

# KANSAS FARMER

FOR THE IMPROVEMENT

OF THE FARM AND HOME

Volume 48, Number 22,

TOPEKA, KANSAS, MAY 21, 1910

Established 1863. \$1. a Year.

## Chinese Pheasant, the Farmers' Friend

By Professor Walter H. Olin

The pheasant, especially the Chinese ring-neck and English varieties, are the most valuable insectivorous birds, as well as the most attractive and eagerly sought game bird of all the species that can be reared in captivity or in a semi-domestic way and be kept in the district in which it is propagated.

The great majority in numbers and kinds of the insectivorous birds are migratory—are only with us a short time—while the pheasant, especially the kinds above mentioned, become attached to the locality and will breed and remain there as long as they are protected and can secure food.

The pheasant is naturally an insectivorous bird, and where such food is obtainable he will eat comparatively little else.

The variety of the insect food of the pheasant is larger than any other bird, so far as known. Investigation shows that over 130 species of insects, including earthworms, are eaten by the pheasant, and doubtless many more will be found to share in its menu.

In addition to this it is especially fond of small rodents, such as field mice, young gophers and small snakes. In England a number of pheasants have been found choked to death in the attempt to swallow worms larger or longer than they could manage; also several pheasants have been found dead, choked on small rodents.

The keeper of almost any large pheasantry has seen his pheasants catch mice that were stealing the grain from the birds. This is verified by Mr. Fred Barnett, superintendent of the pheasantries at City Park, Denver, Colo. Mr. Barnett says that a pheasant hen will catch and destroy a mouse as quickly as a cock pheasant or cat, as he has frequently watched them in the act. They usually pick the head off first, then tear and eat the body or swallow the small ones whole.

Among the insects destroyed by the pheasant are included smelling bugs, that most birds will not touch—this makes these birds more valuable to the farmer than any other.

Prominent among the pests ravenously destroyed are the Colorado potato beetle, the squash bug, the cucumber beetle, the bean leaf beetle, tomato worms, cut worms and the millers which deposit the eggs for the wire worms. The pheasant also digs for and eats the wire worms, as it does all ground worms and bugs, and practically all kinds of ground beetles. Most birds avoid the potato and other bad smelling bugs on account of their obnoxious odors, but the pheasant hunts and eats them.

The southern people are importing the pheasant to eat the cotton boll weevil and its larvae, stating that one pheasant will eat as many of the destructive pests as a number of quail. Many of the insects that are injurious to the corn crop are destroyed by the pheasant, and the pheasant will not attack the grain or ear of the corn until late in the season, after insect food is scarce.

The professors of agronomy of our agricultural colleges state that the chinch bug, which destroys \$100,000,000 worth of wheat annually, is hunted and eaten by the pheasant, both summer and winter; also the

bugs and insects which destroy the foliage, especially of ground plants and crops of the farmer.

The difference between the pheasant and the ordinary fowl in eating insects is largely that the pheasant is continually hunting for the eggs and larvae of insects. In the grain fields and meadows the insect eggs are usually laid on the under side of the leaves of the plants. The pheasant as it passes through the growing grain keeps its head near the ground and turns one eye up and the other down so it sees the larvae and eggs on the

under side of the leaf. It takes hold of the leaf with its bill, throws its head up and clears the plant of the eggs and larvae without injuring the leaf; thus in one stroke destroys four or five or possibly one hundred embryo insects and in a single meal often destroys many thousands of insects in the egg and larvae form, which, when matured, would have destroyed a large amount of crops, and furnish enough bug food for a turkey gobbler for several years. The pheasant destroys the pests before they do any damage to the farmer's crops; the

turkey and common poultry afterward.

Pheasants are fond of grasshopper eggs, especially those of the locust, that deposit their eggs in the earth in dry places, and also larvae of any insect that may be found there. Pheasants in captivity have been known to dig up light ground, where there were many larvae, so that they dug under the fence four inches in the ground. On examination this ground was found to contain insect eggs and larvae of insects.

The pheasant chooses the dandelion and the blubs of buttercups as two of its greatest vegetable delicacies. He eats but comparatively few buds from bushes and trees, except in severe winters. In this way he is quite different from the grouse. Of the grasses he has liking for white and red clover, alfalfa and red and yellow sorrel, but when there are plenty of dandelions and buttercups he will make those his principal vegetable diet.

In the winter time pheasants can be seen turning over forest leaves and examining them and picking off the larvae of different tree insects deposited on the under side of the leaves; also picking over the top soil around bushes and trees for the bugs and larvae.

Along the streams and wet grounds the pheasant finds many snails and crustaceans for food. The pheasant being a terrestrial bird, it eats mostly from the ground or within twelve inches of it when food is abundant, and seldom eats grain, such as wheat, oats and barley, until late in the season, after it has been harvested and threshed, when insect life is scarce. It cleans up the grain stubble fields, being especially fond of buckwheat, millet and common ordinary wheat, and when hungry will eat almost any kind of grain, including beans.

Tegetmeir-English says: "The value of pheasants to the agriculturist is scarcely sufficiently appreciated; the birds destroy enormous numbers of injurious insects—upwards of 1,200 wire worms have been taken out of the crop of one pheasant; if this number was consumed in a single meal the total destroyed must be almost incredible.

"There is no doubt that insects are preferred to grain. One pheasant shot at the close of the shooting season had in his crop 726 wire worms, one acorn, one snail, 9 berries and 3 grains of wheat. From the crop of another pheasant 440 grubs of the crane fly and the daddy-longlegs—these larvae are exceedingly destructive to luscious vegetables. From the crop of another pheasant 48 snail shells were taken. Eight young vipers, weighing about one-fourth of an ounce each, were taken from the crop of a hen pheasant.

"An instance is reported in the London Field of a pheasant which, when found, had swallowed about six inches of a viper, whilst about eight inches of the tail part of the reptile was protruding from the mouth of the bird; both the bird and the viper were dead.

"Another instance is recorded of a pheasant which, on being killed, had no less than 1,225 leather jackets—a most destructive larvae—in its crop."

It is fond of carrots, potatoes, beets, cabbage and turnips in the winter time

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"MANY HAPPY RETURNS, OLD FRIEND"

NOTE.—This cartoon was to be run during the week of Secretary Coburn's birthday. At the time Mr. Reid sketched it, he was ordered to the hospital for a delicate nasal operation. Happily the outcome of the operation was such that he is still able to pursue his art work. His first work after returning from the hospital was to complete this drawing, which, though a little late in printing, is nevertheless notable in that it might have been Mr. Reid's last one, had the result of this operation been otherwise.



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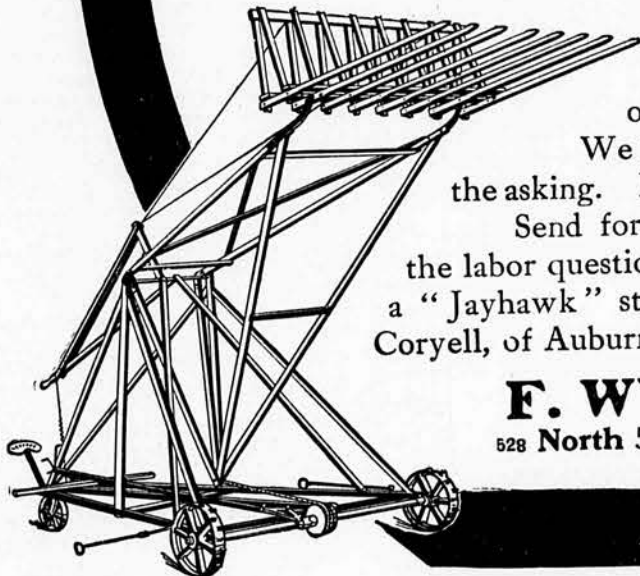
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*The "Jayhawk"*



# KANSAS FARMER



Volume 48. Number 22.

TOPEKA, KANSAS, MAY 21, 1910

Established 1863. \$1 a Year

## When You Buy An Automobile

By N. Newnham-Davis

In choosing a motor car, as in choosing a horse, one must first make up one's mind as to the requirements to be met, for the utility of different patterns of cars, like that of different breeds of horses, is to a certain extent limited, though in both cases a fairly satisfactory compromise may be arrived at. By different patterns of cars, I do not mean different bodies, for on that score a purchaser who has never seen a motor at close quarters can be depended on to know better than any one can tell him what is most suitable for his purpose. With the immense variety to choose from nowadays—limousine, semi-limousine, landaulet, touring car, run-about, etc.—the finer distinctions are mostly a matter of personal taste, and interchangeable bodies for summer and winter, or town and country, are always procurable.

The chief points then for the purchaser to consider, whatever may be his requirements, are: Proportion of weight to size, horse power, method of drive, method of ignition, gearing, and certain broad lines of engine construction, all of which it is the writer's intention to discuss comparatively and impartially.

Excessive weight is, above all things, to be avoided; tires are by far the largest item of expense in the upkeep of a motor car, and the extra wear and tear on them involved by avoidable weight means considerable and superfluous expense. There is no reason why any car should weigh nearly 4,000 pounds unless it is intended to carry freight; the least weight consistent with safety and rigidity is desirable.

Horse power, on the other hand, is quite a different matter, and high rating is always preferable to low, regardless of speed requirements. One often hears a man say: "I am no speed maniac; my car is chiefly for town use, so I have no use for excessive horse power." This is a natural but fatal error, for it is especially for town use that power is wanted. It is well known that the power of explosive engines increases in proportion to the number of revolutions per minute, and many cars which will give 40 horse power at 40 miles an hour will not show five at six miles per hour. To explain this more fully, 1,500 revolutions per minute may be taken as the fair average speed of a motor engine doing its best, and 300 as the lowest speed likely to be used on the high gear; the diminution of power as the number of revolutions diminishes may be judged by the following figures taken from the specifications of one of the most popular cars made in America: At 1,500 revolutions per minute, 57.5 horse power; at 1,000 revolutions, 38.2 horse power; at 800 revolutions, 30.7 horse power; at 600 revolutions, 23 horse power; and at 300 revolutions, 11.5 horse power. Unfortunately, most cars show a much greater diminution of power in proportion to the diminution of revolutions per minute. It is there-

fore most important that the purchaser should know at what number of revolutions per minute the car is rated; American rating means the power developed at 1,500 revolutions per minute, European at 600.

In hill climbing high power is similarly desirable; a car that will negotiate a long climb, like that of the well known mountain pass named "Jacob's Ladder," without coming down on the low gear will be in a much better condition when it reaches the top, both intrinsically and as regards overheating, than one that has to struggle up at the expense of an increase of 30 per cent or more in the number of revolutions of the engine involved in the use of the low gear.

Of the two methods of drive, the carden shaft has increased in popularity at the expense of the chain-drive, chiefly on account of its noiselessness, and in all but the largest cars it has justified its position. For heavy cars, however, the chain-drive has undeniable advantages; it is

stronger, less liable to damage, and, moreover, is capable of repair on the road in case of a breakdown, which a shaft-drive practically never is, as failure generally means stripping of the pinion shaft. Another advantage of the chain is that the power may be increased—of course, at the sacrifice of speed—by changing the size of the sprocket wheels, so that on a long tour the approach to a mountainous country may be deprived of its terrors by having a couple of spare sprocket wheels of suitable size in the kit to give the power required. These are changed again upon entering a flat country where speed is of more importance than abnormal power.

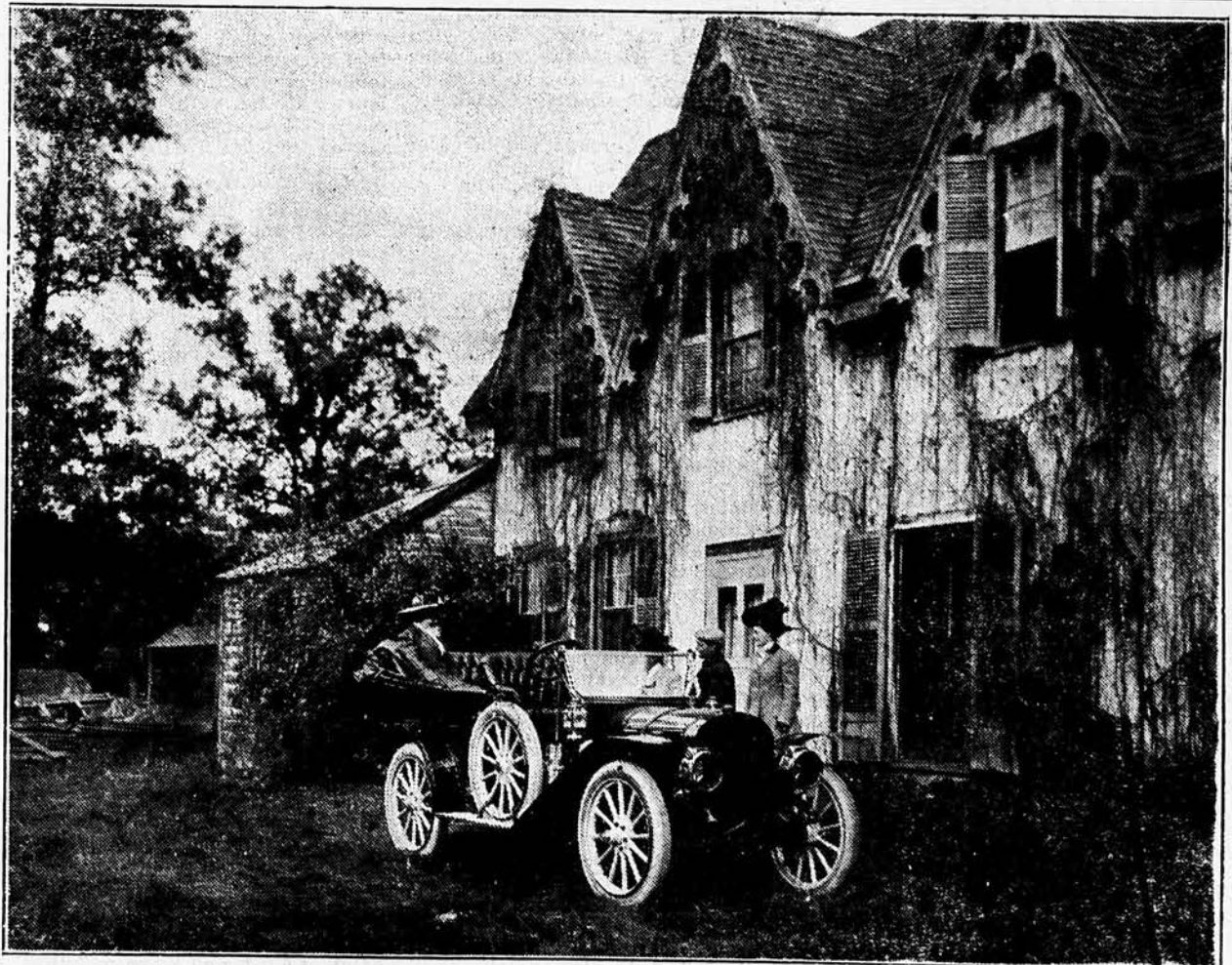
The objection to chain-drive may be obviated by having the chains enclosed in a gear case with an oil-bath like that on a bicycle; in the 1905 automobile show at Madison Square Garden one foreign car was shown with this desirable adjunct.

Gears on all but the smallest of runabouts are invariably of the sliding

type. Between the "progressive" in which the gear lever has but one movement, directly backward and forward, and the "selective" in which it runs in two connected slots, and must be slipped from one to the other in changing, the choice is mostly a matter of taste and habit; while the former appears simpler to the novice, the latter is a general favorite with experts, and is really the easier to manipulate; but anyone will quickly become used to either. Many gears are now made "fool-proof;" that is, they are arranged so as to make it almost impossible to slip in the reverse inadvertently instead of one of the forward gears. The ratchet (progressive) gear lever, too, is an advantage to the novice, as with it he cannot leave his gears imperfectly meshed and therefore likely to slip out, the inevitable result of which would be a "racing engine," and the probability of having to slow down and start on a lower gear.

Between the two methods of ignition, jump-spark and make-and-break, there is very little to choose; while the latter is less liable to functional

(Continued on page 5.)



A Kansas farmer's wife, her beautiful home and her automobile, with the aid of which the plague of distance is eliminated.



# KANSAS FARMER

## EDITORIAL

### THE RETIRED FARMER.

There is one little city in Kansas, and there may be more, whose citizenship is composed largely of retired farmers. This city has the reputation of having much of individual wealth but of having little of that spirit which manifests itself in public improvements and this condition is charged to these same retired farmers. This charge is probably untrue but it suggests something. Why should any farmer who has spent his vigorous manhood in carving out a farm home for himself and in giving to that home so much of his personality, ever become infused with the idea that happiness lies in the town?

To change his residence he must sacrifice his property in a sale; he must change his mode of life; he must abandon old friends and familiar scenes and he must increase his living expenses. The result is ever and always, discontent.

And yet, he has earned a vacation and his means may justify his retirement from the burdens of active farm life. Where better than on the home farm? His interests, his health, his social position, his comfort, his pleasure and his happiness call to him to stay by the farm. The same money that would be lost in his sacrifice of property and the deterioration of the farm when he leaves it could be put into the building of a modern house while the active work of the farm could be turned over to the boys or to a tenant who would be under his eye and within reach of his advice. Such a man can retire from the "burden and heat of the day" and still remain a power for good in his community. He can enjoy his well earned rest with the knowledge that his farm is not "going to wrack and ruin" by the usual tenant route and he will not be fretted with the problems of fitting himself into a new mode of life.

**THE NEXT PASTURE IS GREENER.**

A happy, enthusiastic young man stopped to tell of his plans and prospects in a new land where he was going to make his fortune. He had lived in Kansas all his life; had partaken of her bounties, breathed her pure air and made money. His business was in a prosperous way and his prospects bright. But! He had heard of some far off Eldorado, some "land of pure delight" and he had sacrificed much to get there. He was doing over again in a different way what his schoolmates had taught him to do in their incipient gambling game of "sight unseen." He had bought land in a "colony" where he would have to start all over again with the handicap of having paid much more than the land was worth and more than he could have bought similar land for had he been on the ground. He deliberately set himself back by trusting to his imagination and the glowing statements of the Idaho promoter when he had the hard, tangible facts of Kansas life and conditions before him and knew that he could buy land here at much less cost.

This young man hopes to succeed. He expects to succeed and we hope he will, but when he left Kansas where the conditions were known and where success was practically assured did he not take a long chance? Will it not take years of effort to place himself in the same relative position financially and socially, in his new home that he had already attained here? Was it worth while?

## THE INTEREST IN DRAFT HORSES.

No feature of the great International or the American Royal live stock shows has ever attracted more attention or been of more real educational value than the splendid show teams of draft horses. These magnificent 2-, 4-, and 6-horse hitchers were brought together by the big packing houses or other commercial concerns primarily for advertising purposes and not as a show of breeding animals. To secure them the country was scoured for animals possessing the size, quality and style needed and the result has been an object lesson of far reaching importance.

Prior to their advent the country at large had no very well established ideas as to type in any draft breed and even the importers were little better informed. With the assemb-

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

ALBERT T. REID, President. S. H. FITCHER, Secretary.

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Chicago Office—First National Bank Building, Geo. W. Herbert, Manager.  
New York Office—41 Park Row, Wallace C. Richardson, Inc., Manager.  
Entered at the Topeka, Kansas, postoffice as second class matter.

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

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

ling of these famous teams there has come a crystallization of ideas and this country can now fairly claim the honor of fixing the breed types. That this has been well and correctly done is shown by the universal acclaim with which these famous teams were received in England as well as in this country wherever shown.

Knowing the educational value of such teams, the Kansas State Fair Association will offer some tempting prizes for such exhibits and these prizes are not confined to pure bred animals.

### STATE AID FOR ROADS.

Kansas needs its constitution amended so the state can help make roads. That is something that every newspaper and every good roads friend should begin to consider, is the verdict of the Garden City Telegram.

Under the constitution, the state is forbidden to take part in any works of internal improvement. Most states do, and Kansas should.

Colorado's fine roads are built largely by state aid, and the most perfect piece of roadmaking in the west, the famous Skyline drive at Canon City, was constructed by convict labor. It was outdoor work for the convicts, it was stimulating and healthful, limited to eight hours, and no losses. Kansas should be able to do this.

Every friend of roads should try to make it possible for the next legislature to authorize the submission of an amendment to the constitution permitting this state aid in roadmaking and bridge building.

The planting work on the college demonstration farms in the eastern end of the state is about three-fourths completed. The oats are everywhere looking fine. The Kherson variety is the only one planted this year. So far the Canada field pea is looking well, but it requires a little more time yet to show whether it will produce the root nodules for which purpose it has been introduced by the college. The seed corn fields are producing a very fine stand. Quite an advantage is shown by use of the furrow opener. This season has been an especially good one for demonstrating the use of this implement, because the weather has been unusually dry and much of the ground very cloddy, making it especially desirable to get down into fine, moist earth—the purpose for which the furrow opener is used.—The Industrialist.

The Census Bureau is proceeding actively with the irrigation investigation required by act of Congress approved February 25 last. It is expected to develop exact and practical information relative to the investment of capital in the various pro-

jects and enterprises, and also as to the location and prices of irrigated lands now open for settlement in the arid and semi-arid states of the Union. Irrigation experts estimate that there are between 40,000,000 and 50,000,000 acres of land susceptible of irrigation, of which about one-third are actually under irrigation. Of the latter there are fully 5,000,000 acres not yet taken up by settlers. It is estimated that the completion of this work will add to the farm area of the United States an acreage equaling the farm area contained in the New England states.

M. W. Savage, of Minneapolis, Minn., who has owned more world beaters than any other American horseman, has had the skin of his famous Directum 2:05½ mounted and will give the old hero a prominent place at his breeding farm. Directum has left a progeny behind him which stamps him as one of the world's greatest sires and the perpetuation of his memory and his record in this manner will please his thousands of admirers.

The chemical spray for the destruction of weeds is worthy of more extended application. The weed problem is always with us and is difficult of solution except by cooperation among neighbors. This cooperation should extend to the cities and towns as well as in the country as it is unquestionable that weeds are disseminated from the towns and railroad stations. The spray is made by dissolving 100 pounds of iron sulphate in a barrel of water and is made effective in the destruction of dandelions, wild mustard, etc., by being applied with force in the form of a spray. It kills weeds but helps grass. Thus does science lighten our difficulties.

The official crop report shows that Kansas lost 35 per cent of her acreage of wheat but still has 4,027,000 acres left. This is nearly double that of the next highest state which is Indiana with an acreage of 2,627,000 acres. The condition of the Kansas crop on May 1 was only 65 as compared with 84 for the same day in 1909. The general average condition was 82.1 as compared with 83.5 for last year and 86.7 for the 10 year average.

Drainage prevents loss of crops and labor from stagnant water; permits air to circulate more freely through the soil, carrying with it fertilizing properties, making a warmer soil that can be cultivated early, for dry soil works easier than wet, roots go down deeper in it and get a greater supply of plant food, and more moisture in a

dry season prevents baking and cracking.

The monthly statement of exports of breadstuffs, meats, food animals, cotton and mineral oils, issued by the bureau of Statistics of the Department of Commerce and Labor, shows a total for the month of April, 1910, of 46.5 million dollars, against 53 million in April of last year; and for the 10 months ending with April, 1910, 700 million dollars, against 741 million in the corresponding months of last year.

A prominent farmer who lives near Topeka and who is known outside his own state as a breeder of pure bred stock, remarked the other day that he had an order for three teams of heavy horses for shipment to New York but that he was unable to find them. The horses wanted were to weigh 3,200 pounds or better to the team and to be well matched and broken but no particular breed was designated. This suggests that the man who had the foresight to stock up with good pure-bred mares of any recognized draft breed, care for and breed them carefully, and then do a little fitting on the colts, has a mighty good thing.

In spite of all the air ships and automobiles that are likely to be made, there is not much chance that the horse will ever go out of favor or become so cheap that his beef will take the place of that of the steer. Man just naturally loves a horse and this fact is all to his credit.

Probably no crop grown in ordinary farm practice will yield more feed to the acre than sorghum. In its cultivated form it has developed so many varieties that some one or more of these will be found adaptable to almost any portion of agricultural America. It is easy to crop though; the plants are very tender when young. It is valuable when fed with; worth when fed alone. It should always be allowed to mature well before being harvested or it becomes dangerous. Second growth sorghum is always dangerous to cattle and sheep and the young plants of the first growth seem to be so. It is good as hay but needs a balancer. Just what the poisonous principle found in immature sorghum fodder is we do not know but it is there and should be guarded against.

The Industrialist of April 23 gives the details of the revised course of study of the State Agricultural College. This is useful information to every farmer in the state and should be in the hands of each. The new course provides industrial training for the sub-freshmen and freshmen classes, which was not done before. The road into the college has been broadened and an era of even greater usefulness for the college has been insured.

Nearly 1,000 carloads of Western cattle have been shipped into Chase county thus far this season. These cattle will be pastured there during the summer and the stockmen say that there will not be an acre of grass land lying idle in the county. Other counties report the arrival of heavy shipments of cattle, so that Kansas will be able to account for a good deal of beef later on.

One of the important pieces of experimental work that has lately been done is reported from the Iowa Experiment Station and has to do with economical feeding of work horses. At present prices oats are rather too expensive for such a purpose and oilmeal, cottonseed meal and gluten feed were tried as substitutes. These experiments were made with horses doing full work last summer and showed that with one of these feeds in small quantities in combination with corn the ration was greatly cheapened and the horses maintained their health and spirits. The important results obtained are of widespread interest and have been published in bulletin form.



# Industrial Training National Problem

A very serious, and I may almost say threatening, problem confronts the industries of the United States. I mean to speak to you and your associates of this problem in this letter. Six years of travel and study in Germany, where I saw a wonder industrial development, carried by a nation of highly trained workers, as well as three years of practical experience as schoolman and manufacturer in America, have given me an unusual opportunity of gaining an insight into our present difficulty. Will you give this matter your earnest consideration, for surely it concerns us all alike, and we must all work together if a remedy is to be found.

Four generations ago our forefathers, a few millions in number, scattered along the Atlantic Seaboard, had to their west a vast untouched continent, rich in timber, ores and soil fertility beyond anything the white man had ever found. These vast natural resources were successfully exploited, our wealth increased as if by magic, and today our population of ninety millions has occupied the whole continent, from ocean to ocean, but not without leaving its mark on the land. Our timber is more than half cut, our ore and coal deposits are beginning to show signs of depletion, our impaired soil fertility yields now 18 and 20 bushels in place of the 40 of the virgin prairies. Our numbers continue to increase, and every new-born child brings with it a mouth, but no natural wealth excepting the labor power of its hands.

These hands, when skilled and directed by high intelligence, can create wealth of all forms, and henceforth, we must depend at home and for export into the world's markets, our labor power in place of our natural resources. This means that we must become predominately a manufacturing and industrial people, a course upon which we have already started. We shall be obliged to meet at first in the world's markets and later at home, the products of Germany and Japan, those master modern nations, crowded throughout with a surplus of skilled and efficient labor. We cannot compete with them through cheap raw materials and a low cost of living, which are things of the past in the United States. We can meet them only by the superior skill and better training of masses of American workmen. Where are they?

In pioneer days, to break the virgin prairies, fell the forest, and build the railroads, called for brawn—the muscles of millions of arms and hands. As a modern manufacturing nation, American supremacy must rest upon superior factory organization and vast numbers of efficient workers for every branch of industry, willing to put in a full day's work for a reasonable wage, men whose habits and training from childhood up have given them interest and genuine pleasure in their work.

Immigration from England, Norway, Germany and Switzerland formerly brought great numbers of such. Today, the tide is sweeping from Southern Europe hordes of Latins and Slavs, without schooling, culture, and without training or skill at any trade. To them we cannot look for our skilled factory workers, and perhaps it is well that we should not. What would otherwise become of our own boys and girls? Surely they all could not find places as clerks in stores, banks and offices, as doctors and lawyers. And yet for this our public school system attempts to train them all. Of 127 who enter, one reaches college, and for him the entire course of studies is shaped, leaving the other 126, who drop out on the way, without any specific training to fit them for their life's work as machinists, carpenters, printers, telegraphers. And the right kind of school could give each of them, in addition to the Three R's and book knowledge, thorough training for his work!

A few individual manufacturers, pressed by this need of skilled workers, have started schools of their own, only to find that often the results are lost to themselves when their employees move to other cities. A few of our larger cities have established separate trade schools, but our problem is nation-wide, and nothing but a

reorganization of our whole public school system will meet it. How can we make our schools, upon which we spend more money than any other people, fit our children for their life's work, and furnish our industries, the source of our national wealth, with their army of skilled and willing workers?

The existing public school system was shaped to meet the need of an earlier time, and is the outgrowth of conditions that existed then. Industry was formerly centered in the home, where they used to grow their own food, spin and weave their own cloth, make their soap, dip candles; the father, if he happened to be a cabinet maker or blacksmith, shaped his wood and forged his metal near his home, within sight of his children; each child was called upon while still young to share the parent's activity. It gained not only an insight into the industrial processes, but it acquired habits of work, and training for its future occupation. Then, the school was properly a place to which children were sent for a few hours every day, to pick up the essentials of reading, writing and spelling, and a little information about geography and history. Now, industry has passed forever from the home into the factory system. Sciences like physics and chemistry have become vital factors in the productive processes. Skill and accurate knowledge are needed as never before. The home can no longer give the boy and girl training for their life's work. The school must assume this function.

