

KANSAS FARMER

For the improvement  of the Farm and Home

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—I. D. G.



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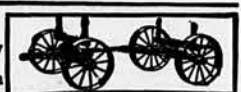
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Experience with Pit Silo

Points in Their Construction Necessary for Success—Dimensions and Capacity

MANY readers have in the past few months asked KANSAS FARMER for information regarding the construction of pit silos. Most of these inquiries have come from the western third of Kansas, Eastern Colorado and Western Oklahoma. For the most part the inquirers have stated that it is not feasible for them to construct any other kind of silo. Also that the absence of rock and water make it practicable to construct pit silos if the same are satisfactory. Some of these inquiries have been answered through the columns of KANSAS FARMER. It should be understood, however, that the editor has had no personal experience in the construction or the use of such silos. The information given has been such as we have obtained from persons who have constructed and used such silos. To provide our readers with the best detailed information possible, we print this article from Ed Wray, Norton County, who last year built several such silos, who has used them successfully, and who writes out of his experience.

Here is given a partial list of standard sizes, also their approximate capacity, and estimated number of grown cattle that can be fed, based on a feeding period of 180 days, allowing 40 pounds a day per head:

DEPTH FEET	DIAMETER FEET	CAPACITY TONS	ESTIMATED NUMBER OF CATTLE
24	10	34	10
26	10	38	11
28	10	42	12
30	10	47	13
20	12	38	11
24	12	49	14
26	12	55	15
28	12	61	17
30	12	68	19
20	14	51	14
24	14	66	18
26	14	74	21
30	14	91	25
22	16	76	21
24	16	86	24
26	16	97	27
28	16	108	30
30	16	119	33
32	16	131	36
36	16	150	42
28	18	137	38
28	20	170	47
30	20	187	52
32	20	205	57

Be it remembered that the pit silo should in dimensions conform to the general dimensions of the silo constructed above ground. That is to say, if the farmer at 10 feet below the surface strikes solid rock, he should not stop digging at that point and so construct a silo 10 feet deep and 20 feet in diameter and consider it equivalent in preservation of silage to a silo 10 feet in diameter and 20 feet deep, even though the capacity would be the same. Ten feet is not sufficiently deep for any silo. The silo should be at least 20 feet deep in order to get a settling effect which will preserve the silage. So in our judgment the success of the pit silo depends upon those conditions of soil which will permit easy excavation and so permit the construction of silos in dimensions which will conform to the general dimensions of those built above ground.

WRAY'S NORTON COUNTY PIT SILOS.

I have written and am enclosing a detailed account of how I made and used the pit silo. I surely think they are the solution of the feeding problem of our western people. I think a pit silo should be made narrow—very narrow. Stock could then be put on half rations of silage while on pasture or while using other feed without having any of the silage spoil. It costs no more in proportion to dig a narrow silo than a wide one, and the narrow one will fit all conditions. If more capacity is needed, make another.

I do not believe uncut silage feeds can be successfully siloed in silos the shape of mine. Mine are too narrow to allow uncut roughage to pack well. Cutters without blowers or elevators, the kind needed for filling pit silos, are so cheap as to be within the reach of anyone, and the silage cut is so much easier to handle that it would not pay not to cut it.

We took a 1 x 4 board, four feet long, and near one end bored a 4-inch hole. Three and one-half feet from this we made another. Going to the place we wanted the silo we laid the board on the ground and drove a bolt firmly into the ground through the large hole. This

left the end of the board with the two small holes in loose, so we could swing it around in a circle. We pushed two large spikes through the small holes so they would scratch on the ground when we moved the board, and by this means we marked two circles. The inner circle was just seven feet in diameter and the larger one just four inches from this all the way around. We dug out this four-inch space between the circles, down to a depth of two feet. This space we filled up level with the top of the ground with a 1 to 3 cement and sand mixture, and left for 24 hours to set.

We got an inch rope 45 feet long, two pulleys, and a barrel. The barrel we sawed in two in the middle and fastened on two bails for dirt buckets. We used a horse to pull up the dirt. After the cement "collar" had "set," we got inside it and dug down about eight feet; then we stopped and plastered the wall one-half inch thick with a 2 to 1 cement mixture. Then we dug down six or eight feet more and again plastered up. By plastering every few feet we avoided having to build scaffolding to stand on while plastering. We kept going down in this manner until we had a pit 25 feet deep. We plastered the bottom the same as the sides and washed the whole with pure cement and water made about as thick as cream. Then the silos were done. We built two, each seven feet in diameter and 25 feet deep.

One man did the digging, one took care of the dirt at the top, and a small boy drove the horse. It took 8 1/2 days to dig and plaster the two silos and we paid the men \$17 for their work. Just a little less than 20 sacks of cement at 40 cents a sack was used. The sand we had, so we did not count that in the cost of making except the labor of hauling. The two silos, complete, cost me \$12.50 each.

We bought a silage cutter with 11-inch knives, but without an elevator or blower, for \$37, laid down here, freight paid. We had a four-horse gasoline engine and it furnished ample power to run the cutter. The cutter is rated at from three to five tons green fodder per hour at a half-inch cut, and will easily cut that much.

We filled the first silo half full of a mixture of corn and cane. We were afraid we would not have corn enough to fill both silos, so we at first used some sorghum. Later, seeing there would be corn to spare, we did not use any more sorghum. At first we did not put in any water, thinking it was wet enough, and right there we made a mistake. The silage packed well and did not spoil, but the cows did not like it so well as they did that we put water on, for the coarse parts of the corn stalks did not soften up like it did when we used water. When we had the first silo half full we concluded to use water, and from then on we used as much water as a 4-inch hose would siphon out of a tank into the silo and kept it running steadily while cutting. We shall use lots of water after this.

We draw the silage out with a pulley and a windlass. The bucket holds 150 pounds and has a full trap bottom. It is drawn up, the trap sprung and the silage falls into a large shallow box or wheelbarrow. A boy of 16 draws up the bucket easily. This silage has been as good as any we ever saw, and it has certainly been very cheap and also convenient to feed. Great care should be taken to keep the walls true and smooth, else the silage will not settle well.

Try Flank Steak This Way.

Don't turn up your nose at flank steak. It is good if properly prepared. Its use will aid in reducing the high cost of your meats. Select a flank steak next time and try smothering it. This is how it may be done:

Chop one good sized onion and a tablespoonful of parsley; mix together a tablespoonful of salt and a salt spoonful of pepper. Sprinkle the bottom of the baking pan with a little onion, place on top of it the steak. Brush it with an egg slightly beaten with a tablespoonful of warm water, and then spread with the remaining portion of onion and parsley. Add a half cupful of stock to which you have added the salt and pepper. If you have no soup stock use warm water. Place in a hot oven and cook for 30 minutes. Lift the steak, and thicken stock. Season and pour over the steak. This dish may be garnished with cooked vegetables.—Industrialist.

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BREEDERS ORGANIZE.

The Jewell County Breeders' Association is the last county organization of breeders effected in Kansas. This association was organized in Mankato, Saturday evening, May 31, and was the net result of the breeders' banquet on this evening. The officers elected were F. W. Veverington, Jewell City, president; W. E. Monasmith, Formoso, vice president; I. W. Kyle, Mankato, secretary; Dr. W. W. Spencer, Mankato, treasurer.

In attendance upon the banquet were 150 persons, not less than 75 of these being Jewell County farmers who are engaged in the work of breeding pure-bred stock. The principal addresses of the evening were made by F. C. Crocker, a Nebraska breeder and a member of the Nebraska State Sanitary Board, who discussed hog cholera and means for its checking and stamping out. The speaker was highly favorable to vaccination and expressed himself as believing that more stringent laws are needed to enforce sanitary conditions. J. M. Rogers, secretary of the well known Mitchell County Pure Bred Association, made a talk along the lines of the advantages of the county organization and its value to live stock breeders. His talk was full of practical suggestions and such suggestions were acceptable from a man of experience and one who has helped in safely and successfully piloting a similar organization through its different stages of development. Col. John Brennen of Jewell County, for 30 years a live stock auctioneer, spoke of the development of the live stock industry of Jewell County and said that it was the happiest moment of his life to see 75 breeders of pure-bred live stock now living within its borders. Senator E. C. Logan, one of the leading and most active members of the Mitchell County organization, also made a fine talk. Editor Knapp of the Beloit Gazette spoke also.

It is indeed gratifying to report the organization of the Jewell County breeders and to know of the auspicious circumstances under which their association has been launched. Several counties of Kansas have each organized a similar association, the members of which are enthusiastic in behalf of the advantages of such organization. We have had much to say from time to time about the success of organizations already effected and have been urgent upon breeders of the various counties to effect such associations. Jewell County has an unusually large number of breeders and it seems strange that they had not organized earlier. It is our judgment that even though there should be a much smaller number of breeders, an organization can be made with fully as beneficial results to its members and to the county as if the number were larger. The live stock breeders of the community are as a class the foremost farmers and always of the best citizenship. With them the success and the development of the live stock industry rests. Their success cannot be hid under a bushel. Success when it succeeds is contagious. The way to build up the live stock industry is for the live stock breeders, such as they are, to organize, arouse enthusiasm and improve in their methods and business and as sure as the world moves, others will come into the fold and be benefited.

Dr. James Law and Mrs. Law, uncle and aunt of Albert T. Reid, president of KANSAS FARMER COMPANY, celebrated their fiftieth wedding anniversary recently at their home in Ithaca, N. Y. Professor Law is a veterinarian of national reputation. Many years ago he was sent to Kansas by the Federal Department of Agriculture to investigate the dairy herd of the Kansas Agriculture College. He found tuberculosis and the herd was destroyed. Later he investigated black leg in this state, also for the federal department. A year ago he contributed an article to KANSAS FARMER on the horse plague then prevailing. Doctor Law is professor emeritus of Cornell University.

writer travelled 50 miles the day preceding the meeting at Garden City, with Mr. Thompson and was greatly impressed with the reception he was given on the various farms visited. Every farmer is inclined to shy at the word "advice," and this is especially true of the western Kansas farmer who has been showered with advice of every kind from ever direction. Farmers it was our pleasure to visit were thoroughly alive to the fact that much information could be furnished to them by the demonstration agent which they could put to valuable use on their farms. More will be said from time to time in the columns of KANSAS FARMER regarding the work being carried on by the demonstration agent.

John R. Crittendon of Hays, Kansas, was elected president of the Kansas Dry Farming Association for the coming year, and P. G. Dean of the same place, secretary. The meeting next year will be held at Hays City where an opportunity to study the work of the Hays Experiment Station will be open to those in attendance.

FIGHTING GRASSHOPPERS.

The grasshopper is at work in all sections of Kansas. He is busiest in western and southwestern Kansas. Grasshoppers probably will do more damage this year than in 1912 unless prompt and vigorous work is done to destroy them. Poison bran mash, the hopperdozer, poultry and young hogs have proved efficient for checking the ravages of grasshoppers.

Poison bran mash should be made this way: Bran, twenty pounds; Paris green or white arsenic, one pound; syrup, two quarts, oranges or lemons, three; water, three and one-half gallons.

In preparing the bran mash, mix the bran and Paris green or white arsenic thoroughly in a wash tub while dry. Squeeze the juice of the oranges or lemons into the water and chop the remaining pulp and the peel to fine bits and add them to the water. Dissolve the syrup in the water and wet the bran and poison with the mixture, stirring at the same time so as to dampen the mash thoroughly. The bait when flavored with oranges or lemons was found to be not only more attractive, but was more appetizing and thus was eaten by more of the grasshoppers.

The damp mash or bait should be sown broadcast in the infested areas early in the morning. The amount of bait made by using the quantities or ingredients given in the formula should cover four or five acres. As very little of the bran mash is eaten after it becomes dry, scattering it broadcast in the morning, and very thinly, places it in the shortest time. Sowing it in this manner also makes it impossible for birds, barnyard fowls or live stock to get enough to kill them.

On alfalfa fields, to get the best results, the bait should be applied after a crop has been removed and before the new crop has started. As the poisoned bait does not act quickly, it will be from two to four days before the grasshoppers are found dead and these will be more numerous in the sheltered places. It does not take much poison to kill them.

Coal oil has been used in many ways for the destruction of grasshoppers, but is most commonly used in the hopperdozer, a device which consists of a long, shallow, galvanized iron pan, mounted on very low runners. The hopperdozer is very effective where it can be drawn over an infested area near the surface of the ground.

On infested bare areas or fields where it does not injure the crop, grasshopper damage can be quickly checked by its use. It can be used without injury in an alfalfa field for two or three weeks after a crop has been cut.

Any grade of kerosene may be used in the hopperdozer. The first cost of a hopperdozer should not be more than \$8. It should be operated at a cost not to exceed twenty cents an acre.

experimental work along these lines, it is evident that live stock must become a far more important factor in the agriculture of the west than it is at the present time. With the introduction of the sweet clover into areas where alfalfa will not produce profitable returns a dependable source of pasture becomes available to the dairyman and the grower of other classes of live stock. It was stated in the discussion that 1,000 head of Florida cattle had been shipped to Finney County and after being 11 days on the road were turned out on sweet clover pasture and in spite of the fact that these animals had been on such scant rations for such a long period, there was absolutely no bloating as a result of their being placed on the sweet clover pasture. Over 2,000 head of cattle were reported to be on sweet clover pasture at the present time in Hamilton County. E. G. Finnup of Garden City has 3,000 acres of sweet clover land under his control at the present time.

With the knowledge of how to produce the various dependable feed crops in the west, it is but natural to look for renewed interest in the profitable handling of live stock under the western Kansas conditions. A few years ago such a discussion as that presented by Professor Reed on the importance of the dairy and good cows and Professor Cochel's presentation of the breeding and feeding of live stock would have been given but scant attention by the audience present at this meeting. At this time, however, they were listened to with the greatest interest and it was apparent to all present that the western Kansas farmer must more and more depend upon growing such crops as are found to be dependable and to the securing of a market for these crops in condensed form through the medium of live stock. Kafir and sorghum fodder, wheat straw, etc., are waste products having absolutely no market value.

Another point standing out prominently in the meeting just closed was the necessity of introducing the silo as practically the only sure means of handling sorghums in such a way as to secure maximum returns in converting it into live stock products. The writer, associate editor of KANSAS FARMER, discussed the economic importance of the silo for the western Kansas farmer and the facts presented found a receptive audience. The important points of this address will later be printed in these columns.

A discussion of irrigation farming came in as a part of the program. The irrigation farmer has been too prone to forget that water which has cost a great deal of money to place on the surface of the ground can be used to a much greater advantage if the practices of dry land farming are carefully studied in its conservation and use. The most significant fact standing out in the discussion of the irrigation question was the absolute necessity of a sufficient amount of irrigation on every farm to grow a dependable garden and such shrubs and trees as are absolutely necessary if homes are to be made attractive and pleasant in western Kansas. This statement came from H. B. Walker, irrigation engineer in the Kansas Agricultural College Extension Department.

