highways and gasoline cars will carry the farmer and his family to town. Immense auto trucks will carry his grain from the barns to the elevators or cars. The cost will be less than it is now and the work will be done more quickly. Good roads will no longer be agitated, because the transportation companies will make the roads good. This will be expensive, but much less so than the building of railroads. And the business of moving farmers and their crops will bring better returns than the railroad earnings of today.

With which is combined FARMER'S ADVOCATE, established 1877.
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THE PREMIUMS ARE WAITING.

A great deal of interest has been developed by readers of KANSAS FARMER in our model eighty acre farm and its equipment, and numerous letters descriptive of this farm and accompanied by illustrations have been received which are creditable to their authors and which we believe will be immensely valuable to the people at large and that it will set them thinking along economical lines. If one man undertakes to attend to eighty acres of land and handle it properly with the assistance of the machinery and live stock that he can use economically, he will have his hands full, and will at once step out of the class of speculative farmers and into the class of real business farmers. There is such a thing as being land poor as has been witnessed by many a Kansas farmer.

Land is of value only as it is productive, and it is worth owning only because of its production or because of its increase in valuation. On the assumption that land values have about reached their maximum for farm purposes in this state, KANSAS FARMER is offering a series of premiums to those of our readers who will show just how to equip and operate an eighty acre farm as a model home and a profitable investment. The prizes are worth while, but the doing of the work necessary to describe your ideas in writing and drawing is worth more.

MANURE SAVES MOISTURE.

It was formerly thought that a plentiful supply of manure would tend to burn up crops in case of a dry spell of weather. The present season, however, has demonstrated that this is not correct, especially if the manure has had time to become thoroughly incorporated in the soil. In every case where the soil was heavily manured last fall or last spring and this has been followed by good cultivation, the crops are showing a good growth with prospects of maturity and yields. While it is possible to get too much manure on a piece of land, it is not likely to happen, and very few people do it. Certainly those who have experimented this year with heavy manuring have found that it has paid them.

THE HOG SITUATION.

The hog market is strengthening up, but this should not lead to any false hopes or extravagant expectations. Out of the present situation, however, there may develop some conditions of interest to the hog men. A shortage of pasture and hay will prob-

ably also mean a shortage of cattle and sheep. This will cause people to eat more pork as everything now indicates that there will be an abundant supply of hogs this fall and winter. While it is true that the corn crop is not made yet, it is also true that the corn crop will stand an immense amount of punishment from climatic conditions at any time up to tassel, and still give a fairly good account of itself. It is likewise true that the hog crop is not entirely dependent upon corn as was once supposed, and very excellent pork can be produced and put on the market without any assistance from the corn field.

All these conditions seem to point out an advantage for the hog man. Hogs are a necessary part of the machinery of the farm, and unless some unforeseen calamity occurs the crop this year will be a good one and the prices profitable.

FORAGE CROPS.

Under present weather conditions the question of hay and other forage crops is assuming serious proportions. The first cutting of prairie hay was good in quality though a little light in weight. The first cutting of alfalfa was extra good in quality and most people are saving the second crop for seed. Undoubtedly, rainfall will bring out a third and fourth crops later, but the question of securing ample forage for stock purposes during the fall and winter is one that must be met promptly. Hungarian millet will mature quickly and yield abundantly if it can be sowed so as to germinate, but the chief dependence of the farmers of the southwest would seem to be upon alfalfa and some one of the sorghums, though Prof. H. M. Cottrell is very strong in his championship of the Spanish peanuts. He claims that by soaking the peanut seed for twenty-four hours before planting a yield of hay can be secured which will be but little short of alfalfa in value, while the nut crop can be harvested by the hogs, much to their advantage. He cites cases where from 600 to 1,000 pounds of pork have been produced to the acre by hogging off Spanish peanuts.

Kafir corn will hardly mature even if it germinates immediately and the season is no longer than common, but milo maize may have a double advantage in being able to mature several weeks earlier, and at the same time yield fully as much grain and forage. Many farmers are turning their attention to milo maize, particularly in the south and west on account of its heavy yield and its early maturing qualities.

KANSAS FARMER is now the leading farm journal of the Mississippi valley and I am proud of it.—Thomas D. Hubbard, Kimball, Kan.

KANSAS EXPERIMENT FARM



The big farm agronomy attached to the Kansas Agricultural College is a place worth visiting, these days. It is not necessary for a man to be a farmer to find interesting things there. If he never had seen a plow or a harrow or given any thought to the origin of the flour that went into the bread he eats he certainly would be impressed with the clockwork system by which everything runs. You get your first real idea of what an agricultural college can do when you ride down the trim roadways, past the clean, properly cultivated fields, and read the printing on the little white boards at the edge of every tenth or twentieth acre test lot.

In many ways it is a wonderful sight. Everyone who reads knows that agricultural colleges carry on experiments constantly to determine the value of certain species of wheat or corn or other grain; but few, perhaps, ever think of the scientific management, the forethought, the care that must be given to every test, or how eagerly the scientist watches every blade that grows. You hear of seed beds, of conserving moisture, of disking, early plowing, listing, and a lot of other ways to cultivate ground, but you never have a clear conception of how important any of these methods is until you ride along the roadways on the college farm. The man who has this experience gains knowledge that will be invaluable. He sees the force that is making what readers of newspapers have heard so much about in recent years: "The new agriculture."

A mighty improvement has come to this big farm in the last year. The rough spots—and there were many—have been ironed out by the plow and harrow. The roads have been straightened and new ones laid out. A little bridge here and a retaining wall there, all of stone or concrete, add much to the general appearance. The main highway past the farm is clean. The old trees and hedges have been cut or trimmed. The corners of the fields have been raked out. An old building near the road has been restored and equipped for tools and repair parts. At one end of the main room is a case of boxes—big pigeon-holes—each labeled with the size of the bolt or nails it contains. At the other end is another set of boxes and shelves where the "hands" find the plow shares, the carpenter tools and the dozens of things a methodical and careful farmer should have handy when he needs them. More money is wasted by farmers every year buying bolts and nails and new parts—when they have them, lost somewhere—than would buy a fine blacksmith outfit, including the forge.

Upstairs in this old house the men have stored seed corn and other perishable supplies. Everything is in perfect order. You see nothing "lying around," no old boards or posts, no refuse. The yards are clean. The machine shed is used. Every implement not needed in the day's work is under cover.

"His house in order," you think as you ride along with William M. Jardine, the expert agronomist from Washington now in charge of the farm, but, after all, it is the test plots that get your thoughtful considera-

The Big Earth Laboratory Where Famous Problems Are Solved

PROF. CHAS. J. DILLON, K. S. A. C.

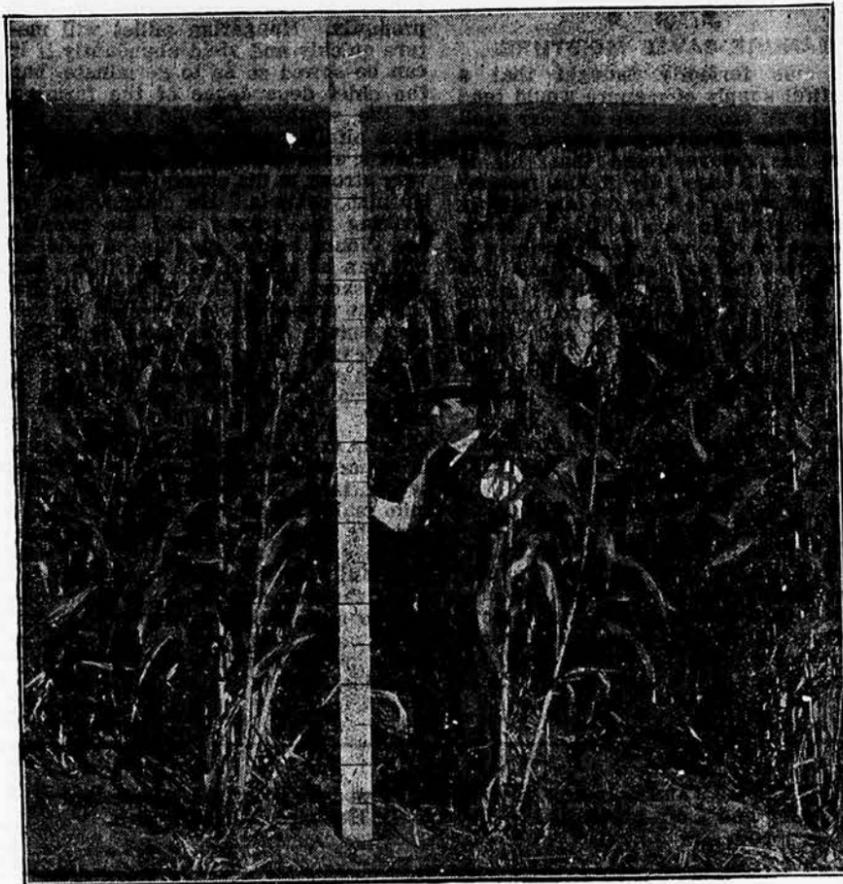
tion. You think of them all the way home and talk of them after you finish supper that night. It looks so simple, and, still, it took such years to prove the value and correctness of the theories that have there been worked out. And it will take so many more years to work out others. On the two hundred and eighty acres are over four hundred one-tenth and one-twentieth acre plots devoted to the various small grain crops, such as wheat, oats, barley, spelt, emmer, etc., and to various soil cultural and soil fertility experiments. About two hundred varieties and strains are under test. Almost every shade of green is presented as a result of the different varieties grown and the different soil treatment given. The smallest differences in soil cultural or soil fertility methods are already reflected in the color and character of the vegetation. The plots are laid out in series separated by well defined roads, while the plots are separated by alleys. Each plot is marked by a stake containing information as to the crop there growing, so that visitors may easily inform themselves as to the character of the work under way.

Of the four hundred plots nearly two hundred are devoted to soil fertility and soil cultural experiments. That is to say, certain crops are

grown in rotation with each other from year to year; other plots are grown continuously to the same crop from year to year; other plots receive different applications of fertilizers; while still others have green manuring crops, such as cow peas, alfalfa and clover plowed under. In fact practically every combination of crop sequence and application of fertilizer is represented. The effect of the different treatments at this early stage of growth is noticeable in the character and rankness of growth and in the color of the foliage.

The two hundred plots planted to grains represent selected strains and varieties developed from individual plants in the nursery, or from seed that has come from all sections of the civilized world, in order to determine the best adapted and highest yielding strains of desirable quality for Kansas.

In addition to these investigations with small grains a nursery is maintained of about ten acres west of the Engineering Building on the college campus, where the breeding and selecting work is carried on. In the nursery the object is to try out small samples of seeds sent to the station from foreign countries and from other stations of the United States, and to develop seed from individual plants.



The nursery work is necessarily conducted on a small scale, that is, small amounts of seed are dealt with, but large number of varieties and selections are under trial. The greater the number of selections the more likely are the chances of discovering high yielding strains. And it is these high yielding strains obtained from year to year that are being planted on larger plots of the agronomy farm. In the present nursery there are over two thousand selections and varieties of winter and spring grains under test.

Both in the nursery and in the field careful notes are taken during the growing season, and at harvest the products of each plot and nursery row are weighed separately and kept pure. With the field notes and the weights of grain produced and the appearance and performance in the field as observed during the summer it is possible to determine the worth of further attention. Very few of the hundreds tested each year are able to pass muster. It is from those that have been increased from the first that make good that is being contributed by the Kansas State Agricultural College among the farmers of Kansas.

The testing and comparing of many varieties and strains of the different crops to ascertain those best suited to Kansas conditions; the testing of the farm crops in different combinations and rotations; the application of different fertilizers to the crops and the best methods of seed-bed preparation, are not sufficient to insure maximum yields.

In addition to the information acquired it is necessary to know when and at what rate to plant the different crops. Fifty plots are devoted to experiments along this line. Wheat, oats, barley, etc., are planted at intervals from the last week in March or as soon as the land can be gotten into shape, until the middle of April in order that the optimum time for planting may be determined. These crops are planted at rates varying from minimum to maximum amounts. This information with that obtained from the tests referred to will give complete information concerning the characteristics of the various crops, their adaptation, and the methods of producing them. The experiments under way in these plots now were designed with these points in mind.

Incidentally, let it be understood that this experimenting is the hardest of work. After you have seen the fields you wonder at the title "professor." It doesn't mean the matter at all, and in a layman's opinion, is a misnomer. These men, of course, professors of a certain science, men with a degree gotten after hard study and work in the laboratory rather than "professor" for the word perfects a new variety of wheat or corn or oats or rye. "Expert" has been run to death. It seems "Farmer" would be a mighty improvement to mean all that real farming men do on the big college farm at Manhattan.

THE LAWS OF PROPAGATION

Food Supply and Environment Are Important Factors in Improvement

GEORGE E. DULL

Fecundity is that quality of the female which enables her to produce her kind in abundance. Some females are known to be much more productive than others of their kind, so a study of the causes of this condition will be of interest, especially to those engaged in the raising of live stock.

It will readily be seen that this is an important quality which should be searched for diligently by the breeder. It will often mean the difference between loss and profit to the farmer and stockman, as it will largely determine the number of females to be kept to produce the necessary crop of young to supply the world's market. Every female above the average number kept to furnish the supply is subtracting the cost of her keep from the possible profits besides the depreciation of the individual herself with increased age.