The leaders of educational thought and pedagogy, as well as hundreds of normal schools, have been at work during the past century in creating our public school as it exists today, in formulating methods for instructing in reading, writing, spelling, history and geography, that is, for teaching book subjects.

Work must now become part of the school course. How shall we prepare a vast army of teachers, capable of imparting training for industrial work? How can we create the New American School?

Our professional educators are too much cut off from contact with active life to feel the need of our time. Business men, conscious of the crisis, must give the impulse.

A model school, that will demonstrate, under ideal conditions, a course of studies for children from the eighth to the eighteenth year, in which vocational training will be given in addition to book learning, must be built.

The basis of such a school is at hand. It is your problem, our national problem, and we must work together to solve.

EDWARD A. RUMELY.  
Member Indiana Committee National Society for the Promotion of Industrial Education, La Porte, Ind.

## Chinese Pheasant, Farmer's Friend. (Continued from page 1.)

although if dandelions are fed to caged pheasants they will eat them in preference to almost any vegetable food, roots and all.

The pheasant is also very fond of many of the wild weed seeds, such as legumes, thistles, especially the burr thistle, wild carrots, sunflowers, wild lettuce, mayweed, marsh elder and mustard seeds.

As a table food, and also as a game bird, the pheasant has been held as the leading bird for these two qualities by the kings, royalty, wealth and educated people of the world for more than two thousand years as being of the greatest sport and richest delicacy. No other bird has held such a position, and it will be a long time before any other bird can gain such distinction.

The home of the Chinese ring-neck is largely in the mountains, as well as in the valleys of China, and they are accustomed to very severe weather, as it inhabits the high altitudes, and yet adapts itself to the lower altitudes, as low as sea level. It is a thoroughbred bird and has been imported into England in considerable numbers to breed up the English pheasant.

The Feathered World, London;

Frank Finn, F. Z. S., says: "The Chinese pheasant, like his human fellow countrymen, is very hardy, and will thrive anywhere, bearing the cold of a northern United States winter and the heat of a Bengal summer quite well. It is also a good breeder and bears confinement well."

The government statistics show that the damages done to the growing crops by insect pests, largely owing to the destruction of insectivorous birds, is estimated at something like \$800,000,000 per annum. This amount would feed and care for many millions of pheasants and other insectivorous birds.

At the last annual meeting of the New York Zoological Society \$60,000 was given to be used entirely for the study of pheasants and the best methods to be adopted for the introduction and distributing of these birds into the United States.

In a number of states the next Legislature will be asked to pass liberal appropriations for propagating the pheasant and other insectivorous and game birds and the distribution of literature to instruct and aid the people in the hatching of the eggs and rearing of the birds about their country homes.

If every farmer, landowner and bird-lover in the country would either secure a setting of pheasant eggs and hatch them under a common hen and rear them like young chickens, or buy a pair of these birds, the problem of how to destroy insects would soon be solved, and I would recommend that farmers avail themselves of this economic opportunity.

## When You Buy an Automobile.

(Continued from page 3.)

disorders it is also less easy of adjustment in case of failure, and it is more susceptible to wear and tear as the action is mechanical. I would accept either method with equanimity in a car that suited me in other respects.

Generation of the electric current for ignition is effected in three ways: by dry cells, by storage batteries (or accumulators), and by magnetos, the last being the latest method. The disadvantages of each are that cells wear out, accumulators require recharging, and magnetos give a spark the intensity of which is in direct ratio to the speed with which they are driven. In slow running, when the best spark is required, the magneto is at its worst; moreover, a car cannot be started with a magneto without "spinning" the engine. With cells or accumulators it is theoretically, though not always practically, necessary to turn the engine only far enough to pass the igniting point in the cylinder that is nearest compression point. The fin-de-siècle method is to combine the magneto with either cells or accumulators, using the latter to start the car, and then switching on the magneto as soon as the engine has attained speed. In make-and-break ignition, low-tension magnetos are used, with the jump-spark either high or low tension. The high tension obviates the necessity of a sparking-coil, which is necessary with the low, but as the coil must be on the car when batteries are used for starting purposes the disadvantage of the low-tension. The wiring from high-tension magnetos is much more complicated than that from the low-tension. Which ever be used, the combination of magneto and cells or accumulators is the ne plus ultra of efficiency.

Into technical details of engine construction it is impossible to enter at length in the space of this article, but there are a few points well within the comprehension of the ordinary magneto is not so potent in practice. purchaser which he will do well to bear in mind. In the first place, a good engine is a silent engine; a noisy one is ipso facto a bad one, and stands self-condemned, as noise means wasted energy and undue wear from imperfect workmanship. Six cylinders are becoming more and more fashionable, and undoubtedly more than compensate for the additional weight by giving a more equal torque. As in a four-cycle explosive engine each cylinder has one power stroke out of four strokes of its piston (or two revolutions of the crank shaft), a four-cylinder engine gives one power-stroke with each half turn of the crank shaft, therefore a six-cylinder engine gives a power-stroke with each one-third revolution of the shaft, producing a more continuous twisting impulse, or as it is technically termed, "a better torque." The disadvan-

tages of the six cylinders are an undesirable lengthening of the crank shaft, and the introduction of a third more factors of error into the working of the engine, involved by the additional cylinders, with their valves, ignition and other appurtenances liable to failure.

Low compression engines are always preferable to high; both the probability and importance of leakage round the cylinder heads are minimized and the labor of cranking is also much reduced.

Overheating in an engine is a bad fault, but it is not generally realized that many builders go to the other extreme and keep their engines too cool. Unless the temperature in the water jacket approaches boiling point the engine is not doing its best. A favorite trick of demonstrators, dipping a finger into the water after a hard climb, to show that the water is not hot, is misleading, as it simply proves a great waste of power, and therefore of fuel. The force of the explosions is mostly converted into heat and lost by radiation and conduction, instead of being used to turn the engine. Of course, no car should have boiling water in the jacket in ordinary running, but one in which the water is cool after a hard climb is unnecessarily extravagant with gasoline.

In carburetors simplicity of design, ease of adjustment, and wide range are the main features to be sought; a dashboard adjuster, which enables the driver to alter the proportion of fuel to air entering the cylinders, according to the power required, is a potent factor in economy and flexibility, is the very satisfactory way the author puts the matter in Country Life in America.

## Free Education.

If you have written for the free books offered by advertisers of the various lines of goods advertised in KANSAS FARMER you have probably noticed that many of such books have been prepared with much thought, by some of the most expert men in the various lines, in the country.

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Next time you get one or two of these free books or catalogs, just make a careful note of the good things the pages may contain.

## Dogs and Butter-Fat.

I used to brag some on a fine collie who could bring the herd and any loiterers in a hustle to the milking shed. An expert dairyman, my guest at the time, quietly looked on without comment or praise for the dog.

I remarked, "He saves a lot of steps."

"Yes," said my friend, "and he pulls a lot of good money out of your pocket too—I wouldn't have the best dog that ever breathed around my cows, or in the stables."

But I said, "We weigh our milk and there isn't an ounce shrinkage even when the dog runs them a little."

"That is true," he replied, "but the leakage isn't there. You lose in butterfat. Your test will always go down. You will be one or two points off and lay it to your buttermaker. A cow always dislikes a dog. He irritates and excites her, and I had a good dog, too, but I have no use for one now. She is fretted and nervous with a dog at her heels, and may cause the loss of her calves. You get a Babcock tester, and I'll pay for it if what I say is not true."

I just got to business all right with my testing, and experiment with dog or no dog. The results proved I was losing butterfat. I figured the whole thing out for a year, and have no use for a labor-saving dog, at the expense of costly butterfat. Divide your herd and test for yourself as I did. Then teach your cows to come at your call, happy and contented, no dog to bully and excite, keeping your herd nervous and fretted. Butterfat is too fine gold to fool away on dogs.—B. J., in Hoard's Dairyman.

What a lot of money you can save by buying a little paint! Weather does more damage to farm implements and buildings than does wear and paint will protect both.



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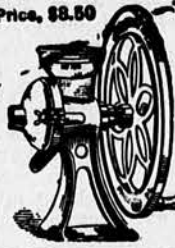
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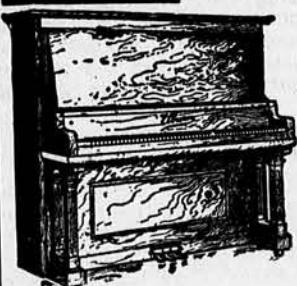
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Collars 20 cents each

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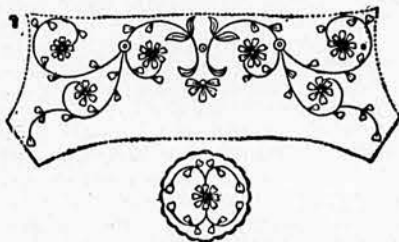
If your dealer doesn't sell them write us. We'll send you our free style book.

CAPITAL COLLAR & CUFF CO., MANUFACTURERS, LINCOLN, NEB.

When you take off a crop see that the land is supplied with a little more of food material for the next crop than you have taken off. It is only in this way that you can hope to have the farm meet your increasing needs and not fall in your old days.

There are only two times in a man's life when he cannot afford to speculate in his advertising. These times are when he can't afford it and when he can.

The ounce of prevention may be better, but nine people out of ten more willingly take the pound of cure.



1531—Baby Cap in Wallachien Stitch.

A dainty washable cap for summer wear, easily and quickly made. Stamped on imported Irish linen, 35 cents. Perforated pattern, 25 cents. Transfer pattern, 10 cents.

# HOME CIRCLE



In these days of general prosperity when the farmer is credited with the ability to buy and pay for what he wants; when labor saving machinery is to be found upon every farm; when the young folks secure the advantages of a college training and rural mail routes, telephones and automobiles serve to annihilate distance and bring the farmer into closer relations with his fellow man does the farmer's wife prosper in her own proper sphere, as well? Is her condition improved? Are her labors lightened by modern conveniences and labor-saving machinery? Does she have her own pin money or hold property in her own name? Does she participate in the meetings of women's clubs or farmers' institutes and does she get time to become active in the affairs of the community? In order to get at the real facts concerning the home life and present conditions of the farmers' wives and families and learn whether the general prosperity has benefitted them as well as it has their sisters of the towns and cities or their husbands and brothers on the farm. The Kansas Farmer will offer a prize of one year's subscription for the best letter on the home life of the farmer's wife and family. These letters must be signed but the names of the writers will not be printed unless special permission is granted. Address your letters to Editor Home Department, Kansas Farmer.

## Rules for Dealing with the Fly Nuisance.

(Issued by The Merchants' Association of New York City.)

Keep the flies away from the sick, especially those ill with contagious diseases. Kill every fly that strays into the sick room. His body is covered with disease germs.

Do not allow decaying material of any sort to accumulate on or near your premises.

All refuse which tends in any way to fermentation, such as bedding, straw, paper, waste, and vegetable matter, should be disposed of or covered with lime or kerosene oil.

Screen all food, whether in the house or exposed for sale.

Keep all receptacles for garbage carefully covered and the cans cleaned or sprinkled with oil or lime.

Keep all stable manure in vault or pit, screened or sprinkled with lime, oil or other cheap preparations, such as are sold by a number of reliable manufacturers.

See that your sewerage system is in good order; that it does not leak, is up-to-date and not exposed to flies.

Pour kerosene into the drains.

Burn or bury all table refuse.

Screen all windows and doors, especially in the kitchen and dining room.

If you see flies, you may be sure that their breeding place is in nearby filth. It may be behind the door, under the table or in the cuspidor.

If there is no dirt and filth there will be no flies.

If there is a nuisance in the neighborhood write at once to the Health Department.

## Seasonable Recipes.

To Wilt Lettuce: Wash and drain the lettuce, shred if preferred. Put into a dish and sprinkle with salt and a little sugar. Melt one tablespoon lard or butter with one cup weak vinegar or lemon juice. When boiling hot pour over the lettuce, stir well and serve.

To Cook Lettuce: Wash and boil a few minutes, drain off the water. Return to the fire, add a little water, season to suit and cook a few minutes longer. Tender lettuce is best served when underdone.

Creamed Potatoes: Peel and slice thin enough potatoes to fill a pudding dish. Put the potatoes into the dish in layers, dredging each layer with flour and a little salt; pour over all enough sweet cream to cover well. Cover and bake rather slowly until done, remove cover and let brown.

Apple Pudding: Make a good biscuit dough and roll out one-half inch thick, spread with butter and sweet apple sauce, roll up and cut into two inch slices and place in greased pans one inch apart. Sprinkle lightly with sugar and bake. Serve with sauce.

Stewed Beef: Cut the beef into small pieces, put to cook in a small quantity of warm water. Cook slowly and add more water if necessary. Salt when over half done. When done, there should be a small quantity of brown gravy in the kettle.

Milk Gravy: Put to boil in a greased sauce pan enough milk for the meal; when hot add two or three tablespoons of flour blended with cold sweet milk. Salt to season.

Milk Pudding: Melt one teaspoon butter, when melted add one and one-half quarts sweet milk, let boil and thicken with two tablespoons of flour. Season with a pinch of salt and stir

in two cups of toasted bread crumbs. Serve warm or cold.

Escalloped Tomatoes: Oil a pudding dish, add a layer of buttered bread crumbs and a layer of canned tomato, continue until the dish is full, having bread crumbs for the last layer. Bake about thirty minutes in a moderately hot oven.—F. Lincoln Fields.

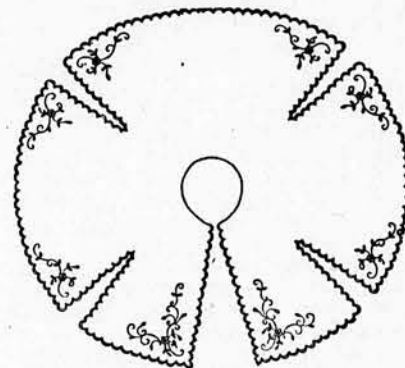
## 8563—A Stylish Little Dress.

This simple little model is unusually attractive and what is more to the point, is easily and quickly made. It is cut in one piece from neck to hem and fastens conveniently down the front. Two wide tucks over the shoulders give the necessary fullness and add considerably to the smartness of the mode. Gingham, linen, cashmere and serge are all suitable for



reproduction. Pattern cut in four sizes, 8-10-12-14 years. Ten-year size requires 3 3/4 yards of 44-inch material.

A pattern of this illustration mailed to any address on receipt of 10 cents in stamps or silver.



## 1555—Infant's Flannel Kimono.

This design is very pretty and easy of execution as will be seen. Very pretty when made up. Stamped on flannel, price 30 cents. Perforated pattern, 25 cents. Transfer pattern, 10 cents.



# HORTICULTURE



## Beginning of Our Forestry.

When did the United States begin the practice of forestry? Few persons can answer this question correctly. Most people are of the opinion that the beginning of forestry in this country was of very recent origin and that the first step in that direction was taken among the mountains of the far West. Neither fact is correct, writes a Wisconsin agriculturist.

While Washington was serving his first term as president of the United States, a recommendation came to him that the government ought to buy live oak islands on the coast of Georgia to make sure of a supply of ship timber for war vessels. The idea appears to have originated with Joshua Humphreys, whose official title was "constructor of the United States navy," although about the only navy then existing was made up of six ships on paper, and not one stick of timber to build them had yet been cut. The vessels were designed to fight the North African pirates.

Five years after the recommendation was made, Congress appropriated money to buy live oak land. Grover and Blackbeard islands, on the coast of Georgia, were bought for \$22,000. They contained 1,950 acres.

Louisiana was bought soon after, and in 1817 the six islands, of 19,000 acres and containing 37,000 live oak trees, were withdrawn from sale and set apart as a reserve. In 1825 Congress appropriated \$10,000 to buy additional live oak land on Santa Rosa Sound, western Florida, and subsequently other Florida timber lands, ag-

gregating 208,224 acres, were reserved.

Up to that time nothing more had been done than to buy or reserve land for the timber growing naturally upon it, but the work was to be carried further upon the Santa Rosa purchase. The plan included planting, protecting from fire, cultivating and cutting live oak for the navy. That timber was then considered indispensable in building war vessels. Much has been said and written of the danger of exhaustion of supply. Settlers destroyed the timber to clear land, and European nations were buying large quantities for their navies. In response to repeated warnings the government finally took steps to grow timber for its own use.

Young oaks were planted on the Santa Rosa lands. Difficulty was experienced in inducing young trees to grow. The successful transplanting of the oak is not easy unless done at the proper time and in the right way. The plantations at Santa Rosa were generally unsuccessful, but large quantities of acorns were planted, and a fair proportion of them grew. But the chief efforts were directed to pruning, training and caring for the wild trees. Thickets about them were cut away to let in air and light.

What the ultimate success of the forestry work would have been cannot be told. The Civil War brought a complete change in war vessels by substituting iron for wood. Forestry work stopped. The timber reserves were neglected. Squatters occupied the land. After a number of years all the reserves except some of the Florida land were opened to settlement.

## FARM INQUIRIES Answered by Prof. A. M. TenEyck

### Professor TenEyck Talks Agronomy.

The slogan of the agronomy department is, "double the average yield of corn in Kansas." And as the average yield of corn in this state is but 21.5 bushels it can easily be done if proper attention is paid to the right principles of crop production. The average yield of wheat in this state is but 13.5 bushels and yet thirty or forty bushels can be produced under average farm conditions. At this station the best yielding variety has yielded an average of forty-four bushels for the past seven years under conditions that any farmer can duplicate. The four factors that will aid in producing larger crops of corn are: Better seed, more fertile soil, proper preparation of the seed bed, and the cultivation of the corn at the proper time.

We have tested more than two hundred varieties at this station in the past seven years. And the yield of corn has varied as much as twenty-seven bushels between different varieties that had the same care and cultivation. Therefore we have concluded that on an average the farmers of eastern Kansas are losing nine bushels of corn per acre each year by not planting the best corn. Adaptation of the variety for the place is necessary.

Don't bother with scrub corn but replace it with well bred seed. I don't believe in sending off to some other place for corn if you have good stock. We have good foundation seed here in Kansas of some local varieties. It might help to introduce new blood by mixing in some new corn of the same variety you are growing. I believe in breeding up. And if you have some corn that is pretty good don't throw it away.

We select corn by the score card but we breed by actual test. Several years ago we selected the fifty best ears out of twenty acres that made more than fifty bushels per acre, and planted these ears in ear row tests, and these ears yielded a calculated crop that varied from nineteen to seventy-nine bushels per acre. That is some difference. And while a nice ear is not always a good yielder, a good yielder is almost always a nice ear.

If an ear is long in proportion to the width the grain will be shallow.

We only occasionally find a very large ear that is well proportioned. And always grow the corn with as deep a kernel as will mature in the climate where it is grown. And breed the ears to fill out well at the ends, a grain added to every ear means an increase of one hundred thousand bushels per year of corn in this state.

I don't have much use for this so-called high protein corn because in order to grow it you must feed the protein into the soil. I would rather get the protein in alfalfa, clover and the like. But we do want corn to produce fat.

We have shown in our work here at the station that plowing under a crop of cow-peas after wheat will increase the corn crop the following year ten bushels above what it would have been if no catch crop had been used.

It don't make much difference what kind of a cultivator you use but the yield depends more on using the cultivator at the right time. And use a two-row cultivator if you grow much corn. The work cannot be done quite as good but this is more than balanced by being able to do more of the cultivating at the right time.

The main purpose of the agronomy department in this crop improvement work is not to gather data and write bulletins. It is to produce high grade seed.

Did you ever find out that you had overdrawn your bank account? Do you remember that you had to make good and do it quick? That is how you will feel when you wake up to the fact that you have worn out your farm by cropping without manure.

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Evans-Smith Drug Co., Kansas City, Mo.  
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### The Breeding Plot.

I do not know the chapter in which the text may be found, but these are the words: "You may be able to get show corn by selection, but you must look to breeding to get the yielding corn."

If there is truth in the above statement, is it not plain that we are greatly in need of more breeding plots? No man can tell by an examination of two or more ears of corn as to which of them will be the greater yielder when planted in the field side by side and cared for in every way the same. Would you not rather be able to go to your field or crib and be able to select the heaviest yielders than all the other things that you do know about corn? A man who could do that would be an expert indeed, would he not? No man can pick out the yielders, and no man can tell when he has picked out his corn which of the ears will grow the more vigorously when planted under the same identical conditions. What would you give if you could go to your seed pile and pick out the ear that would yield the most and those that would grow with the most vigor? Can you think of any two things of more value than those two things would be? If you should imagine that you can do either one of these things, I will bet a coonskin against your old hat that if you will just try it and then plant these ears in a breeding plot, one ear in each row, and care for them the same, and give each the same chance, you will wake up to find that you will be sadly fooled, and you will have much less faith in your judgment.

Now, if these things are so important should we not find them out, if they are to be found out? Is there any way to tell the heavy yielders from the poor ones, and the vigorous growers from the weak ones? If this can be done, will it not pay us to go at it as that is the road to corn improvement?

We can find out just these things. The object of all this talk in the above lines is to start us to thinking right, and to let in light on the importance of "Corn Breeding." So the breeding plot will be the discussion in this article, and I shall endeavor to make it as plain as possible. There are some few methods as to the way certain things are done by different breeders, but the essentials are all the same.

The first thing that will be considered is the ground for the plot. I am inclined to the opinion that it should be rather good soil as it will take reasonably good soil to put good vitality into the corn to be raised. If the soil is the richest you have, it might not produce seed that would stand adverse conditions of poor soil. Also, the ground should not be too thin, as that will not produce vigorous seed to plant in the richer soils. It will,

no doubt, be best to select soil that may be the nearest an average to that in which your general crop is to be planted. The ground also should be as nearly alike all over as possible. If soil differing to any great extent were used it would not give all the ears an equal chance, and that is important as that will be the only means of a true comparison.

As to the amount of ground to be used, that will depend much on the amount of seed you need for your general crop and on the help you may have to do the work. From a half acre one can generally get enough seed to plant at least from 80 to 100 acres, and that is quite enough for our average farm. The same mistake that I made in the start is the one that is common in nearly every case, and that one is that we attempt too much. Do not try more than a half acre to start on, and you are more likely to get satisfactory results. Don't try more than one-half acre at first.

As to the selection of seed will say, that it is now too late to do that the very best way. To begin the selection before the corn is fully ripe is best, as an examination and a study of the plant can be made at that time, and the plant is the machine that makes the ear. By getting into the field before the corn is quite ripe and marking certain plants that meet the requirements it will be a great advantage. An ear should not be taken for the breeding plot that has not grown on a plant that has a good root system—and that can be determined to a great extent by the system of brace roots that appear. The corn plant cannot be any better than its root system makes it. It is further desirable that a stalk have strong short joints, as that will give to it a better leaf system. The root system takes of the plant food as it is in solution in the water in the soil and it is thus carried to the leaves and there combines with the plant food in the air and in the leaf is where the plant food of the soil and of the air is manufactured into plant tissue. It is then very evident that the plant is well worthy of study to the corn breeder. A well developed plant is necessary to vigorous ears. I prefer that the stalk also be of only medium height as that makes it less likely to go down in winds, and grows an ear lower down, which things are very desirable. The ear should be in height from the elbow to the shoulder, and when ripe it indicates that the shank is too large, which indicates a large cob, and also makes the ear hard to break off in husking and thus retards the rapidity of that process. Again, when it points upward the husks will often open up enough to let the rain into the ear and that will, no doubt, injure the vitality of the ear.

I would start with as good seed as could be secured as that will hasten the results that much. Any corn by selection and breeding can be made a good corn, but the better it is to start with the sooner will big results come. There are many corn growers in the state that have most excellent corn, and good seed can in most all cases be obtained from them.

Now, I would especially test every year and use no ear that had not shown in the test 100 per cent germination. Your work would be much of a guess after all if you used some ears that were weak in vigor or vitality, and much of the value of your work might thus be lost.

Then after the ground is well warmed up the planting will be the next thing in order. Many breeders prefer to drill, but I rather like to

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place it in hills. There are the good and bad features of both ways, but I think I prefer to hill as it will let me know that I get exactly the same number of grains in each hill and the same number of grains in each row. I think best to mark off the ground and drop the seed by hand, putting the same number of grains in every hill, then it may be covered with a hoe. So far, you see we have no guess work.

When the planting is ready to begin, I have my ears ready and plant one row from each ear, or as some prefer to plant at least two rows from each ear, as that will make us doubly sure as to the fact of no accident, for if results from the two rows somewhat remotely planted are similar, we feel that it is no guess work again.

Shell enough corn off the ear to plant the row, leaving the butt and tip and some rows entirely on the ear. Now take a small piece of cardboard and mark the number of the row on it and with a nail put into the butt of the ear fasten the cardboard to it, and that will keep the ear so that it may be found at any time for reference and comparison. Treat all the ears the same way and then lay them away in a box where mice and rats cannot get to it, and it will be a source of pleasure as well as surprise in many cases to see the ears that have made a good record or a bad one, as the case may be. We find in many instances that the ears that we thought our very best have proven to be perhaps our very poorest, and some that we thought only common will surprise us by being among our heaviest yielders.

Now, the next thing in order is to arrange a chart of the plat, that anything of importance may be noted on the chart. After the corn has been planted two or three days it will be well to see the plat every morning and it will be seen that certain rows will be coming up much ahead of others. All the slow rows should be marked on the chart, and mark them to be among the ones to be detasseled. No breeding is desired from the plants that lack vigor, neither should any seed be saved from such rows that are lacking in vigor.

It will also be noticed that certain rows grow and thrive much better than others—a fact to be noted on the chart. Also it will be noted that some rows seem to grow much taller than others, and if the height becomes too great, that row also should be marked for detasseling.

As to the rows to be detasseled it is evident that that fact cannot be determined until the work is about ready to be done. Many prefer to detassel alternate rows, and for certain reasons that would be well, but in many cases a row intended to be left as a sire will be found to be sadly wanting in the things most desired in a sire.

Others allow the ears at planting time to determine the rows to be detasseled, but it is evident that that will not be best.

It might be well to state that the object of taking the tassels out of certain rows and stalks is to prevent undesirable breeding. The pollen or dust from the tassel is the male element of the corn plant, and the silk is female organ, and it is necessary that if the elements come in contact that the grains may form. When the tassel is removed from a corn plant it is the same as when the knife is used in our live stock. In our herds we take out the bad individuals and thus prevent breeding from them, and the same laws hold in our corn work, and the results will be just as gratifying.

The time for detasseling will now need to be considered. It will need to be done as soon as the tassels begin to appear from the blades, so if the pollen has become dry enough to fall it is then too late, and the work will be of no consequence and perhaps work an injury in the bargain. At best the detasseling may do some harm to the yield as well as injure the growth of the plant, as it is a wound, and the plant is very likely to suffer to at least a small degree on account of it, especially if the weather conditions are not favorable. It will be necessary to get into the plat every day for a few days at detasseling time, as they do not appear all at the same time, and it is not desired that they do all appear at the same time as that condition would prevent the corn from filling well, as all the silks do not come out at the same time, and also the weather has

much to do in the complete pollination of the corn.

The most approved way to detassel is to pull it out. It comes off at the last joint very easily, but the reaching up so long is a very tiresome job. I have found a good and an easy method is to take a gentle horse, muzzle him, and by riding at the side of the row it puts one in easy reach of the work.

Now, as to what to detassel will have to be determined by the record as shown by what the various rows have done, any row lacking in vigor or showing anything not to be desired is to be detasseled, as no breeding is to be done by such. It is agreed that all undesirable plants should be detasseled, as that will eliminate the scrub individual. There are other rows also that we will want to detassel; at least half that show fine performance, as we want some seed that is not self-fertilized. There is a wide discussion as to what the effect of self-fertilization may be in the corn plant. It is naturally a self-breeder to a certain extent. Some of the pollen fertilizes the ear on the same stalk, and to limited degree will be inbred. The fact that it is naturally a self-breeder makes it best is very flimsy argument, to say the least. Only a casual glance at the things in which man has made improvement by diverting or changing the current of nature will settle that line of argument. It is the generally accepted idea that from the highest quality of the detasseled rows we will get our strongest breeders, those that will give us the most vigorous producers. The seed from all the rows of high quality should be carefully cared for, as the poorest are far better than the seed taken from the general field. All the bad breeders have been removed and that cannot be said of the rest of the field. Then for the ears for a breeding plat next season, let us have the seed from the highest detasseled rows. When the detasseling is done no further note need be taken save to watch for the effects, perhaps, of the detasseling, until the time comes to search for the ears for the next season, as is mentioned toward the former part of this article.

At that time we should note the time of ripening, the position of the ears, and anything else that we may see that might be of interest or profit.