From the standpoint of much more widely introducing the various practices found to be most promising, the introduction of the demonstration agent who travels from farm to farm, is bound to become one of the big things for western Kansas. E. C. Johnson, the state director of the demonstration agents of Kansas, was present, and likewise G. E. Thompson, who covers southwestern Kansas with headquarters at Dodge City. These men told how they were carrying from farm to farm much valuable information which is now available and assisting those visited in putting into practice those fundamental things which are now known. The

WESTERN FARMERS' MEET.
The Kansas Dry Farming Association which held its fourth annual meeting at Garden City recently is not taken seriously enough by the western Kansas farmer. The information presented at this meeting is the result of careful experimentation and would be of inestimable value in the improvement of farm conditions through the western third of our state if put more generally into practice. Far too few were in attendance at the meeting just closed.

Walter Carter, president of the Garden City Industrial Club, in welcoming the association lamented the fact that so few of the farmers of Finney County even made any pretense of studying the work being carried on at the Garden City branch experiment station. For three years this station has absolutely controlled the blowing of the soil under exceedingly trying circumstances. This in itself is a remarkable attainment. Methods of soil culture which will utilize to the best advantage possible the limited rainfall of this area is a dominant factor in successful crop growing. In the addresses and discussions presented remarkable results along this line were most ably presented by such men as Dean Jardine of the Kansas Experiment Station; W. W. Burr, United States Department of Agriculture and many others having practical experience along these lines.

Dean Jardine made the statement that the disk harrow was not the proper instrument to carry on the most successful fallow. The establishment of the "dust mulch" and seeing it blow away as deep as stirred has evidently discouraged many a farmer in his efforts to summer fallow. The system of farming approaching the summer fallow as nearly as conditions will warrant has been generally accepted by all our experimenters. The soil with small clods on top never blows and is in a better condition to absorb the rainfall which may come than the fine "dust mulch."

The dominant point in connection with all the discussions along crop growing was that far greater attention must be given to diversified methods, depending largely on the growing of the sorghums and to a considerable extent upon summer fallow as the only sure system of growing profitable grain crops. The discussion presented but confirms the belief of the writer that the proper development of our grain and forage sorghums and their more general introduction over the western third of our state is one of the big things to be accomplished in the development of western Kansas agriculture.

In connection with this discussion of new crops for western Kansas conditions, one of the most interesting discussions took place. There is little doubt but that sweet clover will have a most important place in developing the agriculture of the West. Dr. C. O. Townsend, agriculturist for the sugar beet company, discussed the cropping methods for western Kansas conditions and stated that in his judgment sweet clover would be a God send to the western Kansas farmer. Dr. Townsend has been pushing diversified farming and the introduction of live stock as the only means of establishing a permanent system of agriculture in the west ever since he has been connected with the sugar beet company. It is a significant fact that the only spontaneous applause interrupting a speaker of the whole program was that given to the statement made by Dr. Townsend that every farmer in western Kansas ought to have a few dairy cows on his farm as a means of bringing in a steady income. A few years ago a statement of this kind would have been met with indifference by the same crowd of farmers, who enthusiastically gave their applause to the statement at this time.

If these various crops must be introduced into the rotation systems of the western Kansas farmer, as we are told by those who are carefully conducting

SOIL BLOWING PREVENTION

Problem Difficult But Can be Solved—The Answer is Here Given

By E. C. JOHNSON, K. S. A. C.

SOIL blowing is one of the most difficult farm problems in Western Kansas. Its chief causes are the prevailing high winds; the depletion of humus or decaying organic matter which, when present, serves to hold moisture and bind the soil together; extensive wheat raising on large tracts which would have served a better purpose if retained in native sod or if planted to milo, kafir or other sorghums; and incorrect handling of the soil. The winds of course cannot be controlled. Therefore, when humus is removed year after year in growing crops without returning straw, manure or green manure crops to the land; when the native sod is broken up and large areas are farmed extensively by shallow plowing and surface disking, leaving no intervening strips of unbroken land; and when crops requiring a level seed bed are grown in preference to inter-tilled crops, such as sorghum or corn which may be grown on land more or less rough, blowing naturally results. In fact some districts in Thomas, Gove and other counties in western Kansas have become almost unmanageable from a soil blowing standpoint.

FUNDAMENTAL METHODS OF PREVENTION.

The Department of Agronomy of the Kansas State Agricultural College for some years has advocated certain fundamental methods for the prevention of blowing. The more important of these are the preservation of humus by returning straw and manure to the land, using it as a surface dressing on wheat fields during the winter; increasing the humus through the use of green manure crops such as rye preceding the summer fallow; cultivating summer fallow with shovel cultivators such as the ordinary 6 or 12-shovel corn cultivator, or the beet cultivator, or with the alfalfa renovator or other implements which leave the field in a rough instead of pulverized condition; cultivating only when the ground contains moisture, but is not wet, and giving only sufficient cultivation to keep down weeds and preserve a soil mulch; summer fallowing with the lister instead of plow and disk, or summer fallowing by plowing twice, once in the spring and once during the summer, leaving the field in the rough; using inter-tilled crops such as kafir, milo, other sorghums and corn in place of so much wheat and preparing the land by listing east and west, or at right angles to the prevailing wind, instead of by plowing. These methods have been used efficiently in preventing blowing at the Western Kansas Experiment Stations at Hays, Garden City, Dodge City, Tribune and Ogallah, for several years.

METHODS APPLICABLE TO LOCAL CONDITIONS.

The demonstration agents in western Kansas, thoroughly acquainted with these recommendations and methods, are emphasizing the application of one or more of these according to local conditions and have planned certain demonstrations which will show their practicability. They have therefore been making recommendations as follows:

(1) Wherever land sown to winter wheat is likely to blow and it is possible to obtain straw or manure, scatter a thin dressing over the field during the fall and early winter and go over it with a disk set straight so that the straw and manure is pressed into the ground.

(2) Where summer tillage is to be practiced, and it usually should be practiced where it is the farmer's purpose to plant winter wheat, plow the land after weeds have started in the spring, till it only when the ground is slightly moist or when the soil will turn over a little cloddy. Till only sufficiently to retain a soil mulch and prevent weed growth, using a shovel cultivator, alfalfa renovator or other tool leaving the field in the rough; or list the land east and west after the weeds have started, splitting the ridges later and working the land down slowly to a level condition in preparation for winter wheat.

(3) Where land is to be used for sorghums or corn, list it in the fall or in the spring as soon as the frost is out of the ground; then plant kafir, milo, other sorghums or possibly corn the last half of May. Plant with the lister either by splitting the ridges or in the lister furrow or, if ridges have been worked down gradually, plant with the loose ground lister, the disk furrow opener or the regular lister.

Each of the three agents in western Kansas has secured forty or more co-operators to undertake at least one of these demonstrations. In some cases a single demonstrator has undertaken all of them. In addition a number of the best farmers have been practicing similar methods of soil handling to some extent. The results obtained by these and by the demonstrators selected by the agents already have shown that unless conditions are extreme, excessive soil blowing may be prevented very largely by correct methods of farming, thus substantiating in actual farm tests the results obtained at the western Kansas Experiment Stations.

Mr. McKee, the demonstration agent located at Norton, reports that many of the farmers in his territory are taking particular pains to prevent blowing of their land and do all they can to protect themselves from adjoining deserted farms that are blowing. The most effective way of doing this in his district is east and west listing of the ground adjoining their own fields. Land listed in this way does not blow to any con-

is spread upon the land the sub-surface packer or the disk set straight should be run over the field so that the straw and litter will be pressed into the ground and anchored. He also emphasizes the value of doing this early on the fields which are liable to blow as soil which has started to drift is more difficult to control than if the initial drifting is prevented. Listing strips east and west in the fields has also been found useful by him. Some people in his district are advocating the leaving of corn stalks on the ground in order to prevent soil drifting. This occasionally may help but he has found instances where even corn ground with the stalks on has drifted quite badly, this being particularly true on the more sandy lands. His experience also is that disking land when the soil is moist, will be quite successful in preventing blowing, but it must not be overdone and the soil reduced to too fine a condition.

SAME CONDITIONS APPLY FURTHER SOUTH.

G. E. Thompson, demonstration agent with headquarters at Dodge City, has



HOW to avert the damage resulting from the blowing of the fields has always been a live topic in Kansas. Years ago in Central Kansas—the very heart of the state—the problem was fully as important as at this time in Western Kansas.

The damage resulting from shifting soil has increased in the West the last five years—this because of a larger area broken out and because of the increased tendency to blow when the soil becomes deficient in decayed vegetable matter as a result of continued cultivation. The remedy is given in this article.

The handling of the soil as here recommended saved Central Kansas—the methods here suggested came to that section without special urging, coming with the change in farm conditions, which changes were recognized as essential to agricultural development. The western condition will ultimately be remedied in the same way.

Last winter the legislature passed a law providing that the county commissioners shall take such steps as are necessary to prevent soil blowing and that the charges shall be taxed against the offending farmer. Since, many readers have written KANSAS FARMER asking how they can comply with the law. This article by Mr. Johnson is the outgrowth of such inquiry. But, strange as it may seem, the central thought has been how to escape the taxes which by law may be assessed, instead of how blowing can be stopped for the good of the land and the country. This is paradoxical, sure enough.

A. Borman

siderable extent until the furrows get filled up with soil blowing in from other fields.

LISTING ACTUALLY PREVENTS BLOWING.

J. L. Romberger and Chas. Pearson, both living near Gem, in the heart of a blown district have tried hard to save their winter wheat by listing strips around their fields. This is partially effective until the furrow is filled up again, when relisting must be done. It is discouraging, however, for a man to farm his own land and then be compelled to work vacant land around him in order to save his own crops. Other men in this same territory commenced listing early in the spring and while their lands have not blown, their work has been difficult at times by reason of drifting soil from other farms. Mr. McKee says "there are a number of cases in Thomas County which will show what listing will do to prevent soil blowing" and adds "if all of the blown land could be listed up at somewhere near the same time and handled carefully afterwards, I believe the blowing could be controlled." T. W. Davitt, near Jennings, Kans., has been quite successful in preventing blowing by spreading straw over his fields of winter wheat.

DO WORK EARLY ON SUSCEPTIBLE FIELDS.

W. A. Boys, demonstration agent with headquarters at Hays, reports similar conditions from his territory. His recommendations are the same as those of Mr. McKee. He emphasizes the point that when straw manure or other litter

had the same experience as Messrs McKee and Boys. In some cases in his district where the ground was in wheat last year and where many dead weeds and other trash were on the ground, the land was double disked when moist and blowing was stopped. He has noticed a number of instances where farmers scattered straw or manure over the winter wheat fields and have effectively prevented blowing. Like McKee and Boys he feels convinced that the most efficient means of preventing blowing on land to be planted to inter-tilled crops is listing east and west and leaving the land in this condition until it is time to plant. He says "a good example of the value of listing is found on the farm of D. F. Jones, south of Cimarron, Kans. In this field Mr. Jones listed about six acres fairly early. The extreme high winds the latter part of March and early in April caused the balance of the field to drift badly but on the listed ground even though the dirt was blown from the top of the ridges to the bottom of the furrow it did not blow from the field and no real damage was done." Again, "on the farm of C. A. Calkins, southwest of Syracuse, listing was done. In this case it was not begun until the ground had already blown and although it was exceedingly dry, it was quite valuable." Mr. Thompson emphasizes the fact that it is quite desirable that loose soil be left in the bottom of the furrow when listing is done as this prevents the ground from drying out too much. This can be accomplished by leaving on the

disk covers of the drill or by attaching small shovels.

EXPERIENCE PROVES METHODS SOUND.

The experience of some of the farmers in the districts visited by the demonstration agents therefore show that blowing can be prevented very largely by correct cultural methods and by the use of straw and manure as surface dressing. As the land is farmed year after year, however, the depletion of humus will continue and the chances of blowing will increase in proportion unless some efficient method, such as the growing of green manure crops, is used to return humus to the soil.

As to the law which was passed by the recent legislature giving the county commissioners in a county authority to make rules and regulations for the prevention of blowing, little has been done. Whether or not this law will help in solving this important problem in western Kansas will depend very largely upon the officers to whom its enforcement is entrusted.

STRIKING DEMONSTRATION IN SOIL BLOWING PREVENTION.

A remarkable demonstration of what can be done to stop soil blowing in Western Kansas is now being made at Colby in Thomas County. Near this town there are 100 to 150 square miles of land which has been unmanageable since April, 1912. Section after section of winter wheat then blew out and a straight wind of more than 24 hours' standing, Decoration day, 1912, completed the disaster, not only destroying the prospects for a wheat crop, but putting the land in such shape that other crops could be grown only with the greatest difficulty. Since then much of the land has been absolutely barren except for a few Russian thistles which gained a foothold. When these matured in the fall of 1912 they also blew into piles against fences, houses and other obstructions and the soil covered them up. This spring the blown land is absolutely bare in spite of rains, the surface soil blowing easily within 48 hours after rain and whipping off any plants which may have started.

The blown area has been slowly enlarging and one after another the farmers have been driven from their land. In many places young shade and fruit trees have been completely covered up and even dwelling houses have been surrounded with drifts of soil higher than doors and windows.

What can be done to remedy this condition? The citizens of Colby and the country surrounding have taken hold and seem to be headed in the right direction.

Through the experiences of settlers and from the results of experiments by the Kansas State Agricultural College, it has been demonstrated that much of the soil blowing can be prevented by listing the land at right angles to the prevailing winds. This has been emphasized in the farmers' institutes throughout the region and more recently by the demonstration agents, and now their labors are bearing fruit. A business man of Colby tried listing a blown piece of land in strips as a demonstration, listing about four rods and leaving four rods untouched, then listing another four rods, leaving a second strip untouched, and so on over the field. He was entirely successful. He and two other citizens of Colby, land owners like himself, in sympathy with the farmers and having their full confidence, recently got together and decided that something must be done to stop the blowing. As the listing method had proven so successful, it was decided to try it over a large area in the blown district.

These men—W. D. Ferguson, J. B. Hampton and G. T. Troutfetter—began to canvass the town for money for the work. Each business man in town was assessed at the rate of 65 cents an acre for 10, 20, 40 or 80 acres apiece, according to their ability to subscribe, and almost every one "came across" until a fund of \$600 was assured to start with. Teams and men were hired to commence work May 27. At the same time a call was sent out by telephone, automobile and personal message, to as many farmers in and near the blown district as could be reached, stating that work would start on that day and would they not help. There was a remarkable response and the first day there were 45 listers with one man and four horses to each lister at work under the direction of A. O. Hemstrom, Sam Pratt and H.

(Continued on Page Nine.)

WINTERING BEEF CATTLE

Details of Experiments Relating to Economical Winter Feeding of Beef Calves

By G. M. VESTAL, K. S. A. C.

THE problem of wintering beef cattle and wintering them most economically is one that comes closer home to the average beef breeder and feeder each year. While the range is supplying the majority of our feeding cattle only a few encounter this problem as compared with the number that must face it in the future if the cattle feeding business continues in its present proportions. As time goes on the feeder must depend more and more upon the home production of his feeder cattle.

With home production of beef cattle there comes a number of problems; e. g., maintaining breeding herds, growing calves and wintering stockers. During the grass season the feeding problem is easily solved, but if the best results are obtained the animals must be well fed and cared for during the winter months. Then comes the problem of making the most economical use of rougher feeds.

Extensive cattle feeding experiments have been carried on for so long a period of time that today sufficient data are available to solve the majority of our feeding problems. It is only right and proper that we should first solve the problems of making the most economical use of high-priced feeds. But should we wait until forced by circumstances to solve the problems relating to the most economical use of rougher feeds? This is what the most of us are doing. The purpose of the calf-feeding experiment begun last January was to determine the relative value of common roughages for wintering beef calves, and to compare alfalfa hay with cottonseed meal as a source of protein for growing calves.