For instance, the census of Kansas for 1910 credits the state with 1,753,825 hogs. If these were reared in litters of seven each, it would have been necessary to keep 250,456 sows, while the litters had consisted of eight only 219,228 females would have been required—a difference of 31,318, which would have been turned into money with a large saving of feed and work.

Fecundity is influenced by many factors, among which may be mentioned climate, food supply, freedom or confinement, physical condition, inherited ability, closeness of breeding, age, size, season and environment.

In general a warm climate is more favorable than a cold climate for the abundant production of young. The number at birth and the frequency of birth will be greatest in a warm climate. The breeding period will be quite largely controlled, in the cold climates, by the seasons of the year. This may be due to a change in the food supply, which affects the ability of the animal to produce young, as will be shown later on.

The state of the food supply seems to be one of the greatest controlling factors of fecundity of both plants and animals. When the function of nutrition is impaired or the food supply becomes insufficient the productive powers suffer correspondingly. Sheep bred on rich pastures produce a high percentage of twins. On the barren hills of western Scotland they produce only 5 per cent of twins, whereas in England 33 per cent produce twins.

Successful impregnation is unlikely in a dry season and succulent food is generally favorable to breeding. Sheep breeders are well acquainted with the fact that if the ewes are placed on fresh, succulent pasture for three or four weeks after the lambs are weaned and then bred a high percentage of twins will be obtained and sometimes triplets.

With wild animals that breed twice a year the time of breeding is determined by the abundance of food. The smaller animals that would not be so quickly affected by a decreased food supply breed earlier, oftener and produce more young at a birth than the larger animals.

Overfeeding reduces fecundity by producing a plethoric condition of the system. This condition may often be noticed in stock that has been fitted for the shows. Lack of fertility is probably more frequent among the fattened stallions that have been recently purchased or are kept in that condition because the owner is afraid they would not look well if worked.

Serious derangement of the generative organs may thus be produced by overfeeding. This would be quite frequently the case with young animals and if continued long enough in older animals might produce a similar condition. Animals excessively fat either fail to breed or produce weak young.

Though an unsymmetrical development of the organization does not proceed far enough to produce an unhealthy condition of the reproductive organs, it may constitute a predisposing tendency to disease that is liable to be made active by slight exciting causes. Plenty of exercise and a low diet may correct any derangement due to overfeeding, if it has not been of too long duration, but local derangements of the system due to disease are difficult to overcome. Prof.

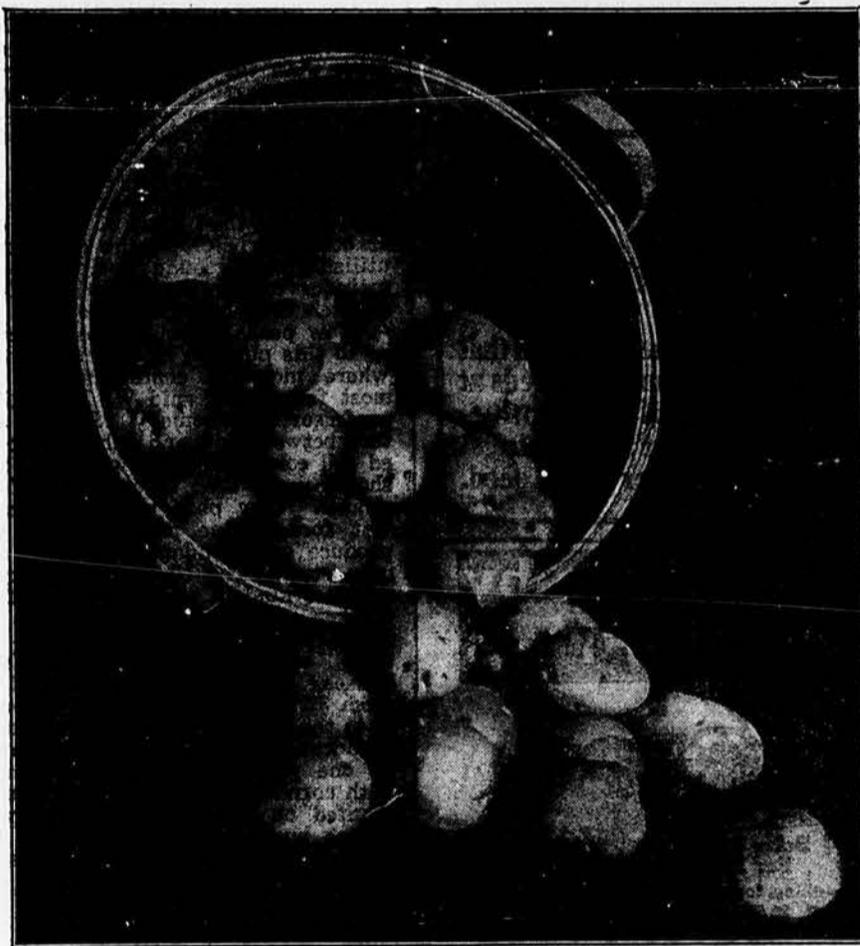
Tanner says: "The non-impregnation of females may generally be traced to an excess of fatness in one or both of the animals and an absence of constitutional vigor." The breeding powers are more energetic when the animals are in moderate condition, not being influenced by either extreme fatness or leanness.

The kind of food often has an influence of the generative organs. The queen bee owes her sex to the royal food received in the larval stage. Any worker grub may be exalted to royalty by a supply of queen bee food. Sugar, if fed in any considerable quantity to domestic animals, has an unfavorable effect upon the fecundity of the animal. An exclusive ration of corn is too fat forming and may impair the breeding powers.

Partial starvation is equally as

accompanied by local disease, will involve a corresponding decrease in the activity of the reproductive powers. Cows of the dairy type, or the less pronounced of the beef type, are more fecund than those of the extreme beef type. The sows from a herd of swine that has been selected and bred for fine bone and high dressing per cent usually give birth to litters smaller in number and less vigorous than those of large, roomy sows from a herd especially selected for vigor and fecundity.

Milk production is intimately connected with the power of reproduction. Those animals that breed with the least difficulty yield the largest supply of milk and produce the most healthy and vigorous offspring. It is, perhaps, impossible to secure the highest type of perfection in the produc-



POTATOES RAISED UNDER IRRIGATION. NOTE THE SMOOTH SKIN AND SHALLOW EYES. NO WASTE HERE.

harmful as overfeeding. While it may not have prevented the development of the generative organs, if continued during pregnancy and after birth, the development of the offspring will be retarded or prevented. A regular supply of nutritious food is most conducive to fertility.

A remarkable development of the tendency to fatten is usually accompanied by delicate constitution, diminished secretion of milk and loss of fecundity. The antagonism of the reproductive functions is shown by the fact, well known to feeders, that the removal of the ovaries or testes increases the tendency to fatten. Fat is more abundant in females and eunuchs than in males, and in females deprived of their ovaries than in those possessed of those organs, and sterility is known to be prevalent among the corpulent of both sexes.

The reproductive organs of extremely fat animals often have their functional activities impaired or even destroyed by fatty degeneration. After an examination of several barren heifers, Prof. Tanner reported some as apparently sound, but so overcharged with fat as to prevent impregnation; in others the ovaries had to a great extent wasted away.

It will be seen from the correlation of the functions of nutrition and reproduction that great activity of the

fat-producing functions, although not of fat without impairing the function of the reproductive organs.

The human family is similar in physical organization of the lower animals. When the mental faculties reach a high degree of development and the physical activities are intensified, the procreative functions are interfered with. Rich families generally have fewer children than those of the poorer class. In sections of Paris where the rich class dwells the number of children per marriage is but 1.97, while in the poor section there are 2.86 per marriage.

An improved condition of the system after a period of privation, and even disease, may produce an unusual activity of the reproductive functions. After the plague of 1348 in England, which almost devastated sections of the country of their population, double and triple births were frequent, and most marriages were fertile.

The production of twins will not only depend on the food supply, but also upon the peculiarities of the system that have been inherited. Referring again to the human family, many instances may be cited of plural births for several generations. A female twin frequently produces twins and the females of these in turn are productive of twins. The heredi-

tary production of twins in sheep is well known to be encouraged by saving the ewe lambs that are twins.

As a rule with twin calves of opposite sex, the female is barren and is called a freemartin. In all other animals twins are fertile regardless of the sex of either twin. In information given by Dr. Simpson of 42 married women, born as twins with males, 36 had children. In freemartins the organs are generally imperfect and the animal has the appearance of a steer.

Changed conditions or environment often affect the fertility of animals or less temporarily. The Spanish Merino was barren and deficient in milk production upon its first introduction into England. Stallions imported into this country from Europe are sometimes sterile and generally less fertile the first year after importation than in the following years. This, however, might be due partly to the fact that they are generally kept in a rather high condition of flesh for about a year after importation. Mares however do not seem to be affected so greatly by this change in climate, probably due to a difference in the method of handling.

Age will have an important influence on fecundity through variations involved in the nutritive functions. Fertility is greatest at full maturity. The practice of breeding too young is thought to reduce the fecundity of the breed. The offspring of very young or immature animals will inherit a condition predisposed to the attacks of disease. The effects may not be observed in the first generation, but are certain to show up sooner or later if this practice is persisted in. In northern Scotland it is thought to be disadvantageous to permit the cows to bear calves before they are four years old. Taking the first lamb from a ewe at one year old is generally non-remunerative, owing to the higher death rate of the lambs. Precocious marriages are less fertile; the children have an increased rate of mortality and have a predisposed tendency toward disease.

The sow and bitch, if bred young, bring small litters, thus reducing the maximum at maturity. In the aviparous animals, the eggs of young females are less in both number and size than those of mature birds and are also less fertile. In other groups of animals the number of young is less.

Close breeding has a tendency to decrease fecundity, while cross breeding has a tendency to increase it. In-and-in breeding of hogs for seven generations produced offspring that were infertile among themselves, but would breed to unrelated animals. Some of the seventh generation were idiotic. They were of good form, but only in a litter, and would not breed to their sire. In-and-in breeding with dogs produced sterility between animals of the same family and malformation.

The degree of freedom or confinement is known to have considerable influence on fecundity, especially if there be a change from one extreme to the other. The procreative powers are often impaired or may be entirely destroyed in wild animals by confinement. The elephant, tiger, squirrel, monkey and parrot seldom breed in confinement, while the lion breeds more freely in traveling menageries than in zoo collections. The flying squirrel produces but two young at a time in confinement, while from three to six are produced in the wild state. The ostrich lays 12 to 15 eggs in a season when under confinement, and double that number in the native condition.

If animals generally sterile under confinement do breed, the young do not inherit this power.

In conclusion I would say every breeder, especially of pure-bred live stock—and every farmer and stockman should secure such as soon as possible—should have training enough to enable him to select breeding animals that will improve instead of run down the herd—animals of uniform type, vigor and constitution and useful qualities throughout. Do not select for fad or fancy, as they will change, but select the useful qualities, as they will reproduce themselves and always be in demand.

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THE FARM



Plowing Arrests Manure.

The refuse of plant and animal remains cannot be used by plants until it is transformed into a soluble condition. This latter work is accomplished by several classes of bacteria. One class ferments and decomposes the refuse, forming ammonia; another class attacks the ammonia and forms it into nitrous acid, while another class attacks the nitrous acid and forms it into nitric acid. The nitric acid unites with certain mineral constituents in the soil to form nitrates. Nitrates are available as food for green plants, according to Prof. J. F. Nicholson.

The whole process of the formation of nitrates out of manures is called nitrification, and the bacteria producing the change must have conditions necessary for their growth, such as plenty of moisture, proper temperature and good aeration.

The process of cultivation, which stirs the soil gives these conditions. Cultivation, therefore, assists in doing more than the destruction of weeds; it reaches farther and deeper in that it is requisite in order to give the "nitrifiers" opportunity to produce an available plant food.

Sow Cow Peas.

In case of the failure of wheat, oats or other early crops, the question of utilizing the ground during the remainder of the season by means of a catch crop becomes important.

"Cow peas, probably, are best suited to this purpose in eastern Kansas, where moisture conditions are the most favorable," said W. M. Jardine, professor of agronomy. "Planted any time between now and July 20, provided soil conditions are right, this crop should make seed before frost if desirable. Cow peas will make excellent forage, fine pasturage, or will produce an abundance of green manure stuff. The New Era variety is the best kind to plant, because of its quicker growing."

"Farmers should be careful to get their seed from responsible seed houses. They probably can get it for from \$2.50 to \$3 a bushel. One bushel to the acre should be used if sowed broadcast for hay or green manure, or one peck to the acre if planted with corn for seed. Cow peas can be planted on land now infested with chinch bugs as they (the peas) are not subject to the attacks of this insect."

Did It Ever Happen to You?