Now in looking forward to the harvest several things should be considered. Count the stalks in the rows and determine how nearly a perfect stand has been matured. Note the number of ears as compared with the number of stalks in a row. The number of suckers may also be noted, and many other things that most any one will notice that may be of interest. One of the most important as well as one of the most interesting parts is yet to be played, and that is the harvest. Each row should be gathered separately and a careful weight taken, and a record made. Note the number of well formed and well developed ears as compared with those of inferior shape and quality. The highest yield of the best quality is the issue. It will be found that some of the "pet" ears, some that we may have taken to the show, and on which we won a prize, have fallen below the "dead line," while some of those that made no great pretensions have won out in the final and crucial test. Folks are sometimes that way, you know.

The corn that has given us the best results should be well dried out and put away for the general crop next season, and the finest and best ears should be carefully preserved for the breeding plat next season.

There is no question but that this method of work carried out for a few seasons will be a great help in vastly increasing our corn yields.

I have tried to make this lesson in corn breeding plain enough that any of the boys can understand, and it is hoped that many will go at it and put out a breeding plat this season. This has been a source of a big profit to me, and it will prove so to others. —S. M. Jordon, Institute Assistant, Missouri.

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For 24-in. Hog Fence, 15¢-20¢ per rod; 18-in. for 20¢; 16-in. for 25¢; 14-in. for 30¢; 12-in. for 35¢; 10-in. for 40¢; 8-in. for 45¢; 6-in. for 50¢; 4-in. for 55¢; 3-in. for 60¢; 2-in. for 65¢; 1-in. for 70¢. Sold on 30 days trial. 30 rod special Ideal Fence Wire \$1.00 Catalogue free. KITSILMAN BROS., Box 388, MUNCIE, IND.



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We manufacture all sizes and styles. It will pay you to investigate. Write for catalogue and price list. CURRIE WIND MILL CO., Seventh St., Topeka, Kansas

## \$1.00 for 90 Cents

Here is a chance for some one wanting to go into business. If you will hurry, a \$10,000 stock of goods for sale at 90 cents on the dollar. Have to sell on account of health. Located in a town of 2,000 people, surrounded by a farming country.

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14c. a Rod for 24-inch Hog Fence. Send for catalogue—20¢—for many styles. Save freight by buying nearer home. The Ottawa Mfg. Co., 702 King St., Ottawa, Kansas.



Keep \$25 to \$50 in Your Own Pocket—That's as Near Home as You can Get

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## Friends—

SEND me your name—just tell me how many cows you milk, and I will write you my personal advice so you can try for 30 days free the best Galloway Bath-In-Oil Cream Separator to do your work—over 200 to 950 pounds capacity per hour, according to your needs. Spend a cent now, this way, for a postal and you can just as easily save from \$25 to \$50 as not. Why pay more when for only \$33.50 and upward, I prepay the freight to you on 30 days' free trial—30 days' approval test, if you say so, and give you my 30 years' guarantee? You cannot get a better offer—to make you more money or save you more money on any separator made—and I will send you the best separator in the world today and you can prove it without any salesman there to talk you over. Why not send Galloway your name today and let me write you personally and send you my splendid, big, color-illustrated separator book right away.

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YOU can test the Galloway alongside of the highest priced \$85 to \$110 separators sold by anybody today—to prove that my new Bath-In-Oil principle is the greatest invention in separators in history. Gears run in oil like a \$5,000.00 automobile. Dust-proof—no oil-hole. Impossible to heat or wear or put out of commission the splendid mechanism which gets you the biggest profits—all the cream—all the butter fat. All gears enclosed—handsomest machine made (as you can tell below by the illustration), milk and cream sprouts high for cans; lowest revolving milk tank, only 38 inches high; so no high lifting. The Galloway is the easiest to clean, with few parts, which come out easy and cannot get back out of place; easiest to run; high crank; low tank; no high lifting and no "back breaking" cranking. Gets the finest cream qualities—and all of it. No lumps or churning, as Nature's true principle is followed without forcing either the milk or cream the wrong way up or down. Skims closest, in any climate or season, no matter whether your milk

is warm or cold. This handsome machine, compact and substantial, with beautiful finish, cannot be beaten at any price. And you cannot get my new Bath-In-Oil principle on any other separator. Remember, that this is most important. It proves to you why I can afford to give you a 30 years' guarantee because I know that the parts cannot wear this out—get hot—clog—or clash and put the separator out of commission like others do where you have to be remembering to oil them all the time. The Galloway is the only separator into which you can pour oil at the top once a month from your oil jug, or can, and have it oil itself without danger of running dry or ruining it like others. This costs you nothing extra—is worth \$50.00 more than separators built the other way. Remember, that I am an actual manufacturer—not a supply house, catalog house, dealer or jobber. You get the lowest direct factory price from me every time. Write me today for my big separator catalog and let me quote you prices that will astonish you.

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## Live Stock and the Soil.

The maintenance and increase of the fertility of the soil transcends all other industrial problems. It is possible and thoroughly practical to greatly increase the yield of crops through animal husbandry. The average yield of wheat in England has grown from 12 to 14 bushels per acre two centuries ago to nearly 32 bushels per acre the five years, 1904-08, largely by the use of animal manure, and by the use of chemical fertilizers and rich imported feeds. In horses, cattle, sheep and swine the United Kingdom has the equivalent of 144 cattle per square mile, while Illinois has 78.

Fifteen years' continuous culture of crops at the Ohio Experiment Station on plots without treatment, on other plots with manure, five tons per acre, and on still other plots with 420 pounds per acre of commercial fertilizer, when compared with the same crops in rotation but with the same treatment, show as the average of the five years, 1904-08, a difference of 24 bushels of corn, 9 bushels of oats and 12 bushels of wheat per acre, in favor of the rotation. There was but little difference the first few years.

Manure has been reinforced and applied to silty clay deficient in phosphorus and lime. Part of the manure has been thrown into an open barn yard during the winter and allowed to lie exposed to the weather until April 1 while another part has accumulated under the feet of the cattle until the same time. The cropping has been a rotation of corn, wheat and clover. The average of 13 years' results shows that the manure has not been used with the highest economy until reinforced with phosphorus. The gypsum and kainit were found relatively unprofitable.

In 1894 four old fields of ten acres each were set apart for a rotation of corn, oats, wheat and clover, the corn being grown on clover sod without manure or fertilizer, the oats following without treatment, but the wheat receiving a top dressing after plowing and before seeding of 8 to 10 tons of barn yard manure per acre.

In 1903 the system was changed and 8 to 10 tons of stable manure applied to the corn land in the fall and winter. A ton per acre of quick lime or two tons of powdered limestone being applied in the spring and the wheat receiving 350 pounds of a fertilizer containing about 4 per cent each of nitrogen and potassium and 7 per cent of phosphorus. The outcome of this change has been an increase in the yield of corn from a previous average of 48.7 bushels per acre to one of 73.8 bushels; oats from 52.2 to 55 bushels; wheat from 19.9 to 36.2 bushels; hay of from 2.7 to 4 tons per acre.

The manure used at present is treated with ground phosphate rock or floats, during its accumulation in the stable at the rate of 40 to 50 pounds per ton manure, or about 400 pounds per acre and at a cost of about \$1.60 per acre. The liming has cost about \$6 per acre and the fertilizer used on the wheat about \$6.40—a total of \$14 for the 4-year rotation. But the gain of 25 bushels of corn, 3 of oats, 16 of wheat and 1 1/4 tons of hay would have a total value of \$40 per acre. In other words the cost of treatment is being recovered nearly three times over in the increase of crop.

Of course it is not possible to return in the manure made from the produce of an acre of land all the elements of fertility withdrawn from that acre by the crops grown upon it, but by proper attention to accumulation of nitrogen through the growing of leguminous crops in systematic rotation, and by restoring the comparatively small waste of mineral elements it becomes possible to prevent further loss of fertility, while the present market price of materials carrying all the essential elements including nitrogen, is such as to justify

their use as supplements to manure.

Corn alone is not an economical nor a healthful food for man or beast, while all experiences show that rotation of crops is absolutely essential to the highest yields. I venture the suggestion that if the soy bean were substituted for part of the corn grown in Illinois the result would be a marked increase in the total food production of the soil and in consequent prosperity of the farmer.

The land now under cultivation is yielding only about half the produce which it is possible and economically practicable to secure from it. The highest production of food and clothing for humanity can only be obtained under a system of agriculture in which the scientific feeding of live stock and the use of resultant manure is a leading feature, because the lower animals are necessarily sources of food and clothing, and especially because they are able to convert into the most nutritious of human foods substances which are indigestible in the human stomach and yet are necessary parts of the plants which produce our food grains.

In the splendid work which is being done by the Illinois Experiment Station, through its carefully conducted soil tests, and through its extensive investigations in the nutrition of animals, the farmers of this great state have the opportunity to conduct their business in the light of such a knowledge of the factors making for success as has been vouchsafed to no other generation of men.—Illinois Farmers' Institute.

## Principle of the Mulch.

Now taking a cake of sugar and placing some pulverized sugar on top of it, and holding the lower edge of the cake in the moisture, you will observe that the water passes up through the cake readily, but hesitates and passes into the pulverized sugar very slowly. This is because the particles of pulverized sugar are broken apart sufficiently that moisture moves from one particle to the other very slowly. It will in time get up through the pulverized sugar, but it will take considerable time to do so. While this moisture is held under the pulverized sugar, there will not be any evaporation from the surface. If granulated sugar is used instead of pulverized the moisture will come up through much more rapidly, because the particles of granulated sugar are angular and fit more closely together. In the case of some sandy soils, it is found that they become compact clear to the surface much more quickly after cultivation than loam soils, because of this same fact, and their greater weight.

This pulverized sugar represents the condition of the field after dragging, cultivating or disking to break the surface of the soil. The disturbed soil holds the moisture down where the wind and the sun do not get hold of it.

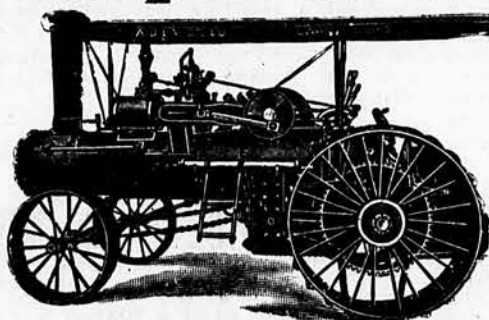
We would advise you to get a stand of clover as soon as possible, and to occasionally plow under some growing vegetation, first disking it into the soil.

Probably four years after the first deep plowing, the fields should be plowed crossway and the sub-soiler again used. This should be done as soon after the removal of the prior crop as possible, and the field planted to a cultivated crop the next season. By following this method of tillage, always doing the work thoroughly and promptly when conditions demand it, we do not think that anyone need anticipate failure in dry farming.

We would, however, suggest that he get seed that is adapted to the conditions under which it is to be planted; in other words, seed grown in western Kansas.

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They will develop more power on less fuel and water than any other engine built.

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The HARD WHEAT SPECIAL. It will save a greater per cent of the grain than any other separator on the market today.

We can deliver separators and engines on short notice.

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WANTED—GOOD, RELIABLE MEN TO sell nursery stock. We have a splendid proposition to offer. Write today. James Truitt & Sons, Nurserymen, Chanute, Kan.

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FOR FREE INFORMATION ABOUT LABETTO Co., Kansas farm lands and Parsons real estate, one of the best towns in Kansas, write W. C. King, Parsons, Kan.

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160 ACRES LEVEL LAND, CROOK CO., Wyo., grows splendid oats, wheat, timothy, alfalfa and potatoes; 12 miles from Bear Lodge gold mines; some improvements. For terms write owner, M. D. Powell, Hardy, Neb.

LEASE FOR FIVE YEARS—CHOICE stock and dairy farm in McPherson Co., to highest responsible bidder on June 8. For particulars address J. S. Hoover, Manhattan, Kan.

WANTED—FARMS AND BUSINESSES. Don't pay commissions. We find you direct buyer. Write, describing property, naming lowest price. We help buyers locate desirable properties FREE. American Investment Association, Minneapolis, Minn.

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## POULTRY.

WHITE WYANDOTTE EGGS, \$4.00 PER 100 or 200 for \$7.00. Mrs. H. G. Stewart, Route 1, Tampa, Kan.

HILLCREST FRUIT & POULTRY FARM—Barred Rock eggs from prize winning stock, \$1 for 15; \$5 per 100. Route 4, Phone Ind. 2180-Ring 1, North Topeka, Kan.

ROSE COMB RHODE ISLAND RED eggs, pure bred; selected range stock, 16, \$1.00; 100, \$5.00. E. Conwell, Onelda, Kan.

ROSE COMB WHITE LEGHORN EGGS \$1 per 15, \$4.50 per 100. Mrs. C. Dibben, Wakefield, Kan.

S. C. BUFF ORPINGTONS—FIVE FENS; large, vigorous, tremendous layers. Eggs, 15, \$1; 100, \$5. R. C. Leonard, Oxford, Kansas.

ROSE COMB REDS EXCLUSIVELY. Eggs from high scoring birds, \$1.50 per 15; \$5 per 100. Mrs. Riley Ingraham, Manhattan, Kan.

EGGS! EGGS!!—FROM 18 VARIETIES thoroughbred poultry, geese, turkeys, Pekin, Rouen, Muscovy and Indian Runner ducks, pearl and white guineas, bantams, dogs, all kinds of fancy pigeons. Hen's eggs, 15 for \$1.50. Write for free circular. D. L. Brunen, Platte Center, Neb.

## Classified Advertising 3 cents a word

Advertising "bargain counter." Thousands of people have surplus items or stock 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 intending buyers read the classified "ads"—looking for bargains. The "ads" are easy to find and easy to read. Your advertisement here reaches a quarter million readers for 3 cents per word, for one, two or three insertions. Four or more insertions, the rate is 2½ cents per word. No "ads" taken for less than 30 cents. All "ads" set in uniform style, no display. Initials and numbers count as words. Address counted. Terms always cash with order. Use these classified columns for paying results.

SINGLE COMB WHITE LEGHORN eggs. R. W. Yoeman, Lawrence, Kan.

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BUFF ORPINGTON EGGS 15, 75 CENTS; 100, \$4.00. Ellen Sheaboraw, Fredonia, Kan.

WHITE WYANDOTTE EGGS—MODEL Poultry Yards, Hanover, Kan.

TWO BUFF ORPINGTON COCKERELS, \$2.00 each. Harry Cure, Atchison, Kan.

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ROSE COMB B. L. EGGS—\$1.00 PER fifteen, \$4 per hundred. Mrs. O. B. Smith, Cuba, Kan.

BUFF LEGHORN EGGS—FENS \$1.50 per 15; range \$1 or \$5 per 100. Mrs. John Wood, Solomon, Kan.

SLIGHTLY USED INCUBATORS AT A bargain. Will exchange for Leghorn stock or eggs. A. Koenig, Hanover, Kan.

EGGS FROM A FINE LAYING STRAIN of Rose Comb Brown Leghorns. Mrs. J. E. Wright, Wilmore, Kan.

WHITE PLYMOUTH ROCKS, FARM raised. Eggs, \$1.00 per 15. Safe arrival guaranteed. A. V. Huse, Manhattan, Kan.

INDIAN RUNNER DUCKS—GREAT LAYERS. Eggs \$1.25 per 15. Also Silver Wyandottes, \$1.25 per 15. Tillie Culver, Garnett, Kan.

BUFF COCHINS—EGGS, \$1.50 FOR 15. W. T. Garner & Sons, Maple Lawn Stock Farm, Crossville, Ill.

INDIAN RUNNER DUCK EGGS Imported stock. Barred Rocks and Single Comb Reds. F. L. Reinhard & Son, Ottumwa, Iowa.

PURE S. COMB BROWN LEGHORNS—Eggs from prize-winning stock. Eggs safely packed 30 for \$1.50; \$4.00 per 100. A. G. Dorris, Osage City, Kan.

100 BARRED ROCK CKLS. AND FEMALES, prize-winning strain, 85 premiums, 30 yrs. experience. Eggs, \$2 per 15; \$5 per 50. Chris. Bearman, Ottawa, Kan.

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NEOSHO POULTRY YARDS—ROSE Comb B. L. Reds, this year's breeders, for sale. We can sell cheaper now than any other time. J. W. Swartz, Americus, Kan.

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WHITE PLYMOUTH ROCKS—EXCLUSIVELY—large birds, good layers, farm range. Eggs May 1st, \$4.00 per 100; \$2.50 per 50. Etta L. Willett, Lawrence, Kan., R. R. 5.

EGGS FROM CHOICE WHITE WYANDOTTES with splendid show record reduced, 15, \$1.00; 30, \$1.75; 100, \$6.00. Beatrice Stock and Poultry Farm, Beatrice, Neb.

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SINGLE COMB! RHODE ISLAND REDS, eggs, \$2.00, \$3.00 and \$5.00 per 15; none better; my show record tells the story. Chas. E. Lentz, Atchison, Kan.

PRIZE WINNING WHITE ROCK EGGS, \$1.00 per 15; \$5.00 per 100. Pekin Duck eggs, \$1.00 per 15. L. T. Spellman, Paola, Kan., Route 8.

NINE YEARS A BREEDER OF R. C. R. 1. Reds, 15 range eggs, \$1.00; 100, \$5.00; choice pen eggs from high scoring stock, \$2.00 per 15; \$5.00 per 50. Mrs. B. F. Weigle, Winfield, Kan.

GALVA POULTRY YARDS—R. C. W. Leghorns and White Wyandottes. Some stock for sale and eggs by the setting or hundred. Prices reasonable. John Ditch, Prop., Galva, Kan.

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EGGS FROM WHITE ROCKS MATED with snow white, White Ivory strain cockerels, sired by White Ivory 2nd, winner of 3 sweepstakes silver cups, score 96½. After May 15, \$1, 15; \$5, 100. Mrs. Harry Webster, Yates Center, Kan.

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FOR SALE—4 RED SHORTHORN bulls, from 13 to 23 months old, eligible for record. J. Thorne, Kinsley, Kan.

FOR SALE—ONE DOUBLE STANDARD Durham bull. Registered and well bred. Age 3 years. C. M. Albright, Overbrook, Kan.

SEE US BEFORE PLACING YOUR stock catalog printing. Western Printing Co., Ptg. Dept. Kansas Farmer, Topeka, Kan.

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100 SHEPHERD PONIES TO EXCHANGE for good farm land, not heavily mortgaged. George Simpson, Wheaton, Ill.

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SIX COLLIE PUPS—\$2.00 AND \$3.00. Victor Hargrave, Richmond, Kan.

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PLANTS—CABBAGE, ALL VARIETIES, 25c per 100, \$2.50 per thousand; tomato, Dwarf Champion, Kansas Standard, Free, Beauty, Stone, Matchless, Acme and Trophy, 30c per 100, \$2.50 per thousand; Sweet Potato—Yellow Jersey and Yellow Nansmond 22½c per 100; \$1.75 per 1,000. 6 other varieties, 25c per 100; \$2.50 per 1,000. F. P. Rude & Son, Both phones, North Topeka, Kan.

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INTERNATIONAL AUTO BUGGY FOR sale. A. Koenig, Hanover, Kan.

ENDLESS DIME SCHEME, WILL MAKE you \$25.00 weekly. (Legitimate). Postpaid 25c silver. W. H. Dutton, Little Rock, Ark.

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SAFETY RAZOR BLADES STERILIZED and sharpened better than new. 2 cents each; razors 15 cents. Samuelson, 611 Penn st., Kansas City, Mo.

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SEND FOR FREE BOOKLETS—ALL about patents and their cost. Shephard & Campbell, 6900 McGill Bldg., Washington, D. C.

PATENTS PROCURED AND POSITIVELY sold if the idea has merit; all countries; best service; book free; send sketch. H. Sanders, 115 Dearborn St., Chicago, Ill.

## PUBLISHER'S PARAGRAPHS.

### A Specimen Letter.

From time to time our readers have noted reference in these columns to the original dry chick feed for young chicks. Some, however, may not know that the original and standard was first put on the market by W. F. Chamberlain of St. Louis, and was then as now known as "Chamberlain's Perfect Chick Feed," made in St. Louis, Mo., as showing the record for this feed, we present the following letter:

"W. F. Chamberlain Feed Co., St. Louis, Mo. Gentlemen: Enclosed find \$5 in full for 200 pounds of Chamberlain's Perfect Chick Feed. We have used it for years and think it the best that can be obtained.—Respectfully, Mrs. J. W. Harris, New Virginia, Ia.

### Do You Need Fencing?

Every farmer who needs fencing of any kind, should get "American Fence News." It tells a good many interesting facts that you really ought to know before you decide on or buy any fencing. The book is beautifully printed, contains many illustrations and tells how to fence for best effect. It tells how to make permanent wire fence, and contains the whole story of Fence Building. It also contains an interesting and valuable article on "The Operation of a Farm," showing the best methods of rotating the crops for biggest profits. Then there is a very interesting article showing how you can save work, time and money, avoid worry, increase your income and get more fun out of life. Also you will find an article on "Ornamenting the Farm." Last but not least by any means, you will find some facts about American Fence. It will indeed pay you to send a postal card addressed personally to Mr. F. Baackes, vice president and general sales agent of American Steel & Wire Co., Chicago, Ill., for your copy of "American Fence News."

### Great Demand For Men in the Automobile Business.

The automobile business is a new industrial field with great possibilities and opportunities for young men, the like of which has never been known before. Although only about a decade old, it has grown to huge proportions. No one dares guess its enormous extent in a few more years hence, and what another decade will bring forth is beyond the wildest speculation. The demand for competent men was never so great in any industry as right now in the automobile business. Capable

chauffeurs, repairmen, automobile salesmen and demonstrators are in big demand and the supply of such men being limited, the pay is correspondingly high. The Kansas City Automobile School of 2109 East 15th St., Kansas City, Mo., is by far the largest and best equipped school in America today and its thorough, practical course of instruction will properly prepare any man with ambition and energy to get into this business and enter it intelligently. The school is sending out a very handsome catalog to those who write for it, telling about the great growth of the automobile business; the great demand for men, and the good salaries paid chauffeurs, repairmen and salesmen; the many opportunities for establishing repair shops and agencies; the thoroughness of this course of instruction and the many successful experiences of its students. See advertisement on another page.

### There Is No Exercise to Equal Cycling.

Among all the sports or forms of exercise, which have found any degree of favor with Americans, cycling is most ideally suited to American needs and American temperament. It satisfies our passion for being "on the go" in a sane, health-building manner. There is no nervous tension on cycling, such as attends the swift ride on the speeding motorcycle, or in the whirling wheel, one forgets he has nerves or muscles. Instead of a rush of air in the face that renders breathing a difficult task it seems second nature, when wheeling, to drink in long sweet, soul refreshing breaths of nature's ozone. "Get out your bicycle and get the fresh air" has been many a physician's advice to the patient seeking relief from nervous strain, stomach disorder, or a long list of kindred ailments. That, too, is our advice to our readers. If you have a bicycle, use it. If you haven't one, you will be surprised to learn how fine a wheel can be bought for a very few dollars from the Mead Cycle Company, Chicago. They are glad to send their catalogue to interested persons.

### Send for This Book.

All of our readers who are thinking of buying a carriage, wagon or set of harness in the near future ought to write to the Elkhart Carriage & Harness Mfg. Co., at Elkhart, Ind., and ask for one of their new 1910 catalogs. This company has been manufacturing vehicles and selling them direct to the user for thirty-seven years and are by far the largest manufacturers in their line doing business this way. Their success is wonderful, but it only goes to show that honest goods at honest prices are always appreciated. This firm knows how to get up a book so as to give a prospective buyer an accurate knowledge of what they have to offer. Going through their factory, as good as a trip through the finest half-tone cuts, made direct from photographs. They picture each particular feature and describe it so clearly and completely that there is nothing left to the imagination. When you order a job from the Elkhart catalog, you know just what you are going to get. Besides they give you a two years' guarantee on every vehicle they sell, and a guarantee from such a company means what it says. Get one of these books before you buy elsewhere, anyway. Mention Kansas Farmer when you write.

### Lice Killer a Godsend.

One of our good readers, a poor unfortunate widow, went in for poultry three years ago, as a last, desperate attempt to keep the wolf from the door. She had worked, prayed and hoped to be able to pay off the mortgage on her home by July, 1910, but the hardest kind of luck overtook her. As she puts it: "I had upwards of 400 hens six weeks ago and I was making money hand over fist. One morning I noticed fifteen or sixteen of my best layers moping around and acting queer and they began to quit laying. Well, more got that way and one morning I found four dead; the next morning three more. About this time I saw a neighbor and we thought it was cholera or some other deadly disease, so I got some good remedies for them, but no use. They kept on dying off, a few every day, till I lost forty-three. More were getting weak every day. Well, do you know, these hens were simply being tormented to death by chicken lice! Of course, they may have had some disease, but those lice were at the bottom of the mischief. I blushed when I tell it, that I had allowed thousands of my hen horrid, crawling insects to get in my hen houses. My neighbor, Mrs. McConnollog, told me to get some 'Red Label Lice Killer' and get it quick. Well, I was surprised. I spent 60 cents altogether for the lice killer. I only used a little of it till the lice were gone and my hens braced up and got all right. I believe every one would have died but for the lice killer. You see as each hen died, it left more lice to get on the remaining hens. The lice killer was a Godsend, that's what it was. I tell all my friends now who are bothered with chicken lice to get Dr. Whittier's Red Label Lice Killer at a drug store. It costs so little and does the work so well that everybody ought to know about it."

## FIELD NOTES.

### What Constitutes Good Portland Cement.

In the manufacture of an article like Portland cement, which is a chemical process, much care must be exercised. The chemical science is an exact one; "near right" does not go; every step must be taken just right to obtain the best results. To begin with, the materials from which Portland cement is manufactured must be, by nature, properly proportioned and in chemical combination. After such materials have been discovered, the process of manufacturing good Portland cement lies in the careful handling and manipulation of the materials through every stage of manufacture. There are several stages; the neglect of precision and care in any one of them cannot be corrected or overcome by the next; all are of equal importance if the best results are to be had, and to lay much stress on any particular stage to a degree of leaving the others in oblivion, is misleading.

In the manufacture of the "Kansas Grass-hopper Brand" every stage is brought to a standard. In compounding the materials, the operation is doubly checked so that there is no possibility of starting the process of manufacture wrong. A good Portland Cement, therefore, consists of a carefully manufactured one from good materials.

The materials employed in the manufacture of the "Kansas Grasshopper Brand" of Portland Cement is limestone and shale. Look up advertisement in Kansas Farmer and write for free booklet.



## EMPIRE Cream Separators In Greatest Demand— Dairymen Investigate

40% more cow owners chose Empires last year than in any other year of their long, successful history. No other separator of any price or style even approached this great increase in demand. It proves that dairymen are realizing more and more how much quality counts and that they are investigating more carefully before they buy.

And Dairy Commissioners have been making the rules of cleanliness more strict. That's another reason why more cow owners are choosing Empires. They are kept perfectly sweet and clean without effort, no taint remains to spoil next skimming as is the case with ordinary separators, having nooks, corners, slots and crevices in the bowl parts.

### Different Styles

The Empire Line includes not only various sizes and capacities, but different styles of construction, offering widest choice—every machine backed by the Empire Guaranty—as good as a Government Bond. Take your choice, the Frictionless Empire or the Empire Disc—each years ahead of all others in improvements. Let us prove to you that Empires turn easily, skim perfectly and give no bother for many years after ordinary separators have gone to the scrap pile.

**FREE—Dairymen's Guide to Dollars.** Let us send you our catalog of the complete Empire Line, setting forth the unbiased truth about different styles of separators. Address **EMPIRE CREAM SEPARATOR CO.** Dept. J 1225 Washburn Ave., Chicago Factory, Bloomfield, N. J.



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and enjoy a most pleasant occupation as competent chauffeur—one that can repair as well as run machines. Splendid Opportunities in this new business. Automobile Livery, Taxicab, Repair Companies being established everywhere. Every man wanting to own an automobile, become a chauffeur, expert repairer, agent or salesman needs our practical course. Write for our interesting free book. **KANSAS CITY AUTOMOBILE SCHOOL**, (Largest and Best Equipped Automobile School in America) 2109 E. 15th St., Kansas City, Mo.

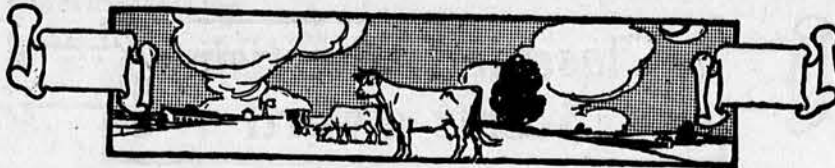
**THE NEW IMPERIAL AUTOMATIC WASHER**  
Emancipates the housewife from drudgery. Satisfies the Daily Longing for an Equal Chance at Life. Combining the good features of the Washboard and Steam Laundry, it charms our customers with its efficiency and makes possible our motto "Not a Dissatisfied Customer." Price within the reach of all. Ask your dealer or write The Imperial Manufacturing Co., Main Office and Factory, Independence, Kansas.