The 50 calves in this experiment were high-grade Herefords, and produced by C. A. Johnson of Russell County. The experiment began January 21. The calves were weaned early in October and were then allowed the run of the range and stalk pasture until shipped to Manhattan. During this time very little gain in weight was made. They arrived fairly thin, but in very thrifty condition, and had an average weight of 422 pounds. They were divided into five lots, ten calves to the lot, care being taken to make the lots fully comparable in weight, quality and condition. The rations fed were:

Lot 1.—Corn silage according to appetite. Cottonseed meal, approximately one pound.

Lot 2.—Kafir silage according to appetite. Cottonseed meal, approximately one pound.

Lot 3.—Sweet sorghum silage according to appetite. Cottonseed meal, approximately one pound.

Lot 4.—Corn silage according to appetite. Alfalfa hay in sufficient amount to make the protein in the ration equal to the protein received by the other calves.

Lot 5.—Corn stover according to appetite. Alfalfa hay the same as Lot 4. Shelled corn in amount equal to the grain in the silage fed in Lot 4.

In the first three lots is a comparison of three most common silages. This is an important question for the Kansas farmers and stockmen. If the sorghum silages are equal to corn silage in feeding value, it means a wonderful help to the live stock interests of the state and, especially, to those dryer sections where corn must give way to the sorghums.

The next problem considered is silage versus fodder, both fed with alfalfa hay. Then comes a comparison of alfalfa hay with cottonseed meal as a source of protein. This also is of special interest to the Kansas farmer, because there are sections where alfalfa hay can be grown in abundance, while in other sections it is hard to obtain, and the farmer who has the hay wishes to know whether he can afford to feed it when he can buy come cheap, concentrated protein feed to go with his cheaper roughages. The farmer who does not have the alfalfa hay wishes to know which is the most economical feed for him to buy.

The results of this experiment may throw some light on these questions, but these results cannot be taken as absolutely conclusive, as more work of the same kind should be done before very definite conclusions are drawn. This is the first extensive experiment on wintering beef calves that has been conducted, and, therefore, the knowledge of the subject is rather limited.

A close study of the data brings out some interesting information in regard to the value of the sorghum silages for

beef production. The feeding of these silages is comparatively new, and the results obtained should be of the greatest interest to Kansas farmers. The table tells the story plainly.

The report is based upon corn silage

silage. They show the increased carrying capacity of farms when silage is used. In support of corn silage it should be stated that the corn silage used in this experiment was rather coarse, as they handled the finer sorghum silages,

RATION.	LOT 1. Corn silage, cottonseed meal.	LOT 2. Kafir silage, cottonseed meal.	LOT 3. Sweet sorg. silage, cot- tonseed meal.	LOT 4. Corn silage, alfalfa hay.	LOT 5. Corn stover, shelled corn, alfalfa hay.
Original value	\$ 7.80	\$ 7.80	\$ 7.80	\$ 7.80	\$ 7.80
Value by the lot	325.40	321.65	333.90	331.35	334.95
Original weight	4172 lb	4124 lb	4261 lb	4248 lb	4294 lb
FEED CONSUMED:					
Corn silage	27431 lb			18533 lb	
Kafir silage		30865 lb			
Sweet sorghum silage			30865 lb		
Cottonseed meal	927 lb	927 lb	927 lb	5932 lb	5912 lb
Alfalfa hay					8710 lb
Corn stover (fed)					5792 lb
Corn stover (consumed)					1897 lb
Shelled corn					5918 lb
DETAILS:					
Final weight	5700 lb	5751 lb	5865 lb	5748 lb	5918 lb
Total gain	1528 lb	1627 lb	1584 lb	1500 lb	1524 lb
Average daily gain	1 1/2 lb	1.62 lb	1.58 lb	1 1/2 lb	1.62 lb
Cost of feed	\$ 55.05	\$ 54.98	\$ 54.94	\$ 57.45	\$ 59.56
Daily cost, by the head	0.055	0.0549	0.0549	0.057	0.059
Cost of gain	3.60	3.37	3.48	3.83	3.68
Value, hundred weight	7.50	7.60	7.50	7.60	7.60
Final value by lot	427.50	437.07	439.87	436.84	443.85
Profit by the lot	47.05	60.46	51.08	45.04	49.34

at \$3 a ton; kafir silage at \$2.66; sorghum silage, \$2.66; alfalfa hay, \$10; and corn stover, \$3; cottonseed meal, \$30 per ton; shelled corn, 50 cents per bushel. Cottonseed meal was the only part of the feed bought outside of Manhattan. Salt every Sunday morning. The silage was bought standing by the acre, and therefore cost a little more than it might otherwise have cost.

These results show the silages to be about equal in value for wintering beef calves when supplemented with cottonseed meal. The gains made by Lot 4 and Lot 5 compare very favorably with those on the other lots and are apparently almost as economical. It is necessary, however, to go farther back and figure on the acreage required to produce the feeds consumed by the various lots. Counting eight tons of corn silage to the acre, it takes only about one and one-half acres to produce the silage for each of the silage lots. In addition to this approximately \$14.00 will pay for the cottonseed meal consumed. Lot four requires approximately one acre for alfalfa and one acre for silage, while lot five requires an equal area for alfalfa, two acres for stover alone, and one acre for stover and corn combined. These figures show the advantage of making the result of growth and cutting. The calves could not handle it so easily as use of the entire crop as in the case of

and therefore they ate less. This difference would not be expected in the case of older cattle.

The feeds were valued to suit local conditions. The valuation will not hold good for all sections of Kansas, but the feeder, by using prices suited to his community and the other data given, can figure his own problems. The value put on the feeds was high enough to cover the cost of the feeding. Comparing alfalfa hay with cottonseed meal, as a source of protein, it is found that the lots getting cottonseed meal made the cheaper gains. Where silage and alfalfa hay made up the ration it proved a little too laxative at times, and the scouring caused the calves to fall behind considerably. No doubt a little dry roughage in addition to the hay would improve such a ration. The calves getting stover and alfalfa hay carry quite a bit more flesh than any of the other calves in the experiment. Since their gains are but very little more than that of the other lots, it would appear that the dryer ration may have a tendency to lay on fat at the expense of growth.

James Reid of Kansas City, W. J. Tod of Maplehill and V. V. Akin of Manhattan placed valuations on the calves, basing their opinions on how they will graze when put on grass this summer. The entire number of calves

made an average daily gain of 1.57 pounds during the 100 days on feed. None of the lot vary much from this figure, so conclusions are based largely on the cost of production of the feeds used to make the gains, and the cost of production must necessarily include the area of land involved. These figures have been given. The cheapness of gains cannot be overlooked. The average was \$3.58 a hundred weight. This allows the college to sell considerably below the purchase price by the hundred weight and come out even. This is emphasized by the fact that there is an average profit of \$5.12 on every animal, while the value by the hundred weight, at the close of the experiment, is about a quarter of a dollar less than the purchase price.

The calves were sold to D. D. Casement of Riley County, and will be grazed this summer in the same pasture and weighed in lots as fed at the close of the grazing season. This should give us some valuable information regarding the effects of silage wintering on the next summer's grazing—a question which seems to hold up a great many farmers, when considering the silo as a part of their equipment for beef production.

Bermuda Fills Kansas Grass Need.

From an agricultural standpoint the greatest need of Kansas is grass. Bermuda is worth a trial. It cannot be killed by over-pasturing. A great protection from winter killing is by having a growth as a windbreak for winter. When there is snow on the ground it won't freeze. Stock will eat it all winter, and so we carelessly let them graze it too closely, after which it freezes. In a general way we say that an acre of Bermuda will graze two cows. It is as nutritious, ton for ton, as wheat bran. Upon the poorest sandy land it will grow and catch all the blowing soil until the Bermuda pasture will hold all of the else shifting soil of the section. There is only one thing against Bermuda for Kansas—it is liable to winter kill. In our next article we will tell how to guard against this.

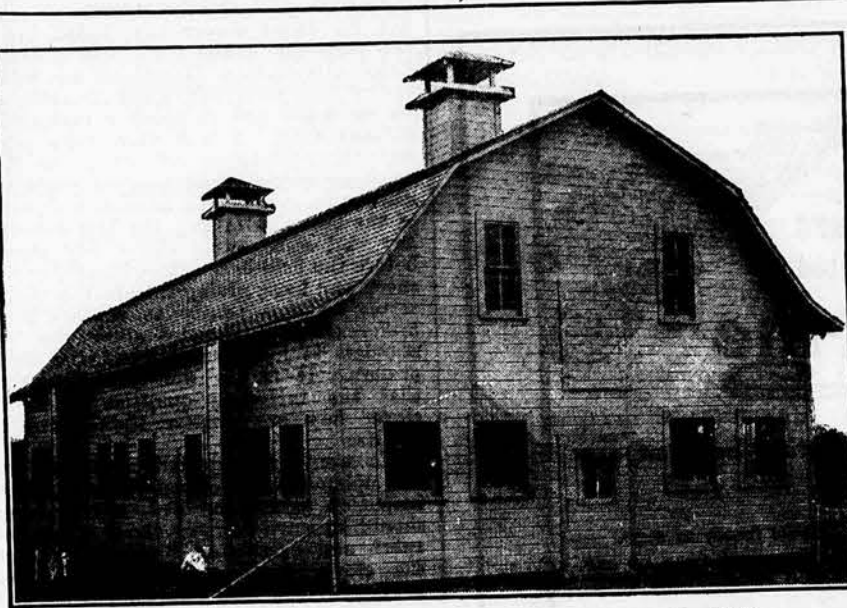
It is a heavy feeder; the roots running every direction in quest of plant food and feeding upon that which it finds in widely varied soils. The roots penetrate the earth for seven feet and form a dense network near the surface. The root system below the surface and the stem system above are quite similar. About every three inches upon the stem there are joints; from these joints new roots are formed penetrating the earth and sending side lines forth, which in turn reproduce themselves. Thus they spread until the land is fully occupied, when the stems shoot heavenward hand over hand.

We have upon our farm in Central Oklahoma 100 acres of this grass, and it is the most profitable thing we can raise. We keep mules; they graze on the Bermuda, and winter on kafir. They never kick. A mule with Bermuda and kafir has no kick coming.

Bermuda is acknowledged the best pasture grass for Oklahoma. It is a southern grass, and how far north it will grow can be determined only by trial. The territory of its usefulness is being extended northward year by year, as it becomes acclimated. When Kansas farmers learn of its value they will set an acre to start with, and from the roots grown upon this acre plat, get more acclimated roots for heavier settings. Should a dry summer be followed by a cold winter, a part of the Bermuda may winter kill. That which remains will be hardier. By this method Kansas will some day have large pasture lands of improved hardy Bermuda.

The first caution should be to use only good roots. Bermuda is improved by careful selection as much as corn, kafir, or even live stock. There are several kinds of Bermuda. One should not set other than yearling roots, and from fields where great care is manifested in foundation stock. Bermuda can adapt itself to all kinds of soil.

There isn't an acre of Kansas land but would profitably grow Bermuda. There isn't any kind of live stock but would thrive upon it. Once established, if it would not winter kill, it would thrive abundantly with proper care for a hundred years. Every year the land would increase in fertility. It is a soil builder. Soil cannot blow or wash when set in Bermuda.—F. A. MITCHELL, Chandler, Okla.



THIS GOOD TYPE OF FARM BARN CAN BE BUILT FOR ABOUT \$600.

A DAIRY barn like the one shown in the picture can be built at a cost of about \$600 if you haul the stone, sand, cement and lumber. This is the calf barn at the Kansas Agricultural College. It can as well be arranged to accommodate cows as calves and would make a model barn for 18 or 20 cows with several box stalls and a feed room. However, for two rows of cows it should be built 3 1/2 feet wider.

The barn as shown in the picture is 28 1/2 by 65 feet. It has 28 windows, the height of ceiling is 8 feet, the height from foundation to plate is 12 feet. All rafters in the roof are 9 feet long. The extensions on side walls are intakes to ventilation system.

The interior shown is arranged for calves. It has stanchions for 27 calves, pens for 14 calves, and three box stalls. The floor, gutter and feed troughs are cement. The stanchions are steel. If arranged for dairy cows the stanchions could be made of wood at little expense.

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Save half the time and expense putting up alfalfa, clover, timothy, etc. The automatic SUNFLOWER Stacker pays for itself in three weeks. Driver always has easy and complete control in guiding, elevating and dumping. A 16-year-old can handle it. The only Stacker guided by a rudder and not by the horses.

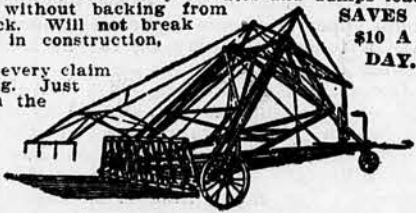
The SUNFLOWER loads from the windrow and automatically elevates and dumps load anywhere on a 20-foot high stack. Lowers without backing from stack. Works from either side or end of stack. Will not break down in front, nor tip up behind. Simplest in construction, strongest and easiest to operate.

Write immediately and let us submit proof of every claim we make. We are ready to show a big saving. Just drop us a postal card and say "Show me" on the Stacker proposition.

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THE FARM



Sweet Clover Again.

E. G. F., Finney County, writes: "I have noticed the widespread interest being taken in sweet clover as is shown through the correspondence of subscribers appearing in KANSAS FARMER. It is surprising to me that this interest has not been manifest many years ago. I have been growing sweet clover for seven years, and what I write is from my experience and observation.

"Almost all my clover grows on fields in the Arkansas River bottom. The soil is a sandy loam and from 3 to 10 feet to water. I do not irrigate. Sweet clover, however, will thrive under irrigation and otherwise favorable conditions.

"I have pastured cattle, horses and mules on this clover. It makes early abundant pasture and stock eat it with a relish. I have never handled any sheep or hogs on my clover fields, but have had correspondence with hog and sheep growers who have and who claim that they like sweet clover better than alfalfa for pasture.

"I have fed sweet clover hay for the past seven years and all fall, winter and spring have been feeding the clover straw from my last fall's threshing.

"The yield of seed per acre varies considerably, but from 120 acres last fall I threshed a little over 900 bushels. We count 60 pounds of seed to the bushel. The seed started selling at \$10 a bushel early in the fall, but has gotten up to \$15 a bushel now.

"There is no question about sweet clover making a good pasture for all kinds of stock, both as spring and fall pasture. I am speaking now of the large white blooming variety. As illustrating the value of clover for hay, I can give you one instance.

"Last fall I sold all my straw and hay to Thomas Cowgill, ex-state treasurer of Missouri, who has a large ranch out here and who full feeds a great many cattle. Mr. Cowgill thought that while he was putting high-price grain into his cattle he would prefer to supply them with the very best of roughage in the form of alfalfa hay, kafir and corn forage. His superintendent at several different times told me that the cattle would leave the alfalfa, kafir and cane for the sweet clover hay and stay on it. I observed this fact for myself. There was something in the sweet clover hay that the stock liked. It is my understanding that the yellow blooming variety is bitter and stock at times will not eat it.