Whenever I see the subject of keeping the boy on the farm touched upon, an incident which happened when I was a boy comes to my mind, writes a correspondent in Wallace's Farmer. About six miles from our farm was one of a large number of farms owned by the wealthiest man in the county. He lived in town, but put in most of his time driving from one farm to another. He was a vigorous personality, a close dealer and made money on his farming operations. One evening my father and I were driving past the farm mentioned. The old gentleman was sitting in his buggy near the road. We stopped and my father entered into conversation with the other gentleman, in the course of which it developed that he had that day sent his younger son, a lad of about 18, on his first independent steer buying trip. He said he wanted to see what Irvie was good for. While we were still talking, Irvie came in sight, driving a small bunch of steers. As they came up the old man got out of his buggy and looked them over and asked Irvie what he had paid for them. On being told, the instinct of the close trader got the better of the judgment of the father and, notwithstanding our presence, he unreasoned his tongue and abused the boy unmercifully, telling him he had no sense, was not worth his salt, was an easy mark, etc., etc. I was but a boy at the time, but I could see the effect. It was Irvie's first deal and he was feeling proud that his father had for once given him an opportunity. The old gentleman's tirade humiliated and discouraged him, in-

jured his self-respect and weakened his confidence. He became a worthless young man and died early manhood under circumstances which brought shame upon his family. This one incident was not enough to ruin the boy, but as a part of many others of the same sort was no doubt responsible for turning a bright promising boy into a dissolute, worthless young man. A little kindness, little instruction, a little patience, little more attention to the most precious of his possessions would have enabled this man to go down to age with pride in his sons. He lived them both and died with the bitter knowledge that, notwithstanding his wealth, his life had been a failure in the only thing worth living for.

A Well in the Highway.

A correspondent states that A owns a farm with section line fenced in road is forced through this farm the section line, the county paying owner \$50 per acre for the land for the road. B lives on a hill short distance from the road and no water on his place, and the question is asked as to whether B, if consent of the County Commission is obtained, can put down a well in road, as far from the middle as possible, put in a windmill or engine pipe water to his house.

As a matter of courtesy and neighbors, B might get the consent of the commissioners and put down a well, but it is the opinion of the County Commissioners of Shawnee county that the law gives them no right to grant a title to highway for such a purpose.

While the well might be dug and used for years without question, it would always remain the fact that no title to the land in which the well as dug could be given and any neighbor could compel its abandonment as being a nuisance at any time he could even enjoin the commissioners from granting the permission the owner from digging it.

It would seem that if such a well could be built in the highway, it could be built on the owner's property a few feet away.

Phosphorus in Agriculture.

There are three important elements of plant food without which no crop can be raised with success. There are others which are necessary to plant life, but these are supplied by the air and are not necessarily renewed and are those referred to. The three principal fertilizers to which the farmer must give attention are nitrogen, phosphorus and potash. Nitrogen is the most expensive when purchased in the form of an artificial fertilizer but it is the most easily supplied nature by the growth of alfalfa and other legumes which draw their supply from the air.

Phosphorus and potash must be supplied to the plant from the soil, and, when the supply fails, it must come through the application of artificial fertilizers. Nitrogen contributes to the vigorous growth of plants and leaves; phosphorus and potash the production of grain and fruit.

Dr. J. F. Willard, in an address before the Shawnee Alfalfa Club, states that the agricultural problem of the future lies in the restoration and supply of the phosphorus of the soil. Sources of phosphorus in this country are limited, and our methods of farming in the one-crop districts are so as to rapidly exhaust that contained in the soil. Rock phosphate, which is found in Tennessee and a few other states, is the only natural supply in America and the cheapest. Slag phosphate is a by-product of manufacture as is also dissolved bone black, and guano is, of necessity, very limited and expensive.

Recent experiments seem to indicate that the ground phosphate rock is the cheapest and most efficient form which to apply phosphorus provides the soil has plenty of humus in it. Ground rock phosphate is abundant

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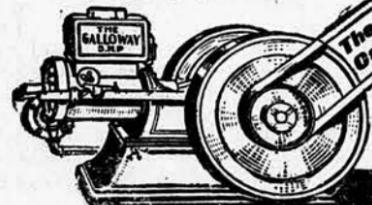
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DAIRY



President C. W. Wood, Worcester, Mass., of the Holstein-Friesian Association, states that thousands of the pure-bred bulls of this breed are sold each year to farmers and others to be used on grade herds. He believes this practice should be discontinued and that the association could better afford to spend \$20,000 a year to veal these bull calves than to allow them to be sold for use in grade herds. He thinks such use of these bulls is unwise and that for temporary gain we incur the risk of losing the individuality of the breed by mingling with other breeds or cattle of no breed. It is penny wise and pound foolish.

Breeding Pure Bred Holsteins.

All men engage in business for two objects: First, to find something congenial; second, to gain a living and have a balance laid by for old age. Divide these two objects and either the man or his business is a failure.

The first great thing in breeding and dairying, for they must go together, is to love the work. You must see something grand and noble in the cow and her offspring or the work is drudgery and no man can succeed when he feels he is a slave. I don't believe there can be a secondary object; the cow must be first, last and the only object.

Now I want to say right here to the man who engages in breeding because his neighbor does or because he believes he can make some money or for any other reason than to make it a general business and is willing to accept the bad as well as the good, that he had better look out or the goblins will get him.

I am going to take it for granted that you have a herd of registered cattle, be it large or small. There are none of us satisfied with what we have; we can see where our cattle can be bettered whether it be in breeding, form, udder, or butter-fat; and I believe the time is here when we must pay more attention to the individual and not so much to name.

But to return to where I left off; how are we going to improve our defects? Some will say by getting the right kind of a sire. That is all right, but how are we going to get out? Is it by sending off and having the other fellow select one that has a great name, and when we receive him find that the poor thing badly needs his name for he is lacking in everything else?

I have said and I am more convinced every day that the next sire I select I shall make it a business to see his dam and sire and as many of his dam's relatives as possible, even if I go to New Jersey, as some I know have done. I will find out for myself if his mother is gentle, not nervous and easy to milk, with fair sized teats; life is too short to put up with a nervous, hard milking, short teated cow.

The future usefulness of a cow commences with its birth and is maintained by liberal, wholesome feed at regular times. I want to say right here that the best motto to hang up in a barn is "Be on time." The bed-ridden or by-and-by man will have the same kind of cows.

After you have grown a heifer don't be in too much of a hurry to make a cow of her so as to dwarf her. Wait until she is large enough. After mating comes the critical time in a heifer's life. She should be liberally fed to keep her growing; don't be afraid that she will get too fat and look like a steer; she will gradually assume the dairy form after milking a while.

After calving her habits are formed; it is for you now to be gentle and feed her on time and give plenty of it—all she will eat up clean—if she leaves anything, take it away. I have no patience with the man who gives a cow something every time he comes to the barn; it will throw her stomach out of order

or give her an abnormal appetite which is just as bad.

A cow's stomach wants regular times for rest just the same as a man's and if you violate the laws of nature your pocketbook will suffer.

Then find out what she is worth before some accident happens to her. Many a cow is better than we think for; others are poorer. Testing tells. I find the cow four years old and from that on is the most successful breeder and the least care.

This is where a good cow, even if she loses a quarter, pays. Her cash value is lowered when her real worth is not impaired, providing she has a good record. And it is hardly ever that this accident happens to a poor cow. It is generally our best.—W. J. Witty, before Michigan Holstein Association.

The Holstein Association.

Last year the Holstein-Friesian Association spent something over \$8,000 in advertising that breed of cattle in the farm papers and magazines and Secretary Houghton reports that the association added 950 new members to its rolls within that time. The membership now numbers 4,500, which makes of it the largest breed association in the world. The secretary further states that, as a direct result of their advertising campaign of the last three years, the membership has increased 95 per cent. The reports show a total of \$134,491.38 on hand, which is an increase of more than \$30,000 during the year. Evidently it pays associations to advertise as it does individuals.

The State Fairs and Expositions.

Following is a list of the western state fairs and expositions with dates of opening and names of their respective secretaries: August 28, Iowa State Fair, Des Moines, A. S. Carey, secretary.

September 4, Nebraska State Fair, Lincoln, W. R. Mellor, secretary.

September 4, Minnesota State Fair, Hamline, J. C. Simpson, secretary.

September 11, Kansas State Fair, Topeka, H. L. Cook, secretary.

September 18, Kansas State Fair, Hutchinson, A. L. Sponsler, secretary.

September 25, Interstate Live Stock Show, South St. Joseph, J. C. Mann, secretary.

October 2, Oklahoma State Fair, Oklahoma City, I. S. Mahan, secretary.

October 2, Missouri State Fair, Sedalia, John T. Stinson, secretary.

October 2, Illinois State Fair, Springfield, J. K. Dickmson, secretary.

October 9, American Royal Live Stock Show, Kansas City, A. M. Thompson, secretary.

December 4, International Live Stock Exposition, Chicago, B. H. Heide, secretary and general manager.

January 13, National Western Live Stock Show, Denver, F. P. Johnson, secretary.

Royal Not at Elm Ridge.

At a joint meeting of the directors of the American Royal Live Stock Show and the directors of the Elm Ridge Co., of Kansas City, the American Royal officials refused at this time to join with the Elm Ridge Co. in a consolidated agricultural and live stock show for 1912. The Elm Ridge Co., composed largely of Kansas City business men, is preparing for the sale of stock in the company and announces that it will hold its first show in the fall of 1912. The Kansas City Stock Yards Co. has announced that it cannot accommodate the Royal after the 1911 exhibition. It was suggested at the joint meeting that the Royal show might be transferred to St. Joseph or St. Louis. The entire matter will be considered at a later meeting of the American Royal directors.—Hereford Journal.

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THE HOPPERDOZER

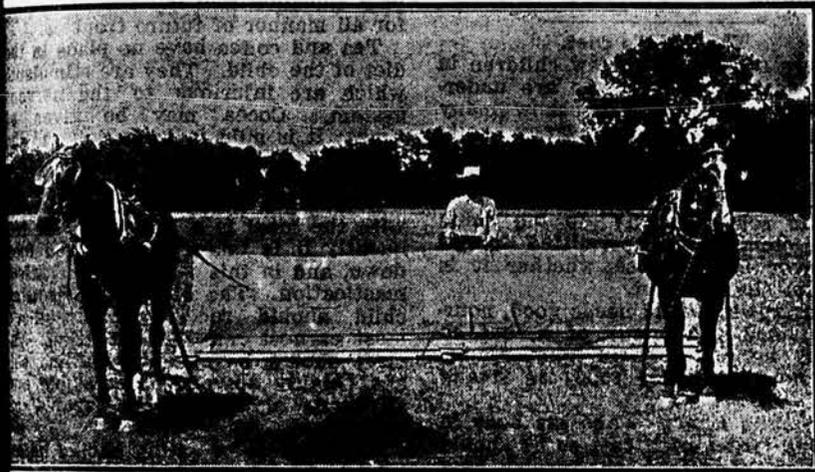
With the dry spring weather there always an increase in the crop of insects, both beneficial and deleterious. This is due to the fact that the other conditions are favorable to hatching of the eggs, and every year comes out in full, while the winter vegetable growth makes them even more numerous by reason of their scarcity.

Many ways have been devised for control or suppression of insects serious to agriculture, with the result that numerous sprays and spray-machines are on the market, all of which are more or less effective. The great enemies of the farmer are numerous, but perhaps none make their presence and their work felt more than do the chinch bugs and the grasshoppers. At this season, when prairie grass becomes more or dry and hardened, it is but natural that the grasshoppers should turn to the green crop for fresh feed, and many ways have been devised for killing this pest though none have been so effective as the harrow and harrow if used at the proper

caught by driving around his alfalfa field.

Hopperdozers are not completely satisfactory, and yet they offer almost the only help which can be afforded by the farmer to his alfalfa field from the inroads of grasshoppers from unplowed fields. They may be made of sheet iron or of lumber, but in either case must be tight enough to hold water. One horse hitched by a single tree on each end gives very much better satisfaction both in pulling the machine more steadily and in stirring up the grasshoppers, than does the hitching of a single horse or even a team in the middle. The hopperdozer is generally about sixteen feet long, and two feet wide, though it may be of any size. It should have a back of muslin or canvas as shown in the picture against which the insects will fly and fall into the reservoir. The compartments in the dozer are first filled with water and then a film of kerosene poured on top and the canvas or muslin on the back saturated with kerosene.

The machine does not harm the growing crop and may be driven back



THE HOPPERDOZER, FRONT VIEW, SHOWING HOW THE MACHINE IS DRIVEN AROUND THE MARGIN OF THE ALFALFA FIELD AND THE GRASSHOPPERS CAUGHT IN THE PANS.

A female grasshopper lays her eggs in the earth within an inch and a half of the surface, and they remain until the following spring and are hatched out to work in the wild grasses if they are abundant, and the crops if they are scarce. There comes a time every summer when the inroad of the grasshopper upon the alfalfa, Kafir and corn is so serious, and the use of the fashioned hopperdozer is perhaps the most effective means of battling this pest at this time that yet been devised. Farmers of Kansas always suffer more or less from the depredation of grasshoppers, though this does not mean that they have their farms invaded by the old fashioned red legged Rocky Mountain grasshopper of the early 70's.