## WESTERN CANADA

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

**70,000 Americans** will enter and make their homes in Western Canada this year. 1909 produced another large crop of wheat, oats and barley, in addition to which the cattle exports was an immense item. Cattle raising, dairying, mixed farming and grain growing in the provinces of Manitoba, Saskatchewan and Alberta. Adaptable soil, healthful climate, splendid schools and churches, and good railways. For settlers' rates, descriptive literature "Last Best West," how to reach the country and other particulars, write to Sup't of Immigration, Ottawa, Can., c/o the Canadian Government Agent. **J. S. CRAWFORD**, 125 W. 9th St., Kansas City, Mo. (Use address nearest you.) (6)

# DAIRY



### Highear Ideals in Dairying.

People are beginning to recognize the fact that agriculture is a big, broad, deep science. Its pursuit requires skill, common sense and energy, but in dairying there is a greater latitude for the use of brains than in any other department. Of all the special branches of agriculture, dairying is the most complex. A successful dairyman must be a judge of real estate in order to strike a bargain in purchasing his farm. He must be a judge of the dairy cow in order to intelligently select his stock. He should have some knowledge of horses, hogs and sheep, all of which are often profitable accessories to the dairy farm. He must understand hygiene, in order to keep his cows in a high state of health. He must understand pedigrees and the principles of breeding, in order to propagate a profitable herd. He must understand the chemistry of the soil, in order to properly rotate his crops and keep up the soil fertility. He must understand seed selection and crop cultivation. He must understand animal nature, in order to coax his cows into their best efforts, and human nature, in order to get his hired help to perform regularly, faithfully and efficiently the work about the dairy farm. He must also be a bacteriologist in order to practice cleanliness necessary to make his product a blessing, instead of a curse. He must understand business methods, in order to find a profitable market for his products. In short, the most successful dairyman will possess the qualities of the real estate man, the live stock judge, the hygienist, the breeder, the chemist, the agronomist, the physiologist, the bacteriologist, and the merchant. Love and gentleness must rule his nature, for an ill-temper is a misfit in a dairy. He is making merchandise of motherhood. He is putting on the market an article of food fraught with wonderful possibilities for the production of life, strength and health or weakness, disease and death. Is it too much to ask dairymen to have a high ideal?

Good, pure milk is a precious food. It gives life and strength to the babe and to the invalid. To the laborer who goes forth in the full strength of years, it gives more energy than other food that he can purchase at the same cost. To the professional man it is ever a restorer of his wasted nerves. To the housewife it is the ultimate consummation of convenience and usefulness. It is the one perfect food of the Divine Chemist. In the great plans of nature there is no substitute for it. The man who produces it should have a clear mind, clean hands and a pure heart.

Bad, impure milk may be a dangerous food. If any of its natural properties are removed from it, or water added to it, it loses, at least, a part of its food value. It may only fill space at a time when nourishment is most needed. If it contains either filth or preservatives, it may actually become poisonous. If it is from diseased cows or is contaminated with disease germs on its way to market, it may produce disease and even death. It should not be produced and handled for the human family like a scavenger gathers offal for hogs.

There is room for higher ideals in all occupations. Perfection can never be reached in any of them. It will probably be more difficult to approach perfection in dairying than in any other occupation. Nevertheless, dairymen should have high ideals in view, and strive and strive, and keep on striving for greater perfection.

Dairymen should never go on record as opposing reasonable reforms in the dairy business. No one can deny that heretofore there has been a general lack of cleanliness and sanitation about dairies. Long practice of watering, skimming and adding preservatives to milk has apparently led some dairymen to believe that they have an inherent right to practice such fraud. \* \* \* There can be no doubt about it being wrong to sell milk from tuberculous cows; or to sell skimmed milk for whole milk; or to use preservatives in milk; or to sell filthy milk. When a few dairymen stand out in the open in favor of these fraudulent practices they cast serious reflections upon the whole dairy industry. The public is led to believe that dairymen are a lot of crooks. The respectable dairymen should be the most severe in reproof of those who are bringing disgrace upon this, the most honorable of all industries.

Dairymen should not only discountenance practices that are palpably wrong, they should take active steps to right all wrong. It will pay. If the dairymen do not correct their own faults the public will do it for them. The public is already aroused on the milk question and are demanding corrections. Opposition by a few crooked dairymen to reasonable reforms not only brings the dairy industry into bad repute, but turns people from the use of dairy products.

Good milk is the cheapest article of food now in use. Filthy milk from diseased cows is dear at any price. The demand for the highest priced milk in the cities, on account of its high class, is greater than the demand for the cheaper grades. Dairymen should strive to produce nothing but milk of high quality, free from dirt, preservatives and disease, and then ask a profitable price for it. The public has already shown a willingness to pay a profitable price for good dairy products. Instead of trying to produce milk at a low cost, even at a sacrifice of its purity and quality, dairymen should go to any necessary trouble and expense to produce wholesome milk, and then ask a profitable price for it. A pint of milk is said to equal in food value four eggs, one-half dozen oysters or a pound of steak. It is available as a food for infants and invalids. It is easily digestible. It is little trouble to prepare for the table. It can be used in a great many different ways in cooking. Altogether it stands alone for convenience and usefulness. Compared to other articles of food and drink, milk is selling too cheap today. If dairymen will stand together and discountenance the dirty, filthy practice of some of their own numbers, make an effort to secure absolute purity in all their own products and educate the public up to the real value of good milk, they will not only command better prices, but are sure to create an increased demand for their products.

Another point might be raised here. It is not so much one of higher ideals as of business foresight. Dairymen are allowing a public slander of skimmed milk. By a few dairymen trying to sell it for whole milk it is being brought into unjustifiable disrepute. An inspector recently stopped a shipment of skimmed milk which was sent to market as whole milk and the papers spoke of it as though it was poisonous. The truth of the matter is that the principal food value of milk is in the skim-milk. I believe it will be found wholesome for more people for drinking than whole milk. Skimmed milk has a great food value, is palatable and digestible. It produces fine pigs and calves and has made a fine physique out of many a baby boy. Dairymen should present these facts to the pub-

lic and put skimmed milk on sale, but should not fall into the fatal and detestable practice of trying to sell it for whole milk.

Suppose two cases: First, a city in this state undertakes by ordinance to require that milk shall be from healthy cows; that it shall be kept at a temperature unsuitable for germ propagation; that it be kept clean; and, if it be called whole milk, it shall be whole milk. Then a few dairymen about the city object to complying with these reasonable requirements. They hire lawyers and go into court. The facts go from the courts to the newspapers. Consumers read the papers, and many of them quit using milk. Many of them use it with only fear and trembling for the safety of their children. What impression does the public get of the dairymen? What is the effect upon the demand for milk? Who is to blame?

Second, the dairymen around the cities in this state go to work of their own accord, and have their cows rid of all disease. They agree to keep their milk clean and to have it just what it is represented. They evade nothing that is fair and right. They take pride in their herds, and invite their customers to inspect their cows and the way the milk is handled. They openly advance the price to cover the extra expense of keeping things in a proper condition. They make a milk inspection ordinance unnecessary. What impression does the public get of these dairymen? What is the effect, in this case, upon public opinion and the demand for milk?

In conclusion, I would like to urge that the progressive dairymen of this state, assembled here today, take the initiative in correcting existing evils in the dairy industry. Now is a good time for this association to go on record as favoring all that is right and fair in dairying. It is not sufficient for a majority of dairymen to live up to right principles. The majority should urge the minority to do the same thing. If, in due time, a few dirty, crooked dairymen fail to catch the proper spirit, state laws and city ordinances emanating from the dairymen themselves, should be passed requiring rectitude of them. There can be no gain saying that voluntary action upon the part of the dairymen to bring about perfection will lead to a better demand and better prices for dairy products. What is better, it will win for dairymen the universal esteem of all mankind.—Dr. D. F. Luckey, State Veterinarian of Missouri.

### Correct Your Faults in the Dairy.

The good dairy cow is hard to find and higher in price than ever before in the history of dairying, and it would seem to me that this trouble will increase if there is not more attention paid to the raising of calves from our best cows. True, it is as expensive as buying in case you are a dairy farmer, where farms are high in price and you are selling milk. But it is the safest and surest way to get a good producing herd that is free from disease, says a writer in the Jersey Bulletin.

A pure-bred sire that comes from a good milking family should be used. If properly handled he can be used for many years, and will prove to be a profitable investment. I believe that many of our farmers in remote districts that are now selling their milk at low prices to the wholesale dealer, would be much better off to turn their attention to the raising of good cows from good stock and selling their cream, or to making butter, than they are under present conditions. It is to be remembered that in this way they are adding much to the fertility and productiveness of their soil.

Another thing in connection with the cow that must be understood, and that is that it is not profitable to keep boarders. The only way you can find that out is to keep milk records. I would as soon think of trying to handle a herd of cows without milking stools as without scales to weigh the milk. One is just as essential as the other to successful dairying. In this way and in this way only you weed out the unprofitable animal. She is a delusion and a snare. The scales, however, will show her up in the proper light. She should go to the butcher and not be a burden for you to carry.

Tuberculosis is a serious menace to the farmer, and I feel that it is not only a good business proposition, but a necessary one from the standpoint of public health, to eradicate it from

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**THE LOUDEN WAY**



your herds. Only one agent has been discovered that will detect it when present, and that is tuberculin. It should be used until your herd is free from the disease, and no animals brought into the herd that have not passed the test. Well-lighted, ventilated and sanitary stables, with a close weeding out of cows that show indications of not being right, will undoubtedly help matters for such as do not feel like making the test, and should be done in all cases. You owe it to yourself as well as to the milk-consuming public to keep your herd healthy, your stables sanitary, and to handle your product in the most clean and careful manner.

The help problem is always with us, as in all other business pursuits. The problem is likely to increase with present industrial activity. We must not be so dependent on the single man if we expect to always get good help; provision must be made through building small houses or otherwise for the men of family. In this way we can surround ourselves with a good grade of help, that will be much more likely to remain with us and render good service.

The average district school gives at best a poor opportunity for the child brought up in the country. A strong effort is now being made by our state authorities and others to improve them by consolidation into one central graded school. If this can be done it would seem to me to be a great help to not only keep our young people on the farm, but offer inducements to men of family to work where their children may have the benefit of healthful surroundings and good educational facilities.

One of the best investments a town can make is money spent for good roads. The state is expending large sums in this direction. Its work should be supplemented as far as possible by the towns, for good roads means much to the dairy industry of our state through the saving of wear and tear on our teams and greater hauling capacity when going to and from market.

No good business man would think of carrying on a business and not know what his goods cost him. To my mind it is just as necessary for the farmer. He should know what pays and what does not pay in connection with his farm operations. Don't guess, but keep a simple set of books. You who have not tried it will be surprised with the results. Be a merchant as well as a farmer.

No farmer can afford to do without farm papers—the more you can take the better. One article in such a paper in a year that will help you will be worth many times the year's subscription. We learn from one another in this world, and this is the best way to get the benefit of others' experience and research.

In concluding I would say, give your wife full credit for her part in your work, for without her help, interest and co-operation you cannot succeed. Take an interest in and love your business. Be helpful and kind to your neighbor. Be honest, industrious and thrifty. If you are not succeeding, don't blame the weather or other conditions, but blame yourself. Get busy and correct your faults.

#### A Bad Mistake in Breeding.

"A man who reads these records as published in the dairy press writes me about a neighbor of his that is working into Holstein-Friesian cattle by using a fine looking half-blooded bull, nearly half of his calves being black and white, and who intends to use a pure bred bull as soon as they become a little cheaper. Such a man, in his efforts to improve his herd, is doomed to failure, for he has started wrong; and because Holstein-Friesian blood, even in small quantity, is apt to affect color, he will be apt to hold that breed responsible for his ill success. As he does not read dairy papers, he will never stop to think that the progeny of a half-blood bull carry but one-fourth the blood he desires, and that the one-fourth cannot offset the preponderating influence of the other three-fourths. He will never learn that the only really good point that his grade bull possesses is the point where the butcher's poleaxe should hit him, when he is led to execution.

"As such men cannot be reached through the dairy press, Holstein-Friesian breeders should do missionary work when meeting them at the creamery, the condensery or the shipping station. Point out the benefits, and urge them to subscribe for a good dairy paper; for if you can only get them to reading and thinking, you will

find it easy to sell them pure bred bulls. The question is not so much as to whether they can afford to do without one, moving along in the old way, and using a scrub or grade. Offer to sell such a man one of the old fashioned, narrow-width tools, be it plow, harrow, drill, mower, rake, or any other, and he will quickly tell you that he is not farming for his health, and that he cannot afford to have high priced help on high priced land monkeying time away with such narrow gauged tools. The reading of a good dairy paper will soon cause him to apply the same logic to the waste of time resulting from the use of narrow gauge cows.

"Suppose that a man pays out \$100 for a pure bred Holstein-Friesian bull, and raises but ten of his heifer calves. Suppose that each of these calves on coming into profit yields but one pound more of milk at each milking than did her dam at the same age, an amount too small to be noticeable without weighing; yet it would amount to 600 pounds for the 600 milkings of the year, and have an average value of not less than \$7.50, or \$75 per year gain for the ten heifers. But the average milking period for a cow is fully six years, which would bring the total gain to \$450 for the ten head. In actual practice, a bull, especially when used by neighbors, begets several times ten daughters, and the individual gain in production of the daughters over their dams is much greater; so that instead of the \$100 outlay being contrasted with \$450 gain, the gain is more apt to be much over \$1,000. What other investment could show such a percentage of profit?"—W. H. Gardner, Holstein-Friesian Association.

Just take a stroll through the pastures some day and take a whack at the bunches of weeds with a corn knife. It will help your milk business.

Hot water and plenty of it is mighty good for the hand separator. Most of your troubles in making butter can be cured with hot water and sunshine in the vessels.

Pasturage has been a little off this spring and the man who held his cows up to full capacity until the grass became good has done a good thing for himself.

If you have not already provided a cool place for your milk and cream do it now before the weather gets any hotter. It not only pays but it pays big.

Figs are an important part of the dairy and, like other parts, they need care. They will drink sour milk but that which comes fresh and warm from the hand separator is vastly better for them.

Everybody is interested in good roads, but perhaps no one to a greater extent than the farm dairyman. The King drag is a simple machine and a good road may be secured by using it on an average of only 12 times a year. Is it not worth while?

Keep the cows in their usual stalls in the summer nights. If these are well ventilated and supplied with plenty of fresh bedding it will be more comfortable for them and handier for you.

According to Joseph A. Arnold, chief of the division of publication, United States Department of Agriculture, dairy products supply 18 per cent of the food in the average American home, while meat and poultry supply 16 per cent. Cereals and their products supply 31 per cent, the greatest amount of any class of foods, while vegetables and fruit together furnish 25 per cent. These figures indicate clearly the relation which the principal agricultural products bear to problems of home economics.

By the use of the hand separator it is possible to make the highest grade of butter at home, providing the cream is properly handled and churned. By the use of the separator you are not only able to make a higher grade of butter and will sell it for a higher price, but you will be able to extract more cream from the milk and hence make more butter. Also the warm sweet milk will have a higher food value either for human use or for animal feeding. If you keep more than three or four cows by all means buy a separator. It will soon pay for itself.

# EVERYBODY HAVING COWS WILL SOME DAY USE A DE LAVAL CREAM SEPARATOR



Nearly 1,200,000 farmers, creamerymen, milk dealers and owners of country homes, throughout the world, are already using De Laval Cream Separators, and 150,000 or more are being added to the number every year—many more this year than ever before.

If you haven't a De Laval Cream Separator already you can't be anywhere near the head of this tremendous procession that started thirty years ago, but it will be foolish to wait to bring up the tail end of it.

The use of a De Laval Cream Separator—with even a single cow—means more and better cream and butter, warm and sweet skim-milk, less labor and more profit, twice a day every day in the year.

A De Laval Cream Separator saves its cost in a few months, not only over any other method of creaming milk but over any imitating cream separator.

Then why not fall into the De Laval procession now? You can't recover the waste and worry of previous years, but you can stop it going further. Why not do so? Every day of delay means just that much more waste of product, quality and dairy comfort. Why prolong it?

De Laval Cream Separators are made for one cow to one thousand, in proportionate size, style and price, and sold for cash or on such reasonable terms that they actually pay for themselves.

They are sold direct or through local agents. If you don't know the nearest agent write for his name and a catalogue, which we shall be glad to send you.

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The White and Brown Leghorns are the greatest layers in the world. I keep 200 of the celebrated Chamberlain laying strain on my Experimental Farm, and to increase the sale of my Perfect Chick Feed, I will send to any one who will send me their name so I can send them my Perfect Chick Feed Catalogue, 2 sittings of Single Comb Brown or White Leghorn Eggs for \$1 for the 2 sittings. Not less than 2 sittings sold. Eggs by the 100, \$5. White or Barred Plymouth Rock or Rhode Island Red or Silver or White Wyandotte or Rose Comb Brown Leghorn or Single Comb Black Minorca Eggs, \$1 per sitting. Large Bronze or White Holland Turkey Eggs, \$2 for 10 Eggs. Large White Pekin Duck Eggs, \$1 for 10 Eggs. This is a rare chance to get a start of extra fine stock. Send Post Office orders on St. Louis and have your orders booked early. Fine Roosters for breeding, \$2.50 each. **W. F. CHAMBERLAIN, (The Perfect Chick Feed Man)** KIRKWOOD, St. Louis County, MO.

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# POULTRY



Now that the rains have come in earnest, see that the chicks are kept dry.

One bad rainstorm often drowns hundreds of chicks, because they are not shut up in their coops.

Half-drowned chicks can often be revived by placing them near a warm stove, and covering them with flannel.

If you do not succeed in hatching every egg in your incubator, do not be discouraged. The experiment stations say that 50 per cent is the average hatch of an incubator.

If the ground is low where the brood coops are placed, it would be well to set them on platforms a few inches from the ground, and then when a heavy rainstorm comes they will not be liable to get drowned.

Remember it is the early hatched pullets that commence to lay early in the fall. Some will commence to lay when five months old; but they must have the best kind of feed, and be pushed for all that is out in order to do this. But it will pay to give the early hatched pullets some extra care and attention, for not only will they lay eggs in the fall, but will keep it up during the winter, when eggs bring the highest price.

An inquirer asks if it is profitable to raise broilers and capons. The raising of broilers is a business and demands proper buildings and machines for hatching and raising them. Unless you are near to a large city it would not be profitable. Neither is capon raising profitable unless you have a special market for them. Of course it is all right to raise broilers and capons for the use of one's own family and there is no better eating than a fried broiler or a roast capon.

The young chicks will need constant care and attention to do well. Some people are very enthusiastic over young chicks for a few days of their life and then they let them go, thinking they can take care of themselves. But if they are not watchful, they will soon find out that their flock of chicks is dwindling away at a frightful rate. Probably lice gets away with most of them, but cats, dogs, rats, skunks and other vermin make inroads on their number till by and by there are very few chicks left. Constant vigilance is the only safeguard for a large and healthy flock of chickens.

Common diarrhoea in chicks is often caused by a chill while they are very young. Boiled milk or boiled rice water is good for this, and as a rule they soon get over it; but white diarrhoea is caused by bacteria, so government experts tell us. As a remedy they recommend calomel, one-tenth

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eggs from prize winning strain, \$1 per 15; \$5 for 100.

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grain; castor oil, a few drops with one to three drops of turpentine. Along with this five to ten grains sulphate of iron should be dissolved in one gallon of drinking water. The best way to battle with the disease is to try and prevent it. First the eggs should be disinfected with 95 per cent alcohol, and the machine thoroughly cleaned, sunned, aired and disinfected. The soil to which the sick birds have had access should be spaded up, limed and thoroughly exposed to the sun and air. All sick birds should be immediately separated from the well ones. Feed a little bread crumbs dry or wet with milk with hard boiled eggs for the first two to three days.

One would hardly suppose that in this enlightened age, there should be anybody left who still believed that chicks hatched in an incubator were less hardy and strong than those hatched by hens. But there are still some people who hold such belief, for we met one last week. We tried to convince the party that there could be no difference between such chicks, for heat was the only element that entered into the matter of hatching chicks. Of course, after the chicks are hatched and are placed in a brooder, there may be quite a difference between such chicks and those raised by a hen. A hen and her brood that have free range are apt to thrive. The hen seeks insects for the chicks and gives them green food and finds many a tid-bit for them that they would not see themselves. But to do well even the hen has to be looked after. She must be kept free from lice or her chicks will surely die. She must be kept in the coop till the dew is off the grass, otherwise she will drag her chicks through the wet grass till they are soaking wet and will lose many of the weaker ones before she gets back to her coop. But taking ordinary care of her, the mother hen is hard to beat for raising her family. In the case of brooder chicks, they must be attended to with the greatest of care in order to thrive. The heat of the brooder must be just right day and night, the food must be carefully selected and given to them several times a day. The brooders must be kept scrupulously clean. The drinking utensils should be attended to daily to see that there is no filth in their water. They have to be fed some kind of meat to take the place of the insects that the mother hen gets for her brood and they must have green food or they will dwindle and die. To give brooder chicks the same care and attention that the hen gives to her chicks is quite a task for anyone, and if one can do it, there should be no more difference between brooder-raised chicks and those raised by the hen, than incubator-hatched chicks and those hatched by the hen.

### Leghorns for Farm Fowl.

I find Leghorns the most valuable fowl for the farm. They are the best known of the egg producing breed, holding the same place among poultry that Jerseys do among cattle. They are lively in action and are the best foragers. They are light eaters and the cost of raising them to full size is about one-half of raising the Asiatic varieties. Two Leghorns can be raised for the same price in a shorter time than one of the larger breed, and there is more money raising poultry for eggs than for meat. But as a matter of fact, they are not behind for broilers, since they grow to the requisite weight in about the same time as the larger breeds and bring just as much per pound in the market. The reason I raise the Brown Leghorns is this: They are not so easily seen by hawks or vermin and they breed true to color.—A. G. Dorr, Osage City, Kan.

### Soft Shelled Eggs.

What causes chickens to lay soft shelled eggs? I sometimes find one to three hens about 3 or 4 o'clock in the afternoon sitting around on the floor with their eyes shut and unable to get on the perches. Their wings

droop and they topple over when trying to walk. I place them on the perches and next morning they act the same way. What is the matter with them?—Mrs. L. E. B., Clark County.

They lack the mineral elements that are required to make the shell. Or, it may be that they are so fat that the egg producing organs have been weakened by the presence of layers of fat. Keep them supplied with plenty of oyster shells, grit, and throw some coal ashes or lime on the floor of the house. Cut down their rations, as you are probably feeding them too much corn and other fat producing food. Feed clover and an abundance of green food. Scatter grains in deep litter and make them scratch for the greater part of their food. Give the whole flock a laxative by adding a tablespoonful of epsom salts to a gallon of water, giving them no other water to drink.—Wisconsin Agriculturist.

### Grain Crops for Poultrymen.

Speaking on this subject before the Connecticut Poultry Association recently, Prof. L. C. Clinton, director of the Storrs Experiment Station, placed winter wheat as the best grain crop for poultry. With wheat, however, as well as other crops, land suitable must be selected.

It will be a mistake, he said, to try grain for poultry on any old land. There must be a careful selection of soil. For wheat, the poultryman should select his heaviest soil or a clay loam. The wheat can follow in rotation after corn or early potatoes. The land need not be plowed. Level it with a harrow, making a good seed bed and put on a top dressing of stable manure, or a commercial fertilizer at the rate of about 300 pounds to the acre, fairly high in phosphoric acid and potash. The seed required will be about two to two and one-half bushels per acre. The yield should be from 20 to 30 bushels per acre. The wheat should be sown in September and harvested the next fall.

Buckwheat is a hot weather crop and must be sown late in June or early in July. The quantity required is from a half bushel to three pecks to the acre. The yield should be from 15 to 25 bushels to the acre. A fertilizer relatively high in phosphoric acid and potash should be used. Too much nitrogen will cause the plants to fall down and lodge. Other grain crops that may be grown with profit are barley, which will yield from 18 to 30 bushels to the acre; oats, with a yield of 40 to 60 bushels to the acre, and a mixture of oats and Canada field peas, which will yield from 40 to 45 bushels to the acre.

### Raising Layers.

Do not blame your pullets next winter when they are not laying. You should know which hens are furnishing the eggs from which these pullets will be hatched; the chances on the average farm are that the eggs from the poorer layers and slower maturing pullets are being used for this purpose, and that the hens that have been laying all winter are being used to hatch these eggs. Culling, selection, elimination, kept constantly in mind, and continually practiced, will mean healthier fowls, livable chicks, earlier pullets, and eggs when they are most wanted.

Do not set eggs from the whole flock, but dispose of all males not used in this breeding pen, and from the remainder of the flock gradually eliminate the drones. It is surprising how large a proportion of the average flock is useless or worse than useless; for these non-producers are in the way of the workers and are preventing them from doing their best.

If you cannot make up such a breeding pen this spring, try this for next season. Next fall mark or band the first thrifty pullets to begin laying; also the yearling hens that are doing well this season. During the early winter carefully note their performance, and from these banded hens and pullets make up your next year's breeding pen. You will be surprised at the increased vigor and productivity of your flock. If your hens are not responding to good treatment with a good average egg yield, try increasing that average by cutting out the non-producers. A well bred, well housed, well fed, and well cared for hen will lay 60 eggs during the three spring months, enough to pay her board for the entire year.—W. E. Vaplan, Colorado Agricultural College.



# LIVE STOCK



## Silage for Fattening Cattle.

### VALUE OF SILAGE.

From October 10, 1902, to June 8, 1903, the Kansas Experiment Station fed a lot of ten steers on corn silage, chopped alfalfa hay and a grain mixture of equal parts ground corn and kafir corn, in comparison with another lot of twenty steers of the same average weight and quality fed exactly the same feed except silage. The results are shown by the following figures:

	No. of steers.	Total gain of lot, lbs.	Grain consumed per 100 lbs. gain, lbs.	Roughness Consumed per 100 lbs. gain, lbs.	Chopped alfalfa, lbs.
With silage, ... 10	4,468	715	461	327	
Without silage 20	8,359	733	...	483	

From the above figures it will be seen that for every 100 pounds of gain the 461 pounds of silage saved 18 pounds of grain and 156 pounds of alfalfa. At the present market prices of these feeds (1910, \$1.08 per cwt. for grain and 55 cents per cwt. for alfalfa) the 461 pounds of silage made a saving of \$1.0524.

The steers were shipped to Kansas City and sold at the stock yards June 23, at the following prices:

Lot with silage, per cwt. .... \$4.95  
Lot without silage, per cwt. .... 4.11

Here is a gain of 25 cents per cwt. in the selling price in favor of the silage steers. Adding this to the \$1.0524 already saved it makes the 461 pounds of silage worth \$1.3024, or at the rate of \$5.65 per ton.

Making the above comparison on the basis of roughness alone, the 461 pounds of silage plus the 329 pounds of alfalfa in the silage lot is equivalent to the 485 pounds of alfalfa in the lot without silage. This shows that the 461 pounds of silage was equivalent to 156 pounds of alfalfa. At this rate, 3.02 tons of corn silage is equivalent to one ton of alfalfa hay.

When sold the silage lot were pronounced excellent cattle and fat enough for the ordinary trade. After the cattle were slaughtered and placed in the cooler, Armour & Co. went over the carcasses. The silage lot contained the largest per cent of fat—just the right amount for the packer's trade. The carcasses showed good quality, with little waste, and would be saleable on any market. The loins and crops were pronounced excellent.

The lot without silage was considered a nice assortment of cattle, but they were not nearly as well covered with fat and did not meet the requirements of the dressed-beef trade as well as the silage lot.

Average farm land in average seasons will produce from ten to fifteen tons of green corn per acre. Assuming that land will yield only ten tons per acre, there is an income, according to the above experiment, of \$56.50 per acre.

### SILAGE FOR STEERS.

J. W. Robertson reports an experiment with steers begun in 1889 and continued for three years. The object was to compare:

1. Silage, hay and roots.
2. Hay and roots.
3. Silage when fed with a constant grain ration.

The conclusions from the three years' test are:

"1. On an average the steers that were fed on corn silage, straw and meal gained in weight 35.8 pounds more per head per day for feed consumed on hay, roots, straw and meal.

"2. On the average of two years the cost for feed consumed for 100 pounds of increase in live weight was 64.4 per cent greater on hay, roots, straw and meal than it was on the corn silage, straw and meal."

In a trial with one- and two-year-old steers fed 20 pounds of cut hay, 40 pounds of roots (mangel-wurzels, turnips, and carrots) and 5 pounds of straw, or 50 pounds of corn silage and 5 pounds of cut straw, with a constant grain ration of equal parts of barley, peas and frosted wheat, the result was as follows:

"1. During the feeding period of twenty-four weeks the steers that were fed upon corn silage, straw and meal gained in weight on the average 19 pounds per head more and cost 5.06 cents per head less per day for feed consumed than the steers that were fed upon hay, roots, straw and meal.

"2. The cost for feed consumed per 100 pounds of increase in live weight was 66.34 per cent greater on hay, roots, straw and meal than it was on corn silage, straw and meal."

A similar trial with calf steers resulted as follows:

"1. During the feeding period of eighteen weeks the steers that were fed upon corn silage, straw and meal gained in weight on the average 16 pounds per head less and cost 2.87 cents per head less per day for food consumed than the steers which were fed upon hay, roots, straw and meal.

"2. The cost of feed consumed per 100 pounds of increase in live weight was 27.6 per cent greater on hay, roots, straw and meal than it was on corn silage, straw and meal."