"At the present time there is no market for sweet clover hay, baled, but I can remember when there was none for baled alfalfa hay. I sell all my sweet clover hay here, but I am thinking of baling some and shipping a carload to Kansas City. I will then take some Saturday afternoon off when the live stock exchange is not busy and will endeavor to arrange to have a few bales of the best alfalfa hay, the best timothy hay and some sweet clover hay placed before the held-over cattle, horses, mules, sheep and hogs, giving the animals themselves an opportunity to express their preference and thereby allow the bystanders to judge as to which the stock prefers. It is my understanding, too, that the fattening qualities of sweet clover hay are greater than those of alfalfa.

"It would be my judgment that on the uplands of Western Kansas where irrigation cannot be had, sweet clover should be sown in rows about three feet apart and cultivated like corn. Since the clover bunches heavily, fields so sown will soon look like solid fields and I believe will produce nearly as much tonnage of hay and yield of seed as when grown from drilling or broadcasting. Sweet clover seems to grow where almost any other crop will grow, and in many instances where other crops will not grow, and I heartily recommend it for the uplands of Kansas."

Chinch Bug Fungus Not Valuable.

Subscriber C. S., Rice County, Kansas, writes: "During the past winter I saw in KANSAS FARMER reference to chinch bug infection which was largely distributed, if I remember correctly, about 1894. I think KANSAS FARMER stated that the use of this fungus had been discontinued.

"I infected and distributed the dis-

eased bugs in a 40-acre corn field in the west part of McPherson County and always believed that those diseased bugs caused the live bugs to rapidly disappear, and I think they have never been so destructive in this locality as they were at that time. A short time ago I talked with a neighbor farmer who also distributed the diseased bugs and who was sure the results were beneficial.

"I do not know whether this method was ever tried outside of Kansas or not. I understand that the government employs experts to study and experiment with methods to destroy insect pests, one system being to cultivate some insect or disease to attack and destroy the offending pest. If the question has not been discussed in print recently, would it not be a good plan to learn the opinion of men who distributed and watched results?

"I recently saw an article recommending the destruction of chinch bugs by burning litter along fences, meadows, etc., during dry windy weather. Many farmers are more in fear of a fire on a dry windy day than they are of a cyclone. Although burning litter is unquestionably a good thing, it is hard to get farmers to act in the matter. The best that can be done always leaves many old bugs over, unless, as is sometimes the case, a cold wet spring helps to destroy them."

Replying to subscriber above relative to the distribution of chinch bug fungus, the Department of Entomology of the Kansas State Experiment Station has during the past five years made a careful study of the fungus disease which attacks the chinch bug and in every part of the state where the bugs have been in sufficient numbers to do injury, the fungus disease was found to be present. In other words, the disease has been found commonly distributed over the entire bug-infested districts of the state, attacking not only the chinch bug but a large number of other species of insects. However, it should be stated that although the fungus disease seems to be present everywhere, the proper climatic conditions must be had in order for it to propagate, namely, plenty of moisture and summer temperatures. If these unfavorable conditions are had the fungus will break out, and if the bugs are abundant it will soon disseminate among them and sweep them off in great numbers.

In 1910 the University of Kansas made a careful investigation of the value of the artificial distribution of the chinch bug disease. It must be remembered that it was at the Kansas University where Professor Snow propagated the chinch bug fungus and from which institution it was first distributed. The following statements are quoted from the conclusions derived from the investigation.

"The chinch bug fungus is present naturally in fields everywhere throughout the infested area in Kansas.

"It is present in such great abundance that any artificial distribution of infection would be too insignificant, by comparison, to be of practical use.

"Its distribution naturally through a field is much more uniform than any artificial distribution can be made.

"The amount of fungus used experimentally in both wheat and corn fields was so far in excess of any that would be used by the farmer in infecting his own fields that he could not reasonably expect to succeed.

"Apparent absence of fungus among chinch bugs in a field is evidence of unfavorable conditions rather than lack of the fungus spores.

"Spent adult chinch bugs succumb to attack more readily than younger ones, but as the old bugs have finished depositing their eggs, their loss by fungus disease accomplishes little else than increasing the amount of the infectious material.

"Advocating artificial infection or encouraging it by sending out diseased chinch bugs does not serve the best interests of the farmer, since his attention is thus diverted from other and more efficient methods of combating the pests."

Thus it appears from the above facts that the artificial distribution of this fungus disease amounts to nothing, and even with favorable conditions the artificial introduction will not hasten the action of the fungus.



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Subscriber's Pit Silo Inquiry.

Our subscriber, J. W. K., Pottawatomie County, writes: "I am considering building a silo. My near neighbors have no silos and will not build. It will be expensive for me to buy a cutter with a blower and an engine to fill my own silo only. I can buy a cutter without a blower at a low figure. I am considering digging a hole in the ground and cementing it for a silo. The only objection I see is that such a silo would not drain, but it certainly would be airtight."

In this issue our subscriber will find detailed information relative to the building of a pit silo, and in connection with the article will find comment by KANSAS FARMER editor on conditions which are necessary for the successful building and successful use of such silo.

The silo does not need a drain. Those silos built above ground are not drained. The silage, if cut at the right time, will not be a sloppy mess due to excessive juices. The time to cut crops for the best silage has time and again been stated in KANSAS FARMER, but will be reviewed before it is again time to put up silage.

The blower with 30 feet of pipe, or sufficient to fill a 30-foot silo, will cost about \$55. An elevator in place of a blower, to fill a silo of the same height, will cost about \$42, so there is not much difference between the cost of blower and elevator. It will require more power, however, to operate the blower than it will to operate the elevator.

If our subscriber has no use for an engine other than that of running a cutter for the filling of his own silo, he could better afford to hire a threshing engine for a few days at what might seem an excessive price.

It is certain that other silos will come into his locality within a year or two, and if he should buy a cutter and blower for his own use this year there is little doubt but that he would be able to later either sell several interests in the cutter or could rent it on a tonnage basis and by such method recover a portion of his original investment. It appears to us that we would not be influenced to build a pit silo wholly on account of a desire to save the expense of a blower or the rental expense on engine to run a cutter with a blower.

We are somewhat familiar with the uplands near the town of our subscriber and we believe that he will encounter solid rock in the digging of a pit silo. In the bottom lands near such town he will encounter sand and water, which will also render a pit silo impractical.

Oil for Chinch Bug Barriers.

In connection with the fight being waged for the protection of crops against chinch bugs, a certain kind of road oil has been found which is believed to be more effective than the tar now used in trenches. This discovery has been made by the entomology department of the Kansas Agricultural College. Since the oil is not manufactured for the general market and can be bought only by the carload, farmers' associations, Granges, unions, institutes, and commercial clubs should undertake to supply their districts with this oil by ordering in large quantities.

The cost of the oil is about 64 cents a gallon f.o.b. Kansas City. In order that these different organizations may purchase any amount they desire, J. H. Miller, dean of the extension division, will undertake to order the oil in carloads sent to centrally located towns from which distribution to local organizations may be made. Farmers should decide at once the number of barrels they need and send their orders to Mr. Miller.

In KANSAS FARMER issue of May 24 complete information was given as to chinch bug destruction and the construction of barriers, etc. Look up the article, read it again, note how the barriers are constructed and prepared for the oil. Figure on the number of rods of barrier that will be needed to protect the growing corn, kafir, cane or other crop from the bugs. You can then figure that it will require one gallon of oil to each five rods of barrier. In other words, two miles of barrier can be oiled with about 115 gallons of oil, and assuming that the oil will cost, laid down at your depot, 7 cents a gallon, the expense for oil would be \$8.05. The arrangement made by the extension division for the purchase of oil for farmers should prove convenient and should be taken advantage of by farmers in general.

The oil can be poured from a sprinkling can the nozzle of which has been removed. It should be poured in a stream of sufficient size to make a line of oil one-half to three-quarters of an inch in width.

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(1136)

Farm Experience Counts.

"A year ago last summer I put up a silo, and we will all remember what the summer of 1911 was. I have lived in Oklahoma twenty years and I have never seen as complete a failure as that was; but I had ordered my silo and I put it up.

"I had out 65 acres of Indian corn and figured on a big corn crop, but the hot winds came in July and burned it in a few days until I don't suppose I could have gathered 200 bushels off of the 65 acres, and it was hardly fit for hog feed. But I had my silo up and I got a corn binder and a corn sled and cut 20 acres of that poor corn and put it in the silo, and I had feed that was as good as alfalfa hay and it cost less than \$1.00 per ton to put it up. I bought 20 head of cattle in the fall of 1911, at a price about one-half of what the same kind of cattle would sell for today. I feed silage to all the stock on my farm, hogs and chickens like it as well as horses and cattle. I believe that every farmer that is going to handle stock should have a silo and a bunch of good milk cows. We milk eight head and our income is about \$1.00 per day; besides our own use and the benefit the pigs get from the milk.

"I believe in diversified farming and not so much wheat, as then you can have employment the year around instead of working hard for about four

months in the summer and be idle the rest of the time.

"I think the farmer should study out for himself what crop will best fit his soil. Sandy soil will still produce good corn but we should not try to fool with corn on hard upland. Kafir and milo is a sure crop on both sandy and hard land."

A good many Kansas bankers have been using circulars, booklets, etc., for distribution among its patrons, the object of which is to lead to better farm practice. Much of this material is good but much of it fails to hit the spot. The above letter was distributed by the First Bank of Hitchcock, Okla. That's a good piece of advertising. It reports an actual experience in farming—it gives the plain fact in farmers' language, is sincere and points the way by experience from a man known in the community. Hitchcock is in Blaine County and is directly south of Harper County in Kansas and with about the same rainfall. In a general way what is good for Blaine County, Oklahoma farmers is good for Harper County, Kansas farmers. Note what is said about silage, kafir, live stock and diversified farming.

Damming Draws and Irrigation.

Subscriber C. H. P., Wallace County, Kansas, writes: "There are two topics of interest to the central and western part of the state. First is the conserva-

tion of the moisture, second irrigation from the flood waters.

"If we can get the flood waters controlled by building dams and reservoirs from the east line of the Sixth and Seventh districts and holding the flood waters and feed the table waters below, also put in irrigation plants, then we can connect the rain belt between the mountains and the rain belt east.

"We have 15 inches of rainfall a year here and it practically all runs off, as the elevation is so great—about 11 feet per mile from the Colorado line to Salina, Kansas. When we can build dams and reservoirs and hold the flood waters, it will cause evaporation and create more rainfall. Also, if the water soaks into the sand, it has a tendency to feed the table waters and keep them from running off and ooding out the valleys in the East. My idea as a resident of the dry section is that if we hold the waters of the highlands it will answer two purposes—conserve moisture and save the crops on the valleys between us. I would like to hear from others in regard to this."

Record Price For Ranch.

John Feldhut of Iuka has closed a deal for the purchase of a big ranch in Finney County, costing \$104,000. The place includes a \$5,000 irrigation plant. Mr. Feldhut came to that section a few years ago, a poor man, and got a start in Reno and Pratt Counties.

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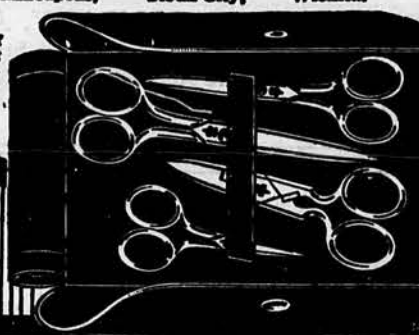
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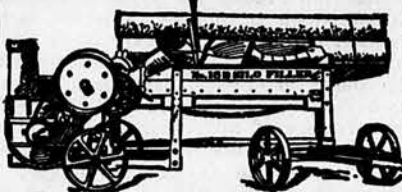
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LIVE STOCK



Reports from all sections are that the season so far has been extremely favorable for grass and pastures are abundant and all kinds of stock on pasture are doing unusually well.

Chas. Stephens, Cherokee County, a breeder of Holsteins, reports a heavy demand for dairy cattle. He says good milk cows bring twice as much money as they did three years ago.

T. M. Ewing, Montgomery County, says that he thinks in his county there is only about 60 per cent of a normal number of hogs. The spring pigs were saved in good condition generally speaking, and there is no cholera in his vicinity. The demand is heavy for dairy cattle but good cows are scarce and sell at high prices. He says in fact that all kinds of cattle are scarce and prices for all kinds high.

We are confident that more pure-bred sires of all classes of live stock are now being used in Kansas than ever before in the history of the state. This condition should be expected and the statement is made only in support of our contention that every farmer should improve the class of his live stock by the use of the best possible sires. James W. Williams, Lincoln County writes that "as a rule the farmers of my county are breeding to pure-bred sires" and that there is a strong demand for all kinds of good live stock in that county.

In Barton County our subscriber, L. C. Hipp, writes that there is an increasing demand for jacks. The demand for mules is strong at good prices. He attributes this to the fact that about one out of every six horses in his county was lost as a result of the plague and these horses are being replaced by mules. There is a slow but nevertheless increasing demand for cattle and Shorthorns are the most sought for. Contrary to the reports from most Kansas communities, Mr. Hipp writes that the silo in his county is not growing in popularity.

From Charles Sutton, Douglas County comes this word: "If the stockman cannot make money under present conditions he should change his occupation." This coming from a large breeder of Angus cattle and Berkshire swine indicates an enthusiasm and satisfaction which is indeed gratifying. It is our own opinion that live stock to the number of two or three times more than are kept on most farms are more certain to return the farmer a profit than any other plan of farming. Mr. Sutton reports an increasing demand for pure-bred beef cattle and for all kinds of good dairy cattle. He says too that his county has about 65 per cent of a normal number of hogs. There is some cholera in the county.

"The dairy business is not in as flourishing condition in this county as it was four or five years ago. Most of the farms here are large and I think farmers have found that on account of the extra amount of work with the limited and usually unsatisfactory help that can be had, makes dairying almost impossible. At any rate there are but few farmers who now milk more cows than enough to supply their family needs." This is from D. J. White, Chase County, who reports an increasing demand for all kinds of pure bred beef cattle, but practically no demand for dairy cattle. With stockmen he says the silo is growing in popularity. The swine population of Chase County he reports is about 20 per cent above normal and springs pigs generally were saved. He also says that there is no cholera in the county.

There is little question but that the western third of Kansas will soon become a heavy buyer of all kinds of stock. Various letters recently received lead us to this belief. The necessity of live stock farming is generally well recognized in that section. F. H. Borthwick of Sheridan County says that there is an increasing demand for all kinds of cattle, particularly for cows that will produce a fair quantity of milk. He says that in his section the Jerseys are

the popular dairy breed. He reports for his county about 10 per cent of a normal number of hogs, and a proportionate scarcity of all kinds of live stock. The growing popularity of the silo with a full recognition of its value to the western farmer is responsible more than anything else for the changed feeling with reference to the need of live stock. The silo, with the growing of some of the sorghum crops for filling, presents to the western farmer a greater hope for successful stock raising and farming than has ever before been entertained.

In Wilson County Henry Hunter reports a shortage of about 60 per cent in hogs and a great shortage in cattle. He says that at nearly every public sale a larger number of horses are offered than of cattle and that the demand is good for cattle of all kinds.