Fighting grasshoppers successfully depends upon two things. If all the neighbors in a community will unite and plow up the land in which they hatched and keep it stirred more so that the eggs are subject to changes of climate, the result will be an immense reduction in the number of hoppers developed. This, however, would involve an enormous expenditure of time and labor, for which there would be no other returns. It would also involve the plowing up of roadsides which may have its own damage done by the hoppers. The best method rests with the individual farmer. By building a hopperdozer similar to that shown in the accompanying engravings and filling it with water and a thin layer of kerosene oil, he will be able to successfully destroy an enormous number of these insects by simply driving around his alfalfa field or his corn field. The photographs from which the engravings were made were taken of a machine constructed by E. S. Brown of Lebo, Kan., and represent a home-made hopperdozer with which he successfully combated this insect pest which was making heavy inroads on alfalfa fields. The small pile of grasshoppers in the foreground in the picture, shows four and one-half bushels of hoppers that were

and forth over it wherever the hoppers are dangerously numerous, though much good may be done by driving around the field at the time of the immigration. The work is best done in bright, warm weather, and before the grasshoppers have reached their full size. It does not matter if they should jump out of the pan as they are doomed anyhow provided they have touched the kerosene. Like all other insects grasshoppers breathe through pores along the sides and any thin oil that will enter these pores and interfere with the breathing will kill the insects. The only object in using water at all is to save kerosene, as a film of kerosene on top of the water is just as effective as would be a solid body of kerosene. The insects when destroyed may be placed on a compost heap for manure or disposed of in other ways. They are, however, valuable as a manure.

With a good big flock of turkeys and a hopperdozer a farmer can pretty well protect his crops against the destruction by grasshoppers, which is sure to come unless some artificial means is resorted to. Various other ways of handling the grasshopper question have been attempted but the perfect one has not yet been discovered. One of the methods which has been adopted with some success is that of plowing under the young hoppers in a field where they are hatching by beginning at the outside and plowing toward the center. This turns under a good many of them and forces others toward the center so that they have an increasingly long distance to travel to reach a food supply than they would otherwise have. It has been found that young hoppers can live four or five days without any food at all and this is not very encouraging.

Another method of handling them has been by mixing one part of Paris green with about one hundred parts of fresh horse manure, and softening the mass with water so as to make it easily distributable throughout the field where the hoppers are doing damage. This, however, can not be used in places where poultry or turkeys have access to the field. It is

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sometimes possible to burn over an area that is infested with young grasshoppers, and thereby save an adjoining crop. This method, however, is of questionable benefit. Another poison of frequent and more or less successful use is the mixture of bran and water with Paris green in the proportion of two parts of Paris green to twenty-five parts of bran. This may then be sweetened with some cheap sirup or molasses, and distributed where the grasshoppers will have access to it. This method is found to

be more valuable for truck gardeners than for farmers, but for neither if they allow poultry to have the run of the land. A spray made of four pounds of arsenate of lead to one hundred gallons of water is also effective, but is also dangerous to poultry and grass eating animals.

From the results obtained and the little expense involved it is perhaps true that the hopperdozer is about as effective as anything that has yet been devised for combating the grasshoppers.

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Beneath the moon he told his love,
The color left her cheeks;
But on the shoulder of his coat
It showed up plain for weeks.
—Columbia Jester.

When beating eggs add a pinch of cream of tartar to them and they will not fall after they are whipped.

When covering a kitchen table with oilcloth put a layer of brown paper on first. It will prevent the oilcloth cracking and make it wear much longer.

To wash dress shields soak them in cool water to which a little ammonia has been added, rinse and hang over the bathtub without wringing. This will greatly lengthen the life of the shield.

The Child's Diet.

There are doubtless few children in these days of plenty who are underfed, but I am wondering how many are properly fed. How many mothers make the feeding of their children a study? In how many dinner pails would we find the right kind of food for the school lunch? In too many cases children are permitted to eat whatever they choose whether it is best for them or not.

The growing child needs good, nourishing food and plenty of it, but he should not be fed on pickles, pie, doughnuts and fried foods as steady diet.

The child is active and his body is growing larger each day, so he should be given foods that will furnish heat and energy to make his activities possible, for thus strength is developed; also foods which will furnish the nitrogenous elements necessary for the building up of body tissue.

Many children are permitted to spend their pennies for candy, instead of being encouraged to save them, and soon the candy habit has destroyed the appetite for the regular meals, impaired digestion and often ruined the teeth. Not that the child should be deprived of candy, for pure sugar is a food most easily assimilated and one that furnishes an abundant supply of heat and energy with little effort on the part of the body. The child should be taught when to eat candy; never just before meals, for it takes away the appetite for solid food, but just after the meal and then in moderation.

The child's diet should include plenty of pure milk, eggs properly cooked, either soft boiled or poached, white and graham bread, fruit, vegetables, soups, well cooked cereals, fish and meat in small quantities once a day, and simple cakes and puddings.

Many children do not care for vegetables yet they should be encouraged to eat them. Vegetables supply valuable minerals which aid in purifying the blood; they also furnish bulk to the food, which causes a healthy exercise of the muscles in the digestive organs. By presenting a variety and preparing each vegetable in a number of ways, the child may be led to cultivate a taste for this class of foods.

From infancy children should be taught that older people can often eat things which are quite unwholesome for children; lighter desserts or fruits may be substituted for the rich pastry or pudding and a lesson in self control be presented.

A child who is fussy about his eating meets many unpleasant situations later in life and often places his hostess in an awkward position, because he has not cultivated a liking for good wholesome foods in general.

Children should be trained to eat slowly and masticate their food thoroughly. This necessitated cultivating the habit of being prompt in rising in the morning, so the breakfast need not be hurried. Many a mother thinks she is doing a kindness to her child to let him sleep in the morning. She does not realize what a bad habit she is helping him to form, one that will prove a hindrance all through life. If the child goes to bed at the

proper time he will get the required amount of sleep and can rise promptly without the slightest harm.

It is often deemed necessary for the child to eat more often than the adult, in fact it is a far better plan than to have him overeat at any one meal. The child's stomach cannot assimilate as large a quantity of food at a time as that of the grown person. Lunches between meals should be regular and carefully planned. Highly seasoned foods should be avoided, but simple, nourishing foods such as bread and butter, milk, fruit or a sandwich, may be given.

The greater number of children's diseases arise from improper diet and yet mothers continue to permit their children to eat abundantly of highly seasoned and unwholesome foods which create unnatural appetites, impair digestion and lay the foundation for all manner of future troubles.

Tea and coffee have no place in the diet of the child. They are stimulants which are injurious to the nervous system. Cocoa may be given at times; it is mild in its action and the fat it contains gives it real food value.

Drinking a great quantity of water with the meal is a bad habit, for frequently it is taken to wash the food down, and in this way hinders perfect mastication. The diet of the growing child should receive the mother's most earnest care and attention. Variety should be sought for; and salads, highly seasoned meats, pie and all kinds of fried foods should be avoided.

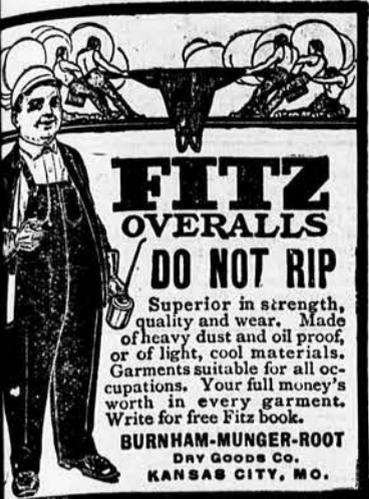
Right habits of eating should be established and regularly observed in the child is to be healthy and strong in mind and body.—Miss Nellie W. Farnsworth, State Normal School, Valley City, North Dakota.

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Figured foulard in gray and white with braiding and tucked net for trimming is here shown. The waist made in peasant style with a shaped reverse trimming. The skirt is finished with the popular panel front and back gores and lengthened by a plaited flounce at the sides. The waist pattern—8935—is cut in 6 sizes 32, 34, 36, 38, 40 and 42 inches bust



measure. The skirt pattern—8961—is cut in five sizes, 22, 24, 26, 28 and 30 inches waist measure. It requires 6 yards of 44-inch material for entire costume. This illustration is for two separate patterns which will be mailed to any address on receipt of 10c for each in silver or stamps.



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"A and B. own land adjoining, with partition fence between. A has no stock on his land and has only two wires on his part of the fence and very poor posts. B runs stock on his and the animals break through A's fence. What steps, of any, can B take to compel A to fix his fence? If B's stock injure A's crop, is B liable for damages?"

This is the statement of a Smith county correspondent and presents a not uncommon case.

In the first place A's fence is not a legal one. If barbed wire fences are referred to, the law requires that not less than three wires shall be used, the top one of which shall be not less than 44 inches from the ground, the bottom wire not less than 18 inches from the ground and the middle wire placed half way between these two.

If plain wire is used the law requires that it shall not be less than No. 7, firmly fastened to good posts well set in the ground, at least two feet deep, and that four wires shall be used, which shall be provided with suitable rollers or levers, at proper intervals, for tightening the wires. For barbed wire the posts shall not be set in the ground less than 20 inches and not farther apart than two rods. In either case the fence must be of good materials and put up in a substantial and workmanlike manner.

If any party neglect or refuse to repair a partition fence or his part of it, the aggrieved party may complain to the fence viewers, who will order it repaired. If this is not done promptly the complainant may make the repairs and charge them against the other party, and collect with 1 per cent a month interest, through any court of competent jurisdiction.

If the fence viewers order this fence repaired and the owner fails to do so and you make the repairs yourself and get the award for costs and interest through the courts, then this award becomes a lien on the land of the other party until paid.

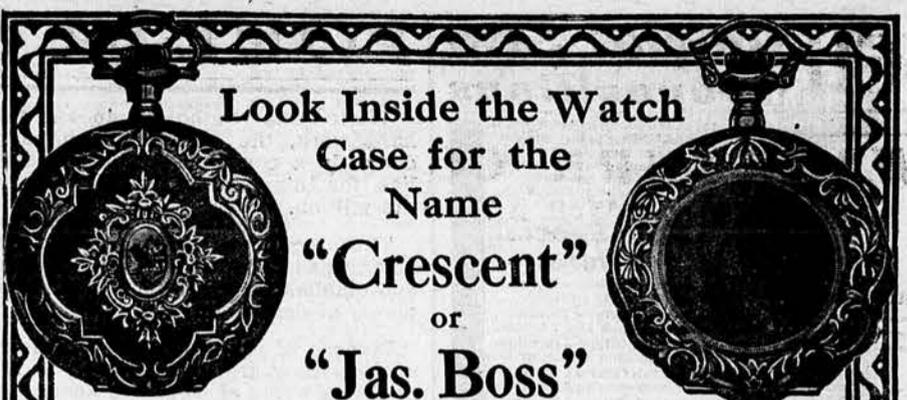
The Profit in Alfalfa.

A few years ago it was the generally accepted idea that the successful growing of alfalfa was confined to a few especially favored states. That this belief was without foundation is proven by the crops that have been grown in localities where it was thought this profitable forage crop would not grow. For instance, who would have believed that alfalfa would grow and survive the vigorous winters of the Canadian Northwest? Yet such is the case. As to the time of year best adapted to sowing the seed, much depends upon the locality. It is sure, however, that the seed bed must, in every case, be properly prepared, good seed used and properly sown.

The Superior Grain Drill, manufactured by The American Seeding Machine Co., Incorporated, Springfield, Ohio, is admirably adapted for sowing alfalfa. The seed can be sown through the furrow openers and drilled in rows, or it can be broadcasted by detaching the grass seed tubes from the grain tube tops, thus letting the seed fall between the discs. In either case, whether drilled or broadcasted, the disks give the ground an additional cultivation and thus prepare a more mellow seed bed. The Superior Grain Drill is not only adapted to the sowing of alfalfa, clovers and grasses, but all known seeds from wheat to seed as large as bush Lima beans, and in any amount desired to the acre. This machine is manufactured in plain grain and combined grain and fertilizer styles. It can also be had in all sizes with different spacing between furrow openers. Single discs, double discs, hoes and shoes can also be had. Write to the American Seeding-Machine Co., Incorporated, Springfield, Ohio, for their Superior Drill catalogue. Then go to your nearest implement dealer and ask to see the Superior, which is guaranteed to do and to be all that the manufacturers claim.

A high grade, guaranteed durable live rich red barn paint is sold by the Sunflower Paint & Varnish Co. of Ft. Scott, Kansas, direct to the consumer at only 85c per gallon in 5 gal. cans, freight prepaid. This is a paint proposition worth considering by every farmer. This is a reliable company and now is paint season. Try this paint.

Look Inside the Watch Case for the Name "Crescent" or "Jas. Boss"



The cheapening process that has crept into the watch-case business has hurt the legitimate jewelry store.