The Ontario Agricultural College reports that more rapid gains and cheaper gains were made on grain and silage than on grain and hay or grain and roots.

At the Indiana Experiment Station two experiments were made with two-year-old steers to determine the feeding value of corn silage when fed with shelled corn and clover hay. In 1906-'07 the experiment lasted 180 days. Ten steers fed shelled corn and clover hay made an average daily gain of 2.01 pounds, at a cost of 8.56 cents per pound, and a similar lot receiving shelled corn, clover hay and corn silage made a corresponding gain of 1.85 pounds, at a cost of 8.31 cents per pound. In 1907-'08 the experiment was repeated, lasting 150 days, when the steers fed the corn and clover ration made a gain of 1.9 pounds, at a cost of 9.13 cents per pound, and those fed the corn, clover and silage ration made a gain of 1.8 pounds, at a cost of 9.3 cents per pound.

In the financial statements of the two lots fed in 1906-'07 it was seen that the profit per steer was practically the same whether fed on corn and clover or on corn, clover and silage. The financial statements for the year 1907-'08 show a profit of \$18.41 in favor of the lot fed silage.

A second experiment was conducted to determine the value of a ration composed of shelled corn, cottonseed meal, clover hay and corn silage as compared with a similar ration without the silage. The initial value of these cattle was \$4 per hundred in both lots. The initial weight was 1,123 pounds in the silage-fed lot and 1,130 pounds per steer in the lot fed no silage. At the end of the six-months period the lot receiving silage averaged 1,602 pounds, while that receiving no silage weighed 1,570 pounds. The ten steers which received silage made an average daily gain of 2.6 pounds, at a cost of 7.91 cents per pound. Those not receiving silage made an average daily gain of 2.44 pounds, at a cost of 8.74 cents per pound.

The results indicate that corn silage may profitably be made a portion of the ration for finishing cattle.

At the Ohio Experiment Station a test of the relative merits of corn silage and corn stover was carried on with five lots of seven each and one lot of six steers. On full feed the three lots fed silage received 25 pounds per head per day, with 17 pounds of corn and 2.5 pounds of cottonseed meal, and the dry-fed lots received 20 pounds of shelled corn and 2.5 pounds of cottonseed meal. The steers were given all the dry,

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coarse fodder they would eat up clean, corn stover being used in the early part of the test, and hay of different sorts later. In the 140 days of the test, the average daily gain of the steers on silage was 2.333 pounds, and on dry feed 2.313 pounds, the cost of a pound of gain being 9.04 cents and 10.21 cents, respectively.

At the Virginia Experiment Station four lots of nine steers each were fed in stalls for 161 days a low grain ration, 2 pounds per head per day, made up of corn-and-cob meal and cottonseed meal 1:1, and supplemented respectively by hay, corn stover, corn silage, and a mixture of the silage and stover 1:1, and then pastured for 138 days, the range being at the rate of five acres per steer.

"While in the stalls the average gain per head per day varied from 0.12 pound with the stover-fed lot to 0.85 pound on silage. On pasture the smallest gain, 1.67 pounds per head per day, was noted with the lot which had been fed a mixture of silage and stover and the greatest gain, 2.2 pounds, with the hay-fed lot. Considering the test as a whole, the smallest gain, 1.05 pounds, was noted with the stover lot, and the greatest gain, 1.26 pounds, with the silage lot. The gain was least expensive, when the test was considered as a whole, with the silage-fed lot, costing 4.12 cents, and the greatest with the hay-fed lot, being 6.64 cents per pound.

"A special object of the investigation was to compare silage and stover, and a slaughter test showed that the average dressed weight of the silage-fed cattle was 57.05 per cent and that of the stover-fed lot 56.3 per cent of the live weight. Though the percentage difference was small, the extra amount of beef produced on the silage ration, according to the author's calculation, was 316 pounds, which, at 8 cents per pound, would make \$25.28, or about 25 cents per 100 pounds live weight, in favor of the silage ration."

At the Pennsylvania Experiment Station corn stover and corn silage were compared with two lots of six steers each, the grain ration in both cases being broken ear corn with two pounds of cottonseed meal per head per day. Mixed hay was also fed to both lots.

In the 120 days of the test the average gain on corn stover was 214 pounds per steer, and on silage 240 pounds. The cost of a pound of gain with the corn stover ration was 8.08 cents, and with the corn silage ration was 7.69 cents. Undoubtedly a part of the superior value of the corn silage was due to the ears which it contained.

### SILAGE FOR SOLE ROUGHAGE.

"From the results it appears that the cattle receiving silage as their sole roughness during the winter made the largest average gains, did not drift materially when turned on grass after the first ten days, slaughtered out to better advantage than the dry-fed cattle, and were in a thrifter and better condition throughout the entire feeding period. This is a sufficient proof of the fact that succulent foods can be fed to cattle maintained as stocker and finished on grass."

### COMPARED WITH PASTURE.

"The beef made per acre by the grazers varied from 46 to 60 pounds, or a return of from \$2.12 to \$2.82 per acre. An acre in silage yielding eight tons will provide roughness for four animals for one hundred and eighty days, which shows the importance of the silo where intensive farming is practiced, and the fact that larger returns can be secured from and through the medium of the silo than were obtained through grazing in these experiments."

"The feeding value of silage is in a large measure due to its comparative richness in nutrients especially suited for the nourishment of cattle its ease of digestion as compared with dry foods, its palatability due to its aroma and succulence, and the fact that it aids in cooling the system and keeping it free of effete material and keeping the circulation active."—Prof. C. H. Hindman, Kansas Agricultural College.

### The Hampshire Sheep for Crossing Purposes.

The Hampshire breed has rapidly come to the front in recent years. These sheep have become so popular that they were second in number at the three last international shows of mutton breeds.

When we stop to realize that the Hampshire is but a comparatively new breed in this country we are forced to admit that it must have strong points in order to command the attention of breeders in such a marked manner. As evidence of their mutton qualities I would cite that the grand championship at the recent international was won by Hampshires and that for the past two years the grand champion pen of all breeds at the English Smithfield show was won by a pen of Hampshire wethers. This, I think, shows that they are second to none in fleshing qualities.

For crossing purposes the breed is becoming very popular. The lambs attain a heavy weight while still young, as the Hampshire is an early maturing animal and a very heavy milker. Crossed on white-faced ewes Hampshire rams will produce with very few exceptions black-faced lambs, so popular in market circles. The half-blood ewe will then be a good sized sheep with a nice covering of wool, a heavy milker and a good mother. She will be well able to rear twin lambs and take good care of them. She will prove to be a good rustler, as this is one of the characteristics of the breed. Hampshires will subsist more exclusively upon and utilize more coarse feed than any other breed. The quality of being good mothers and milkers is a valuable one in a breeding flock as more and better lambs can be reared from them than from the scant milking breeds. A ewe with a good milk supply will take kindly to her lambs whereas one that is deficient in this respect will not and sometimes even refuses to own her lamb as natural instinct tells her that she cannot support it. On this account I have often found it comparatively easy to make a Hampshire ewe own a foster lamb if she has lost her own.

While a long-wooled ram crossed on common ewes will produce large lambs, they nevertheless have much more open coats which make them more liable to parasites and more subject to cold. It is for these reasons if for no others that lambs by such rams are less desirable than others. Lambs by a Southdown or Shropshire ram make a very good cross, but they do not attain the size that a cross-bred Hampshire will and the ewes are not such heavy milkers.

Now, just a word about selecting sires for crossing purposes. The ram chosen for this work should be a strong, masculine-headed fellow, short on legs, wide and thickly fleshed over the back and well quartered. Avoid the rangy, loosely-coupled ram as his lambs will lack in constitution and be poorer feeders than would those from a more compactly built buck. With good fat lambs at present prices, why should not every farmer own a small flock of sheep? No class of live stock will give better returns for time and money expended. They will clear the fence corner of weeds and enrich the soil of every acre trodden by their golden hoofs.—William F. Renk, of Renk Bros., Wisconsin.

If you have a good milk cow and she has little "ways" with her just let her have them. Please the cow and she will please you.

How often do we feel that we are workers whose compensation is inadequate, who labor that others may become rich and who are tortured by these facts. We fall of a great object when we do not remember that money is only an incidental object and that love of accomplishment is the real thing. Appreciation by others is pleasant but it does not last long. If our work is well done our own souls will praise us and that is compensation.

### Shinn Heavy Pure Copper Cable Lightning Rod!

A postal brings W. C. Shinn's wonderful book "Lightning, and How to Control It" By the Conqueror of Lightning.

It contains all known reliable information for every farmer and every member of his household. Tells all about lightning and the laws of nature in regard to it—how houses and barns take fire, and how people and stock are killed—why water drains, stoves and iron beds are very dangerous during thunder and lightning storms, and explains fully how and why Shinn's Copper Cable Lightning Rods prevent strokes absolutely. Send a postal for it today. Address

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# APIARY

Kansas Farmer invites correspondence upon subjects connected with bee culture, and is prepared to answer questions in this column. Address all letters and inquiries to J. C. Frank, Dodge City, Kan.

## Straws From Dodge City.

(By J. C. Frank.)

I often wonder if there is any other business that has had to go through the mire of ignorance and superstition equal to beekeeping.

Queen cells may vary very much in size and shape, and the quality of the queens reared in them is liable to as much variation.

We certainly must sow before we can expect to reap. This applies as truly to beekeeping as to any other line of business.

In the production of extracted honey, give seven frames in the eight-frame super and nine frames in the ten-frame.

Don't put on your supers before the bees are ready for them, as you gain nothing by doing so, but only render it harder for the bees to keep up the necessary heat.

There are many who advocate the non-use of the queen-excluding honey-board; but we strongly advise its use in connection with the production of extracted honey.

Change all failing or slow queens promptly and breed from the best you can secure, thus raising the standard of your stock step by step and improving the average year by year.

No man can intelligently set himself to the work of increasing the number of his colonies, nor can he obtain the best results in the production of honey and wax unless he has some knowledge of the principles of queen-rearing.

The advantage of plenty of room between the hives is also evident when handling a swarm, its neighbors will not be so likely to be interrupted, and when using the extractor, it is quite apparent that ample room is essential.

The foundation of the queen, once accomplished, is efficacious during her life, or as long as she remains healthy and vigorous; and when once become fertile, she never afterwards leaves her hive, except when accompanying a swarm.

Queen breeders are often wrongly accused of sending out hybrid queens when the queens they sent were all right; but shortly after she commenced to lay she was superseded by a younger one reared from her brood, which was mated, and the purchaser never knew the queen he bought was killed shortly after she commenced to lay.

The necessity of having a neat and attractive table with the name and address of the producer on every package of honey put upon the market is well understood by the enterprising beekeeper. The guarantee of purity by the producer put on every package he offers for sale is the best protection he can get from the stories of adulteration that injure the sale of his product.

A nursery cage may be made by taking a piece of soft pine  $\frac{7}{8}$  by  $1\frac{1}{2}$  inches wide by 2 inches long; bore an inch and a quarter hole crosswise and cover both sides with wire screen (use black screen); bore a three-quarter inch hole in the top and a quarter-inch hole in the bottom, the latter being filled with queen candy and closed with a cork; the hole in the top of the cage is for the insertion of the queen cell, which should be protected from attack of the bees by a piece of tin.

The present improved system of management requires that hives should not stand too near each other. There should be at least six feet between them, and 10 feet would be a preferable distance. If hives are set this distance apart, queens are less liable to be lost, when returning to the hive after meeting the drones.

## Transferring Bees.

1. Will you please tell me the best make of hives, as I want to get a couple?

2. I have some bees in old gums and want to transfer them. What is the best method of transferring from old to new hives?

3. Which is the handiest make of hive?—E. C. H., Kansas City, Kan.

The Longstroth, commonly called the dove tailed hive, is probably the best and handiest.

Turn the old hive upside down and drum out the bees until you find the queen cage hive, placing a queen, including honey-board, on the old hives over this your new hive and let your queen loose in the new hive, wait 21 days, and dispose of the old hive.

In Kansas, next to alfalfa and clover, sorghum is considered the best forage crop, as it yields abundantly even on the poorer ground, is relished by stock and withstands dry weather better than any other annual plant known to our agriculture. Milo, possibly, may endure drought better, but it does not rank with sorghum at all in the forage line, being principally valued for its grain. Where hay is scarce or high priced, sorghum is an excellent substitute or supplemental feed, and where other feeds are abundant, sorghum will add to the variety of the feed, and return sure and creditable profits.

A book entitled, "Are Bees Reflex Machines?" by H. V. Buttel-Rupen, Ph. D., has just come to our desk. It is a volume of 48 pages 10 by 7 inches in size. Any one wishing to study the scientific points of apiculture, will do well by placing a copy in his library.

Instinct teaches the bee that its very existence depends upon a prolific queen and a well regulated and ample brood nest. As long as these conditions are present the colony works on in contentment, but as soon as the brood nest becomes crowded and there is no place for the queen to deposit her eggs, instinct teaches the bee that its existence is imperiled, and they become discouraged and swarm out to establish a new home.

At this writing, May 6, our bees are at work on honey locust.

When I was a boy a large part of our farmers kept a few colonies of bees, but now we seldom see any bees through the country except in large apiaries. And the same change will continue to go on until there will be comparatively few men engaged in the business, and these few will be located in the exceptionally good locations, keeping their thousands of colonies, and having the best of everything connected with beekeeping that money can buy; and they will sell their surplus at wholesale to reliable parties, giving them three or four months' time if they wish, which often makes quite a difference in the price favoring the producer. There

are many young men now starting in the business who will in time drop out; but some will continue, and they are the ones who will be the honey producers of the future. They will first work for men having had a long experience until they have a practical knowledge of beekeeping. Here, among other things, they will learn the value and necessity of a good location. To these they will naturally go, where, with their practical knowledge of the business, they can produce honey at half the cost that the inexperienced man can in an ordinary location.

## Number of Colonies.

1. How many colonies do you think can be kept profitably in one place, in this country?

2. What system of increase do you use?

3. Have you tried the Divisible brood chamber hive? I will use 25 this season, made up of  $4\frac{1}{4}$ -inch supers.—W. A. M., Quenemo, Kan.

Answer—1. That depends on the locality. I think about 50 colonies is a plenty in your locality, if you have plenty of alfalfa in the neighborhood from 100 to 150 colonies can be kept profitably.

2. There are various ways of making increase. We prefer the one given by the late E. L. Pratt, which is as follows:

## PREPARING THE HIVE.

Make a bottom-board fast to an empty eight-frame body and adjust a screen to the entrance that will be convenient to remove and replace later on, and select a cover that will fit bee-tight and not bother when the time comes to use it.

Place in this prepared hive five nice clean combs, making sure that some of them contain a little honey, to guard against starving your swarm should it rain for several days directly after hiving, but no brood.

If you have no drawn comb and still desire to increase your colonies, full sheets of foundation can be used the same as though they were combs. Place in the hive one comb of honey, then four full frames of well wired foundation, then the follower—then shake in the bees.

In connection with the use of foundation it might be well to say here that bees shaken in this manner will almost invariably build worker combs, if given a laying queen, and if starters only are furnished in the frames one is almost certain of securing some handsome all-worker combs at no cost.

If starters of foundation are to be given, the number of frames should be reduced. Give two when the bees are shaken and then add one at a time, on the outside, until the hive is filled with combs.

To build up colonies in this manner one must have a good field, and a constant honey flow; feeding will answer in lieu of honey flow.

## ARRANGEMENT OF THE NEW HIVE.

Push the five combs to one side, insert a hanging division board and make all fast with two nails in such a manner that the hive can be carried without fear of the frames shifting out of place.

Cover the whole surface of the hive with a sheet of enamel cloth and tack it in place with four tacks—two at the corners and two directly over the division board in such a manner that

the portion of the sheet coming over the space in the hive not filled with combs can be turned over for purpose of shaking in the bees.

If your covers are of the flat types the sheet may be omitted, and by simply sliding the roof to one side, the bees may be shaken forthwith into the opening.

## SHAKING THE SWARM.

On a fine morning take your prepared hive to a booming stock, slide the cover over or turn back the flap. Set the hive in a position to receive shaken bees without loss of time.

Now smoke and open the full stock and shake into the prepared hive all the bees from off four or five combs of brood, being careful not to get the queen.

To shake the bees neatly and well, lower the comb to half its depth into the opening, and with several quick downward jerks all adhering bees are suddenly dislodged.

If you have prepared your hive as it should be the shaken bees will immediately run under the division board and up onto the combs under the sheet or cover out of the way, leaving all free to turn back the flap or slide on the cover.

After closing the prepared hive return all the brood combs to the full stock and close that hive.

Then remove the prepared hive, now stocked with queen bees, to a cool, dark place, and there let it remain in hopeless queenlessness until towards evening—then and not until then—run in a laying queen.

3. Yes, I have tried it and after using it for a number of years, I finally discarded them.

## INTRODUCING QUEENS.

1. How do you introduce queens into a colony?

2. How can I keep ants out of my bees?—J. W. G., Pomona, Kan.

Answer—1. Directions for introducing are generally sent with the queens, which are as follows: Note condition of queen and if all right proceed to introduce her, remove cork from end of cage, and lay cage on frames directly over cluster, cover cage with cloth or quilt and do not molest hive for five days. If your hive has a flat cover just tack a thin strip of wood across back of cage, spread the frames and hang cage face down between them. Before introducing be sure your colony is queenless. If your bees are queenless more than a day, remove what cells may be started.

2. Be sure that your bees have a good, prolific Italian queen, and the ants will not bother them.

A little hardship won't hurt you—it's the crucible through which untried strength must pass to get its temper—but don't let it give you the wrong sort of temper. Men learn how to command others by first controlling themselves. If you can't stand misjudgment, you weren't strong enough in the first place to justify confidence.

## Beekeeping

Its pleasures and profits, is the theme of that excellent and handsomely illustrated magazine, GLEANINGS IN BEE CULTURE. We send it for six months on trial for twenty-five cents, and also send free a 64-page book on bees and our bee supply catalog to all who name this paper.

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I have 8 good young Red Polled Bulls and some heifers. Prices low.

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

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Spring yearlings bred for last of April and May farrow, large and smooth. The best of breeding priced at \$40 and \$50. Write today, these bargains won't last.

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

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I HAVE A GOOD bunch of spring pigs of both sexes; up-to-date breeding with plenty of quality. Write me your wants and I will treat you right.

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A choice lot ranging in age from 12 to 20 months, sired by Mystic Baron; all good ones, in fine shape. Among them are some choice herd headers. Prices right. Visitors welcome. Write your wants.

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Fall boars of best of breeding and quality at bargain prices for quick sale, also a few bred sows for June farrow of the best of breeding and bred to good boars. Write at once.

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Duroc sows and gilts sired by Bell's Chief 4th and bred to richly bred boars. Will sell and ship when safe.

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Daughters of King of Cois. II and G. C.'s Col. These are very choice gilts priced to sell. Also a few choice boars of summer farrow.

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30 fall gilts by G. C.'s Kansas Col. and 15 yearling and matured sows, all by noted boars. Will sell and hold until safe for fall litter. Also 10 fall boars, tops of our fall crop.

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Sired by First Choice he by Grand Chief. Gilts bred to Little Bear, a grandson of On and On. Those offered for sale are the tops of a large bunch. The gilts and the price will please you. Write right now to Young & Kimmeling, Glasco, Kan.

**BIG STRONG SEPT. BOARS.**

Sired by Guy's Monarch, the boar with frame for 1,000 lbs. and a 10 1/2-inch bone. Out of dam by the noted boar First Quality. Low prices for quick sale, must make room for spring pigs.

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**ELMDALE POLAND CHINAS.**

10 fall boars and 10 fall gilts. Choice individuals. Sired by Imperial Sunshine and out of Mischief Maker, Impudence I Know.

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**POLAND CHINAS WITH SIZE.**  
Headed by Pawnee Look. I have bred pure bred Poland for 20 years and have learned many valuable lessons and in the future shall breed nothing but the big smooth kind. More hog and less hot air.

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**WALTER'S BIG SMOOTH POLAND CHINAS.**

Expansive, the best living son of Expansion, heads herd. Daughter of Grand Look bred for July farrow to Expansion for sale. Also other choice gilts bred to same boar for fall litters.

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Pure bred Ohio Improved Chester White swine. Few Sept. gilts for sale either bred or open. Booking orders for early spring pigs. Satisfaction guaranteed.

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35 bulls from 4 to 18 months old, at \$40 to \$100.  
15 bull calves, 1 to 4 months, \$30 to \$50 each.

50 cows, 3 to 7 years, all milking, or soon fresh, a lot of them in calf to some of the best bred bulls in the East, and grand, good individuals, with producing qualities. Prices \$150 to \$250. 30 heifers and heifer calves from 4 months to 2 years. Prices \$60 to \$150.

Come to the Holstein headquarters of the west, and buy the best. Every animal tuberculin tested, and sold under a full guarantee. Must sell 30 cows in the next 30 days to make room.

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**Feeding Cottonseed Meal.**

With corn at 60 cents per bushel and alfalfa hay at \$8 per ton, is it profitable to feed cottonseed meal to either fattening or stock cattle?

At the same price for corn and plenty of good alfalfa pasture will it pay to feed either digester tankage or meat meal either to fattening or stock hogs? Under the above conditions, would it pay to feed it to pigs at the time of weaning them?—C. L. Brown, Beloit, Kan.

For fattening cattle it would depend altogether on the conditions, as to the length of time to be fed and the finish desired on the cattle, as to whether it would pay to add cottonseed meal to corn and alfalfa hay.

Usually the cost of gain is not affected to a very marked extent by the addition of cottonseed meal to a ration of corn and alfalfa hay; but a small amount of cottonseed meal added during the last two months of the feeding period, usually raises the value of cattle from 5 to 25 cents per 100 pounds. Of course, this is not always the case, but there is a general effect of putting a better finish on the cattle by the addition of cottonseed meal; so that for the last two months of the feeding period it will probably pay to add cottonseed meal to the ration.

As for the feeding of cottonseed meal to stock cattle when there is an abundance of corn and alfalfa hay, the extra cost of the cottonseed meal is usually too much to pay for its use for wintering cattle. If, however, there is no alfalfa hay and corn stover, prairie hay or sorghum hay have to be used, the addition of about two pounds of cottonseed meal and two or three pounds of corn per head daily, make the cattle come out in a very thrifty, vigorous condition.

As regards the feeding of tankage or meat meal to fattening stock hogs on alfalfa pasture, will say that for stock hogs it will certainly not pay to feed anything except the corn on alfalfa pasture.

With the fattening hogs, the gains can be increased about 20 to 25 per cent by the addition of the tankage or meat meal, in the proportion of 5 to 10 per cent of the grain ration. However, the cost is not greatly affected, the difference, however, being in favor of the mixed ration.

It would certainly pay to feed pigs at weaning time, even on alfalfa pasture, a slop containing tankage or meat meal. Preferably, these feeds should be mixed with shorts and fed in a slop; but they would have a very beneficial effect, even if fed without the shorts. Up until the time the pigs weigh about 100 pounds it will certainly pay to feed more than corn alone.—F. G. King, K. S. A. C.

The Shires are among the most useful of the draft breeds of horses and many farmers and breeders prefer them to any other. A recent letter from the president of the American Shire Horse Association states that if the exhibits in this breed at our big fairs this fall will seem to warrant it, that association will probably offer special prizes in Kansas next year.

Many a good horse is spoiled in the training. Very many people still think they must "break" colts and thus they are ruined. Colts should be trained, not broken, and one of the important, the very important, lessons in this course of training should be that of teaching them to work with open bridles. In driving strange horses the writer never feels so safe as when he is behind a team with open bridles. This means that the animals have been trained, not "broken," and that their intelligence is at your service in doing their work.

England raises twice as much wheat per acre as the United States and Sir Horace Plunkett declares that this country could increase the value of its corn and wheat crops by hundreds of millions of dollars yearly by scientific farming.

Sometimes we hear complaints about the corn and a demand is made for varieties that will mature earlier even though they yield smaller ears and kernels. The difficulty is not with the corn provided these varieties which are well established in Kansas are planted. When you have planted Reid's Yellow Dent, Boone County White or other well established sorts and do not meet with the success you ought to have just turn your attention to the soil. That is probably where the trouble lies.



# KANSAS LAND

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FINE IMPROVED 160, 5 miles out, \$5,700; terms. L. E. Thompson, Norwich, Kan.

## Homeseekers

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

## SNAPS

35,000 acres in McMullen Co., Texas, all good, level land, black, sandy loam; price \$10.00 per acre.

73,000 acres in southwestern Texas, \$1.35 per acre.

200 acres near Marquette, McPherson Co., Kansas. Well improved. Price \$10,000.

CHAS. PETERSON,

Hutchinson, Kansas.

## Corn, Wheat, Alfalfa

Lands in Trego County, Kansas, where prices are advancing rapidly. Best opportunities in Kansas for homeseeker and investor. Write for our list, mailed free and postpaid. Live agents wanted.

D. W. KELLER LAND CO.,

Wakeeney, Kansas.

## OTTAWA COUNTY BARGAINS

160 acres, 3 miles town, 110 cultivation, balance pasture, 4-room house, barn, 65 acres wheat, all goes with possession, \$6,500. Easy terms. New list free.

J. S. BOYLE, Bennington, Kan.

## GOOD FARM

344 acres adjoining town, highly improved, 6 acres alfalfa, 5 miles fence, mostly woven wire. Further particulars write

J. C. ELVIN,

Harper, Kansas.

## LANE COUNTY, KANSAS

Offers bargains in wheat and alfalfa ranches at \$10 to \$20 per acre. Write for my price list and investigate at once.

WARREN V. YOUNG,

Dighton, Kansas.

## KINGMAN CO. LANDS

Banner Wheat and Corn County of the State. Write for Selected List.

BROWN REAL ESTATE CO.

KINGMAN, KANSAS.

## A SNAP.

794 a. fenced, 400 a. cultivated, 200 a. more fine land, balance pasture, 7 a. alfalfa, hog tight. Orchard and other trees. Fine 7 room house with bath, large barn, granary, hen house, cattle sheds, blacksmith shop, etc., water service complete. Rural route and phone line. 8 miles to county seat. \$35 per acre. 1-3 cash; balance time. 100 other bargains in Ellis and Trego counties. D. W. Nickles, Hays, Kan.

## A GOOD RANCH

In Chautauqua Co., Kan., 2040 acres, good improvements, good grass, plenty of living water, only two miles from railroad station. Will sell at a bargain or take some trade.

LONG BROTHERS,

Fredonia, Kansas.

## Land Bargains

I HAVE 14 of the best quarter sections of land for sale within 4 miles from Minneola, some of them improved, and some all sown to wheat, that I can sell for from \$35 to \$40 per acre; will give terms to suit. Will be pleased to hear from you at any time.

EUGENE WILLIAMS, Minneola, Kan.

## GREATEST SNAP OF THE SEASON

An excellent 160 acre farm, about 7 miles northeast of Fredonia, good frame and stone house, 6 rooms, 2 cellars, frame barn, well fenced with hedge wire, 80 acres hog tight. Divided into 5 different fields: good orchard of 15 acres with all kinds of fruit; good cistern, 3 wells and 1 spring house. Land has been cultivated except 35 acres in pasture. Four acres alfalfa, 12 acres clover. This is an excellent home, good land and nicely located. For sale for a short time at \$30 per acre. Cash, no trade. Address

C. B. CANTRALL

Fredonia, Kansas

IMPROVED FARMS in S. W. Kansas and N. W. Oklahoma, \$10 to \$25 per acre. Write Moore & Falls, Liberal, Kan.

FOR REPUBLIC COUNTY corn, wheat and alfalfa lands, at reasonable prices on good terms. Write or see Hall & Cartensen, Belleville, Kan.

## FREE LIST.

Dickinson County corn, wheat and alfalfa farms. Write today.

Baumgarth & LaPort, Abilene, Kan.

PHILLIPS COUNTY corn, wheat and alfalfa lands, \$40.00 to \$30.00 per acre. Prices rapidly advancing. Write or see L. E. COUNTRYMAN, Phillipsburg, Kan.

FOR SALE—Improved 160 acre farm, near Parsons, Kan., fine improvements, black loam soil, price \$25 per acre. Write WALKER & CARDWELL, Parsons, Kan.

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

CHOICE KANSAS FARMS in Smoky Valley, Saline and McPherson counties, where you can raise alfalfa, corn and wheat with profit. Write for information and list. David Bachman, Lindsay, Kan.

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

RENO COUNTY FARM—320 acres highly improved, fine new house with gas and water in, sandy loam soil, best kind corn and wheat lands; price \$4,000. Other bargains.

W. W. BARRETT,

Sterling, Kansas.

MIDDLE AND SOUTHWESTERN KANSAS LAND.

Corn, wheat, alfalfa and ranch lands, at low prices on liberal terms. Great opportunity for homeseeker and investor. Be sure to see me before you change your location.

E. B. FRITTS, Real Estate Broker,

Hays, Kansas.

## BARGAINS IN LAND.

A well improved 16,000-a. ranch in Sherman Co., \$10 per a., easy terms, also other smaller ranches and 100 scattering quarters and half sections from \$9 to \$12 per a.