From Geary County Thomas McKinley writes that there is an increasing demand for pure-bred cattle of both beef and dairy breeding. He says "my experience and observation on the improvement of live stock has led me to believe that the past experience with pure bred stock has not been as remunerative and as encouraging as it should have been and for the reason that the breeding of pure bred stock is handicapped by serious obstacles. First, it has been difficult to induce farmers to pay remunerative prices for pure-bred sires; second, incompetency of breeders to select, breed and develop their animals so as to demonstrate the superiority and financial advantages of pure-bred stock from scrub animals; third, the penalty imposed by an excessive tax on pure-bred sires which does not look reasonable to the beginner; fourth, excessive freight and express charges on individuals or carlots. I am fully persuaded that the elimination of some of the above obstacles on the part of those engaged in the breeding business would result in an impetus to the advancement of the cause of better live stock, and an impetus not heretofore experienced. The successful improver of live stock is a public benefactor and is entitled to appreciation and financial success."

Veterinary Inquiry.

A Severy, Kansas, subscriber writes for information regarding a correspondence course in veterinary science. He fails to sign his name so we cannot give him the information he desires. Our remarks would not be of general interest to KANSAS FARMER subscribers and so we cannot devote the space thereto. Here is another instance in which we would be glad to serve our inquirer but because he failed to sign his name we cannot. The St. Joseph Veterinary College, St. Joseph, Mo., is an advertiser in this paper. Write it for particulars.

Stamping Out Hog Cholera.

George Glover, of the Utah Experimental Station, writes that in one community with which he is familiar and in which hog cholera was rampant the disease was stamped out by the following method:

A competent veterinarian was made a deputy sheriff with instruction to clean-up cholera. He did it by first ordering the carcasses of cholera hogs destroyed by fire, healthy hogs were isolated from sick ones, serum was used with discretion, pens were ordered cleaned once a week, and the litter destroyed by fire; lime was scattered in the yards and the pens whitewashed, the hogs were placed in quarantine and notices to that effect were posted conspicuously, the moving of hogs on the public roads was prohibited and all imported hogs were held fifteen days before exposing them to other hogs.

This procedure in a general way, if enforced vigorously, will control hog cholera and there is no other way. The sanitary authorities must enforce the same general rules in quarantine and disinfection that they do with small pox and scarlet fever in the human and there is no reason why the disease cannot be equally as well controlled.

This fall, as soon as the leaves are cut by frost, is the best time to make new plantations of rhubarb and horseradish. The ground for both of these plants must be deep, mellow and rich.

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Do You Want Men? Do You Want Work?

FARMERS wanting help and those wanting work will watch KANSAS
FARMER for further announcements.

KANSAS FARMER's advertising for the names and addresses of men
who desire work in the harvest fields is resulting in the receipt of hundreds
of inquiries from men who desire locations. Farmers who are seeking help
are also making known their wants in great numbers, and be it understood
that Kansas farmers are wanting help other than for harvest.

The first of the week we began notifying men of locations where they
can get work. It was necessary that notification be delayed until this
time, giving opportunity for the receipt of names and addresses of the
largest number of men possible so that we might avoid sending a man
from Belleville to Manhattan when that same man might be wanted either
at home or at some other point nearer.

We are giving Kansas men preference over those outside of Kansas.
We believe that there are enough men in Kansas, together with those who
will move from Oklahoma north as the harvest progresses, to take care
of the Kansas crop.

We really believe that there are enough men and teams in those
counties in far western Kansas, where the acreage is small, to come near
supplying the help needed in the harvest fields farther east. We are
especially endeavoring to locate these inquirers.

It is always dangerous to guess on a Kansas wheat crop—or for that
matter of any state—until the crop is made. There is no question but
that in the western half of the state conditions are decidedly spotted.
Local rains the latter part of last week have made the crop in sections
where a few days before it was believed the crop was gone. In those sec-
tions where it failed to rain the yield will be small and some fields not
cut. Good local rains in other sections of the western half of the state
have favorably changed a situation doubtful a week ago. The acre yield
will be comparatively short in several of the big and dependable wheat
counties of the central Southwest. This condition will be more than offset
by the fine crop generally throughout the eastern half of Kansas, but
which latter section, however, does not have an acreage equal to the west-
ern half.

It is our guess—a guess only—that Kansas will harvest 90 million
bushels.

The KANSAS FARMER coupons are again printed below. You are in-
vited to avail yourself of this service.

Farmers who want harvest hands will please cut out this blank and
mail it at once to KANSAS FARMER, T. A. Borman, Editor, Topeka,
Kansas.

When will your harvest begin? _____ Do you want shockers,
How many men do you want? _____ pitchers, stackers, extra teams?
What have been the prevailing harvest wages per day? _____
Will you need any men after harvest and at what kind of work? _____

Name _____ R. F. D. _____ State _____
Address _____ Telephone Address _____
Telegraph Office _____

If you want to work in the harvest fields, fill this out and mail to
KANSAS FARMER, T. A. Borman, Editor, Topeka, Kansas.

Name _____ Address _____ Age _____
Occupation _____ Have you ever worked
in the harvest fields or at outside day labor? _____
Can you go to any county? _____ Do you want work after
harvest, and what kind? _____

If you have a team or harvesting outfit and want to give addi-
tional information, write on separate sheet. We will endeavor to put
every man who applies into direct communication with the farmer
nearest him we know what wants harvest hands.

KANSAS FARMER will act as a clearing house for farmers who want
harvest hands and for harvest hands who want work. No charge
whatsoever will be made to anyone, under any circumstances, for the
service, unless you want information by telegraph or telephone, in which
case you will pay the charges.

Fill out one of these blanks and mail at once to

KANSAS FARMER, T. A. Borman, Editor, Topeka, Kansas.

Soil Blowing Prevention

Continued from Page Four

D. Olcott. They listed land in strips.
These strips were run east and west
about four dora apart, each listed strip
being two to four rods wide. Almost a
thousand acres were thus prepared the
first day.

The wind was whistling from the
north at the time, raising the dust so
that at moments one could see only a
few rods ahead. After a considerable
area was listed, however, this proved an
effective stop to the moving soil and the
line of demarcation between listed and
unlisted areas was so distinct as to be
seen at a distance of many miles. A
house in the blown area several miles
from Colby which has not been seen
from Colby on a windy day for more
than a year, on account of the dust,
stood out clear and distinct as a clean-
cut demonstration of what this work
was accomplishing.

A sad accident happened the first day
of this work. Mr. A. O. Hemstrom,
largely instrumental in directing the
field work and one of the respected citi-
zens living near Colby, had his back
broken while riding in a car. He had
been crippled by rheumatism a long time
and sat in the car bending forward

slightly and leaning on a cane. In cross-
ing a rut the car suddenly gave a jerk.
His chin hit the cane, his head was
thrown backward, and the jar broke his
back. He was rushed to the hospital,
but since has died. This saddened the
spirit of the workers and some were not
present the second day. The majority
came back, however, and automobiles
scoured the country for others.

All are working to drive back the
threatening desert and the listed area is
increasing. The courage and clear grit
of those undertaking so difficult a task
as the reclamation of these blown lands
is worthy of the highest commendation.
May no one stand back, but every one in
the district lend a helping hand, with
time, labor or money, or all of them.
Land owners, resident and non-resident,
are lending a hand when they see that
organized effort brings results; many
business men are helping and others
should help. If all would "pitch in" it
would probably be a matter of only a
few weeks until the area would be under
control. When once under control it can
be kept so by sane farming, and it will
once more be valuable for farming pur-
poses and for homes worth while.

Over 600,000 Wearers



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No. 2231

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The "Our Family" is a "Star
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other shoes of the same kind at the same price.

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how it is made. Ask to see it.

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diate neighborhood. With an expen-
diture of 20 or 30 cents you can im-
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Department of Agriculture. Modern and
completely equipped laboratories. Unex-
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St. Joseph, Mo.

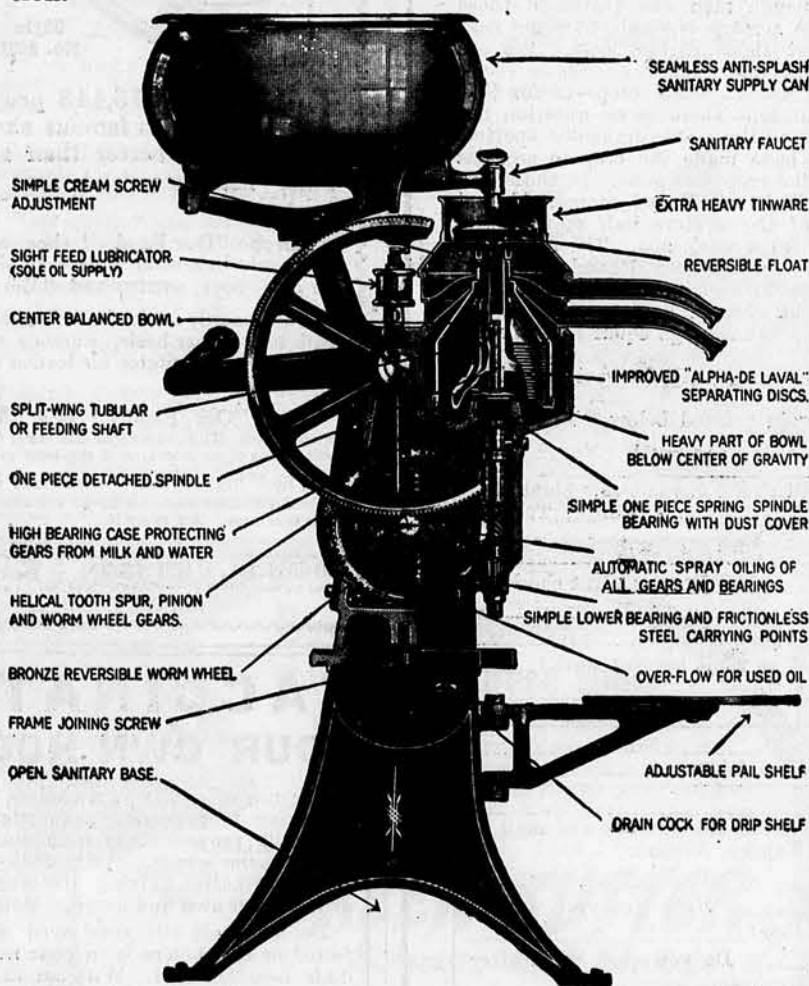
TAKEN UP—STRAY SORREL MARE,
weight about 500 pounds, 9 years old, strip
in face, three white feet, branded MS on
right hip, 1A (inverted) on left shoulder,
flying W on left shoulder, ISI and RII on
left hip. H. T. Bandy, Kanorado, Kansas.

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READ KANSAS FARMER'S CLASSIFIED
ADVERTISING PAGE FOR READY BARGAINS

DAIRY



The grade cow, if she be a good grade, is a profitable dairy cow. However, the grade sire has no place in the dairy herd.

The first two or three months of the hand-reared calf's life are always the critical period. It should have good feed and good care during that time. Then it will be able to take care of itself in good shape.

Calf rearing is a necessity on every dairy farm. This, for the reason that it is more economical to rear good cows than it is to buy them. It is also the more certain means of keeping up the dairy herd.

In passing through the country it is not difficult to know those farmers who are milking cows or have milked cows. As a rule, the farm dairyman is the most prosperous man in the community. If he is prosperous and is not dairying, it is a fairly safe bet that he was one time a dairyman and that he will give the old cows credit for having put him on his feet.

If you are dissatisfied with the profits from the dairy herd it will be well to inquire carefully into the length of the producing period of each cow milked. It is probable you will find that a few short milking cows are eating up the profit of those cows which are persistent milkers, able to return a profit for their feed and care. Culling the herd and disposing of the short time milkers is the surest way of building up the herd and increasing the profit.

Every cow on the place deserves a fair trial with the right kind of feed in the right quantity and her milk weighed and tested before she is regarded as unprofitable. Hundreds of cows which under right feed and right management would yield a good profit are, under present methods, unprofitable. It is not fair to the cow and not fair to yourself to undertake to cull the herd on outward appearances or without the cow being given an opportunity to show what she is capable of doing.

A big cream check is not the result of accident, but it is the result of good feeding and good handling, and most likely of good cows. A big cream check does not come from cows which give a gallon or two of milk a day, each, regardless of how rich in butter fat that milk may appear to the eye. A big cream check comes from a bunch of cows that give from three to five gallons of milk a day, each, for four or five months of the year, and milk proportionately well for at least nine or ten months of the twelve.

This is the time of year when the cream cans and the milk pail and all the separator parts should be scrupulously clean. If the cream is to keep well for family use or for delivery to the cream receiving station, clean milk utensils, clean methods of milking and the animal heat removed from the cream as soon as possible after separating, will result in keeping the cream in the best condition possible. The best storage for the cream is the milk house constructed over the pump or tank covered and set out in the open. The milk house or covered tank should be well ventilated.

KANSAS FARMER has in the past month or six weeks answered a number of inquiries as to the cause of cows giving bloody milk. We just now have another inquiry from "An Old Subscriber" asking for the same information. Had this subscriber given his name and address we would have answered by mail and not again taken space in these columns to answer this question. Subscribers will do us a favor always to sign their names to inquiries. If an answer has recently been printed in KANSAS FARMER we can then write direct. This is a subscriber from Russell County. The rupture of a small blood vessel or blood vessels is usually responsible for cows giving bloody milk. Sometimes this condition is due to an abscess either in the udder or teats. Usually the trouble in either case is of short standing and with careful handling of the udder in milking nature will effect a cure. Us-

ally, too, the trouble is confined to only one quarter. Sometimes the trouble is so aggravated or serious that the quarter should be dried up or not milked more than necessary to prevent spoiling and under which conditions the quarter will go dry. No surgical operation or the use of any medicine or application is necessary or beneficial in ordinary cases.

In our issue of May 17 a photograph of one of the leading Brown Swiss bulls was labeled as a first prize Jersey bull. The picture was so described by mistake. We are glad, however, to do the Brown Swiss breed the credit of a correction. Those who are familiar with the hundred and one ins and outs in the preparation of copy for a great farm weekly like KANSAS FARMER can appreciate how a mistake of this kind might occur. The Brown Swiss is recognized as one of the important dairy breeds. The breed, however, is new in Kansas, but is adapted to Kansas conditions fully as well as some other breeds. One reason that so little is known of the breed in the West is because of the few animals being here owned and because of the scarcity and consequent difficulty in obtaining the breeding stock.

Every man who engages in a manufacturing enterprise works early and late to increase the productive power of his factory and he is not content until that factory is producing a maximum of the products for which it is designed. This is a tip to the farmer. How many farmers can you name in your neighborhood who have endeavored to increase the producing power of their farm? How many have endeavored to make the farm worth more money than it was worth when they bought it, except by the addition of buildings, fences, and other improvements? Do you consider that the farmer is justified to the same extent as the manufacturer in his effort to make his farm produce a maximum of grain, pork, beef, etc., and at the same time maintain the land on the up-grade in fertility and producing ability?

The National Dairy Show will this year be held in Chicago, October 23 to November 1. As the success of an industry must include the success of all of its branches, there is to be held a conference during this year's show looking to advancing each and every branch of dairying, beginning with the cow, of course. This conference will embrace delegates from each cattle association, the creamery interests, the cheese makers, the milk producers, the milk distributors, the ice cream manufacturers, the silo makers, the dairy farm machinery men and the dairy machinery manufacturers, ice cream machinery and subsidiary interests, the agricultural colleges, the railroads, the trade press. With such a combination of energy great results for the industry must accrue. A splendid effort ably assisted by the Grange and the railroads to bring out a big attendance to this year's show is being made.