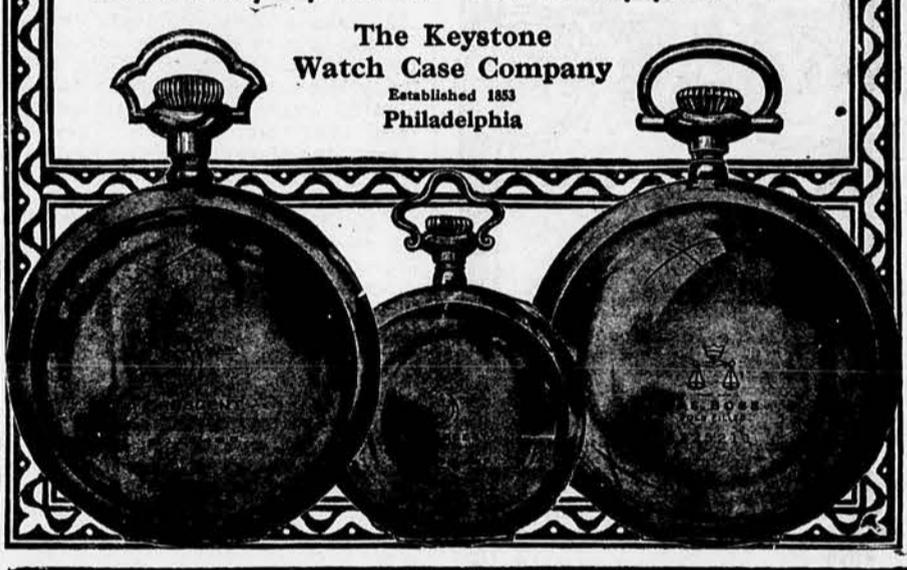
Too often the jeweler himself has been blinded by the "guarantee" stamped inside a low-grade case.

You are partly to blame because you inquire about the movement of a watch and pay little attention to the case.

Thousands of filled cases are sold every day with the layers of gold so thin that the engraving or engine-turning can not be done with a diamond-pointed tool. It is merely bur-nished on. Such a case may be stamped "guaranteed for 20 years" when it will not wear twenty weeks.

You can be sure of legitimate value if you will insist on a "Crescent" or "Jas. Boss" gold-filled case and look for our trademarks. They are standard with the fine jewelry trade, and have been for fifty years.

The Keystone Watch Case Company
Established 1853
Philadelphia



FINE CREAM WHIP-EGG BEATER FREE

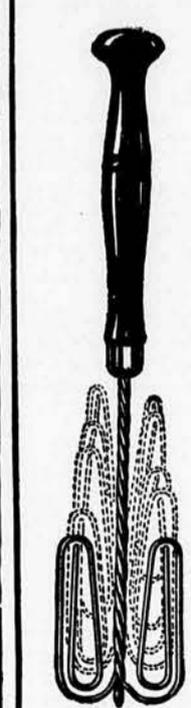
The accompanying miniature illustration will give you a very faint idea of the simplicity and practical value of this new household article, needed by every woman in her kitchen.

It is operated with one hand by simply bearing down on the handle and working same up and down while you hold the cup or receptacle with the other hand. It is positively the handiest, neatest and best cream-whip and egg-beater ever manufactured. No cranks or gears to get out of order and it will last a lifetime.

We will send one of these egg-beaters to any reader of KANSAS FARMER who will send us 25 cents for a new trial subscription to KANSAS FARMER for three months. If you are already a subscriber, send the name of a friend and 25 cents, and we will ship the egg-beater to you at once. Use coupon below.

Publishers KANSAS FARMER,
Toeka, Kan.
Gentlemen: I inclose 25 cents, for which please send me the Egg-Beater and Cream-Whip described in your advertisement.

My Name _____
Address in Full _____
Name of party to whom KANSAS FARMER is to be sent three months _____
Address in Full _____
(If a subscriber yourself fill in first two lines only.)



MAPLEINE FLAVORING

Use it like lemon and vanilla. A delicious syrup is made by dissolving white sugar in water and adding Mapleine. Grocers sell Mapleine; if not, send 35c for 2oz. bottle and recipe book. Write to Dept. 6 CRESCENT MFG. CO., Seattle, Wash.

5 Special Silo Propositions

One of them is sure to interest you if you are going to buy a Silo or Ensilage Cutter this year. I save you money and guarantee to please on quality. Write me for one of these

Five Special Offers:

- 1 For the man who wants a Silo and a Cutter.
- 2 Club Offer—2 farmers. Silo each and 1 Cutter.
- 3 Club Offer—3 farmers. Silo each and 1 Cutter.
- 4 Club Offer—4 farmers. Silo each and 1 Cutter.
- 5 Club Offer—5 farmers. Silo each and 1 Cutter.

Special prices also quoted on either single Silos or Cutters.

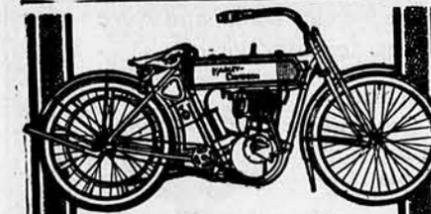
You Need a Good Cutter

Champion Silo licensed under Harder Patent No. 627782

The short hay crop will make corn silage worth \$10 a ton this winter. You will save money with a Champion Silo and a Ross Cutter. Write now for my special proposition and my big free book.



Keller J. Bell
Manager
Farmers' Co-Operative Produce Co.
807 11th Street, Des Moines, Iowa



10 Miles for a Cent

You can go to town in one-fifth the time, with twice the pleasure and at one-tenth the cost on a

Harley-Davidson
MOTORCYCLE

It is the Most Economical
The Harley-Davidson holds the official World's record for economy.

It is the Most Durable
The first Harley-Davidson we made nine years ago although they have traveled thousands of miles are still giving perfect satisfaction.

It is the Most Reliable
The Harley-Davidson is the only motorcycle that has ever been awarded a diamond medal and a 1000+5 score for super-excellent performance in an endurance contest.

Nearly one-third of all the motorcycles sold in America are Harley-Davidsons.

Let us tell you more about the "Silent Gray Fellow."
HARLEY-DAVIDSON MOTOR CO.
816 L St. Milwaukee, Wis.

You can raise 85 to 100 per cent of your Chicks by using

"Otto Weiss Chick Feed"

thereby saving Funeral Expenses. Ask your dealer, or send for Circular.

THE OTTO WEISS ALFALFA STOCK FOOD CO., Wichita, Kans
Largest Alfalfa and Chick Feed Plant in the United States.

ELM GROVE POULTRY FARM

Barred Rocks, R. C. & S. C. R. I. Reds, S. C. White Leghorns and Pit Games. Write for prices.

ELM GROVE POULTRY FARM, Wichita, Kansas.

GUNS and Revolvers REPAIRED

We can furnish or make any PARTS for Guns, Rifles, Revolvers, Bicycles and Motorcycles. Send us your work or write for prices. Expert repairing our specialty. Bicycle and Motorcycle supplies.

GRAF GUN & CYCLE WORKS,
2205 E. 9th St. Kansas City, Mo.

GRAB'S WONDER LIGHTER

Everybody's buying it. The safest, most efficient and economical substitute for dangerous and costly matches.

Flashes instantly. Igniting any gas or alcohol. Good for 5,000 lights. A household necessity. Simple, durable. Price prepaid only 10c. Think of it! Hurry order. Agents wanted.

VICTOR M. GRAB & CO.,
130 Ashland Block, Chicago, Ill.

POULTRY Readers Market Place

CLASSIFIED ADVERTISING 3 CENTS A WORD

While it is too hot to do any real hard work, the comfort of the hens demands a continual warfare against lice, for this weather breeds them by the million.

The torrid weather we have been having has been hard on the chickens, and emphasizes the need of shade and plenty of cool water.

Dispose of the surplus cockerels as soon as they are large enough to fry, as it is a waste of money to keep them when feed is so high.

It becomes necessary at times to prepare a lotion to bathe wounds and sore places on poultry. Nothing is better than a few drops of laudanum in a teacup of water, this being both cooling and healing.

Many fine chicks are materially injured by crowding. They are growing rapidly and are greedy, caring more to get all they can, regardless of the wants of the others. They crowd, and tread on and pick each other till we find our once promising flock is looking decidedly ragged. Separate them, according to sizes, give the weaker ones a chance, we may find our best fowls among them. The coops should be enlarged as they grow older. The cockerels should be separated from the pullets when they are three months old. But if you don't wish to keep them for breeders, it would be better to sell them.

Roup Among Turkeys.

I write you to find out what the trouble is with my young turkeys and what to do for them. They appear lively but have a discharge from their nostrils watery and a scab seems to form over their nostrils. They have warm, dry places to sleep; feed chick feed, some curd, some cornmeal and soaked bread and egg. One seems to be swelled around one eye a little. There has been no roup in my flock. Please let me know what to do for them.—Mrs. B. W. Frost.

Ans.—Your statement, "There has been no roup in my flock," seems to contradict the facts as stated in your letter, for the symptoms you describe all indicate roup. Though we have not had wet weather to cause roup, still this disease can be acquired by turkeys or chicks by allowing them to run out on the grass during heavy dews. Here is what an expert says of this disease: "Roup is one of the most to be dreaded diseases which afflict poultry and is mainly caused by exposure to cold and wet. Roup will produce acute inflammatory action resulting exudation, eventually embracing the entire surface of the membranes of the nose, mouth, throat and windpipe. If this exudation is not speedily checked, it degenerates into pus, which is the discharge present in the last two stages of roup, and is the only mode in which this disease is disseminated. In the second stage, termed diphtheritic roup, the exudative membrane, becoming permanent and pressing upon the subjacent tissue, acts as a foreign body, causing ulcerations to appear on the surface. These ulcerations are the so-called "cankers." This condition arrived at, there is in the third stage of the disease, a stagnation of the nutritive processes, the blood becomes impaired and scrofula and liver disease supervene. These conclusions have been arrived at after studying the disease for three years, during which time diseased fowls have been experimented upon, killing some at the various stages, and dissecting them. They are easily cured in the first stage, curable in the second, and not worth curing in the third. The following will be found unequalled treatment for all stages of the disease, combined with nutritious, soft food:

"Pills—Sulphate of copper, half grain; cayenne pepper one grain; hydrastine half grain; copaiba three drops; venetian turpentine, quarter section. One pill, night and morning.

Lotion—Sulphate of copper quarter ounce, dissolved in pint of rain water. To wash out the mouth and nostrils if required.

The simplest means of preventing their drinking water acting as a means of spreading the disease, is to add a little tar water to it, prepared by stirring about one pound of tar in two gallons of water."

Advertising "bargain counter." Thousands of people have surplus items or for sale—limited in amount or numbers hardly enough to justify extensive display advertising. Thousands of other people want to buy these same things. These interested buyers read the classified "ads"—looking for bargains. The "ads" are easy to find, easy to read. Your advertisement here reaches a quarter of a million readers in cents per word for one, two, or three insertions. Four or more insertions, the rate 2 1/2 cents per word. No "ad" taken for less than 30 cents. All "ads" set in plain style, no display. Initials and numbers count as words. Address counted. Terms: cash with order. Use these classified columns for paying results.

HELP WANTED.

WANTED—ONE THOUSAND LADIES to secure special introductory offer on our Seamless Aluminum Fireless Cooker; club rates. National Mfg Co., College View, Neb.

WANTED—A NEAT, TIDY, PRACTICAL woman under 35 to do the cooking and washing for a family residing in the country; top wages to the right one. L. C. Walbridge, Russell, Kans.

CIVIL SERVICE EXAMINATIONS OPEN the way to good government positions. I can coach you by mail at small cost. Full particulars free to any American citizen of 18 or over. Write today for Booklet E 809. Earl Hopkins, Washington, D. C.

SALE OR EXCHANGE.

A SUB-IRRIGATED VALLEY FARM; TWO hundred acres, in sight of town; best alfalfa and cantaloupe land; write for particulars. Lander, Deerfield, Kans.

REAL ESTATE.

TO SELL YOUR PROPERTY, WRITE Northwestern Business Agency, Minneapolis.

I HAVE A GOOD LIST OF KANSAS and Missouri farm lands for sale or exchange. Grant Johnson, Newton, Kansas.

SNAP—1 1/2 MILE TOWN, 157 A. HOG, alfalfa creek farm; crops with place; \$75; easy terms. Box 696, Paradise, Kans.

FOD SALE—80 A. ALFALFA LAND. IF interested write for list of ten 80 acre tracts near Salina, V. E. Niquette, Salina, Kansas.

WELL IMPROVED 160, 50 ACRES creek bottom alfalfa land, bal. level wheat land, fenced, 50 fine bearing cherry trees, fine water \$3,200.00, terms. Buxton Bros, Ulica, Kansas.

FOR SALE—160-ACRE IMPROVED Hellingmish, near good town; price \$800. A. M. Bittner, 4710 West 34th ave., Denver, Colo.

OWNERS OF LAND WANTING TO EXCHANGE same for improved income property or merchandise should write us now. Chaney-O'Meara Land Co., Topeka, Kansas.

HOME TEADS, CHEAP LANDS, RANCHES, improved farms, orchard tracts; Calif. and Oregon; new country; free booklet. L. F. Curtis, Com'r, N. C. O. Ry., Reno, Nev.

160 ACRES, NORTHEAST CORNER OF Webster Co., Neb. Good land, fine improvements, close to town, good crops; \$80 acre; good terms. W.B. Barrett, Hayes Center, Neb.

WILL EXCHANGE FOR LAND—FURNITURE store, inventory \$25,000; hardware and implements, \$10,000; livery and mule exchange, \$10,000. Melvin L. Holaday, Anthony, Kansas.