M. ROBINSON, the Land Man,

Goodland, Kansas.

## 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 us for a proposition on our own ranches.

Frizzell & Ely, Larned, Kan.

CORN, WHEAT AND ALFALFA LANDS.

In Cloud, Washington and Republic counties, where all staples produce bountiful crops and prices are advancing rapidly. Best section in Kansas for a home or investment. Write for a free list.

Nelson Land Co., Clyde, Kan.

## DICKINSON COUNTY FARMS.

Good water, good climate, corn, alfalfa and wheat produce mammoth crops. We sell these lands at prices that will produce big interest on the investment. Write us for full information.

Murphy & Fenton, Abilene, Kan.

## SHARON COUNTY ALFALFA LANDS.

Choice corn and alfalfa farms for sale in Barber county, Kansas. Crop failure unknown. Write for particulars and list. Address

WILLIAM PALMER,

Medicine Lodge, Kansas.

## HARPER COUNTY.

Home of corn, alfalfa and wheat. Lands \$25 to \$75 per acre that would be cheap at twice the money. Values advancing rapidly. Now is the time to buy. Description and full information free.

HEACOCK REALTY CO.,

Anthony, Kansas.

## CLARK COUNTY BARGAIN.

2,500 acres, 12 miles of Bucklin, all fenced, good running water, 20 acres natural timber, good improvements, 500 acres good alfalfa land, easy terms. Price \$18 per acre. Write

H. E. McCUE,

Bucklin, Kansas.

## NEMAH COUNTY, KAN., BARGAIN.

100 a. farm lying 7 miles S. W. Corning, 90 a. corn land, 8 a. prairie meadow, 2 a. fine orchard. Land not rough stony, nor ditchy. Good 5-roomed house, barn and other outbuildings, extra good water, 1 mile to school. R. F. D. and phone line. Can be bought on March 1, settlement 1911 at \$60 per a. Good terms. Other propositions.

C. E. Tinklin, Corning, Kan.

## JUST LIKE STEALING

To take this beautiful half section in Cowley Co., only 8 miles from a good R. R. town, in a fine community, school, church and stores, only ¼ mile; free phone, rural route, 5-room house, cistern, good stable, well finest water in the state, pond, two orchards, 100 acres cultivation, bal. splendid bluestem pasture, can all be tilled but 20 a., level, upland country farm, smooth and level; soil is a deep black limestone loam, average over 40 bu. of corn per a. last year; grows alfalfa perfectly; only \$30 per a. for a short time; you'll have to hurry, this won't keep; \$5,000 cash, balance back; talk fast; it's money for you.

SHARP REALTY CO.,

Turner Bldg., Wichita, Kan.

## The Hoxie Realty Co.

Farms and ranches, any kind of land. Some of the best alfalfa, corn, wheat and hay land in the West. Also ranches with timber and running water. Good business propositions in Hoxie. For further particulars write us.

HOXIE REALTY CO.,

G. H. Walbel and M. L. Bell,

Hoxie, Kansas.

## JEWELL COUNTY.

Leads them all, according to Coburn, in corn, alfalfa, poultry, mules, cattle, hogs, honey. Write what you want to

GREEN REALTY CO.,

Mankato (County seat), Kansas.

## BARGAINS.

Improved ½ section level farm land, 1-4 mile P. O. and school, 250 a. in cultivation, 100 a. wheat, 1-3 crop goes with place. Price \$30 a.; make very reasonable and long time terms. W. B. Grimes, Owner, Ashland, Kan.

## 240 ACRES VALLEY LAND.

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

## COWLEY COUNTY BARGAIN.

284 acres, 2½ miles of Arkansas City, 160 acres in Arkansas river bottom land, 40 acres in alfalfa, 120 for corn, 9-room house, bank barn 36x40, small orchard and windmill. Price \$57.50 per acre. Write R. A. GILMAR, Arkansas City, Kan.

THIS WEEK'S BARGAINS—Several good stocks good clean general mds. Doing good business; trade for Kansas land worth the money. Now is your opportunity to get into an established business. Cheap wheat and alfalfa lands for sale. The H. M. Davis Realty Co., Greensburg, Kan.

## FARM BARGAIN BY OWNER.

240 acres located 2½ miles from Meade, Kan., 100 acres in cult., good well and windmill; price \$4,000, \$2,800 cash, balance 3 years at 7 per cent annual int. Write for list of other properties. L. E. SCHUMACHER, Owner, Meade, Kan.

## KIOWA COUNTY BARGAIN.

160 acres improved, 4 miles to town, 60 acres pasture, 80 acres wheat to purchaser. Price \$4,500. 640 acres hard land, well improved with share of wheat at \$50 per acre. J. A. BECKETT, Greensburg, Kan.

## COME TO KINGMAN CO.

Where you can raise wheat, corn, hogs, alfalfa and good cattle. If interested, send for our descriptive price lists and maps.

JOHN P. MOORE & SON,

Kingman, Kan.

## FOR EXCHANGE.

320 acres of fine land located in Coffey Co., Kan., fair improvements, good water, fenced and cross fenced, 4½ miles from a good railroad town on the main line. Owner wants to trade for cheap western land.

MANSFIELD LAND CO.,

Ottawa, Kansas.

## FOR HOMESEEEKER OR INVESTOR.

Kiowa and Cavalry Creek Valleys. Comanche County, Kansas. Alfalfa land \$20 to \$35; rapidly advancing. Great opportunities for homeseeker or investor. Write for our large list of bargains, mailed free and postpaid.

PIONEER REALTY CO., Protection, Kan.

## THE BEST TOWN TO LIVE IN.

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

## 240 ACRES OF LAND

3 miles north of Selden, on Prairie Dog creek, about 70 acres good alfalfa land, 100 acres broke, small house and other improvements, some timber. Price for the next 30 days, \$4,000. Good terms. Other farms. Write for free literature.

GEO. F. LEWIS & CO.,

Selden, Sheridan Co., Kansas.

## TREGO COUNTY LANDS.

If you are looking for a snap, here it is. 160 acres, all in cultivation, ¼ to go with it. All perfectly level. German Lutheran neighborhood. 12 miles south of Wakeeney. Price, \$3,500, \$1,200 cash and balance in five equal annual payments. Write us for other bargains.

KANSAS AND COLORADO LAND CO.,

Wakeeney, Kansas.

I HAVE SOLD my half section near Colby and now offer a fine, smooth quarter 3 miles from Brewster, Kan., no improvements except 40 acres under cultivation, school house across road from it. This quarter is choice and is offered for the small sum of \$2,200 cash.

Another smooth quarter, 14 miles from Brewster, 55 acres under plow, sod house, good well and new windmill and a bargain at \$2,000 cash.

These are bargains and must be sold soon. Address

IKE W. CRUMLEY,

Brewster, Kan.

## AN IDEAL FARM FOR SALE.

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

134 ACRES, 2 miles from Cottonwood Falls and the same distance from Strong City, on the main line of the Santa Fe. 70 acres of alfalfa, 60 acres in corn and 4 acres in orchard and lots. A small house and fair barn and other outbuildings, 2 wells with windmills. Has telephone, daily mail and close to school; this is a fine bottom farm, every foot alfalfa, corn and wheat land, good locality. Price \$80 per acre; can give liberal terms. Will sell on contract and give possession this fall. J. E. HOCKEY, Cottonwood Falls, Kan.



# KANSAS LAND

**H. J. SETCHELL & SON, Real Estate,**  
Morland, Kan. Send for free list of Gra-  
ham and Sheridan county lands.

**A RICE COUNTY HOME.**  
A fine quarter section 3 1/2 miles from  
Lyons, splendid improvements, orchard, 30  
acres fine alfalfa, 50 acres pasture, all till-  
able, 70 acres in corn, all goes with place,  
school 10 rods. Possession if sold at once.  
Price \$13,000.

**NODURFT & TORREY, Lyons, Kan.**  
**WALLACE COUNTY LANDS.**  
At \$10.00 to \$25.00 per acre. You will  
double your money if you buy now. If you  
want a good investment, write for further  
information. The Great Western Develop-  
ment Co.

**H. FITZGERALD, Mgr. Kansas.**

**BARGAINS IN GAS BELT.**  
120 a. in Wilson Co., Kan. Fine soil, well  
improved, lays well, good 7-room house,  
good barn, orchard, grove, paying \$120 gas  
rental. Close to market. Will pay to in-  
vestigate.

**SHANNON & HARSHFIELD,**  
Fredonia, Kansas.

**BOOKS COUNTY.**  
Corn, wheat and alfalfa make big crops  
every year. We sell these lands at \$20 to  
\$75 per acre on good terms. These prices  
are advancing rapidly. Now is the time to  
buy and get the advantage of the big in-  
crease in land values sure to come. Write  
for further information.

**CASE & WILSON, Kansas.**  
**Plainville.**

**WALLACE COUNTY, KANSAS.**  
Where land is now selling for \$10.00 to  
\$15.00 per acre. If you buy now you will  
double your money shortly. The best  
"buys" in Kansas are to be had here. If  
you are looking for a good home or money-  
making investment, write me.

**G. G. IMMEI,**  
Land Agent, Sharon Springs, Kan.

**SHERIDAN COUNTY**  
LANDS MY SPECIALTY. WRITE M. D.  
GALLOGLY, REAL ESTATE BROKER,  
HOXIE, KAN.

**GOVE COUNTY LANDS**  
\$8.00 an acre and up. If you want a  
good home, and an investment that will  
double soon, write me.

**THOMAS P. McQUEEN,**  
Treasurer of Gove Co., Gove, Kan.

**Rooks and Graham Co. Land**

In any size tract, at \$17 to \$40 an acre,  
depending upon improvements and distance  
from town. Write for new list. Mailed free  
and postpaid.

**E. G. INLOW, Kansas.**  
**Falco.**

**MEADE COUNTY FARMS**  
400 farms, 160 to 140 acres, improved  
and unimproved, at \$12.50 to \$25.00 per a.,  
easy terms. 320 a. 7 mi. Meade, in German  
settlement. 300 a. fine tillable land, 160 a.  
cult., price \$6,400. Experienced salesman  
wanted. CHAS. N. PAYNE, Hutchinson and  
Meade, Kan.

**Rawlins County**

Good lands for sale at \$10 to \$25 per acre  
on good terms. These lands are well located,  
near schools, churches and markets. Write  
us for further information.

**ROBERTSON & HORTON, Kansas.**  
**Atwood.**

**Have You School Children?**

We have just listed a well improved 80  
acre farm only two miles from County High  
School, good seven room house, practically  
new barn, all tillable and no rock, \$4,800.00.

**DONAHUE & WALLINGFORD,**  
Mound Valley, Kansas.

**MEADE COUNTY BARGAIN.**  
320 acres Meade Co., Kan., small house,  
good well and windmill, barn, all fenced,  
175 acres in wheat, all of which goes to  
purchaser, 7 miles of Plains, Kan., close to  
school and church. Write for details.

**CARLISLE & DETTINGER, Meade, Kan.**  
**CROOKED CREEK VALLEY LANDS.**  
Have several tracts, 80 to 1,000 acres.  
Water 20 to 40 ft. Raise alfalfa, corn,  
wheat. Eight miles Fowler. \$20 and up.  
Terms.

**BOX 83, Kansas.**  
**Fowler, Meade Co.,**

**ADMINISTRATOR'S SALE.**  
160 acres 1 1/2 miles from Downs, Kansas,  
all good land, 1-3 of crop delivered to  
town. We will sell this at a reduced price  
to settle estate. This sure is a bargain  
and cannot last, as we must sell. For terms  
and description write B. D. Courter, Downs,  
Kansas.

**TO TRADE FOR EASTERN KANSAS LAND**  
of same value. A \$4,500 clothing stock lo-  
cated on Mo. Pac. R. R. 50 miles west of  
Atchison. Only exclusive stock in town.  
Will consider any reasonable proposition in  
Kansas. Stock is good and consists of  
stock usually found in first class clothing  
stores. Cheap rent. Fixtures belong to  
building. Make proposition. Stock can be  
seen any day. C. E. TINKLIN, Corning,  
Kan.

**FOR SALE OR EXCHANGE.**  
Small stock of new and second hand fur-  
niture, located in a good county seat town.  
R. R. division point, good business at a  
bargain or would take a good quarter of  
western Kansas land in exchange. Also  
1,400 a. ranch, about 200 acres cult., 100 a.  
old alfalfa, 50 acres new, and 100 acres  
more will be seeded this year. If not sold,  
house, barn, windmills, etc. Land not cult.,  
will afford pasture for 50 head stock;  
only four miles from good shipping point in  
north central Kansas. Price \$25 per acre,  
terms to suit. Will take part trade.

**LEWIS & ELDRED, Kansas.**  
**Phillipsburg.**

For free information about Thomas and  
adjoining counties, write to or call on  
**TROMPETER & SON,**  
Colby, Kansas.

## FOR SALE

Sherman county lands, in any size tracts  
on most liberal terms. Write for prices,  
descriptions and illustrated literature mailed  
free and postpaid.

**IRA K. FOTHERGILL,**  
Real Estate and Inv., Kansas.  
Goodland,

**SHERIDAN COUNTY LANDS** at \$15.00 to  
\$35.00 per acre. You will have to act  
quickly. Write for further information. W.  
S. Quisenberry, Hoxie, Kan.

**HAVE YOU ANYTHING TO TRADE?**

If you have, list it with Howard, the  
Land Man, and he will get you something  
in short order that will suit you. I have  
farms to trade, automobiles, houses and lots,  
in fact, everything you can think of that  
you are likely to want. Talk it over with  
Howard, the Land Man, Room 15, Turner  
Bldg., Wichita, Kan.

**640 ACRES,** smooth as a floor, 2 1/2 miles  
station, well improved, 6 room house with  
double cemented cellar, porch nearly around  
house, large barn, 320 acres fenced with  
3 wires and hedge posts a rod apart; 320  
acres in cultivation, good well, windmill and  
tank. Price \$25.00 an acre. Terms. Other  
farms at lower prices.

**JOSEPH SAGER, Kansas.**  
**Colby.**

## GOVE COUNTY

If you want to buy wheat and alfalfa  
land, at the lowest prices, on the best terms,  
write to or call on

**O. B. JONES,**  
Gove, Bonded Abstractor, Kan.

**320-ACRE LABETTE CO. FARM.**

Located 2 mi. from good railroad town,  
240 a. in cultivation, 10 a. mow land, bal-  
ance pasture, black limestone soil, good,  
tame grass, grain and stock farm. Two sets  
of extra good improvements, plenty of wa-  
ter and fruit. \$50 per a. This is only one  
of our many bargains. Write for free list.

**THE BOWMAN REALTY CO.,**  
Coffeyville, Kansas.

## COLORADO LAND

**FREE MAPS** handsomely illustrated liter-  
ature, and valuable pamphlet describing the  
San Luis Valley. Write today. Illinois  
Realty Co., Monte Vista, Colo.

**COLORADO LAND.**  
Before buying land in the San Luis Val-  
ley, write San Luis Land Bureau, Monte  
Vista, Colo., for report on soil, irrigation,  
etc. Grand climate, beautiful mountain  
scenery, wonderful fertility, and land is  
cheap.

**\$7 TO \$15 PER A.,** on liberal terms. Home-  
stead relinquishments, \$100 to \$800 each.  
Where rainfall is plentiful, and prices are  
rapidly advancing. Write for full infor-  
mation stating what you want. Maher & Hanks,  
Deer Trail, Colo.

**LANDS! LANDS!**  
In the famous San Luis Valley. Land  
from \$40 to \$125. Crops abundant. Un-  
excelled water-rights. We live here, are  
old ranchers here, and own land here. Write  
for handsome illustrated booklet mailed  
free. DWIGHT G. GOVE, Monte Vista, Colo.

**SAN LUIS VALLEY**  
Irrigated land with perpetual water  
rights in tracts to suit on easy terms. Prices  
still far below real value. Products alfalfa,  
peas, potatoes, wheat, oats and fat stock.  
**THE TRANS-MISSISSIPPI INV. CO., Inc.,**  
La Jara, Colo.

**ARE YOU MAKING MONEY?**  
95 per cent of the San Luis Valley farm-  
ers are getting rich. Why? Because they  
are producing the finest pork and mutton  
in the world at lowest possible cost. Our  
free illustrated folder tells how. Write for  
one. C. W. FOSTER, Monte Vista, Colo.

**SAN LUIS VALLEY.**  
Write for free handsomely illustrated  
booklet, before you buy land in the San  
Luis Valley. This booklet contains much in-  
formation, invaluable to the prospective  
settler or investor. Book is just off the  
press. Send your name today, for a free  
copy.

**C. C. KERR & CO., Colo.**  
**Monte Vista.**

**SAN LUIS VALLEY.**  
4,037 acres fine farm land, adjoining good  
town. Cuts 1,000 tons splendid native hay.  
Some fine alfalfa, 100 acres potatoes, re-  
mainder grain and pasture. Good farm  
houses. Best water rights. Must sell at  
once. \$27.50 acre. 3,750 a., first class hay  
and farm lands, near Alamosa, fine farm  
houses and barns. Improvements worth \$25-  
300. Good water rights; splendid artesian  
wells. Other bargains. **BUTLER & HINES,**  
Alamosa, Colo.

## EASTERN COLORADO LANDS

\$12 to \$25 per acre; about 1-3 cash, bal-  
ance to suit purchaser. Also homestead re-  
linquishments for sale cheap.

**A. TERWILLIGER, Prop.,**  
**Byers Hotel, Byers, Colo.**

## SAN LUIS VALLEY

Lands where big crops of potatoes, al-  
falfa, peas, etc., grow to perfection. Reason-  
able prices; good terms. Write for illus-  
trated literature, mailed free.

**W. P. FISHER COMPANY, Colo.**  
**La Jara.**

**Johnson & Nordstrom Sold Him.**  
Johnson & Nordstrom of Clay Center,  
Kan., write: "The little ad in Kansas  
Farmer brought 12 inquiries and sold the  
Jersey bull calf to Mr. J. M. Myers  
of Jefferson, Kan. We also received a  
big lot of letters from this advertise-  
ment from parties wanting to buy fe-  
males but we had nothing for sale.  
Johnson & Nordstrom, Breeders of Jer-  
seys, Clay Center, Kan."

## LAND NOTES

It will pay all Kansas Farmer readers to  
write the Illinois Realty Co., Monte Vista,  
Colo., for a copy of their free book, telling  
about good homes and money-making in-  
vestments in the San Luis Valley.

All who contemplate buying land in the  
San Luis Valley of Colorado should first  
write the San Luis Land Bureau, Monte  
Vista, Colo., for free report on soil, cli-  
mate, irrigation, etc.

One of the leading real estate firms of  
Southern Colorado, C. C. Kerr & Co., Monte  
Vista, Colo., have just published an ex-  
pensive booklet for the guidance of pros-  
pective buyers of San Luis Valley land. A  
copy will be mailed to you free, postage  
prepaid, if you write for one and mention  
the Kansas Farmer.

Dwight H. Gove, a former ranchman in  
the San Luis Valley, is now in the real  
estate business at Monte Vista, Colo. He  
is sending out a handsome pamphlet which  
is just off the press, describing the San Luis  
Valley, and telling of money-making oppor-  
tunities there. Send him your name for a  
free copy, mentioning the Kansas Farmer.

Good homestead relinquishments will soon  
be a thing of the past. If you will write to  
Maher & Hanks, Deer Trail, Colo., men-  
tioning the Kansas Farmer, they will tell  
you about some, and also about some good,  
cheap farm lands.

C. W. Foster, Monte Vista, Colo., has  
prepared an expensive folder, describing  
the San Luis Valley and giving illustrations  
of many farm scenes. The folders are free  
to Kansas Farmer readers, as long as they  
last. Write for one.

La Jara is one of the most progressive  
towns in the San Luis valley of Colorado,  
and is surrounded by fertile and cheap ir-  
rigated lands. The Trans-Mississippi In-  
vestment Co., La Jara, Colo., will gladly  
furnish all information desired about the  
country to Kansas Farmer readers.

Some of the best and cheapest irrigated  
lands in Colorado are to be found around  
Del Norte, in the San Luis valley. R. P.  
Newman, of Del Norte, Colo., is sending out  
a handsome booklet free, that is well worth  
writing for. Mention the Kansas Farmer.

A. Terwilliger, proprietor of the Byers  
Hotel, Byers, Colo., is also the real estate  
man of Byers. Good farm lands range in  
price from \$12 to \$25 per acre, and Mr. Ter-  
williger says he still has a few good home-  
stead relinquishments for sale cheap. Don't  
forget to mention the Kansas Farmer when  
you write him.

The San Luis Valley is widely known as  
the home of alfalfa, potatoes, peas and fat  
stock. The W. P. Fisher Company, La  
Jara, Colo., will send you some handsomely  
illustrated literature free, describing this  
great country, if you mention the Kansas  
Farmer when you write.

The San Luis Valley of Colorado is widely  
known as the place where the best ir-  
rigated lands can be secured for the least  
money. Butler & Hines, Alamosa, Colo.,  
are advertising a large, well improved, ir-  
rigated tract in this issue of the Kansas  
Farmer for \$27.50 an acre. How is that  
for a bed-rock price on first class irrigated  
land? Write them for a complete list.

## Fairs and Stock Exhibitions for 1910.

Alberta Provincial Exhibition, Calgary,  
Alberta, Canada, June 30-July 7.  
Winnipeg Industrial Exhibition, Winnipeg,  
Canada, July 13-23.

North Dakota State Fair, Fargo, July 25-  
30.

Blue Grass Fair, Lexington, Ky., Aug. 8-  
13.

Iowa State Fair, Des Moines, Aug. 25-  
Sept. 2.

Canadian National Exhibition, Toronto,  
Ont., Aug. 27-Sept. 12.

Nebraska State Fair, Lincoln, Sept. 5-9.

Ohio State Fair, Columbus, Sept. 5-9.

Minnesota State Fair, Hamline, Sept. 5-  
10.

Maryland State Fair, Timonium, Sept. 6-  
10.

Kansas State Fair, Hutchinson, Sept. 10-  
17.

Indiana State Fair, Indianapolis, Sept.  
12-16.

Kansas State Fair Association, Topeka,  
Sept. 12-16.

South Dakota State Fair, Huron, Sept.  
12-16.

West Michigan State Fair, Grand Rapids,  
Sept. 12-16.

West Virginia State Fair, Wheeling, Sept.  
12-16.

Wisconsin State Fair, Milwaukee, Sept.  
12-16.

Kentucky State Fair, Louisville, Sept. 12-  
17.

New York State Fair, Syracuse, Sept. 12-  
17.

Oregon State Fair, Salem, Sept. 12-17.

Michigan State Fair, Detroit, Sept. 19-  
23.

Interstate Live Stock Fair, Sioux City,  
Ia., Sept. 19-24.

Tennessee State Fair, Nashville, Sept. 19-  
24.

Missouri Valley Fair and Exposition,  
Kansas City, Mo., Sept. 24-Oct. 9.

Interstate Fair, Trenton, N. J., Sept. 26-  
30.

La Crosse Interstate Fair, La Crosse,  
Wis., Sept. 26-30.

Interstate Live Stock and Horse Show,  
South St. Joseph, Mo., Sept. 26-Oct. 1.

Montana State Fair, Helena, Sept. 26-  
Oct. 1.

Washington State Fair, North Yakima,  
Sept. 26-Oct. 1.

Wyoming State Fair, Douglass, Sept. 27-  
30.

Tennessee Tri-State Fair, Memphis, Sept.  
27-Oct. 4.

Illinois State Fair, Springfield, Sept. 30-  
Oct. 8.

Oklahoma State Fair, Oklahoma City,  
Sept. 27-Oct. 9.

Missouri State Fair, Sedalia, Oct. 1-7.

Utah State Fair, Salt Lake City, Oct. 3-8.

Virginia State Fair, Richmond, Oct. 3-8.

Spokane Interstate Fair, Spokane, Wash.,  
Oct. 3-9.

Alabama State Fair, Birmingham, Oct. 6-  
15.

American Royal Live Stock Show, Kansas  
City, Mo., Oct. 10-15.

Arkansas State Fair, Hot Springs, Oct.  
10-15.

Texas State Fair, Dallas, Oct. 15-30.

North Carolina Agricultural Society, Ra-  
leigh, Oct. 17-22.

Louisiana State Fair, Shreveport, Nov. 2-  
11.

San Antonio International Fair, San An-  
tonio, Tex., Nov. 5-20.

**Cures Moon Blindness.**  
Did you ever go to the stable in the morn-  
ing and discover your favorite horse was  
moon blind? The Visio Remedy Association,  
1933 Wabash Ave., Chicago, Ill., guarantees  
to cure him, thus saving you from loss  
financially and the necessity often of re-  
placing him. Under their guarantee you  
pay for results only, thereby taking no  
chance, with everything to gain.

## FIELD NOTES

### FIELD MEN.

O. W. Devine.....Topeka, Kan.  
Jesse R. Johnson.....Clay Center, Kan.  
E. G. Sollenberger.....Woodston, Kan.



### PURE BRED STOCK SALES.

June 10—C. S. Nevius, Chiles, Kan.  
June 11—H. E. Hayes, Olathe, Kan.

**Jersey Cattle.**  
June 30, 1910—Kinloch Farm, Kirksville,  
Mo.

**Hereford Cattle.**  
Nov. 10—T. I. Woodall, Fall River, Kan.

**Poland Chinas.**

Aug. 11—E. H. Davidson, St. John, Kan.  
Sept. 20—J. D. Spangler, Sharon, Kan.

Oct. 5—Homer Gruver, Spring Hill, Kan.  
Oct. 19—A. B. Garrison, Sumnerfield, Kan.

Oct. 14—T. J. Dawe, Troy, Kan.  
Oct. 15—J. B. Whipple, Fall City, Neb.

Oct. 18—Herman Groninger & Sons, Ben-  
dena, Kan.

Oct. 20—Hubert J. Griffiths, Clay Center,  
Kan.

Oct. 21—J. M. Ross, Valley Falls, Kan. and  
W. E. Long, Ozwake, Kan., sale at Val-  
ley Falls.

Oct. 22—H. C. Graner, Lancaster, Kan.  
Oct. 25—W. C. Singer, Hiawatha, Kan.

Oct. 26—W. R. Webb, Benda, Kan.  
Oct. 26—G. M. Hull, Garnett, Kan.

Oct. 27—Walter Hildwein, Fairview, Kan.  
Oct. 28—I. R. Berkey, Louisburg, Kan.

Nov. 1—H. B. Walter, Effingham, Kan.  
Nov. 1—H. F. Pelphrey, Humboldt, Kan.

Nov. 2—J. W. Pelphrey, Chanute, Kan.  
Nov. 2—Albert Smith & Sons, Superior, Neb.

Nov. 2—R. J. Peckham, Pawnee City, Neb.  
Nov. 3—George W. Smith, Burchard, Neb.

Nov. 3—D. W. Evans, Fairview, Kan.  
Nov. 3—T. J. Meisner, Sabetha, Kan.

Nov. 10—H. B. Walter, Effingham, Kan.  
Nov. 16—W. A. Prewett, Asherville, Kan.

Nov. 19—G. W. Roberts, Larned, Kan.  
Feb. 7—J. M. Ross and W. E. Long, Valley  
Falls, Kan.

Feb. 9, 1911—Albert Smith & Sons, Su-  
perior, Neb.

Feb. 8—H. B. Walter, Effingham, Kan.

**Duroc Jerseys.**  
Oct. 28—Thompson Bros., Garrison, Kan.  
Nov. 15—J. E. Joines, Clyde, Kan.

Feb. 2—Thompson Bros., Garrison, Kan.

**Horses.**  
Oct. 26—W. S. Corsa, Whitehall, Ill.

Please notice the important announce-  
ment about Jersey cattle made in this issue  
of Kansas Farmer by W. N. Banks of Inde-  
pendence, Kan. Mr. Banks has some very  
choice blood lines represented in his herd  
and is prepared to fill orders promptly and  
at reasonable prices. Mention Kansas Farm-  
er and write him.

Volume 55 of the American Poland China  
Record has lately been issued from the  
office of Secretary W. M. McFadden at Chi-  
cago. This volume contains pedigrees of  
boars numbered from 143167 to 152869 and  
of sows numbered from 361702 to 373500.  
Lists of the names of the officers, stock-  
holders and breeders are valuable features.

### Percheron Mares for Sale.

J. W. Barnhart of Butler, Mo., starts a  
new ad with Kansas Farmer and offers a  
few choice 2-year-old Percheron fillies for  
sale. Mr. Barnhart will breed these fillies  
to any of his five stallions and match them  
up in teams to suit purchaser. Mr. Barn-  
hart has made some good sales through his  
ad in the Kansas Farmer. Look up his ad  
and write him.

### O. I. C. Glits for Sale.

This week we start the advertisement of  
Mr. J. M. Dryden, breeder of Ohio Im-  
proved Chester White swine. Mr. Dryden  
lives at Phelps City, Mo., and owns one of  
the best herds to be found in the middle  
west. He offers for quick sale September  
glits, either bred or open, also spring pigs  
to be sold and delivered later. Mr. Dryden  
guarantees a square deal to everyone. Write  
and get prices at once and mention Kansas  
Farmer. More about this herd later.