Some time since in this column we printed a statement congratulating the American Guernsey Cattle Club upon having established a list for meritorious grade Guernseys. We made some inquiry of Secretary Caldwell of the club and we are advised by him that the list is to include such grade animals as are sired by registered Guernsey bulls which bulls will make the Advanced Registry qualifications under the supervision of agricultural experiment stations. It is the object of this plan to add to the credit of the Guernsey as a winner of the battle with the scrub cow. Results of grade Guernsey tests will be announced in KANSAS FARMER from time to time. We can see wherein the American Guernsey Cattle Club would be interested in the meritorious records of the grade Guernseys sired by Advanced Registry Guernsey bulls, but to the rank and file of Kansas farm dairymen the superiority of the grade Guernsey as compared with the common cow could be much more forcibly impressed upon them by having the list include meritorious grades even though not sired by Advanced Registry bulls.



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Sec'y.....C. M. Freeman, Tippecanoe City, O.

Some Grangers have asked whether or not Secretary of Agriculture Houston is a member of the Grange. He is not.

Items in the Grange column of KANSAS FARMER issue of May 24 and credited to L. Mabel Waters, secretary Berrington Grange No. 1430, should have been credited to her as Lady Assistant Steward.

In every community there are many people who do not know the objects and purposes of the Grange. These are the folks you should get out to your open meeting where they can hear some of the Grange doctrine.

The National Stockman and Farmer, published at Pittsburgh, Pa., prints a Grange column very similar to that printed in KANSAS FARMER. In its issue of May 24 it refers to the public market established at Manhattan by the Riley County Grange, and recommends that the Grangers of Pennsylvania follow the example.

Some time since it was claimed that when 78 members were taken into Silas Wright Grange, New York, this was the largest class ever added to a subordinate Grange. This caused the secretary of Pembroke Grange, New Hampshire, to remind Grangers that on March 4, 1886, 134 members were taken into that Grange and of which class 67 were men and 67 women.

The establishment of parcel post was due wholly to the efforts put forth by the Granges throughout the United States. The parcel post was a demand made so strong by the Granges that Congress could not turn a deaf ear. This is an example of what the Grange can accomplish when it really sets about to do things. This is a day when results count. The Grange is one farmers' organization that has brought results.

In the Grange column of an exchange we find these subjects suggested for discussion during the fall and winter. It seems to us that here are some good topics: Shall we farmers patronize the mail order houses when cheaper? The most practical way of assisting the young person to success. What legislation do the farmers of this neighborhood most need? What is most needed to strengthen the farmers not prosperous? What middlemen can we dispense with? How shall we arrange the "wife's share" so it will be satisfactory to all concerned? On what articles could we profit by buying and selling together? Some of the wastes on the farm and how to stop them.

Not Favorable to State Commission.

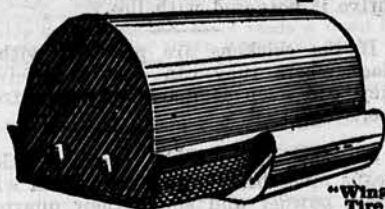
The Manhattan Grange met at the home of Mrs. J. L. Fuller last Wednesday. A bountiful dinner was spread beneath the trees and enjoyed by all. The Grange was called to order at 1:30 and after preliminary business the W. I. took charge of the program. Two beautiful solos were sung by Mrs. Fuller, "Colorado" and "The American Rose." Both were greatly appreciated. The patrons then took part in a general discussion led by State Lecturer L. S. Fry on the subject of Commission Form of State Government. The prevailing opinion seemed to be not to center too much power in the hands of a few, but to have as many people represented as possible. During the summer months it is customary with this Grange to hold the most of their meetings with members of the Grange at their homes.—Mrs. V. V. AKIN.

An easy way to clean lamp chimneys is to hold the chimney over the steam of a tea-kettle for a minute, and then wipe clean with a soft cloth. A chimney washed in this way is less apt to break than when water is used.

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ON EARTH Harvest YOUR grain with our WINNER-WONDER 4-horse-power engine. Cuts, elevates, binds grain. Only two horses needed. Removed—use for general work. Cushman Mfg. Co., 808 N. Third, St. Joseph, Mo.

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Note this patented "Wing." How it presses against the channel, thus preventing mud, grit or water from getting in and quickly rusting the rim and destroying the tire base. This tire remains sound, won't creep or get loose. Gives utmost wear and will protect your carriage and greatly lengthen its life. Being of tough, springy rubber, it is exceptionally easy-riding.

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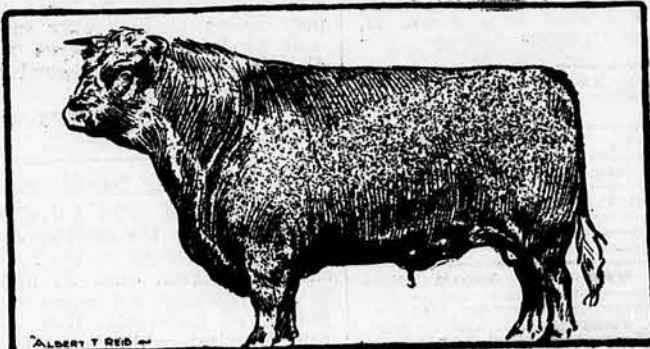
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WHITE WYANDOTTES EXCLUSIVELY. Eggs, \$4.50, 100; \$1.75, 30. Mrs. Will Beighel, Holton, Kan.

LIGHT BRAHMA, WHITE WYANDOTTE, Indian Runner Duck eggs, half price. Ducks for sale. Mrs. Emma Ahlstedt, Roxbury, Kan.

ROSE COMB REDS, COLUMBIAN WYANDOTTES, Indian Runner Ducks, Golden Seabright Bantams. Eggs for hatching. Mailing list free. A. D. Williams, Minneola, Kan.

BUFF WYANDOTTES—CUT PRICES for balance of season. Eggs from all our breeding pens at \$1.50 per 15; \$5.00 per 100. Baby chicks, \$1.50 per dozen. Mating list on application. Wheeler & Wylie, Manhattan, Kan.

Poultry Horticulture

Neither old fowls nor chicks will thrive if bothered with lice.

If the chickens are provided with a place where they can dust themselves, they will keep comparatively free from lice.

If they are not so provided, then means must be taken to dust them with insect powder and spray their quarters with liquid lice killer.

A small ad in KANSAS FARMER will help you to dispose of your surplus stock, and you can get better prices than when sold to the butcher. But anyhow, get rid of all that you cannot use to good advantage.

Market the culls as soon as you discover that they have defects that would debar them from the breeding pens. You will not want them around, so when they become of marketable size, sell them to the butcher. Cull closely, for you will find by experience that even the best of hens will throw some culls. It pays to keep only the best.

Now that eggs are at their cheapest price, would be a good time to store some away for winter's use. There is no cheaper or handier way than to pack them in salt. Take any kind of crock or jar and place a layer of salt on the bottom, then a layer of eggs, cover with salt and so on till the jar is filled. They will keep for six or eight months. Some use a preservative of water glass for keeping eggs, others use lime water, but for family use, for preserving a few dozen eggs, there is no better or cheaper method than preserving with salt.

A little energy expended in keeping the grounds around your poultry plant in good condition is energy well expended. Nothing is so unsightly as a littered yard. If you will make it a rule to have a place for everything, and then keep everything in its place, you will have no trouble. The throwing of this box here and that board there is what soon disfigures the place. A yard littered with bricks, boards, tin cans and every conceivable thing, is not an inviting place for a visitor. The clean, attractive yard, with nicely painted coops, makes an impression that the visitor never forgets.

While it takes a trap nest to tell exactly the status of the laying hens, still by observation one can tell an extra good laying hen than a poor one, and when a poor one is found she should be eliminated from the flock at once. Where it costs much more than a cent each to produce eggs, the margin of profit is too small to be satisfactory. While the cost of eggs can be lessened by correct feeding, the best way to reduce the cost is by keeping hens of larger egg production. If a hen lays only a hundred eggs a year she is not profitable, where you have to buy everything that she eats. But if she lays 150 eggs a year, she will leave a margin of profit. So it is evident that if we are to be sure of a safe profit on our eggs, we must cull out the poor layers, keeping only such hens as will produce enough eggs to pay for their keeping, with a good balance in their favor. Hens that are four years old or more will never lay eggs enough to pay for their keep.

Caponizing Demonstration.

Probably the most valuable part of the program of the meeting of the state Poultry Federation at the Kansas Agricultural College, June 25 and 26, will be a caponizing demonstration. George Benoy, of Cedarvale, Kan., is to give this practical exhibition. He is one of the greatest experts in the United States and therefore his part of the program will be of very great value to all poultrymen who desire instruction and enlightenment in caponizing.

Incubator Chicks.

Dear Sir: We hear so much about the difficulty of raising incubator chicks. I have been in the business for 21 years, always lost so many I was quite discouraged. This year I sent 50 cents (M. O.) to the Walker Remedy Co., E-13, Lamoni, Iowa, for their Walko Remedy and am having great success with it—makes me think I have found a gold mine. If I had only tried it long ago, just think of the hundreds, yes thousands of little downy fellows I could have saved. It certainly is a boon to incubator users.—MRS. CHRIS WOLF, Exira, Iowa.—(Adv.)

In the drier sections of Kansas where such materials as straw, old hay and even barnyard manure are easily and cheaply obtained, the mulching of potatoes is a common practice. There are a few farmers who have successfully practiced the mulching of other garden vegetables. In those sections devoted largely to the growing of wheat, the gardens are planted in the spring with fine enthusiasm and high hopes, given a few cultivations, then, as the days grow hotter and drier and the garden needs the most attention, the wheat harvest demands the whole time of everybody on the farm and the garden is neglected.

Some few farmers who have practiced the mulching of the late summer and fall vegetables and have grown good crops of these every year, realize the value of being able to dispense with cultivation during the busy summer season. Occasionally we find a farmer who is over-enthusiastic concerning the mulching of his garden crops. The practice has its disadvantages as well as its decided advantages. Under certain conditions it may be quite as expensive or even more expensive than continued cultivation. This is especially true of those crops which must be cultivated a number of times before they are large enough to be mulched, and more true of those that mature very early in the season. With the wheat farmer, however, it is not a question of the cost but of dispensing with cultivation and at the same time the conserving of the moisture during that period when he knows that he will not be able to cultivate the garden because of lack of time.

A mulch of straw not only conserves the moisture in the ground but it prevents the growth of weeds, the two objects of cultivation. While it may be truthfully said that mulching will develop a later crop, which may or may not be a disadvantage, and if the weather conditions are favorable may not even increase the yield over clean culture, with conditions as they are in the wheat growing counties it will be found that the mulch will, on the average, increase the yield one-third in crops that mature after mid-summer.

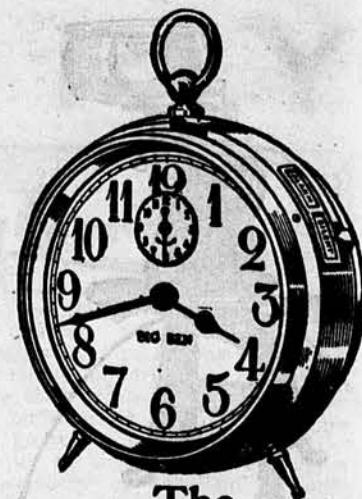
Not all garden crops can be profitably mulched. There are some vegetables which mature before the ground is sufficiently warmed to make the practice safe. Some start so slowly that they have to be cultivated a number of times before the mulch is applied and if it is applied at all, it will be found more expensive than continued cultivation if the time can be found to give the garden continued cultivation. Sweet corn is usually ready to "lay by" before the wheat harvest begins. Peas, radishes, lettuce, early onions, etc., usually mature before the farm crops make such heavy demands on the farmer's time.

There are a few crops of which there can be no question as to the profits of mulching. There are most of those vegetables that mature in late summer and fall, such as tomatoes, potatoes, sweet potatoes, string beans, cabbage, late root crops, cucumber, melons, etc. A mulch applied to these crops as soon as they have become well established in the soil, with the possible exception of potatoes which are often mulched soon after planting, will not only conserve the moisture, but will save labor, increase the average yield and, perhaps, reduce the expense of production.

Straw is usually available in the wheat belt. Barnyard manure serves a two-fold purpose when applied to the garden as a mulch. Three inches of straw is sufficient for all purposes. Many of the disadvantages pointed out by those who have had only a limited experience with the mulching of vegetables are the results of too heavy an application of the mulch. Three inches will retain the moisture and prevent the growth of the weeds. A heavier application will retard growth and prevent light showers from reaching the earth below, especially if the ground is on a hill side.

The mulch should not be applied too early in the spring. The ground should have time to become thoroughly warmed. After a heavy warm rain, coming the last of May or first of June, is a good time to apply the mulch.

The season thus far this spring has been almost ideal for the home garden. The ground in most sections is well soaked. A mulch applied now will conserve the moisture and make sure that crop of vegetables which so many families on Kansas farms are lacking. It is at least worth while to try it on a portion of your garden for a comparison of results.—GEORGE O. GREENE, Horticulturist K. S. A. C.,



The Biggest Thing in the Clock Business

Big Ben is the biggest thing today in the alarm clock business.

He is only two years and a half old, but he's already getting more work from the States than any clock alive.

In two years and a half time, 18,000 jewelers—70% of the total number of United States watchmakers—have already adopted him. Two million and a half families leave it to him to call them up in the morning. Two million and a half families use him all day long to tell the right time by.

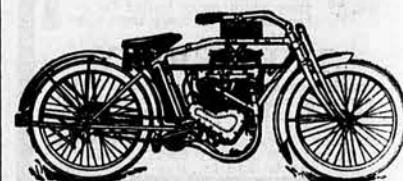
He is really two good clocks in one—a crackerjack of a timekeeper and a crackerjack of an alarm.

Big Ben stands seven inches tall. He is triple nickel-plated and wears an inner vest of steel that insures him for life. His big, bold figures and hands are easy to read in the dim morning light. His large, comfortable keys almost wind themselves. He rings five minutes steadily or ten intermittently. If he is oiled every other year, there is no telling how long he will last.

He's sold by 18,000 watchmakers. His price is \$2.50 anywhere in the States, \$3.00 anywhere in Canada. If you can't find him at your jeweler's, a money order mailed to Westclox, La Salle, Illinois, will send him anywhere you say, express charges prepaid.

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LANGSHANS.

EXTRA BIG-BONED HIGH-SCORING Langshans, guaranteed. Osterfoss Poultry Farm, Hedrick, Iowa.

BLACK LANGSHANS—PEN, \$1.50 PER 15, \$2.75 per 30; open range, \$1 per 15, \$1.75 per 30. Good hatch guaranteed. D. W. Wolfe, Route 2, Carrollton, Mo.

BUFF COCHINS.

FOR SALE—BUFF COCHINS OF QUALITY. Send for mating catalog. J. C. Baughman, Topeka, Kan.