FOR TRADE—A VERY FINE IMPROVED quarter section, close to this city; want grass land in central Kansas or Nebraska. J. H. King, Cawker City, Kan.

MR. OWNER: WE HAVE EXCELLENT facilities for exchanging your property; low rates; no expense unless trade is made; write us. Co-operative Sales & Exchange Co., Salina, Kansas.

240 ACRES, HALF IN CULTIVATION; 5-room house, 2 barns, orchard, living spring 90 feet from kitchen door; 4 miles Humansville. Price \$26 per acre. Mo. Land Co., Humansville, Polk Co., Mo.

MUST SELL CITY HOME: 6-ROOM house, 40-ft. lot, fruit, etc.; fine location, worth \$2,000, for \$1,750; easy payments. F. Server, owner, 1219 Wyoming ave., Kansas City, Kan.

WEISER, IDAHO, OFFERS WONDERFUL opportunities for farmers, investors, stockmen and fruitgrowers. Splendid climate, reliable information and illustrated literature FREE. Address Weiser Commercial Club, Weiser, Idaho.

TEXAS FARMS AT SPECIAL PRICES—The fertile Brazos Valley is being thrown open for small farms at bargains; send 2 cent stamps to the Sec'y of Brazos Valley Commercial Club, Bryan Texas, for a map of Texas and information.

FOR SALE—AT A REAL BARGAIN, 80-acre farm near Lee's Summit, Mo.; 5-room house and other improvements; owner's business requires residence in New York; will sell at a bargain. Address M. A. Selsor, care Current Literature, 140 W. 29th st., New York.

FARMS WANTED—WE HAVE DIRECT buyers. Don't pay commission. Write describing property, naming lowest price. We help buyers locate desirable property free. American Investment Association, 43 Palace Bldg., Minneapolis, Minn.

WHY PAY RENT FOR A FARM? MAKE rent pay for a farm. You may not find a good farm for rent next year. You want fertile land, wood, water, good neighbors, improvements, \$10 up. Terms. Write for booklet. Arkansas Farms Company, Little Rock, Ark.

FREE—"INVESTING FOR PROFIT" Magazine. Send me your name and I will mail you this magazine absolutely free. Before you invest a dollar anywhere, get this magazine—it is worth \$10 a copy to any man who intends to invest \$5 per month. Tells how \$1,000 can grow to \$22,000. How to judge different classes of investments, the real power of your money. This magazine six months free if you write today. H. L. Barber, Publisher, R. 431, 28 W. Jackson Boulevard, Chicago.

POULTRY.

R. C. R. I. REDS FROM PRIZING stock, Mrs. L. C. Pierce, Riley, Kan.

BARRED ROCK BABIES AND BIRDS, Eggs 15, \$1.00; 60, \$3.25; 100, Mrs. D. M. Gillespie, Clay Center, Kan.

S. C. BUFF ORPINGTON EGGS per 15, \$6 per 100. Mrs. Ella Shurtz, Fedonia, Kan.

SILVER SPANGLED HAMBURGs, clusively; nothing better. J. L. Brown, B. Kearney, Neb.

PURE-BRED WHITE ROCKS Black Langshans; cockerels and pullets 4 months old. 50 and 75 cents each. Lillie O'Leary, Phillipsburg, Kan.

S. C. R. I. REDS, STOCK AND EGGS sale in season. Write for prices. & Moore, 1239 Larimer Ave., W. Kansas.

ROSE COMB REDS. BARGAIN yearling hens and cocks. Eggs \$1 now. F. A. Rehkopf, Topeka, Kan.

BUFF WYANDOTTES—BARGAIN for balance of season. Eggs \$1.15; day-old chicks 15c each. High birds only in breeding pens. A rare to get a start from high class stock. Wheeler, Manhattan, Kan.

BIG SPECIAL SALE—2,000 CHICKS and ducks; Orpingtons, Rhode Island Wyandottes; Orpington ducks, White Wrens, Fawn and White Runners and other varieties; we have what you are looking for at a big reduction and will quote you prices; write us. J. M. Son, Clarinda, Ia.

DOGS.

SCOTCH COLLIE PUPS, COLOR and white; farm raised; natural price \$5 to \$8. Write for description. Peterman, El Dorado, Kan.

FOR SALE—Rabbits, Collies, St. B. puppies, goats, John Krech, 39 West Blue Island, Ill.

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

When writing advertisers, please mention KANSAS FARMER.

CATTLE.

HOLSTEINS—SPECIAL PRICES few fresh heifers for a short time. Romig, Sta. B. Topeka, Kan.

FOR SALE—REGISTERED bull calves from grandson Golden Lad; their dams give fifty pounds a day; priced right, Alvey Bros., Meriden, Conn.

FOR SALE—DOUBLE STAR Polled Durham herd bull, Lord V. 6471-(258569); sire Lord Mayor, dam Corla 5th; sound and all right; price reasonable. Frank Michael, Erie, Kan.

FOR SALE—FINE REGISTERED sey cow, with her daughter—both milk flow. Will make low price for cash. Write for price and full information. Address, 614, Kansas Farmer, Topeka, Kan.

JERSEY CATTLE, COLLIES, Pigs, Chinas and White Wyandottes. For sale, choice pigs by Peerless Perfected, the grand champion at American 1906, out of granddaughters of Med. Price \$10. Write your wants. U. Seward, Kan.

OILS.

BEST KEROSENE AT \$2.00 per gallon barrel; crude dip at \$2.35 per gallon barrel; \$1.50 allowed for kerosene gasoline barrels returned when empty. Write for prices on your order. The Rollin Oil Refinery, Chanute, Kan. (Oldest independent refinery in Kan.)

MISCELLANEOUS.

FOR SALE—TEN THOUSAND posts. H. W. Porth, Winfield, Kan.

FOR TRADE—A GOOD TRAIL outfit for western Kansas land. J. Trousdale, Newton, Kan.

E. R. BOYNTON HAY CO. City, Mo. Hay receivers and shipper.

FOR SALE—BEE SUPPLIES, for catalog. O. A. Keene, 1600 S. Topeka, Kan.

USED REMINGTON NO. 6 IN GUN, recently overhauled; a bargain at once. Write 13, care Kansas Farmer, Topeka, Kan.

PUNCTURED TIRES REPAIRED minutes; cement or dough; absolutely permanent; reliable; agents wanted; write Lincoln Specialty Co., Funke Bldg., Neb.

SEEDS AND PLANTS.

BOONE CO. WHITE AND HI. Dent seed corn; prices reasonable; fund your money if you are not sure. E. E. Hazen, Hiawatha, Kan.

FIELD NOTES

FIELD MEN.
The Devine.....Topeka, Kan.
R. Johnson.....Clay Center, Kan.
Cody.....Topeka, Kan.

PURE BRED STOCK SALES.

Percherons.
11-15.-H. G. McMillan & Sons, Rock
16-18.-H. G. McMillan & Sons, Rock
Holstein-Friesians.
7-8.-H. C. Glessman, Station B,

Herefords.
10.-Thos. Crawford, Butler, Mo.
17-18.-G. W. Newman, Emporia, Kan.

Poland Chinas.
26.-Ben. M. Bell, Beattie, Kansas
27.-J. D. Willfong, Zeandale, Kan.
28.-B. A. Bell, Beattie, Kansas.
29.-S. A. Bugg, Hamilton, Mo.
30.-S. A. Salter, Jasper, Mo.
31.-J. C. Dillingham, Platte City, Mo.
32.-J. B. Dillingham, Platt City, Mo.
33.-J. B. Swingle, Leonardville, Kan.
34.-A. J. McClarnon, Bradyville, Iowa.
35.-Frank Michael, Erie, Kan.
36.-W. P. Sear, Erie, Kan.
37.-W. H. Emens, Elmdale, Kans.
38.-S. A. Hobson & Son, King City, Mo.
39.-J. Dawe, Troy, Kan.
40.-T. R. Enos, Romona, Kan.
41.-Oak Hill Stock Farm, Esbon, Kan.
42.-S. N. Hodgson & Son, Parker, Kan.
43.-Geo. M. Hull, Garnett, Kan.
44.-W. E. Long, Meriden, Kan.
45.-J. J. Hartman, Elmo, Kan.
46.-J. E. Bundy, Goodrich, Kan.
47.-Dietrich & Spalding, Ottawa, Kan.
48.-Roy Johnston, South Mound, Kan.
49.-Geo. W. Smith, Burchard, Neb.
50.-A. R. Rystead, Mankato, Kan.
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53.-A. P. Young, Lexington, Mo.
54.-T. J. Melsner, Sabetha, Kan.
55.-W. B. Van Horn, Overbrook, Kan.
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57.-Baker Bros., Butler, Mo.
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Frank Elder, Green, Kan.
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Thompson Bros., Garrison, Kan.
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W. T. Fitch, Minneapolis, Kan.
E. P. Managan, Chapman, Kan.

O. I. C. Swine.
J. N. George, Hopkins, Mo.
R. W. Gage, Garnett, Kan.
Arthur Mosse, Route 5, Leaven-
worth, Kan.
D. R. Champion, Raymore, Mo.
C. R. Champion & Son, Raymore.
George O. Clark, Wilcox, Neb., and
W. & E. Holtquist, Sacramento, Neb.
at Holdrege, Neb.

Berkshires.
Chas. E. Sutton, Lawrence, Kans.
B. Young of Geaseo, Kan., writes that
such the pastures are a little short and
the water getting scarce, his hogs are
fine, Polands will do well almost any-
where and under almost any circumstances,
if you have the right kind, such as
owned by Mr. Young, you have a
chance at their making good.

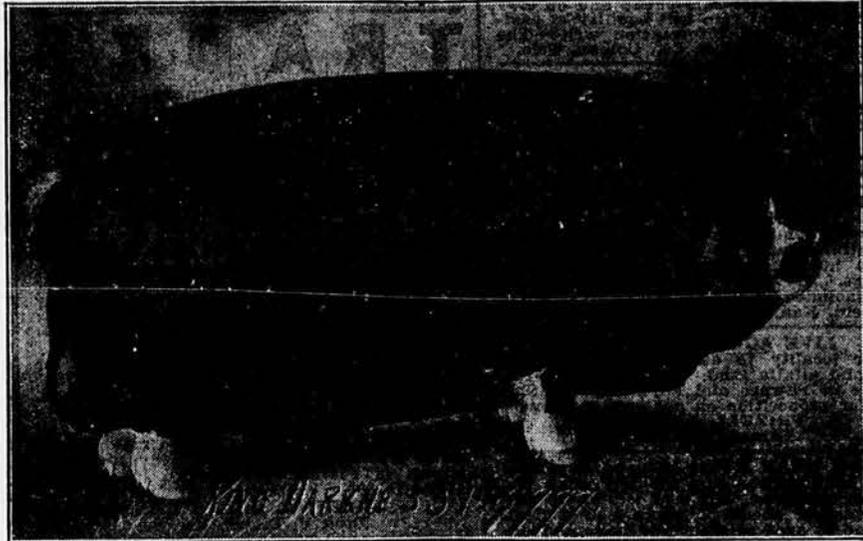
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practically a new institution located in
heart of Ottawa, Kan., close to the free
public library, high school building and
the population of Ottawa is about
and is the center of the greatest agri-
cultural district of Kansas. The equipment
of this college is unique, original and un-
equalled in this particular. A large roll top
table and office chair constitute the
majority of a student while in attendance.
Special attention is given to the subject of
writing, an expensive Barroughs adding
machine has been installed and use is made

of real money (no college currency), the
college being connected with two of the
leading banks of Ottawa for real experi-
ence. For full information regarding terms,
write Ottawa Business College, Ottawa,
Kan. Ask for free catalog which explains
every course in full. Please mention the
Kansas Farmer when you write.

Dover Grange Fair.
The second annual fair to be held by the
Dover, Kan., grange will open its gates on
September 28 and continue three days. The
fair held last year was so remarkably suc-
cessful that the "boosters" were encouraged
to hold another one this year and their
handsome premium list is an assurance that
they have done their part. Paul M. Lyttle
of Valencia is secretary and he will be glad
to supply added information.

Berkshire Boars.
June K. King of Marshall, Mo., is ad-
vertising a few choice Berkshire boars.
They are large, growthy fellows and would
make herd headers for breeders or farmers.
They are right every way and priced to
sell. If you need a boar write Mr. King
and mention Kansas Farmer.

Big Boned Poland Chinas.
Chas. Z. Baker of Butler, Mo., is ad-
vertising a choice lot of spring pigs of the
large type breeding. They are big and
growthy. Better write for price on that
herd boar you are going to buy. Look up
card in this issue and write Chas. Z.
Baker, Butler, Mo.



King Darkness is one of the best, of not
the best, Poland China boar in Kansas to-
day, and if there is a better and smoother
aged boar we have not seen him. He is as
smooth as a pig. He heads the Miller &
Manderscheid great herd of Poland China
sows, King Darkness pigs sell because they
are the right kind. He breeds just like his
sire, Meddler 2d, big bone, big type, easy
feeding, showy kind and why should the
breeders not want his pigs? His get won

Big Type of Pigs for Quick Sale.
John T. Curry of Winchester, Kan., de-
sires to dispose of his entire crop of spring
pigs just as quickly as possible. Mr. Curry
has a very choice lot of pigs of both sexes
and will price them singly or in pairs or
trios at very reasonable prices. His sow
herd is composed for the most part of mat-
ure sows of Expansion and Big Hadley
breeding, and his herd boar is an immense
hog, Mr. Giant Wonder, by Price Wonder,
his dam by Orange Chief. This is the big-
gest of the big for breeding. Buy a boar
and ship him while the cost of shipment
will be light. Mention Kansas Farmer
when writing.