To the Editor—I have set out the 18 acres  
of catalpa trees that I wrote you about in  
January and feel that I have done a plenty  
to celebrate the visit of the Halley comet.  
I used 1 year old seedlings which I bought  
of the Winfield nursery from their adver-  
tisement in the Kansas Farmer. These  
trees were the finest seedlings I ever saw  
and my business with the nursery company  
was of the most pleasant and agreeable na-  
ture.

**J. W. JOHNSON,**  
Geneseo, Kan.

### DAWE'S POLANDS.

Mr. T. J



# TEXAS LAND

## A PARADISE RECLAIMED

15,000 Acres Actually Irrigated in the  
BEAUTIFUL PECOS RIVER VALLEY OF TEXAS.  
Deep, rich soil. Abundance of water. Delightful climate. Right on the Santa Fe  
Railroad, station in center of tract.

### DAM, RESERVOIR, CANALS, ALL COMPLETE NOW.

Free water with every acre. Selling fast. Act quick if you want an actually irrigated farm cheap, or an investment that will pay you 50 per cent annually. Excursions and cheap rate first and third Tuesdays of each month.  
Most desirable irrigated land and town site proposition on the market today. Send for interesting booklet. Tells you about it. Good live agents wanted in every locality.

ARNO IRRIGATED LAND CO.,

Topeka,

Kansas,

## FREE TRIP TO TEXAS

If you want to take a free trip to the Sunny Pecos Valley of Texas where they cut six crops of alfalfa and raise all kinds of fruits and vegetables. Write us for further information.

THE HEATH COMPANY,

TOPEKA, KAN.

### GOOD RANCH.

3,368 acre ranch, improved, \$5.00 acre, Robertson Co., 7 miles county seat. Adjoining land couldn't be had for twice our price. Would sell part or all. All fine grass and much first class farm land. Detailed description and plat free.

C. A. BABCOCK,

Harper,

Kansas,

Dalhart, Texas is where we are located and we have some land bargains for the buyer. Write for our free, handsomely illustrated book or come to Dalhart and let us show you a country without a fault.

J. N. JOHNSON LAND COMPANY,

Dalhart,

Texas.

# Oklahoma Land

### "WE SELL THE EARTH."

Farmers grow wealthy in a short time in Custer and adjoining counties in Oklahoma growing hogs, corn, alfalfa. Farms at from \$30 to \$50 per a. Write us for land list.

Clinton,

DULANY & RANDOL,

Oklahoma.

IF YOU have money to loan on good farm and city security, write JOHN HARRIS, Chickasha, Okla.

FREE INFORMATION about Oklahoma. Homer H. Wilson, here since 1893. Enid, Okla.

MAJOR COUNTY corn, wheat and alfalfa lands. Lowest prices. Best terms. Information free. J. A. H. Godfrey, Fairview, Okla.

### CADDO CO. FARMS.

Best in Oklahoma for homes or investment. Four address on postal card will bring descriptive list and literature.

MADWIN & GIBBS CO.,

Anadarko,

Okla.

### CORN, OATS, WHEAT

and alfalfa and all staple crops grow to perfection here in the garden of Oklahoma. Prices reasonable. Write for list and descriptive literature.

C. E. POCHET,

Newkirk,

Okla.

### EASTERN OKLAHOMA.

Improved farm, 160 acres, good, new house, half section of unimproved land. Very fine. Several other good bargains. Write me if you want to know about Eastern Oklahoma. T. C. BOWLING, Owner, Fryer Creek, Okla.

### WASHITA VALLEY LANDS.

From \$10 to \$30 per acre offer great opportunities for investment. They are well located near railroads, towns, churches and schools. Write for further information. JOSEPH F. LOCKE LAND & LOAN CO., Wynnewood, Okla.

### REAL ESTATE BROKERS.

Mangum, Okla. Lands that produce big crops of cotton, alfalfa, corn, wheat and all other staples at very reasonable prices. Write for free list of bargains. McMillan & Langford, Okla.

Mangum,

Okla.

## "Hough Sells The Earth"

In Caddo county, fertile, rich, cheap. Send 10 cents in stamps for handsome colored county map of Oklahoma, circulars and list. Letters answered in German or English.

W. R. HOUGH,

Apache,

Okla.

CADDO COUNTY, OKLAHOMA  
corn, wheat, cotton and alfalfa lands \$20.00 to \$40.00 per acre, according to improvements and distance from towns. Lands are advancing rapidly. Now is the time to buy. Write for full information.

J. ELZIA JOHNSON,

Hinton,

Okla.

### IMPROVED FARMS.

150 acres, 140 in cultivation, good 9-room house, barn 45x65, tool shed and granary, 40x10, orchard, telephone, R. F. D., near school, 4 miles county seat. Price \$9,000. Write

J. T. RAGAN,

Vinita,

Okla.

### NOTICE TO RENTERS.

Here is something you may never see advertised again: No. 240—100 acres, 3 miles from good town, 17 miles from R. F. D., 152 a. tillable, 80 a. in cultivation, 110 fruit trees, 2 room house, \$2,500. Terms, \$1,000 cash, bal. terms. Write us when you can come.

The Grand Investment Co., Thomas, Okla.

640 ACRES OF DEEDED LAND; 300 acres of this is first class farming land; 400 acres of Indian land, leased and under cultivation; 3,000 acres of first class grazing land (Indian) leased for term of years; excellent water and good grass; very cheap lease, good two-story house, cave, good grain elevator, scales, corral and everything in first class shape, and the farm land is of the richest. Plenty of timber for wood and plenty of shelter for stock, and is an ideal farm and cattle ranch very desirably located; 2 miles to railroad. Steam plows, farming tools, horses and everything in connection with this ranch go. First Loan & Mortgage Co., Watonga, Okla.

CORRESPOND with us about Garfield Co. lands. McCarty & Plumley, Enid, Okla.

### WASHITA VALLEY LANDS.

Good corn and alfalfa farm, four miles Pauls Valley, one mile State Industrial School, 170 acres, 150 under cultivation, 150 acres Washita valley, 6 room house, above overflow. Electric line soon. Price \$10,000.

O. W. JONES,

Pauls Valley,

Okla.

### A FINE HOME FARM.

320 acres 1 1/2 miles south Wagoner. New 7-room house, nice outhouses, good barn, granary, wagon shed, wind mill, concrete tanks. Nice bearing orchard, 225 acres cultivation. Can most all be plowed. All good land, good set tenant improvements, 4 good wells, one of the best improved farms in the county. Price \$45,000 per acre. Lots of others. Write for information.

W. H. LAWRENCE,

Wagoner,

The Land Man,

Okla.

### EASTERN OKLAHOMA.

200 acres, 7 miles from Muskogee, 2 miles of railroad town, all good valley land, living creek water, 20 acres cultivated, balance meadow, all fenced. In white settlement, on main road, close to church and school. Price \$30 per acre. Many other farms, improved and unimproved at \$25 to \$35 per acre.

R. B. BEARD & CO.,

Muskogee,

Okla.

### SNAPS IN GRANT CO., OKLAHOMA.

1/2 section, 2 miles of Medford, county seat, 1-4 deeded and 1-4 school land, 185 a. in cultivation, 110 a. in wheat, 25 a. fine alfalfa, balance pasture, 6 room house, barn 56x60, granary for 3,000 bu., 1 mile to school and good high school in town, creek bottom, deep black loam soil, 1/2 all crops in granary and possession next Aug. 1. Price until April 1, 1910, \$11,500.

BATTEN REALTY CO.,

Medford,

Oklahoma.

## Oklahoma Land

Where corn, wheat, alfalfa and cotton are making the farmers rich. We specialize on Oklahoma, Cleveland, Logan and Washita counties. Fine alfalfa lands \$30 and upward. Write for list and printed matter, mailed free. We also lead all in Oklahoma City property.

### FARM & HOME INV. CO.,

Culbertson Bldg., Oklahoma City, Okla.

### DO YOU WANT TO SELL YOUR FARM?

Write us, we will give you good information. Hoffman's Compiled List Report, 328 Sedgwick Block, Wichita, Kan.

## MISSOURI LAND

NORTH MISSOURI farms for sale and exchange. Home of blue grass, corn and clover. Booklet and state map free. Broyles Land Co., Chillicothe, Mo.

IMPROVED corn, clover and blue grass farms. 40 miles south Kansas City, \$50 to \$75 per acre.

Jot M. Wilson & Son, Harrisonville, Mo.

CORN, clover and bluegrass farms in the best section of Missouri, very reasonable prices. Write for description. W. A. HORN, Harrisonville, Mo.

## FOR SALE

60,000 acres of land in Saline and McDonald Counties, Mo. Especially adapted to the Fruit, Poultry and Dairy Business. Can be purchased on easy terms in 20 acre tracts or more. Write

JOSEPH C. WATKINS,

305 Miners Bank Bldg.,

Joplin, Mo.

### SMALL PAYMENT DOWN

And one-half cent an acre per day buys a farm. We pay railroad fares of all who go with us to investigate our lands, whether they buy or not. Write for description booklet and further information.

F. E. McNULTY,

719 New York Life Bldg., Kan. City, Mo.

### DID YOU GO TOO FAR?

Do you want to have a clover, bluegrass and timothy farm again? If so, write us. We sell well improved Johnson county farms for \$40 up. Write for our list, mailed free and postpaid.

LEETON LAND CO.,

Leeton,

Mo.

### 880 ACRES FINE TIMBER LAND.

Abundant living spring makes ideal ranch; if cleared would be good agricultural, farms adjoining all sides can not be bought for \$50 per acre; near county seat; price \$75 per acre; no incumbrance; will take some trade. J. H. Quarry Realty Co., 120 Commerce Bldg., Kansas City, Mo.

### I OWN A FARM OF 240 which I want to sell.

It is a good stock farm because it will grow good corn clover and timothy and has the best of water in four good wells. It has a comfortable house of four rooms and a summer kitchen. Stable room for 8 horses and feed. One-fourth of a mile from the school. In good neighborhood in Bates county, Mo. I will sell for \$35 per acre and make easy terms. Don't write unless you want to buy a farm, as I am a poor correspondent. John D. Moore, Rich Hill, Mo.

## NEBRASKA LAND

### TWO SPLENDID FARM BARGAINS.

400 acre farm in Red Willow county, Neb., 2 1/2 miles from McCook, good 2-room house, good barn and other good improvements, 160 acres choice valley alfalfa land, 55 acres now growing; 100 acres bottom and 40 acres upland; cultivated, balance pasture, well watered, some timber and abundance of choice fruit trees, bearing. Actual value of land over \$20,000, but belongs to non-resident, who will take \$16,000 if sold soon—only \$40 per acre. Act quick; don't miss this.

560 acres 12 miles from McCook, 7 miles from Troyer, Kan., 400 acres choice, smooth farm land, balance good pasture, half cultivated, slight improvements. A splendid bargain at \$16 per acre.

For other snaps in farm and ranch lands write or see

ACKERMAN & STEPHENS,

McCook,

Nebraska.

### IRRIGATED HOMESTEADS.

In the famous North Platte Valley, where Uncle Sam furnishes the water on ten years time without interest. Crops yield \$25 to \$100 per acre. Homesteads at from \$700 to \$3,500, according to improvements. Deeded lands \$75 to \$100 per acre. Free rural mail delivery, telephone and all modern farm conveniences. These lands in splendid settlement of fine homes near town. For particulars write or see

CARPENTER, PLUMMER & MURPHY,

Morrill,

Nebraska.

### 45 BUSHELS WHEAT LAND, \$25 PER ACRE.

We own and control 20,000 acres of Cheyenne county, Nebraska's choicest farm land now on the market. The heaviest crop yielding county in Nebraska for ten years; alfalfa also a leading crop. Ask for folders and full particulars. Agents wanted everywhere. Write for our proposition at once. Railroad fares refunded if things not as represented.

FUNDINGSLAND & SEVERSON,

Sidney,

Nebraska.

### SOUTHWESTERN NEBRASKA.

Known in early years as a part of The Great American Desert. And now is rapidly being transformed into a prosperous, and very productive agricultural country. Better land for less money can not be found, everybody is wanting it, and Mr. Reader, remember the old adage, "The Lord for All and the Devil Get the Hindmost." Cast your lot with the former, by buying you a farm in Cheyenne County.

THE CHASE COUNTY ABSTRACT CO.,

Imperial,

Nebraska.

## FREE LIST

of Nebraska lands, in Chase, Dundy and Perkins Counties, ranging in price from \$6.00 to \$35.00 per acre. No crop failures since 1895. Your name and address on a postal card will do it.

IMPERIAL LAND CO., Imperial Neb.

## Land Bargains

NEBRASKA, Colorado and Kansas lands, well located in Dundy County, Neb., Yuma County, Colo., and Cheyenne County, Kan. \$10.00 to \$25.00 per acre, for good smooth land. Some 640 acre relinquishments yet.

HAIGLER R. E. & INV. CO.,

Haigler,

Neb.

## NEBRASKA

160 acres, only 4 1/2 miles from Benkelman. \$15.00 an acre, if sold at once. Has about 100 acres good corn land, and about 80 in cultivation. Telephone and rural delivery lines are right there; school 1 mile, one-half down, balance at 8 per cent. Other farms.

D. L. OUGH,

Benkelman,

Neb.

## LANDS LANDS

Chase, Dundy and Perkins County. Crops haven't failed since '95. Prices range from \$6.00 to \$25.00 per acre. Also Colorado farms and ranches for sale. Write for free descriptive literature.

IMPERIAL LAND CO., Imperial, Neb.

### PUBLISHERS' PARAGRAPHS.

Seventeen Lessons in Better Farming. Every reader of Kansas Farmer is entitled to receive, free of all cost, a copy of a remarkable book, published by Deere & Company. The title of this book is "Better Farming," and it tells just what every progressive farmer wants to know. It contains separate chapter on Alfalfa Growing; Business-like Dairying; Silos and Silage; Improving the Corn Crop; Hints on Making Hay; Seed Wheat; Soil Cultivation; Maintaining Fertility; Improving the Cotton

Crop; The Gasoline Engine; The Boll Weevil; The Science and Art of Plowing; Fighting Jack Frost, and Adjusting Wheel Plows.

Each chapter is prepared by an authority who knew how to make every sentence count. Each chapter goes right to the heart of its subject and is of vital importance not only to our readers, but also to every other progressive farmer in the country.

In addition to these directly instructive articles, there is an inspiring introduction to the book under the general heading of "Better Farming," an intensely interesting chapter on the invention and development of the steel plow, and other pages, the complete line of Deere Plows and Cultivators are well illustrated and described.

All in all, we don't remember to have seen another book published for free distribution that will be so much appreciated. During the past seventy years Deere & Company have gotten mighty close to all farmers of America. They have done some fine things in the way of issuing free books of value. But they have capped the climax with this latest book.

Certainly, some four or five or perhaps mostly all of the lessons in this book will be of particular value and interest in every farm home we reach. Hence, we trust that thousands will take advantage of this opportunity. Just mail a postal or letter to Deere & Co., Box 13, Moline, Ill., and ask for a copy of "Better Farming," second edition, giving your name and complete address, and stating that you are a reader of this paper. It will pay you to write the postal now, for the things it tells may help you in your next week's work. The book is certainly a mine of valuable information and should be handy for every farmer to read thoroughly. Send the postal now.

### LARGE INCREASE IN AUTOMOBILE SALES.

More automobiles were sold in the United States during the thirty-one days of the month of March than in any corresponding period in the history of the automobile industry, according to reports received from many factories now working overtime.

This has emphasized the certainty of enormous sales of automobiles that will follow during the next three or four months.

Sales have far exceeded the expectations of the makers, the demand for cars of the better class as well as for those of lower prices being so large that even those factories working overtime can not produce enough to fill the demand.

Charles T. Jeffrey, general manager of Thomas B. Jeffrey & Company, announces that March was the greatest month in the history of the Rambler business, more than double the number of sales being made in that month than in the corresponding period one year ago.

"The demand is for our higher priced models," said Mr. Jeffrey, "and the increase has been chiefly in the larger cities like New York, Boston, Cleveland, Chicago, Kansas City and San Francisco."

"I understand that many factories have been greatly handicapped in making deliveries because of their increased business. We have not been seriously affected, of course, because we are independent of all sources of parts supply. We anticipated this great demand during the spring months and because we make all the parts of our cars we have been able to make deliveries readily."

"This unusual demand, while indicating a prosperous condition of the industry, is more than of ordinary interest to the buyer, because of the possibility of quality being overlooked in the assembling of cars for rapid sale."

In this connection these factories with limited outputs have the advantage from the buyer's standpoint.

Regarding this, Mr. Jeffrey said: "It is a great thing to be independent, either as a buyer or as a manufacturer of goods. A buyer does not like to be limited in his choice of the goods that he buys. He wants the best possible article at the most reasonable price."

"The manufacturer does not want to look to his own profit merely, but to the profit of the buyer. He wants to build cars that will be satisfactory to that buyer. Of course, the careful buyer always looks for that product made in this way because he knows that only with the advantage of independence can the best cars be produced."

### Farmers' Meeting at the Hays Experiment Station.

The Agricultural College folks have a big State Farmers' Institute at Manhattan every winter, bringing together hundreds of the leading farmers of the state. Now they are planning a big event for the Branch experiment station at Hays for Tuesday and Wednesday, June 7 and 8. Few people know that Kansas has at Hays the largest experiment station in the world, nearly four thousand acres about half of it already in cultivation. There are nearly 500 acres of wheat now, all improved varieties, and reports indicate that it is the finest wheat prospect in the state—half of it knee-high now.

Then there will be at that time about five hundred acres of corn, alfalfa, milo and broom corn, one hundred and fifty acres of fine alfalfa and many other crops, some of them of new and untried varieties, grown nowhere else in the west. Then there are the orchard and the forestry and garden experiments that will be of great interest.

Of interest to stockmen will be the biggest cattle feeding experiment ever conducted anywhere—with twenty-four cows, and one bull of each of the four best breeds, Mericord, Shorthorn, Angus and Galloway. At least the experiment started a year ago with the above number and now there are calves at side. All these cattle were selected by Professor Kinser and are being handled under his direction.

Now on June 7 and 8 Superintendent Teneyck invite the farmers of all Western Kansas to visit this big experiment station farm and see for themselves the work in progress. The program will be the same for both days, inspection of farm with explanation of experiments and addresses in the grove by those in authority, with a general conference, questions and discussions, visiting the farm, 8 a. m. to 12 p. m. and from 2 to 3 p. m., examination of cattle herds, 3 to 5 p. m., addresses and conferences.

Every institute and every commercial club in Western Kansas is asked to send at least five delegates and then a general invitation is extended to everybody to come and see and learn and contribute something to this great meeting—the first of the kind ever held in Western Kansas. It will be a help to the committee on carriages if all institute and commercial club secretaries will notify the Commercial Club secretary at Hays a few days in advance of the number of delegates from that institute or club.



**Colorado Land****CALL OF THE WEST**

Why do you rent? Why give the best years of your life working for others? Own your own farm—you can do it on payments less than the rents you are now giving.

**BE INDEPENDENT—DO IT NOW.**

We have plenty of choice smooth fertile lands such as are now producing from 25 to 45 bushels of wheat per acre and yield abundantly of corn, alfalfa, oats, potatoes and other crops we can sell you at from \$10 to \$25 per acre on good terms. Write us at once for information as to the splendid opportunities for investment in lands both irrigated and irrigable, or choice farming uplands. These lands are in Logan and Weld counties and the famous Crow Creek Valley. THE BEST OF NORTHWESTERN COLORADO.

Act now and get the benefit of the rapid rise in values. Some good homestead lands subject to filing.

**THE WESTERN LAND CO.**

COLORADO.

STERLING,

**KIT CARSON COUNTY, COLORADO**

I offer 35,000 acres agricultural land in Kit Carson county at \$7.50 per acre on easy terms and long time. Averages 90 per cent smooth land. All tillable, good soil and water guaranteed. A splendid colonization proposition.

ALBERT E. KING,

McPH. RSON, KAN.

**1000,000 Acres of Land in Eastern Colorado**

If interested in lands in Eastern Colorado, where there has never been a hot wind or cyclone, where the water is shallow, fifteen to twenty-five feet deep, natural, sub-irrigated alfalfa land, where the soil is rich from the glacial drift from the mountains, where the air is pure, and the sun shines, and more showers than any other district. Write us for folder descriptive of the land and best map of Colorado published. Kit Carson.

KIT CARSON COMPANY.

Colorado.

**\$11.50 --- PER ACRE --- \$11.50**

For 640 acres of the best land east of Denver in Colorado, worth \$17.05 to \$20.00 by Sept. 1st. Write for information and terms. Colorado.

THE LONGMONT REALTY CO.,

LIVE AGENTS wanted to sell Washington County land; big crops are being raised every year. Write for offer. The Clary Land Co., Akron, Colo.

**YUMA COUNTY, COLORADO**

Lands \$14 to \$20 per acre, where all staples produce big crops. Write for free list.

B. M. WEAR, Jr., Yuma, Colo.

**SAN LUIS VALLEY, COLORADO.**

Irrigated pea, alfalfa, hay and livestock farms, \$45 to \$90 per acre. Write for full information. HAIGLER REALTY CO., 1134 E. Pike's Peak Avenue, Colorado Springs, Colorado.

EASTERN COLORADO—Lands at lowest prices and best terms. If you want a good home or investment, you should see me. I have been here for 17 years. Inclose stamp for reply.

**THE GENOA LAND COMPANY,**

Genoa, Colo.

EASTERN COLORADO Lands \$10 an acre and up. Live agents wanted. Write for our descriptive literature and county map, mailed free.

**HAYNES LAND CO.,**

Vona, Colo.

960 ACRES at \$6.75 per acre of good farming land 10 miles out. For this and prices on other lands write us.

**KENEDY LAND CO.,**

St. Peter, Minn. Genoa, Colo.

YUMA COUNTY, COLO. Lands that raise big crops of all staples, \$10 to \$15 per acre. Great opportunities for home seeker and investor. I own a few quarters, which I will sell cheap.

A. L. KISSINGER, U. S. Commissioner, Yuma, Colorado.

WASHINGTON COUNTY, COLORADO. Corn and wheat lands \$7 to \$30 per acre. Prices advancing rapidly—now is the time to buy. 320 acre homesteads and cheap relinquishments. Write for free list.

THE AKRON LAND CO., Inc., Akron, Colo.

LANDS that raise big crops of all staples, near towns, churches, schools and neighbors \$10 to \$25. Will locate you on a 320 acre homestead relinquishment. Act quickly. Write for full information. Empire Land & Cattle Co., Akron, Colo.

LANDS. Adams, Arapahoe and Elbert County, Colo. Produce big crops, all staples; \$8.50 to \$17.50 per acre. For a good home, or investment that will increase rapidly, write for free list and descriptive literature.

PARKS BROS. & ORTON, Longmont, Colo.

CHEYENNE COUNTY, COLORADO. Where land often pays for itself in one crop. For \$8 to \$16 we can sell you choice land, well located, near schools, churches and markets. Write or see.

WILD HORSE LAND CO., Wild Horse, Colorado.

LOVELAND, COLO. The land of irrigation and sunshine, sugar beets, wheat and alfalfa produce big crops. If you want a good home, or increasing investment, write or see.

ARTHUR H. GODDARD, Loveland, Colo.

FREE HOMESTEADS

Of 320 acres in Colorado to readers of Kansas Farmer; ample rainfall, rich deep soil that will grow the finest of crops without irrigation. Fine deeded land adjoining \$10 to \$15 per acre, on easy terms. Write me today enclosing 25c and I will send you a sample of the soil, sectional map and homestead law, also answer all questions.

H. G. MATTESON, Benkelman, Neb.

**GOVERNMENT LAND FREE IN ROUTT COUNTY COLORADO**

To secure good farmers, we tell you how to locate 160 acres of fine government land in Routt County, on Moffat Road, (Denver Northwestern & Pacific Railway.) Big crops, pure water, good soil, fine climate and markets. Fine openings for investments and business. We have no land to sell, its absolutely free from the government. Law allows you to return home for 6 months after filing. Write for free book, map and full information that tells how to get this land free. Address W. F. JONES, Gen. Traffic Mgr., 708 Majestic Bldg., Denver, Colo.

STOP! LOOK! LISTEN! To what we have to say in regard to our business. We have a large list of the best lands in Morgan County. Should you desire a good irrigated farm, good dry land on a homestead, communicate with us or come and give us an opportunity to show you what we have.

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

**COLORADO LANDS**

Send for our descriptive map folder of Eastern Colorado, mailed free upon request. We have many bargains in wheat and alfalfa land, nice and smooth, at \$8.50 to \$20.00 per acre.

FLAGLER LOAN & INV. CO., Flagler, Kit Carson County, Colo.

IF YOU WANT TO BUY AN IRRIGATED FARM that will produce big crops of all staples, at a reasonable price, write to or call on C. B. Henderson, Loveland, Colo.

**I. L. DARBY****THE PIONEER LAND MAN**

Government and Deeded Lands and Town Property. 320 acre Homesteads. Snaps in Relinquishments. Write for new illustrated folder, mailed free. Grover, Colo.

**SUNNY COLORADO.**

Beautiful irrigated homes, along the Denver, Laramie and Northwestern, 5, 10, 20, 40 and 80 acre tracts, suitable for all crops grown by irrigation. \$200.00 an acre and up, on liberal terms. Write for beautifully illustrated literature, mailed free. COLONY INVESTMENT CO., Inc., Immigration Agents D. L. & N., Greeley, Colo.

DO YOU WANT TO BUY Eastern Colorado lands? Write for our free folder of 28 large illustrated pages. Cheyenne County Land Co., Cheyenne Wells, Colo.

640 acres fenced and cross-fenced, twelve miles of Denver, three miles of Parker, Colo., well grassed, has living water sufficient to water 200 head of stock every day in the year, \$12.00 per acre, half cash, balance in one and two years at 6 per cent. Several other bargains just as good. Write

A. J. SIMONSON, Denver, 214 Cooper Bldg., Colo.

KIT CARSON COUNTY, COLORADO. Corn, wheat and alfalfa lands, at \$10 to \$25 per acre, according to location and improvements. Prices are rapidly advancing, and the time to buy is now. Write for our free illustrated booklet, stating what you want. A live agent wanted in your locality.

A. W. WINEGAR, Burlington, Colo.

EASTERN COLORADO—The home of wheat, barley, millet, cane, broom corn, speltz, and all staples. Lands are now very cheap, from \$9.00 to \$11.00 per acre for raw land to about \$20.00 per acre for improved farms, but are rapidly advancing in price. Write for free printed matter, stating what you want.

McKACKEN LAND CO., Burlington, Colo.

**WYOMING LANDS**

FREE—320-ACRE Homesteads—Millions of acres; fertile lands, valuable information, laws, maps showing how and where to locate sent for 25c, mailing cost. Western Land Company, K 404, Cheyenne, Wyo.

**IOWA COLONY**

\$15 lands near Cheyenne, grows crops equal to \$100 lands anywhere. Don't drown out or dry out—have rain enough. Finest climate and water. Maps free.

HARTUNG LAND COMPANY, Cheyenne, Wyo.

**EASTERN COLORADO.**

Our lands raise big crops of wheat, oats, flax and corn, and are rapidly increasing in value. If you act at once, we can sell you a good farm for \$12 to \$25 per acre. We want a hustling agent in your locality. Illustrated descriptive literature free upon request.

CLARENCE M. SMITH, Flagler, Colo.

**COLORADO FARMS**

If you want western land, may I explain opportunities in northwest Colorado, to invest in either irrigated or non-irrigated wild land, or improved farms. Upon the land, or improved farms, I am in position to talk of the land trade, (if so required) ex-aid a buyer by acting (if so required) exclusively in his interest to secure for him a bargain in land. I refer by special permission to First National Bank, Sterling, Colorado. For information address,

H. A. CLAPP, Otis, Colo. Sterling, Colorado.

**WYOMING LANDS**

Improved Irrigated Farms and Stock Ranches. Direct from the owners at low prices on liberal terms. Write for our free descriptive literature. Laramie, THE WESTERN IRRIGATED LANDS CO., Wyoming.

**AUCTIONEERS****L. E. FIFE,**

LIVE STOCK AUCTIONEER,

Newton, Kansas. Breeder of Percherons, Shorthorns and Duroc Jersey hogs, posted in pedigrees; terms reasonable. Write or wire for data.

**LAFE BURGER**

LIVE STOCK AUCTIONEER.

Write or wire me for date.

WELLINGTON, KANSAS.

**JOHN D. SNYDER**

Auctioneer, Winfield, Kansas.

I sell for many of the most successful breeders.

**THOMAS DARCEY**

Live Stock and Real Estate Auctioneer. Fifteen years' experience. Breeder of Poland China hogs. Well posted in pedigrees. Dealer in real estate. Terms reasonable. Wire or write for dates. Long distance phone 2551. OFFERLE, KAN.

**W. C. Curphey**

LIVE STOCK AUCTIONEER.

Write, phone or wire me for dates. Abilene, Kansas.

**Col. Essie Craven**

LIVE STOCK AUCTIONEER.

Twenty Years Selling All Breeds. NORTH BRANCH, KAN.