LEGHORNS

S. C. BUFF LEGHORNS—EGGS FROM choice birds, 30, \$2; 100, \$4.50. J. A. Reed, Lyons, Kan.

FOR SALE—ROSE COMB BROWN LEGHORNS, stock and eggs. Mrs. J. E. Wright, Willmore, Kan.

EGGS FROM PURE-BRED S. C. BROWN Leghorns, \$1 for 15; \$4 for 100. H. N. Holdeman, Meade, Kan.

SINGLE COMB BROWN LEGHORNS exclusively. Choice farm flock, carefully mated. Eggs, \$3.00 per 100. Mrs. D. A. Wohler, Hillsboro, Kan.

MY STANDARD BRED S. C. BUFF LEGHORNS won at Newton 1st cock, 1st and 2d cockerels, 1st, 2d and 3d hen, 1st, 2d, 3d and 4th pullet, 1st pen. Stock for sale: cockerels \$1 and up. Eggs \$2.50 for 15; \$5 for 100. S. Perkins, 801 E. First Street, Newton, Kan.

HOME CIRCLE



BRAD'S BIT O' VERSE.

Get the Habit.

Once in a while you should try to look pleasant, cheering the folks as you amble along; once in a while you should sing like a peasant, yodling a chorus that's lusty and strong. Don't go around looking sad and forsaken, voicing your anguish and howling with woe; tell Mr. Gloom he is badly mistaken; try it, and maybe the habit will grow. Once in a while you should try to be happy, even at dawn when you rise from your couch; smile as you tackle your sausage and "frappé"; nobody loves a chronic old grouch. Try to be friendly and helpful and cheery, striving to do something good on the way; lifting the fallen and boosting the weary; try it, and maybe the habit will stay. Once in a while you should think of the daisies, doing their best the big world to make bright; cut out the fears and the clouds and the hazes, lifting your eyes to the welcoming light. Strike up a roundelay, get the glad habit; let your long visage round out with a smile; look for a sunbeam and joyfully grab it; try to look jubilant once in a while.

Stains on raincoats may often be removed by rubbing them with a piece of raw potato.

Washing soda will be found very helpful in removing stains from granite ware.—Albany Journal.

It is not difficult to give jewelry a rich luster if the articles are rubbed with a cloth wet with alcohol diluted one-half. Then it should be rubbed dry with a soft cloth.

In preparing sauce of any kind, to serve with a sardine or salmon dish, the oil from the canned fish may be used as a basis quite as well as butter or olive oil.

When commencing a medallion in crochet, instead of making a chain and joining it to make a ring, just make a long stitch and put into this as many stitches as required, then draw up the end of the thread. This is a nice way, also, to start the center of a button.

And ever near us, though unseen,
The dear immortal spirits tread;
For all the boundless universe
Is life—there are no dead.
—LORD LYTON.

The English society of arts offered a prize for the best process of cleaning silk, woolen and cotton fabrics—one that would not change their color or injure them in any way. The winning recipe was as follows: Grate two good sized potatoes into a pint of clear, clean, soft water; strain through a coarse sieve into a gallon of water, and let the liquid settle. Pour the starchy fluid from the sediment, and it is ready for use. Rub the articles gently in the liquid, rinse thoroughly in clear water, dry and press.



6227



6214

No. 6227—Draped Three-Gored Skirt. The draped skirt is worn by everybody. This skirt has three gores and closes at the side of the front, where it is slightly draped. In the back there is a wide panel in box plait effect. All soft cotton fabrics, ratine, pongee and such silk and wool mixtures as crepe and kindred fabrics may be used in making this skirt. The pattern, No. 6227, is cut in sizes 22 to 30 inches waist measure. Medium size requires 3 1/2 yards of 44-inch material. Price of pattern, 10 cents.

No. 6214—Ladies' Dress. This smart gown would make an excellent going-away dress for a bride, or a dressy street dress for any woman. It is made with a shoulder yoke across back and front, extending well down on the shoulder. Here the plain sleeve is attached. The skirt has four gores. It opens in front over a small panel and may have either normal or raised waist line. The pattern, No. 6214, is cut in sizes 34 to 42 inches bust measure. Medium size requires 3 1/2 yards of 44-inch material. Price of pattern, 10 cents.

Care should be taken when poaching eggs not to allow the water to boil after the eggs have been put into it as the bubbling of the water makes the edges ragged looking. The eggs should cook slowly and quietly. But be sure the water is boiling when the eggs are put in.

The French have a remedy for treating corns which is said to be infallible. Boil until tender the tough outer skin of several strong onions. While still warm bind them over the corn with a linen bandage. If fresh applications are put on night and morning the corn should disappear in two or three days.

A way of working stems which seems well worth trying is the following: First make a line of fine running stitches, then run again on the same line, making the surface stitches of the second line cover the distance between stitches of the first; thus you have a continuous line. Now work over and over these stitches, without catching into the material; you will have a smooth, even cord or roll, very effective and quickly done.

A Use For Toothpicks.

After stuffing a fowl for the oven, draw the edges of the incision as closely together as possible. Stick toothpicks through the flesh in such a manner that about an inch will protrude from each side from the incision, and about an inch apart the entire length of the opening. Then take a stout cord, place the center around the bottom pick, and weave from point to point as one would lace a shoe. Tie at the top. At the neck, stick two picks straight through, and wind a cord tightly around them on one side, tie and slip, then do the same on the other side. When the fowl is removed from the oven, all that is necessary is to remove the picks. The cord will be loose so it can be snipped in two or three places and drawn out easily.—McCall's Magazine.

Classified Advertising

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. Year advertisement here reaches over 300,000 readers for 4 cents a word for one week; 3 cents a word for two weeks; 2 cents a word for three weeks; 14 cents a word for four weeks. Additional weeks after four weeks, the rate is 3 1/2 cents a word per week. No "ad" taken for less than 50 cents. All "ads" set in uniform style, no display. Initials and numbers count as words. Address counted. Terms, always cash with order.

SITUATIONS WANTED ads, up to 25 words, including address, will be inserted free of charge for two weeks, for bona fide seekers of employment on farms.

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FREE ILLUSTRATED BOOKLET TELLS about 300,000 protected positions in U. S. service. Thousands of vacancies every year. There is a big chance here for you, sure and generous pay, lifetime employment. Just ask for booklet 8-509. No obligation. Earl Hopkins, Washington, D. C.

WE WANT A MAN WITH RIG, FARMER preferred, to drive our representative and introduce him to farmers who should buy old line life insurance from one of the best companies doing business in Kansas. Good pay. Reference, any bank in Topeka. Address J. E. Spalding, Topeka, Kan.

MEN AND WOMEN WANTED FOR GOVERNMENT positions. \$60 to \$100 month to commence. Vacations. Steady work. Over 12,000 appointments this year. Parcel post requires several thousand. Influence unnecessary. Write immediately for free list of positions. Franklin Institute, Dept. 085, Rochester, N. Y.

REAL ESTATE.

LIST YOUR TRADES—GIVE COMPLETE description first letter. Frank King, Atlanta, Kan.

BARGAIN—A NICE SMOOTH 80 ACRES of tillable land, only 7 miles from Salina; \$3,200.00. Write for list. V. E. Niquette, Salina, Kan.

160 ACRES, THREE MILES FROM EASTON; 145 plowable, lays nice, good improvements \$9,000. Edd Searies, Easton, Leavenworth County, Kansas.

FOR SALE OR TRADE—A GOOD DAIRY farm; 160 acres; 50 acres good bottom land, silo, some alfalfa, close to town. Roy Sanderson, Quincy, Kan.

CALIFORNIA LAND. SEND FOR CATALOG. Properties in all counties. Valuable, reliable information. C. M. Wooster Co., Phelan Bldg., San Francisco.

TRADE FOR FARM—TWO FINELY improved tracts; 20 acres Atlanta, 2 1/2 acres Winfield, Kan. Good rental. Save commission. Owner, Frank King, Atlanta, Kan.

EAST TEXAS. A FINE 300-ACRE FARM with first-class residence, one mile from Jefferson. One hundred acres in cultivation, balance in timber. Will make low price and good terms if sold at once. Box 114, Jefferson, Texas.

FOR SALE—SUBURBAN HOME AT 324 South East Street. All modern. Nine rooms, wash house, cistern and city water, good barn, fine fruit; 8 acres. G. W. Hurley, Emporia, Kan.

BEST CORN, ALFALFA AND STOCK farm for sale in Nuckolls County. 240 acres smooth new land, large house, barns, sheds, 30,000-bushel grain elevator; man can handle 1,000 head cattle. Brown Land & Loan Co., Superior, Neb.

WIDOW MUST SELL 400 ACRES, including 40 choice Holstein cows, all crops, 100 acres valuable timber, modern buildings worth \$7,000; running water. Price, \$10,000. Easy terms. Free catalog. C. J. Ellis, Farmers Bank, Springfield, N. Y.

STOCK AND GRAIN FARM, 700 ACRES; 200 acres bottom, 300 acres tame grass, 200 acres timber, living water; sure crops; large house and barn; fine climate; the best proposition in the Southwest. Price, \$20,000. Terms on part. S. H. Nay, Owner, Chifty, Ark.

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

EIGHTY ACRES—35 ACRES IN CULTIVATION, balance fine timber; 2-room frame house, barn, wagon shed, hen house, workshop, smoke house, cistern, paved garden, bearing orchard, on two public roads, convenient to school, church, store and post office. For quick sale, only \$10.00 per acre. Terms on part. Crain, Licking, Mo.

COME TO MARION, KAN., THE IDEAL home town. Can sell you a choice plot 150 x 250 feet with two-story frame house, eight rooms (one unfinished), modern improvements except bath tub, good barn, fine old shade, on corner paved street, handy to high school. Price, \$3,000, on terms. Here is merit for home or investment. Box 117.

TEXAS PANHANDLE, HANSFORD County. 640 acres magnificent level prairie upland, all tillable, 200 acres cultivated; very rich chocolate sticky soil; splendid for wheat, oats, corn, milo maize, sorghum; 3-room house, barn, well, windmill. Well worth \$14 per acre. Will sell at \$8.50 per acre. One-third cash. H. G. Damon, Owner, Corsicana, Texas.

CAN'T MAIL YOU A FARM, BUT WE can send you a free sample of soil that will locate you on one. Fruit, alfalfa, grain, potatoes, poultry, hogs—the dirt with dollars in it. Low-priced land, fine California climate. Fairport, new town on Goose Lake—ninety miles of shore line. Irresistibly attractive. Ask for "Free Soil and Full Particulars." Land Commissioner N. C. O. Ry., Fairport, California.

ALBERTA—658 ACRES BEAUTIFULLY situated, mixed farm; 1 1/2 miles frontage on lake; nearly 500 acres tillable, balance pasture; abundant water; 70 acres broken, 500 fenced, cross-fenced; good house, 2-story barn, stables, dairy, granaries, hen house, etc. Dead snap for immediate sale, \$16 per acre. \$3,700 cash, balance arranged. About this and other bargains write George Grant, Herald Block, Calgary, Alberta.

HOGS.

350 BIG-TYPE MULEFOOT HOGS FOR sale. Dunlap, Williamsport, Ohio.

REGISTERED DUROC SPRING PIGS, both sexes. Bred gilts. Yearling and aged boars. Prices reasonable. James Weller, Faucett, Mo.

VIRGINIA FARMS.

WRITE FOR LITERATURE DESCRIBING great bargains in Virginia farm lands. Venable & Ford, Lynchburg, Va.

WYOMING.

COME TO PINE BLUFFS, WYOMING, where farming pays—where 1,000 cars of grain were shipped out last season—where on an average the crop each year on every acre under cultivation more than pays for the land—where oats yield 65 to 100 bushels per acre, wheat 30 to 40 bushels—where the land cultivates easily—where we have fine climate and ample rainfall—where those who are here have made good. Will refund your expenses if these statements are untrue. I own 30,000 acres of virgin soil, stored with the untillable riches of centuries, which I offer for sale at \$10 to \$25 per acre on terms within your reach. Let me send you descriptive literature. C. L. Beatty, Pine Bluffs, Wyo.

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SOME CHOICE JERSEY BULLS THAT must be sold quick. Two nearly ready for service. Chester Thomas, Waterville, Kan.

A FEW HIGH-GRADE HEIFER CALVES two to four weeks old, \$15 each. Burr Oak Farm, Whitewater, Wis.

WELL BRED GRADE HOLSTEIN BULL calves crated at \$20 per head while they last. Arnold & Brady, Manhattan, Kan.

REGISTERED HOLSTEIN HERD—BULL and bull calves of choice breeding. Price reasonable. Carl Snyder, Route 7, Topeka, Kan.

FOR SALE—35 HEAD HOLSTEINS, 3 TO 6 years old, fresh and springing; also Jerseys, Guernseys, a few fawn Jersey heifers, bred; special prices; satisfaction guaranteed. Jack Hammel, 215 Adams St., Topeka, Kan.

FOR SALE—75 HEAD OF YOUNG dairy cows, just shipped in from Minnesota. Jerseys, Guernseys and Holsteins. Prices reasonable for quick sales. Also have some extra fine 2-year-old bulls. O. N. Himmelberger, 405 Fillmore St., Topeka, Kan.

BONNIE BRAE HOLSTEINS FOR SALE. Eighty head high-grade young cows, two-year-olds and bred yearlings. These cattle are strictly first class, with many heavy springers. Come and see them. Ira Romig, Station B, Topeka, Kan.

SHEEP

REGISTERED SHROPSHIRE SHEEP. Special prices on yearlings, two, and my herd ram, three years old. Also a few yearling ewes. D. E. Gilbert, Beloit, Kan.

DOGS.

SCOTCH COLLIES—WESTERN HOME Kennels, St. John, Kan.

FOR SALE—SCOTCH COLLIE PUPS. Sable and White stock farm. U. A. Gore, Seward, Kan.

A CHOICE PAIR OF FOX TERRIER breeders; female bred; good raters. A. D. Willems, Minneola, Kan.

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YOUNG MAN, WOULD YOU ACCEPT and wear a fine tailor-made suit just for showing it to your friends? Or a Slip-on Raincoat free? Could you use \$5 a day for a little spare time? Perhaps we can offer you a steady job. Write at once and get beautiful samples, styles and this wonderful offer. Banner Tailoring Co., Dept. 321, Chicago.

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TOGGENBURG, FAANEN, HEAVY MILK-ers. Pea Fowl, Pekin Ducks, Mink. Prospectus, 4 cents. Golden Goat Reserve, Combs, Ark.

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BEE SUPPLIES, ROOTS GOODS. SEND for catalog. O. A. Keene, 1600 Seward Ave., Topeka, Kan.

FOR SALE—THIRTY-SEVEN S-FRAME empty supers, good condition, painted, 20c each. O. A. Keene, Topeka, Kan.

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640-ACRE HOMESTEAD in Nebraska, Platte Reserve, open to entry after October 1, 1913. Send \$2.00 for complete map to **A. J. VAN ANTWERP**, County Surveyor, Broken Bow, Neb.

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KINGMAN 1,120 a. solid body, 350 cult., 500 COUNTY bot., fair bids, near market; **KANSAS** price \$32.50, half cash, bal. at 5 RANCH per cent. **JOHN F. MOORE**, LAND CO., Kingman, Kansas.

ALWAYS HAVE Just what you want in farm or city property. A new list just out. Write for it. List your sale and exchanges with me. Hardware for sale. **ED A. DAVIS**, Minneapolis, Kansas.