Back in the Hog Business.
With this issue we claim October 9 for a
Poland China hog sale for Frank Michael
of Erie, Kan. We are also advertising for
sale the show and herd bull Lord Victor X-
6471, sire Lord Mayor, dam Victoria 5th.
This bull is a double standard Polled Dur-
ham, a show bull and a splendid breeder.
Please look up ad and write for prices.
Mention Kansas Farmer.

Registered Jersey Bulls.
With this issue we start an ad. for Alvey
Bros. of Meriden, Kan., offering for sale a
few choice Jersey bull calves. They are
from grandsons of Golden Fern's Lad and
out of dams that give 50 pounds of milk
per day. All can be registered and will
make first-class herd bulls. Prices right.
Please look up ad. and write Alvey Bros.
at Meriden, Kan.

first and second senior boar pig, first and
third junior boar pig, second senior sow pig,
first junior sow pig, first and second herd,
first and second produce of sow, junior
champion boar, reserve junior champion
boar and reserve grand champion boar. Mil-
ler & Manderscheid, at St. John, Kan., have
a number of spring pigs sired by King
Darkness and will price a number of gilts
bred to him for fall litters. Look up their
ad. in Kansas Farmer and write them your
wants. Kindly mention Kansas Farmer.

Kansas Fairs in 1911.

Following is a list of fairs to be held in
Kansas in 1911, their dates, locations and
secretaries, as reported to the State Board
of Agriculture and compiled by Secretary
F. D. Coburn:
Allen County Agricultural Society: Frank
E. Smith, Secretary, Iola; Sept. 5-8.
Allen County-Moran Agricultural Fair As-
sociation: E. N. McCormack, Secretary,
Moran; Sept. 14 and 15.
Barton County Fair Association: Arthur E.
Taylor, Secretary, Great Bend.
Brown County-The Hiawatha Fair Assoca-
tion: C. A. Monney, Secretary, Hiawa-
that; Sept. 5-8.
Butler County Fair Association: T. P. Man-
nion, Secretary, El Dorado; Aug. 22-25.
Butler County-Douglass Agricultural So-
ciety: J. A. Clay, Secretary, Douglass;
Oct. 4-7.
Clay County Fair Association: W. F. Mil-
ler, Secretary, Clay Center; Sept. 5-8.
Clay County-Wakefield Agricultural Soci-
ety: Eugene Elkins, Secretary, Wake-
field; Oct. 4 and 5.
Cloud County Fair Association: Fred W.
Sturges, Jr., Secretary, Concordia; Sept.
19-22.
Coffey County Agricultural Fair Assoca-
tion: J. H. Rudrauff, Secretary, Burling-
ton; Sept. 25-29.
Cowley County Agricultural and Live Stock
Association: A. F. Dauber, President,
Winfield, Sept. 28-29.
Cowley County-Eastern Cowley Fair Assoca-
tion: R. V. Gratton, Secretary, Bur-
den; Sept. 20-22.
Dickinson County Fair Association: C. A.
Morton, Secretary, Abilene; Sept. 26-29.
Douglas County Fair and Agricultural So-
ciety: Elmer E. Brown, Secretary, Law-
rence; Sept. 25-30.
Elk County Agricultural Fair Association:
J. J. Marshall, Secretary, Grenola; Sept.
6-8.
Franklin County Agricultural Society: J.
R. Finley, Secretary, Ottawa; Sept. 19-22.
Gray County Agricultural Society: Charles
Bull, Secretary, Cimarron; Sept. 28 and
29.
Greenwood County Fair Association: C. H.
Deiser, Secretary, Eureka; August 29.
Sept. 1.
Harper County-Anthony Fair Association:
L. G. Jennings, Secretary, Anthony; Au-
gust 8-11.
Harper County Agricultural Association:
S. C. Lobaugh, Secretary, Harper; Sept.
27-29.
Leavenworth County Fair Association: C.
A. Sparrow, Secretary, Leavenworth;
Sept. 4-7.
Linn County Fair Association: John C.
Morse, Secretary, Mound City.
McPherson County Agricultural Fair Assoca-
tion: Milton Hawkinson, Secretary,
McPherson; Sept. 5-8.
Mitchell County Agricultural Association:
W. S. Gabel, Secretary, Beloit; Sept. 27-
30.
Montgomery County Fair Association: El-
liot Irvin, Secretary, Coffeyville; Sept.
26-29.
Nemaha County Fair Association: J. H.
Cohen, Secretary, Seneca; Sept. 6-8.
Neosho County-Four-County District Agri-
cultural Society: W. W. Stanfield, Secre-
tary, Chanute; Sept. 26-30.

Ness County Agricultural Association: J. A.
Cason, Secretary, Ness City; Sept. 27-29.
Norton County Agricultural Association: M.
F. Garrity, Secretary, Norton; August 29-
Sept. 1.
Osage County Fair Association: E. J. Wil-
liams, Secretary, Burlingame; Sept. 5-8.
Ottawa County Fair and Agricultural As-
sociation: J. E. Johnston, Secretary, Min-
neapolis; Oct. 3-6.
Pawnee County Agricultural Association: T.
C. Wilson, Secretary, Larned; Sept. 12-15.
Pratt County Fair Association: Walter Pe-
digo, Secretary, Pratt; Aug. 15-18.
Reno County-Central Kansas Fair Assoca-
tion: A. L. Sponsler, Secretary, Hutchin-
son; Sept. 18-27.
Republic County Agricultural Association:
C. M. Arbuthnot, Secretary, Belleville;
Sept. 12-15. (Also, race meet June 6-8.)
Riley County Agricultural Society: W. B.
Craig, Secretary, Riley; Aug. 22-25.
Rooks County Fair Association: Charles
Riseley, Secretary, Stockton; Sept. 5-8.
Rush County Fair and Agricultural Assoca-
tion: T. C. Ruddeol, Secretary, Rush
Center; Aug. 29-31.
and Mechanical Association: E. R. Tut-
tle, Secretary, Salina; Aug. 29-Sept. 1.
Shawnee County-Kansas State Fair Assoca-
tion: H. L. Cook, Secretary, Topeka;
Sept. 11-15.
Smith County Fair Association: H. C.
Smith, Secretary, Smith Center; Sept. 5-8.



THE HOPERDOZER, SIDE VIEW, SHOWING
THE PANS FILLED WITH WATER AND KER-
OSENE, IN WHICH THE GRASSHOPPERS
ARE CAUGHT IN LARGE NUMBERS.

MAKE SOME EXTRA MONEY THIS
summer. You can do it easily by taking sub-
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neighborhood. Liberal commissions paid to
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once. Good territory open, especially in
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Good chances to earn expenses.
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man has strength to
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vor, which only great
pressure brings out, is
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turns of wheel, mate-
rials are put under
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Recipes. A'so describes press. VICTOR M.
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It Is Different
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tected by Harder Patent No. 627,732.
Other big features make this the
best Silo you can put on your farm.
Our free book proves to your sat-
isfaction that this is the Silo you
need. Cheapest because best.
THE HAWKINS MFG. CO.,
623 S. W. 9th St., Des Moines, Ia.

CORN HARVESTER with Binder
Attachments, cuts and
throws in piles on harvest-
er or windrow. Man and
horse cuts and shocks equal
with a corn Binder. Sold in every state.
Price \$20 with Binder Attachment. S. C.
Montgomery of Texline, Tex., writes: "The
harvester has proven all you claim for it.
With the assistance of one man cut and
bound over 100 acres of Corn, Kaifir Corn
and Maize last year." Testimonials and
catalog free, showing pictures of harvester.
NEW PROCESS MFG. CO., Salina, Kansas.

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Fair enough isn't it? If you like, I'll send
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man in every county in Kansas, who owns
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BARGAINS IN LANDS

FARMS FOR 61 FARMERS IN COLORADO

Out of that level strip of alfalfa, between Colorado Springs and Pueblo, along that beautiful stream which flows from the mountains, called the Fountain and skirted by a heavy growth of timber and paralleled by the Rio Grande, Santa Fe and Southern Railroads, also that beautiful auto boulevard from Kansas to Denver.

Write me today for a map of this land and full particulars which will cost nothing. Do it now. **G. W. LOVAN, Room 26, Independence Bldg., Colorado Springs, Colorado.**

NESS COUNTY "SNAPS"

Write for our list of Special Bargains. We have some prices that will surprise you. Remember that Ness County adjoins the banner wheat county of Kansas for 1910. County map and literature mailed on request.

FLOYD & FLOYD, Ness City, Kansas.

WHAT have you to trade for lands or city property? **Hule, Coffeyville, Kan.**

BUY OR TRADE with us. Exchange book free. **Bersie Agency, El Dorado, Kan.**

240 ACRES, 9 rm. dwelling, close to town; bargain. **Buckeye Agency, Agricola, Kan.**

IMP. and unimp. land in western Kansas. **W. G. Ruth, Scott City, Kansas.**

I MAKE a specialty of Ford county land and Dodge City property. **F. H. SUGHRUE, Dodge City, Kansas.**

GET OUR BOOK OF 500 FARMS and properties everywhere to trade. **Graham Bros., Eldorado, Kan.**

\$35 AO \$60 PER ACRE. Improved farms—Montgomery Co. **FOSTER BROS., Independence, Kans.**

HAVE over 100,000 acres in different tracts; country is good. Write for my list. **J. Douglas Harp, Mullinville, Kiowa Co., Ks.**

MONEY in western land. Live agents wanted. Write **WALTER & WALTER, Syracuse, Kansas.**

ESTABLISHED 1885—Write for free list. **Park H. Thornton, Real Estate Dealer, Coldwater, Comanche Co., Kansas.**

93 YEARS IN NESS COUNTY. Write me about cheap farms here. **W. P. ANDERSON CO., Brownell, Kansas.**

FARMS FOR SALE IN CLOUD AND surrounding counties in Kansas. All prices, from \$30 to \$100 per acre. Glad to send you the list. **Concordia Land Co., Concordia, Kansas.**

200 ACRES, 14 miles south of McPherson, Kan.; good farm; price \$90; exchange for mdse.; mostly alfalfa land; imps. good. **J. M. Clubine, Durham, Kan.**

FOR SALE OR TRADE—Properties of all kinds. Lands \$15 to \$75 per acre, 40 years' residence. **W. H. Kaitenbach, Toronto, Woodson Co., Kansas.**

SOME OF THE FINEST FARMS in Kansas for \$30 to \$70 per a. Close to excellent town; raise corn, wheat, alfalfa, all kinds of crops; fine water at 8 to 35 ft. Write for free list. **W. C. ALFORD, Hazleton, Kans.**

BAGAINS in Southern Kansas farms, unimproved lands and stock ranches. Prices \$25 to \$70 per acre. **E. K. Longley, Howard, Kansas.**

FOR TRADE—A \$20,000 stock of general mdse. Wants Kansas land at actual value. Good town with fine country around. **Taylor & Bratcher, Coldwater, Kansas.**

10 DOLLARS PER ACRE UP TO \$25 for best improved farms in Wichita county, Kansas. **WHEAT BELT LAND CO., LEOTI, KAN.**

CHOICE ALFALFA LAND, for sale or exchange. Exchange propositions are made a specialty. **UNITED LAND COMPANY, 902 Schwuter Bldg., Wichita Kansas.**

160 ACRES, 3 miles of Towanda. A snap at \$7500. Other good farms in western Butler county. Write for particulars. **G. W. MOORE, Towanda, Kansas.**

ONE-HALF SECTION improved Stafford Co. wheat farm, \$60 per a. Must be sold before July 1; close to church and school. See this and make me an offer. Write for full particulars. **J. B. KAY, St. John, Kansas.**

A GOOD corn, wheat and alfalfa section; fine for hog and cattle feeding. 90 ml. from Kansas City. Well improved. Write for price, terms and pictures of improvements. Can take 32 a. as part payment. **T. J. Ryan & CO., St. Marys, Kan.**

WRITE FOR MY BIG LIST OF CHEAP cattle, horse and sheep ranches. I have improved farms worth the money on terms to suit in the sure wheat belt. Agents wanted to co-operate. **J. C. WHARTON, McCracken, Kansas.**

FINE HOME, 48 a., one mile of this city, about 38 a. now in cultivation, bal. pasture, 6 room house, new barn 34x60 and hay loft; two wells and mill and other outbuildings; good orchard and all second bottom land. Priced to sell at \$5,500 cash. **E. F. Dewey, Hue Rapids, Kan.**

15,000 ACRES CHEAP LAND. Kit Carson County, Colorado for sale or exchange. Good relinquishments cheap. This is the rain belt of Colorado. Good soil, good water, good crops, everything prosperous. Write for particulars. **GIBSON & NELSON, Flagler, Colo.**

POOR MAN'S CHANCE—320 a., nice, smooth, level wheat land. 160 acres in cultivation, 160 a. grass, a l can be farmed, deep, rich, dark loam soil, fine water, in good neighborhood. Priced for short time only, \$25 per acre and good terms; second creek bottom land and not a bad spot on it. Address **Stinson & Sheldon, Spearville, Kan.**

STOP RENTING

Here are 100 acres 8 miles Fall River, Kansas, 85 acres cultivation, balance native grass; 3-room house, common stables, orchard, good water, close school; this farm lies in nice valley; each price \$4,000; will take \$1,000 in good work and driving teams as part pay. **W. A. Nelson, Fall River, Greenwood County, Kansas.**

FARMS, RANCHES and City property for sale and exchange. Merchandise stocks a specialty. **A. N. BONTZ, Wichita, Kansas.**

WE TRADE OR SELL ANYTHING ANY- where. The Realty Exchange Co., 18-22 Randall Bldg., Newton, Kan.