**LIVE AND LET LIVE**

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

**JAS. T. McCULLOCH**

CLAY CENTER, KANSAS.

**J. H. MOORMAN.**

Live Stock and General Farm Sale Auctioneer. Satisfaction guaranteed. Long distance phone connection. SOLOMON, KANSAS.

**SHORTHORN CATTLE**

SHORTHORNS. If you need a young bull or some females write us, prices right. SHAW BROS., Phillips Co., Glade, Kan.

SCOTCH SHORTHORNS. 7 young bulls from 10 to 15 months old. Scotch and Scotch topped; one pure Scotch bull by Blythe Conqueror. A few choice heifers for sale. C. H. WHITE, Burlington, Kan.

TENNEHOLM SHORTHORNS. Have on hand a few young red bulls ready for service that are out of splendid milking dams and have good beef form. No better breeding could be wished. Can spare a few females. Prices moderate. E. S. MYERS, Chanute, Kan.

**A CARLOAD SHORTHORN COWS**

All are bred or have calf at side, 4 good young bulls that I am sure will suit. Everything nicely bred and in good condition. Moderate prices. Come and see us.

D. H. FORBES & SONS, R. F. D. 8, Bell Phone 31.

**Center Grove Stock Farm**

Scotch Shorthorn cattle and 20 bred sows and a few good spring boars of large type Poland China hogs. Write me what you want. No trouble to answer letters. Bell Phone.

J. W. Pelphrey & Son, R. 6, Chanute, Kan.

SCOTCH HERD BULL FOR SALE. The Cruickshank Clipper bull, Scottish Archer 283319, sired by Victor Archer 22310 and out of Imp. Noam's Ruth 2nd. An extra good individual and sire but cannot be used in herd longer to advantage, and will be priced reasonable.

S. B. AMCOATS, Clay Center, Kansas.

**Humboldt National Stock Farm.**

Shorthorn cattle, large type Poland China hogs, 10 spring boars, priced right. Write me your wants. I meet parties at trains. We can do business. Come and see me.

H. F. Pelphrey & Son, Humboldt, Kan.

**JERSEY CATTLE****LINSCOTT JERSEYS**

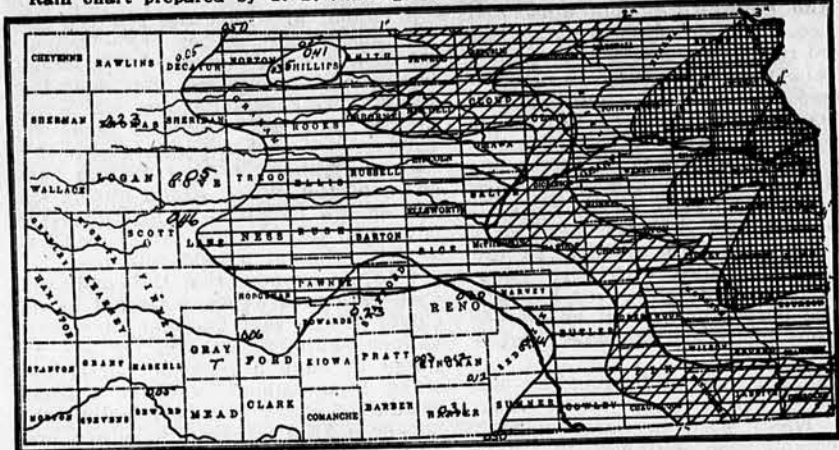
Offers a few choice cows in milk and some bred heifers. Milk and butter records accurately kept.

R. J. LINSKOTT, Holton, Kansas.

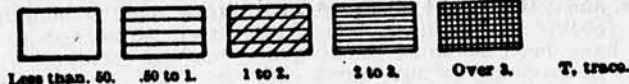


# WEATHER MAP

Rain chart prepared by T. B. Jennings from reports collected by the Weather Bureau.



SCALE IN INCHES:



## KANSAS FARMER'S WEEKLY REPORT, General Summary.

The weather has been unusually cool most of the week, ranging from 4 to 15 degrees below normal. It has also been somewhat more cloudy than usual. Light showers occurred in many of the far western counties with good rains in the central counties and heavy rains in the eastern.

### Reports by Counties.

**Allen**—Monday and Tuesday warm, balance of week cool with a light frost on the 8th. Plenty of rain.

**Anderson**—Abundant rainfall, which has improved all vegetation. Week generally cool.

**Bourbon**—Very wet first of week. Warm weather 8th and 10th. Other days cool.

**Chautauque**—The rains first of week brightened up vegetation, but much more is needed.

**Coffey**—Ground too wet to work and weather too cool for corn.

**Douglas**—Some of the early planted corn will have to be replanted. Pastures have improved since rains began. Wheat looks well, average stand 85 per cent—not over 5 per cent plowed up. Kharkoff wheat sown as late as Nov. 15-18 better than half stand. Crop and fruit outlook promising.

**Elk**—Plenty of moisture, but weather too cool for good growth.

**Greenwood**—The low temperature rather offsets the benefits from the rains.

**Johnson**—Very rainy first days of week. Quite cool 8th, 11th and 12th.

**Marshall**—The rains first of week, relieving the dry spell. Farm work progressing well. Gardens and pastures improving. Considerable wheat ground being planted to corn.

**Nemaha**—Rain stopped all field work, but corn planting has recommenced. Roads are very rough.

**Pottawatomie**—The rains have helped the pastures and meadows. Corn mostly planted. Alfalfa cutting has begun. Cherries and plums mostly dropped. Apples on low lands will be scarce.

**Riley**—Good rains first days. Cool week with warm weather the 10th.

**Shawnee**—The 9th and 10th were warm, but the rest of the week was cool with much cloudiness. Plenty of rain in the early part of the week, but the weather is too cool for good growth.

**Woodson**—First half of week too wet for farm work. Crops doing well, but too cool for good growth.

**Middle Division.**

**Barton**—Thunder showers improved wheat, barley, oats and pasture. Light frost on the 8th, no damage. First crop of alfalfa ready to cut, but will be short. Corn planting well advanced. Pasture very short. Fruits promise abundance.

**Butler**—Weather cold except two days.

### FIELD NOTES.

**A Rubbing Post.**  
G. J. Page, of Colony, Kan., is advertising the Wasson rubbing post which he says, has proved very effective in ridding hogs of lice, mange and scratches, at a less expense than any other method. This rubbing post is well known in neighboring states, where it has been longer in use and has proved entirely satisfactory. Mr. Page's advertisement appears in another place in this paper and he will be glad to send full particulars and prices if you mention the Kansas Farmer.

To the Editor—We had a very dry March and April, .55 inches total precipitation for those two months. Rains beginning May 2 amounting to 1.52 inches between 2nd and 6th, inclusive, placed wheat out of danger for the present. While the straw may be short we have as good a prospect for a good yield as we have had for several years. I think I will be safe in saying the destruction by frost and freeze during winter was not over 5 per cent in this immediate locality. Ground in fine condition for planting. About the same acreage of corn and Kafir corn as usual. Very little cane except for feed. Some alfalfa being sown. With favorable conditions from this on I see no reason for not having a bountiful harvest.  
—Hugh A. Storer, Alton, Kan.

### The Independence Business and Trades College.

With this issue we are starting the announcement card under Schools and Colleges of the Independence Business and Trades College of Independence, Kan. This business and trades college is one among the leading institutions of its kind in the country. Their work combines the scientific and practical knowledge that is necessary to success in the business world. Every member of the faculty is a specialist in his work. The rooms are modern, well lighted and sanitary in every respect. Many of the students earn their own living expenses by performing various duties before and after school hours. Prices are very reasonable. If you are a business education, we would advise that you write this institution for their handsome illustrated catalog, which contains full information and prices of tuition. When writing please mention the Kansas Farmer.

### A Few Choice Bulls for Sale.

With this issue we start the new ad of Stewart & Downs at Hutchinson, Kan. The herd bulls used in this herd are Forest Knight by Gallant Knight and Victor Arch-

er by Archer and out of a Gallant Knight cow. Forest Knight is a 7-year-old bull with wonderful scale and conformation; he is one of the smoothest Shorthorn bulls ever known of and for his age we do not know of one of his equal. Stewart & Downs are keeping in their herd about 35 choice heifers sired by Forest Knight. They will sell this bull and several young bulls sired by him. Victor Archer is a roan bull—he has many good points in his favor—he has proven a good sire. A full sister to Victor Archer sold in the Kansas City Royal last fall for \$500. Stewart & Downs are offering a few choice cows and heifers at very low prices. Look up their ad in this issue and write them your wants. They are plentiful a few choice cows and heifers at very low prices. Write or call and see them. Kindly mention the Kansas Farmer.

### The Kansas-Oklahoma Futurity.

Secretary A. L. Sponser of the Hutchinson State Fair writes in "Owing to the fact that we have secured the great futurity colt trotting and pacing races of the Kansas and Oklahoma circuit, more interest is being exhibited by owners, trainers and breeders of harness horses than ever before. The eyes of the entire horse world are upon the events to occur here this year. They are the first futurity colt states that were ever promoted by a fair circuit. Some of the horse papers thought it probable when these stakes were opened that they never could be carried to a successful conclusion. But they were evidently not acquainted with the push and enthusiasm of the western horsemen. These stakes will be raced for \$5,000 on our track this year before the largest crowd that ever assembled in the state to see a racing event. The organization of the Central Jockey Club will afford an opportunity of putting our running races on in much better form and with greater interest in all there will be paid by our association at our meeting this fall during the five days of interesting and exciting events \$20,000 in money. All this added to the \$20,000 in premium offerings in other departments, together with our great machinery exhibit, will produce the greatest all-around State Fair Kansas has ever seen."

### The Sutton Daddies.

Mr. George A. Porteous, manager of the famous Sutton Farms at Lawrence, Kan., writes: "We have shipped the entire bunch of bulls from our ranch at Russell as we had sold all that we had here of serviceable age. A few of this large bunch of bulls have already been sold, but there are some good ones left. Many of them are just coming a year old, while some are coming

## Mitchell County Breeders' Association

DR. C. B. KERN, President.

J. M. RODGERS, Secretary.

Nothing but first class animals offered for sale for breeding purposes. Mitchell County Fair, Sept. 28, 29, 30 and October 1, 1910.

Premium List Ready June 1.

E. C. LOGAN, President.

W. S. GABEL, Secretary.

### SHORTHORN CATTLE.

**THE PURE SCOTCH BULL HIGH-**  
land Laddy by Brave Knight by Gallant Knight heads our herd. Some fine young bulls developed for this fall's use. A young herd of real merit. **BRINEY & BRINEY, Beloit, Kan.**

**LOCUST GROVE HERD SHORTHORNS.**  
Up-to-date breeding with good quality. **ELMER C. CREITZ, Beloit, Kan.**

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

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

**HERD BULL, Royal Goods by Select**  
Goods by Choice Goods for sale; also young bulls. Herd headed by Dred-naught., **MEALL BROS., Cawker City, Kan.**

### HEREFORD CATTLE.

**W. B. & J. M. RODGERS, Beloit, Kan.**  
Breeders of Hereford Cattle and Berkshire Hogs. Quality before quantity. Come and see us.

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

**100 HEAD OF HEREFORDS**, the home of Caster 259475, the winner in every big show he was ever in. A few choice young heifers and cows for sale. **F. L. BROWN & CO., Sylvia, Grove, Kan.**

### PERCHERON HORSES.

**REGISTERED PERCHERONS**—The home of Vidouque (Imp.) 40463, also the brood mare Risette (Imp.) 51115. Inspection invited. Farm adjoins town. **E. N. WOODBURY, Cawker City, Kan.**

**REGISTERED PERCHERON HORSES**  
in stud. Imported Rebels 42523, by Casaque by Tehidus, who sired Callipso and Casino. Visitors welcome. **C. J. JOHNSON, Solomon Rapids, Kan.**

**THE HOME OF JAQUE W. 42659** by Tlatrey, dam imported Risette. Inspection of my Percherons invited. **RALPH G. MCKINNEY, Glen Elder, Kan.**

two. All are in good, lusty breeding condition. We must sell these bulls at once, as our pasturage here is limited. We have also a few calves by Champion Ito, which are very high class and around 12 months old. Some of these are on feed and will go into our show herd this fall. Our trade this year has been very good, especially in females, and the buyers in several cases have been beginners in the cattle business. These young breeders are to be congratulated on their choice of the blacks, as this will start them on their road to breeding market toppers.

## EXCHANGE COLUMN

**FOR SALE OR EXCHANGE.**  
Alfalfa land in shallow water district of Oklahoma in 40 to 640 acre tracts, \$20 to \$65 per acre. For particulars write **C. B. RHODES R. E. & INV. CO., 4400 Helst Bldg., Kansas City, Mo.**

**FOR SALE OR EXCHANGE FOR OTHER PROPERTY.**

17-room hotel, finished new throughout, in growing town; best hotel in town—practically no competition. Also some snaps in Gove and Sheridan County land.

**D. A. BORAH, Cashier State Bank, Grinnell, Kansas.**

**TO EXCHANGE FOR KANSAS FARM.**  
Suburban grocery stock will invoice about \$3,000. Will assume some on farm. Residing properties in Kansas City and 20 farms, Kansas and Missouri, ranging from 80 to 400 acres each to exchange. **J. E. REED REALTY CO., 628 N. Y. Life, Kansas City, Mo.**

**FOR SALE OR EXCHANGE, WEST CENTRAL KANSAS LAND.**

Wheat, corn and alfalfa lands. Large and Gove counties, \$15 to \$25 an acre. Prices advancing rapidly. If you have a good trade to offer write us. **W. H. DAYTON Land Co., Abilene, Kan.**

**FOR SALE AND EXCHANGE.**

Kansas and Missouri farms for city property, stocks merchandise, and other farms. Describe what you have, will make you a good trade. List your farms for exchange with us. **R. R. Woodward Real Estate & Investment Company, 264 N. Y. Life Bldg., Kansas City, Mo.**

**BUY OR TRADE with us. Send for list.**  
**BESSIE-MEREDITH, Eldorado, Kansas.**

### FREE HOMESTEADS.

Can locate you on 640 acre relinquishments in Nebraska or 320 acre government homesteads in eastern Colorado on main line of B. & M. R. R. Also fine deeded lands, town property and stocks of merchandise for sale or exchange. I make a specialty of exchanges. Real estate men send me your exchange lists. **M. W. M. SWAN, Haigler, Neb.**

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

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

### COACH HORSES.

**LAWDALE STOCK FARM**, Oldenburg German coach horses. International prize winning stock. A tried stallion for sale. Inspection invited. **JOSEPH WEAR & SON, Barnard, Kan.**

### POLAND CHINAS.

**LEBAN CREEK STOCK FARM**—Poland Chinas, large herd to select from, fall pigs of both sexes for sale now. Not related. Can also spare a few bred sows. **E. C. LOGAN, Beloit, Kan.**

### EUREKA HERD OF PURE BRED

Poland Chinas and Duroc Jerseys. Bred glits and sows all sold, but have a few fall boars and glits of both breeds. Prices right. **W. H. SALES, Simpson, Kansas.**

### DUBOC JERSEYS.

**GOLDEN RULE STOCK FARM**—Choice bred sows and glits for sale at prices to move them, best of breeding and individuality. Satisfaction or no sale. **LEON CARTER, Asherville, Kan.**

**GOLDEN RULE STOCK FARM**—The best in Duroc-Jersey swine. Orders booked now for early spring pigs of either sex. Pearl H. Radgett, Beloit, Kan.

### HAMPSHIRE.

**HAMPSHIRE HOGS.** Always have stock for sale. Write for prices. **A. B. DOYLE, Beloit, Kan., Rural Route 1.**

### O. I. C. SWINE.

Tracing to the famous Kerr and Big Mary families. No more females to offer. A few choice bred and open glits for sale. **T. C. WRENCH, Beloit, Kan.**

### AUCTIONEERS.

### COL. M. J. VANAMBURG

General and Live Stock Auctioneer. PHONE 943, **BELOIT, KAN.**

### COL. F. L. SMITH

General and Live Stock Auctioneer. PHONE 434, **BELOIT, KAN.**

**TO EXCHANGE**—17-room hotel in good town in southern Iowa, want farm or residence. Stock of dry goods to trade for Kansas City residence. Farms to trade for city property. I can match you on any kind of a trade.

**HENRY G. PARSONS, Lawrence, Kansas.**

## TREGO COUNTY

Lands for sale or exchange; prices \$15 to \$40 per acre, also city property and stocks of merchandise. If you have a good trade to offer, no matter where it is located or what it is, write us.

**ED. PORTER LAND AGENCY, Wakeeney, Kansas.**

## TO TRADE

550 acre grain, grass, alfalfa and stock farm, close to good town, 100 mi. S. W. of Wichita, a fine combination farm, \$50 per acre, \$12,000 inc. 5 years, 6 per cent, want income property or merchandise for equity of \$15,500. Address.

Box 382,

**Kiowa, Kansas.**

## FOR SALE OR TRADE

In farm land a clothing store, new stock, involving between \$7,000 and \$8,000, consisting of men's clothing, hats, shoes and furnishings. Store room 25x80 feet, modern front, good fixtures, rent \$35 per month, population about 2,000, situated in a growing coal mining town in southeastern Kansas with new mines being opened continually. The only exclusive clothing house in the town no middle men. Address

**H. DEGAN, PITTSBURG, KAN.**

## THE STRAY LIST

**Coffey Co.**—Geo Throckmorton—Co. Clerk. **HORSE**—One fleabitten grey horse, pony, no brands or marks visible; taken up by O. W. Hussa of Hampton township, April 1, 1910. Valued at \$25.

**County Clerk**—W. H. Shaffer—Cherokee Co. **TAKEN UP**—1 bay mare about 12 yrs. old, 15 hands high, wt. about 1,000 lbs.; small white spot in forehead, branded M. in left front shoulder, scar on right front leg, scar on left hip, shod all round. Valued at \$40. Taken up by J. D. Bailey Apr. 19, 1910, of Crestline, Shawnee twp.

**County Clerk**—W. H. Shaffer—Cherokee Co. **TAKEN UP**—1 bay mare pony about 5 yrs. old, 14 hands high, large white spot in forehead, both hind feet white, branded A on left shoulder, shod all round, had head stall on. Taken up by J. D. Bailey, Apr. 19, 1910, of Crestline, Shawnee twp.



# CLOVER SILAGE IN STATE OF WISCONSIN

The subject of silos and silage has been presented to us for years by our best practical dairymen at our farmers' institutes, experimental associations and farmers' short course and through the agricultural and farm papers and farmers who have attended any of these meetings or have read many of the articles written on this subject have been forced to admit that the advocates of the silo have the best of the argument.

It has been my privilege to attend the experimental association meetings and part of the farmers' short course for the past three years and while attending the meeting of 1908 I spent part of one forenoon finding out all I could regarding silo construction. Soon after returning home I contracted for two small stave silos, which were placed inside our barn, using part of the space that had formerly been used for a hay mow.

That part of our farm which is used for a pasture is rather low and in ordinary seasons gives us good feed, but such seasons as we have had for the past three or four years it has been too wet during the earlier part of the season. This had a good deal to do with our trying the experiment of clover silage for summer feed. The past season gave us an enormous growth of clover, which stood up fairly well. As this was all new to us and not being able to find out from anybody that had ever tried to handle clover in this way, we waited until we thought it had reached the right condition to begin cutting for hay, that is when the first blossoms began to change to brown. We began cutting June 22 and in the morning while the dew was on, beginning at once to load onto the wagons, three or four men pitching it on with large barley forks. It was not necessary for a person to be on the load, for it unloaded much better when not tramped. This was drawn to the silage cutter and cut one inch long. It was well spread and tramped in the silo. During the forenoon we put eleven loads into the silo. This was about one-half the amount that had been mowed. At noon we had a very heavy rain which lasted about one hour. As soon as the rain was over, we commenced drawing the wet clover. Of course a considerable part of the water dripped out during the pitching onto the load and from the load to the cutter, but for all that the clover that was put in the silo in the afternoon was wetter than that which

was put in in the forenoon. I am satisfied that this extra amount of water in the clover was one of the reasons that helped to make this trial so satisfactory.

The last load run through the cutter was one-fourth of an inch long. This being wet and by being thoroughly tramped left the surface quite hard and firm.

The following day I scattered some barley over the surface and for several days sprinkled it with water. In a few days we had a growth that seemed to exclude the air.

On the 27th of July we took about a load off the top. This took all the green barley, the root growth and a thin layer underneath which seemed to me to smell pretty strong. At this time our pastures were getting dry and the feed short. We had been feeding new clover hay for two or three weeks at milking time. We were so busy haying, harvesting and cultivating corn that it did not seem as if we could stop to uncover it, and right here I want to say, that from the appearance of the top and the smell that came from it, and hearing the comments of people who had heard about the trial, I was not quite as anxious to open it as you might suppose. There seemed to be a feeling of pity, as well as curiosity concerning the results. Several different ones "kindly" offered to help pitch it out and draw it out on the land, for they thought that if it did not burn itself and set fire to the barn it might make pretty good fertilizer.

The first two or three feeds that were given the cows seemed to justify my friends' opinions. We put some bran on the feed after putting it in the mangers. The cows ate the bran readily, but ate the clover sparingly. This seemed to be a new item on their bill of fare and they did not seem to know what to make of it. My hired man said, "They acted like a fellow getting used to a new brand of chewing tobacco." After five or six feedings all of the cows were eating it. We fed a heaping bushel basket full to each cow twice a day. Some would eat more and it was given them. No bran was fed after the second day. Our cows soon began to increase their flow of milk and lost that dissatisfied look that they seemed to have had when they were brought up at milking time. As the pastures became poorer and the flies more numerous, the young heifers and some of the cows that were soon to freshen

got into the habit of going into the stable at milking time and they were given feed regularly.

Now as to results. The flow of milk was soon increased considerably, the cows were contented and very soon their appearance had changed so that several asked me how much and what kind of grain are you feeding your cows, and when told that all they were getting was the clover silage seemed hardly to believe me.

The twenty-one loads of clover put into the silo were taken from three acres. We fed twelve of the cows all of the time and eighteen head part of the time for eight weeks. At the time of filling silos with corn (September 18) all of the clover had not been fed out. There must be two or three tons in the bottom now (March 16).

During the time of feeding the clover silage, some of our cows freshened. They were in fine condition and commenced milking in good shape, and I think that since we have been feeding corn silage better results have been obtained on account of the cows being in such good condition.

I am satisfied that we made two mistakes. One was in not putting in more clover and the other in not beginning to feed sooner, for if we had begun feeding silage two or three weeks sooner instead of dry clover hay we could have increased the amount of milk instead of the decrease which was noticeable at that time.

Some of my neighbors thought that the clover silage fed to cows while they were running in the pasture would physic them and be injurious, but such was not the case as not one of the cows was so affected.

Our bull was kept in the barn all of the time and received two feeds of silage a day with what dry hay he would eat at noon. He kept in fine condition and at no time did he show a too laxative condition.

There are one or two conditions present in clover that are not so noticeable in corn for silage purposes. First: The stalk or stem of clover being hollow, more tramping seems necessary to exclude the air.

Second: The average temperature at the time of putting in clover silage being about thirty degrees higher than at the time of putting in corn, a considerable amount of moisture should be provided at the time of filling so as to avoid a burning or scalding during the process of cooking or fermentation that all silage seems to go through.

As to silos: Each of our stave silos is placed on top of a five-foot wall. The walls are laid up in cement mortar, the bottoms are concrete and both bottoms and sides are plastered

with two coats of cement. There is no noticeable difference in the appearance of the silage, either clover or corn, against the staves or against the cement.

I cannot give you the relative proportions or the feeding value in comparison between clover or corn silage, but from the results obtained last summer we consider clover silage one of the best and cheapest feeds for summer use, and we believe that if it can be arranged so that we can have some of the clover silage during the winter, we will have a feed that the cows will relish and a pretty well balanced ration at a moderate cost.

I do not suppose that the conditions that were present when we put in our clover silage last summer may ever happen again, so we will try and arrange to have a tank or barrel elevated high enough so that a small stream of water can be run into the blower and the necessary moisture provided, for we believe that more moisture than is contained in the clover itself is needed to insure it against loss by molding or over-heating.—W. P. Bussey, Omro, Wis.

Appearances are deceptive. The Ben Davis apple continues to sell well because it is a fine looker but for eating purposes it is about as good as a raw potato.

The bright finish on your plows cost you money to secure and is worth keeping. Clean every night and grease well when left for any length of time.

## FIELD NOTES.

### Oerly's Poland Chinas.

Mr. F. F. Oerly of Oregon, Mo., starts advertising with us this issue. Mr. Oerly has bred Poland China swine for 20 years and has acquired a very great knowledge of the business during that time. He has had the ups and downs that always go with the business. He has seen prices soar as high as the wild geese fly and sink again to bed rock. Mr. Oerly knows the history of all the noted sires of the breed for many years back. He has seen some visions and had some hopes blighted. But for every disappointment he has learned some good lesson and today he is perhaps in better shape to achieve success in the business he loves than he has ever been before. Sometime back he saw what he calls the hand writing on the wall and made up his mind that he wanted a bigger type of Poland and acting upon that impression and with the courage that has always characterized his movements he topped one of Nebraska's best fall sales both on board and gilt, buying the great young boar Pawnee Look for \$91. Pawnee Look was sired by Looks Grand and his dam was a big sow by King Do. Pawnee Look has done well in his new home and is a source of great delight to his new owner who watches his rapid growth as a father notes the development of his favorite son. At this time Pawnee Look measures 60 inches in length, has a 16 1/4-inch bone and bids fair to become one of the biggest of the breed. The tilts purchased of other big type breeders of Nebraska and Kansas have done well and Mr. Oerly believes more than ever in the big kind.

### C. S. Nevius' Best Sale.

On Thursday, May 12, C. S. Nevius, of Chiles, Kan., held one of the most successful sales of the season, 40 bred gilts sold for \$2,166, or an average of \$54.15. Five boars brought good prices. The sale was well attended, both by breeders and local farmers. Several breeders were present from Oklahoma and Missouri and the bidding was snappy all through the sale. At no time was there a drag or lack of enthusiasm. The sale was conducted by Col. R. L. Harriman, Col. Snyder and Col. Bean. Following is the report in full:

No.	L. V. O'Kiefe, Stillwell, Kan.	\$ 76.00
1.	H. C. Lachenbaugh, Watonga, Okla.	47.00
2.	Hohenstein Bros., Chelsea, Okla.	46.00
3.	W. R. Williams, Ozark, Mo.	50.00
4.	H. C. Lachenbaugh, Watonga, Okla.	61.00
5.	J. W. Chiles, Chiles, Kan.	27.00
6.	C. H. White, Burlington, Kan.	62.00
7.	E. S. Walters, Chiles, Kan.	52.00
8.	E. P. Smith, Bragg, Okla.	52.00
9.	Hohenstein Bros., Chelsea, Okla.	114.00
10.	W. R. Williams, Ozark, Mo.	65.00
11.	C. H. White, Burlington, Kan.	78.00
12.	E. P. Smith, Bragg, Okla.	62.00
13.	W. B. Wallace, Bunceton, Mo.	68.00
14.	H. C. Groner, Lancaster, Kan.	62.00
15.	George Widd & Son, Spring Hill, Kan.	66.00
16.	George M. Hull, Garnett, Kan.	47.50
17.	J. D. Scott, Watonga, Okla.	50.00
18.	L. V. O'Kiefe, Stillwell, Kan.	61.00
19.	H. P. Lachenbaugh, Watonga, Okla.	52.00
20.	J. D. Scott, Watonga, Okla.	49.00
21.	Bert Harrison, Pilot Grove, Mo.	43.00
22.	H. D. Lachenbaugh, Watonga, Okla.	65.00
23.	C. D. Chaney, Chiles, Kan.	35.00
24.	Joe Clark, Chiles, Kan.	40.00
25.	J. D. Scott, Watonga, Okla.	49.00
26.	L. H. Coats, Bellair, Kan.	50.00
27.	Hohenstein Bros., Chelsea, Okla.	66.00
28.	J. D. Scott, Watonga, Okla.	41.00
29.	C. J. Woods, Chiles, Kan.	38.00
30.	J. H. Grave, Adren, Mo.	51.00
31.	W. B. Wallace, Bunceton, Mo.	32.00
32.	Bert Harrison, Pilot Grove, Mo.	45.00
33.	Hohenstein Bros., Chelsea, Okla.	45.00
34.	J. E. Crawford, Drexell, Mo.	41.00
35.	W. B. Wallace, Chiles, Kan.	49.00
36.	W. B. Wallace, Chiles, Kan.	42.00
37.	H. T. Gaddis, McCune, Kan.	75.00
38.	Joe Clark, Chiles, Kan.	39.00
39.	Bert Harrison, Pilot Grove, Mo.	51.00
40.	W. B. Wallace, Chiles, Kan.	55.00
41.	Bert Harrison, Pilot Grove, Mo.	39.00

## ONE-MAN HAY PRESS



Self-Feeder, Self-Threader and Knotter. All Steel, full circle. We guarantee 1 ton an hour with ONE MAN to operate it. 1 1/2 tons an hour two men. We sell on FREE trial. TUTTLE HAY PRESS

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