CALHAN, COLO. We have thousands of acres of land for sale cheap and on easy terms in the great rain belt country of eastern Colo., for full information write—The Eastern Slope Securities Co., Calhan, Colo.

BUTLER, HARVEY AND SEDGWICK CO. LANDS.

Plenty of rain and everything looking fine. Come and pick out your farm on next March settlement. All kinds of exchanges. Send for new list. **EBERHART & MELLOR, Whitewater, Kan.**

100—CHOICE DICKINSON AND CLAY CO. FARMS—100

80 acres 3 miles from town, 70 a. under plow, alfalfa land, 20 pasture and meadow, 5 room house, good well, barn and other buildings. \$2000 cash; rest to suit; 25 a. wheat included. Write for list. **J. J. Bishop, Wakefield, Kan.**

LIVE AGENT WANTED in your locality to assist in selling corn, wheat and alfalfa land. We own thousands of acres in Pawnee and adjoining counties. Write for proposition on our own ranches. **FRIZELL & ELY, Larned, Kansas.**

IF YOU MEAN BUSINESS and have real estate and merchandise of any kind for sale and exchange, and are willing to pay a commission should I make you a deal, write me at once of what you have and desire I have several very attractive propositions to offer you for a home or investment; am doing a general exchange business. **Carl G. Anderson, Athol, Smith Co., Kansas.**

NI HAIT OJ NAOL LSEH EHL If you would like to live in the most beautiful city in the West, with unsurpassed education, business and religious advantages, in a city clean, progressive, where real estate values are low, but steadily advancing, where living expenses are reasonable, a city with natural gas at lowest price, address the **SECRETARY OF THE COMMERCIAL CLUB, Topeka, Kansas.**

FOR TRADE

235 acres 4 miles of Garnett, Kan.; 70 acres in cult.; 25 pasture, balance meadow; 5 room house, barn, etc. Price \$15,000; mortgage \$5,000; wants mdse. **80 acres 3 miles of Greeley; good farm, well improved. Price \$5,200. Wants western Kansas land. SPOHN BROS., Garnett, Kansas.**

YOU'LL LIKE LINN COUNTY, KAN. We have abundant coal, wood, natural gas and good water. The land raises magnificent crops of alfalfa, timothy, clover, bluegrass, oats, corn and wheat, R. F. D. and phone at your door. Price \$20 to \$80 per acre. List free. **A. E. ROOT, Pleasanton, Kan.**

A BUTLER COUNTY BARGAIN. Crops Never Looked Better. 160 a. 5 ml. town, all good soil, 125 cultivated, balance pasture and meadow. Two sets improvements. A snap for a short time at \$55 an acre. Send for full description. Kansas Map and new land list free. **JAS. A. THOMPSON, Whitewater, Kansas.**

FINE STOCK FARM. 560 a., 100 a. in cultivation, 150 a. in meadow, remainder in good pasture; 5 room house; nice barn 106 ft. long, 30 ft. wide; other buildings; good well; orchard; on rural route 3 miles to shipping point and 5 1/2 miles of Fredonia, the county seat, a flourishing city of 3 railroads and abundance of natural gas; very healthy and nicely located. Will take \$32.50 per a. if sold by August 1. Good terms. Address **OWNER, Lock Box 926, Fredonia, Kansas.**

Cheap Kansas Land

From \$3.00 to \$15.00 per acre, write **GEO. J. DOWNER, Syracuse, Kansas.**

210 IMPROVED, Woodson Co.—timothy, clover, alfalfa on farm. Wants mdse. or income property. Write for description. **YATES CENTER LAND CO., Yates Center, Kans.**

A FINE NESS COUNTY FARM—240 acres 1 1/2 miles from town, 1/4 mile to school, 160 acres perfectly smooth, 80 acres pasture land not rough, good well, NEVER DRY, all fenced and cross fenced. Price \$25 per acre. Will trade for good clean stock of mdse., groceries preferred. If interested write for list. **Rutherford & Oliver, Utica, Kan.**

160 ACRES, 3 miles from town, one 4-room and one 2-room house, barn with mow 14x24, cattle shed 14x50, 85 acres cult., 4 acres alfalfa, 15 a. alfalfa land, all tillable, school 1/4 ml., telephone, young orchard and grove of forest trees. Price \$4,500. Trade for good clean stock general merchandise or hardware. **F. T. McNinch, Ransom, Kansas, Land list free.**

347 ACRE FARM

3 sets of improvements, close to town, Price \$70 a. Incumbance \$6,000. Want land not farther west than Ness Co. for equity. Describe fully. **A. M. SPEARS, Ottawa, Kans.**

WRITE G. L. PAINTER & CO.

About Ford Co. Land. \$15 per acre up. **DODGE CITY, KANSAS.**

Hamilton County Lands

One quarter section, \$900. 480 acres, Bear Creek Valley, \$3,300. 100 acres Arkansas River bottom alfalfa land, \$6,000. **J. B. PRATT, Syracuse, Kansas.**

LIFE is worth living in Kearney county. Hunting and fishing on Lake McKinney; 7 mi. long; rich soil; one crop pays for land; we have R. F. D. and telephones. Write for information about Kearney county. **LAKIN LAND & IMMIGRATION CO., Lakin, Kan.**

WESTERN KANSAS

Wheat and alfalfa lands cheap; no sand or rock; good soil and productive; write for list; state in first letter what you wish; save delay. **V. C. CUTLER CO., Scott City, Kansas.**

TRADES

I have several customers who have lands and town property to trade for merchandise. What have you got to offer? **G. W. KLOCKENTEGGER, Selbert, Colo.**

400 ACRE STOCK FARM for sale; has 2 sets of good improvements; land lays fine; is good soil; is well watered and has a fine grove or park and joins a good town. A rare opportunity. Don't miss it. Write for particular and list of farms. **Spears Realty Co., Ottawa, Kansas.**

LAND IN FORD COUNTY and the Southwest at \$4 per acre up. Wheat lands a specialty. **BROWN & VERNON, Dodge City, Kansas.**

Mr Small Investor: Let me tell you how to make hand-some profit on a few dollars invested each month in Plains, Kans., town lots. Price \$12.50 to \$50. Write me. Right now. **JOHN W. BAUGHMAN, Desk F, Plains, Kansas.**

Fine Stafford County Ranch

at \$25.00 per acre. Write for particulars. **A. L. McMillan, Stafford, Kansas.**

Do You Want To Sell Your Farm?

It is my business to help find buyers for farms. I charge nothing for telling you how I work. If you hire my help the cost is very little. Write me for my plan. **E. L. GARVER, Box 142, Topeka, Kan.**

FOR TRADE—232 A. near here; all good smooth black land; two sets of improvements on it; mtg. \$1,000; half in cultivation, an ideal home; owner wants a good hardware and implement stock; well located. Price \$85 per a. Write. **G. T. KINSEY, LeRoy, Coffey Co., Kansas.**

FOR EXCHANGE—GROCERY STOCK OF \$2,000 daily sales; well located, cash business; want Western Kansas land or income. **CAVE REALTY CO., Salina, Kansas.**

FOR EXCHANGE. A good 160-acre farm in Woodson County, Kansas; 70 cultivated, 60 meadow, balance pasture; no rock; \$65 per acre; mtg. \$4,000. What have you for equity? **A. B. ESTEP, Yates Center, Kansas.**

A GOOD DAIRY FARM Of 160 acres; 80 acres in a high state of cultivation; 25 acres fine meadow, balance pasture; all fenced and cross fenced; watered by creek in pasture and well at residence; orchard, 3-room cottage, barn, granary and corn crib; this place is located 5 miles from court house and 3 miles from paved street and car lines in Wichita; price \$9,000, terms to suit purchaser. **EDWIN TAYLOR REALTY CO., 107 S. Main St., Wichita, Kansas.**

Lamar Colo., NO BETTER irrigated Kansas Valley Irrigated Land. Write for map, price list and full information. **GEO. A. WATSON LAND CO., Lamar, Prowers Co., Colo. (Established in 1886 at Lamar.)**

Irrigated Farms in Bent Co., Colo., to trade for general mdse. Write me relative to Government lands coming under new ditch. **HARRY C. JOHNSTON, Las Animas, Colo.**

FOR SALE—COLORADO LANDS Improved, Irrigated Farms, Cheap Lands, Fruit Tracts and City Property at prices that are right. Terms to suit. **C. C. COLE, Boulder Colorado.**

LOWER PECOS VALLEY IRRIGATED LANDS

In West Texas is absolutely the best location for safe and profitable investment in America. 40 acres will provide an ideal home and a yearly income of \$3000 to \$5000. Development has only fairly started and present values will double and treble in price within two years. We own or control the sale of the best dependable irrigated lands which we can sell in tracts to suit at from \$50 to \$100 per acre, water rights fully paid, on easy terms, or we can supply sections of artesian or shallow pumping well lands at \$5 to \$10 per acre. For productive-ness and all the year climate the Pecos Valley is unsurpassed. Let us know your wants and we will supply detailed information. Address **THE HEATH COMPANY, 100 West Seventh St., Topeka, Kan.**

320 A. Gov't Homestead

Exceptionally fine land, in well settled community, where good crops are raised every year. Easily worth \$5,000 to \$8,000 proving up time. Quick action necessary to get one of these. I charge reasonable attention fee—write or come at once—you can lose if you want a good productive home. **CARL M. COOK, Limon, Colo.**

HOLLY, COLORADO

I own 1,500 a. in various sized tracts, all cult.; good buildings and other improvements, with old established water right. Will sell any tract on small payment down, in 10 years at 6 per cent. Plenty water all the time and best of land, within 3 mi. of town. Come out and see. You will not be disappointed. Best reason for selling. You pay no commission when dealing with me. **J. S. McMURTY, Holly Colo.**

MEETING OF KANSAS GRADING COMMISSION.

Notice is hereby given that under the provisions of Chapter No. 222, the Grain Grading Commission will meet at the office of the Governor in Topeka, Kansas, on the 1st day of July, 1911, at 10 o'clock a. m., to establish the grades of grain to be known as Kansas grades, to be in effect on and after the 1st day of August, 1911. **THOMAS PAGE, J. G. MAXWELL, A. T. ROGERS, Grain Grading Commissioners.**

Wheat King Uses Tractors.

The real advantage of farming with engines, we feel, is on account of being able to do our plowing or disking in season, say from July 1 to August 20. This, you understand, can be done by engines commencing at the same time the headers are in the field and following them right up until harvest is over or to the middle or 20th of August.

We have generally used the 32 p. steam traction engine and has been very successful in preparing ground to suit, i. e., any depth that we may want it. This 32 h. p. engine can plow and harrow without any trouble from 50 to 70 acres per day at a cost of \$35 to \$37 each day but we have a gasoline tractor constructed at Colby of 30 h. p. that we feel satisfied we can plow and harrow the same depth and the same acreage per day as the steam engine at a cost of not to exceed \$25 per day. I might say here that we use the LaCrosse disk plows which have always given perfect satisfaction.

The benefits derived from the use of tractors in farming is the saving and in getting the plowing of just about the same depth we desire, at in proper time. By this I mean that where farmers head their wheat at perhaps use all the horses on the farm during the harvest there is no left to do the disking or plowing when harvest is over and the horses are worn down by the heavy work, hot weather, and flies, they are not shape to go into the field and prepare the ground for seed. I consider that there are two very essential reasons for getting the work done during harvest, viz., first, for the reason that it puts the land to rest once by turning the stubble and preventing it from pumping any moisture we may have out of the ground and second, it prevents weeds from sapping the life out, after the crop has been taken off. This will lead the ground in fine shape for seed about August 25 to September while it would be impossible to prepare any great acreage with horses in time to keep the weeds from setting a new crop is seeded.

I might add that this year a great deal of summer fallowing is being done, not entirely from choice but because of the winter killing of the sands of acres of wheat, and it is to be hoped that it will benefit the country by giving us a larger crop next year and also be a warning to farmers that there is still such a word as "fall" in the vocabulary of the farmer.

In the comparisons made above of items of expense I have said nothing about the wear and tear, breakage, etc., incident to farming with engines which are sure to occur! It might be well to remember that it will be necessary to add something to the expense of every day's work on account of this liability, but in level territories where engines can be used as they can in northwestern Kansas there is no doubt in my mind as to the benefits to the farm in using engines for preparing their ground for fall seeding.—**J. N. Pike, Colby, Kan.**

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