FARMS AND RANCHES FOR SALE. Wheat, corn, alfalfa and grazing land; any size tract you want, from 80 acres to 15,000 acres, from \$10.00 to \$60.00 per acre. This is the banner wheat country. Write me for list. **C. E. SETTLE**, Coldwater, Kan.

FINE DAIRY FARM 240 Acres, highly improved, in high state of cultivation; good orchard, silo, alfalfa; near best college town. \$52 per acre. Write for farm list. **T. B. GODSEY**, Emporia, Kan.

BARGAIN—200 Acres Fine Bottom Land, above overflow; virgin timber, near railroad. \$4,000, terms. Also handle exchanges everywhere. List free. **BURBOWS**, Warm Springs, Ark.

1,000 ACRES OF WHEAT LAND WANTED. Not farther out than Trego County. Give good description in the first letter. Must be priced worth the money. Don't care for any improvements. **BOX NO. 1, LA CYGNE, KAN.**

GEORGIA: McDuffie County's large plantations offered in small tracts, well located and improved, \$15 to \$25 acre. Fine public roads, telephones, grain, cotton, fruits, live stock growing to perfection; ideal climate, fine citizenship. Free booklet. **President Board of Trade, Thomson, Ga.**

FINE 160 A. FARM, lime stone soil, good house, barn, etc. Nicely located. Will produce wheat, corn, clover, alfalfa. Part cultivated, balance pasture, meadow. Close to Fredonia, Kan., in oil gas belt. Will take \$40 a. and \$75 a. Address **Owner, Lock Box 807, Fredonia, Kan.**

THE GREAT SUMMER COUNTY produces good crops corn, wheat and alfalfa when crops fail in other portions of the state where land is double the price. Write for list of bottom and upland farms for sale. **WM. HEMBROW**, Caldwell, Kan.

FOR SALE—60 Acres—All bottom land; some timber, running water, small improvements, 3 miles from Manhattan, the seat of the largest agricultural college in United States. Price, \$5,000.00. **Bardwell Real Estate Co.**, Manhattan, Kan.

RANCH—1,880 acres Modern improvements. 300 acres alfalfa land. Trego County, Kansas. \$25.00 acre, encumbrance \$7,000. Want smaller farm. **BUXTON**, Utica, Kansas.

WANTED—Stock ranch in exchange for half section farm, well improved, close to good town, in best farming community in Marion County. All smooth land, deep, black soil, highly improved farms all around. Priced at cash value. **MOTT & KOHLER**, Herington, Kansas.

DICKINSON COUNTY BARGAINS. We have many fine creek and river bottom farms, also splendid upland farms for sale. Soil deep rich black loam, producing the big corn, wheat and alfalfa. Our prices are reasonable. Write for terms and list. **Briney, Pautz & Danford**, Abilene, Kan.

SPLENDID CORN FARM—147 a. nearly all under cultivation, nearly all Dragon bottom above overflow; fine corn, wheat and alfalfa land; 4 mi. Burlingame, 5 mi. Osage City, Kan. Fair improvements, fine location. Price, \$10,000, half down. Ask for list. **F. C. BRACKNEY**, Burlingame, Kan.

OPPORTUNITY KNOCKS At every man's door. This knock is for YOU, if you have money to buy one of the best farms in Kansas, not far from Kansas City and adjoining one of the nicest cities in Kansas. Will earn 10 per cent net this year. \$20,000 will handle, balance long time, 5 per cent. **JOHN A. KEER**, Independence, Mo.

Fine Home, Little Money—160 acres, 4 miles southwest Sharon Springs; plenty buildings, good wells, 40 acres suitable for alfalfa, 8 to 10 feet to water; fenced, 35 acres in cultivation. Price, \$1,600; \$580 cash, \$440 due January, 1914, without interest, \$480 on or before 3 years at 5 per cent interest. Come and you will buy. **Harry C. Wheeler**, Sharon Springs, Kansas.

THIS IS A SNAP

160 acres nice level land, 12 miles from Dodge City, Kansas, 2 miles from switch on D. C. & C. V. Ry. Co. 100 acres fenced with two-wire fence, 60 acres in wheat, one-third goes with place. \$23 an acre. **H. B. BELL LAND COMPANY**, Commerce Building, Dodge City, Kansas. Phone 2.

ONLY \$3.00 CASH

BALANCE \$1.50 PER MONTH Pays for a level, well located, 50x140-ft. lot at \$30 for inside lots and \$35 for corners—in the prosperous little city—Plains, Kansas. Where prices are advancing rapidly and good profits assured. Send first payment for contract on guaranteed lot, or write for complete information. **MUST ACT QUICK.** **JOHN W. BAUGHMAN**, Plains, Kansas.

Drawer B.

LAND Real Estate Dealers, Farmers and others with property of any kind to buy, sell or exchange, should try the Real Estate and Land Columns of Kansas Farmer, which reaches the farmers with the money to buy. Circulation increases of 60,000 guaranteed. Kansas Farmer can do the work for you. No other farm paper reaching this great circulation as Kansas Farmer. Write for rates and further information to **KANSAS FARMER**, Topeka, Kansas.

BEST TOWN TO LIVE IN.

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

LOWER YAKIMA VALLEY, WASH. Twenty acres at Richland, Benton County, Wash., on the Columbia River, highly improved, irrigated orchard tract set to best varieties of commercial apples, with peach and pear fillers. Trees 4 years old and will come into bearing next year. Best of soil, abundance of water and mild climate; acres of strawberries paying \$400 per acre; alfalfa yielding 4 cuttings, or 8 to 10 tons per year. Comfortable home and good barns with a well equipped dairy and 10 grade Jersey cows. For particulars address owner, **C. D. MITCHELL**, Richland, Wash.

WANTED—TO BUY THREE GENTLE Shetland ponies. Must be sound and young and weigh between 300 and 600. Send photo if you have it. Address P. O. Box 82, Topeka, Kan.

GOOD PAY AND PERMANENT BUSINESS connection for one man in each county in Kansas, Nebraska and Oklahoma to look after established business. \$25 or better per week at start can be made, working small towns and rural routes. Good chance for rapid advance in earnings. Complete outfit free and credit given. Previous experience unnecessary. Write at once. **Fireside Sales Co.**, 623 Jackson St., Topeka, Kan.

AUTOMOBILE—WILL TAKE \$1,025.00 for my \$4,000 automobile. Will demonstrate to buyer's satisfaction. No trades considered. Speak quick. Address **Bargain A.**, Care Kansas Farmer, Topeka.

FIELD NOTES

Merten's Good Polands. The writer recently visited E. E. Merten, Poland China breeder at Clay Center, Kan. His herd book is King Hadley 3d by King Hadley 2d, he by King Hadley 1st. The dam of King Hadley 3d was a daughter of Granetta, a litter sister to the noted boar, Bell Metal, by Expansion. This boar is assisted by Kansas Wonder, a son of Big Bone Pete and out of very large Wonder bred sow. Mr. Merten has bought herd sows from the best breeders of this and adjoining states and has in his herd at this time daughters of Old Expansion, What's Ex, Grand Look Jr., and other boars of note. There is a fine bunch of spring pigs on the farm now. He will build a new hog house and make other improvements in line with his ideas of maintaining a herd. Write Mr. Merten about the hogs and visit him whenever convenient.

Enos Offers Choice Bred Glits. A. R. Enos, Romona, Kan., starts a Poland China card this week. Mr. Enos breeds an extremely large hog, maintaining quality and finish. He offers 20 splendid glits of July and August farrow, bred for August and September litters. These glits weigh around 250 pounds each in nice breeding condition. They were sired by A Wonder's Equal, a son of old A Wonder, and dams are large sows sired by Nox All Hadley by Big Hadley. The glits are being bred to Mr. Enos's new boar, Orphan Chief, purchased from Roy Johnson of South Mound, Kansas. This boar is one of the large boars of the breed and certainly will make a great nick with these glits. The writer can think of no better investment for any breeder or farmer. These glits are being priced at \$35 and \$40 per head. Write while they last and mention Kansas Farmer.

Normandale Jerseys and O. I. C. George E. Norman & Sons of Normandale Farm, Newton, Kan., and owners of Normandale herds of Jersey cattle and O. I. C. swine, claim October 14 as the date of their annual fall sale of O. I. C. hogs. Normandale O. I. C. herd is one of the best herds now assembled, and their fall offering will be one of the best of the season. They have a great herd of O. I. C. sows sired by the best boars of the breed. The sows of the herd have been very carefully selected and all are of the ideal brood sow type. The herd is headed by King Dam by Frost's Buster by Thea. King Dam is a very high-class boar. He is one of the big-boned easy-feeding kind with lots of quality and is one of the good breeders now in service, and is from Dan Wilcox's Crystal herd. They also have a young boar in service that is from the J. C. Kennedy herd. This youngster is an all around good individual and a good breeder. The spring pigs of this herd are a very fine lot of big-boned growthy fellows that have size and quality. A feature of this fall offering will be a lot of extra good fall glits, some extra good fall boars and several tried brood sows that are high class. The fall glits and boars are a fine lot and their entire offering for the fall trade will interest breeders of high-class O. I. C. hogs. The Normandale herd of Jersey cattle is also extra good. It is made up of a splendid lot of individuals representing Golden Fern, St. Lambert, Viola's Golden Jolly, Flying Fox and Tormont blood lines. Norman & Sons buy only the best individuals of choice breeding, and price is never an object with them when the individual and breeding are right, and Normandale Jersey herd is one of the extra good ones.

Spring Grove O. I. C. Herd. Breeders of O. I. C. swine throughout the corn belt will be pleased to learn that S. D. and B. H. Frost of Kingston, Mo., are again building up an extensive O. I. C. herd. The Frost Brothers, associated with their father, Judge L. L. Frost, a pioneer O. I. C. breeder with a wide reputation as a scientific breeder of O. I. C. swine with size and quality, have contributed very largely to the rapid improvement of this popular breed

of swine. Their great prize winning herd at the World's Fair, St. Louis, was the sensation of the swine exhibit. It was the greatest prize winning herd on exhibition at the fair, and ever since that time Spring Grove O. I. C. herds have captured the prizes in the strongest shows in the country. They have a splendid herd of sows, many of them descendants of Jackson's Chief 4759 and White Oak 1029, the two great World's Fair prize winning boars, and on the dam's side many of them trace to the famous Tutesy 8913, the World's Fair prize winning sow. They have one of the outstanding finest lots of spring pigs that the writer has seen this year. They were sired by their O. K. Mikado boar and Don Ben, a splendid young boar tracing to Callaway 514, the Missouri State Fair winner. They are also using a very high-class youngster by White Eagle Chief. This youngster is a show boar. The Frost Brothers are maintaining all the high quality that won for their herd at the World's Fair. Their offering for the fall trade will be strictly of that class and it is possible that they may exhibit a show herd at the leading fairs this year. Watch for further announcement concerning this herd.



One of Frost's Winning Herds.

Jeff Constant & Son's Duroc Sow Sale. Attention is called to the sale advertisement of Jeff Constant & Son, Denver, Mo. On Friday, June 27, they will offer a selection from their famous Duroc herd, consisting of bred sows and glits, fall glits open, and an outstanding lot of August and November boars. The sows and glits to go in this sale are a choice lot. They have been carefully selected and are the ideal brood sow type for which the Constant & Son herd is famous. Among them will be daughters of their great herd boars, W. J. C.'s Prince of Colonels by Prince of Colonels and I Am Bell's Chief by Ohio Chief. They are out of such sows as Princess Queen by W. J. C.'s Prince of Colonels, dam J. D. S. Improver Belle by J. D.'s Improver Model Beauty 2d by Elder's Wonder by King Wonder, W. J. C.'s Queen by I Am Bell's Chief, dam Myrtle's Crimson Wonder by Crimson Wonder Again; Chief's Bell by Ohio Chief, dam Savannah Belle by Red Chief; I Am Woolen's Best by Duroc Improver, and other great sows of their herd. They are bred to farrow in August, some of them to W. J. C.'s Prince of Colonels, some to I Am Bell's Chief, and others to their fine young herd boar, Constant's Crimson Wonder Again by Crimson Wonder Again, dam Proud Sixteen. The offering is one that will interest Duroc breeders wanting breeding stock that is bred right and that is an ideal lot of individuals. The August and November boars to go in this sale are a choice lot. They were sired by W. J. C.'s Prince of Colonels and I Am Bell's Chief. They are out of the very best sows of the herd, and breeders will find herd headers in this offering. Send for catalog at once and arrange to attend this sale if possible. Free conveyance from Grant City and Albany, Mo., on morning of sale. Please mention Kansas Farmer when writing for catalog.



Group of Breeding Cows Belonging to C. S. Nevius & Sons, Chiles, Kan.

Shorthorns in Demand. The sale of Shorthorn cattle advertised by C. S. Nevius and the State Agricultural College for June 6 was a great success. It was a clean offering of good useful cattle and the prices received were very satisfactory. Forty-six head held for \$9,835, an average of \$213.80, including a number of small bull calves. Colonels Harriman, Snyder and James did the selling. Following is list of prices.

1—Graves & Wilson, Wellsville, Kan.	\$525
1½—Robt. R. Schultz, Holton, Kan.	580
2—J. Ellis, Paola, Kan.	355
2—W. F. Bleam, Bloomington, Kan.	325
4—H. Cooper, Osborne, Kan.	325
5—James G. Hunter, Louisville, Kan.	100
6—J. V. Allen, Burlington, Kan.	100
7—H. O. Ellis, Paola, Kan.	130
9—A. F. Kitzner, Osage City, Kan.	110
10—Dave Rodgers, Stilwell, Kan.	85
11—Tomson Bros., Dover, Kan.	255
12—Bellows Bros., Maryville, Mo.	300
13—J. H. McCulloh, Creighton, Mo.	275
14—Ed Stegman, Straight Creek, Kan.	300
15—Bellows Bros.	325
16—J. H. McCulloh	225
17—J. H. McCulloh	200
18—M. S. Conyers, Peabody, Kan.	225
19—Ed Stegman	190
20—M. S. Conyers	300
21—Ed Stegman	225
22—Clarence Woods	160
23—M. S. Conyers	200
24—M. S. Conyers	210
25—M. S. Conyers	155
26—M. S. Conyers	150
27—Ed Stegman	250
28—Ed Stegman	170
29—Joseph King & Son, Potwin, Kan.	125
30—Ed Stegman	95
31—Tomson Bros., Dover, Kan.	150
32—M. S. Conyers	115
33—Dr. W. C. Harkey, Lenexa, Kan.	145
34—W. F. Bleam	160
35—M. S. Conyers	100
36—W. F. Bleam	130
37—Dr. W. C. Harkey	130
State Agricultural College assignment:	
41—H. H. Holmes, Great Bend, Kan.	\$300
42—W. C. Conyers, Peabody, Kan.	245
43—W. C. Conyers	270
44—Ed Stegman	260
45—J. C. Gore, Raymore, Mo.	145
46—M. S. Conyers	200
47—M. S. Conyers	190
48—M. S. Conyers	170
49—M. S. Conyers	150

BARGAINS IN EVERYTHING MAY BE found in these classified columns. For a quick ready sale on anything, try a small ad in these columns, which are read in the homes of over 60,000 subscribers. Rates, 4 cents a word; four insertions or more, 3½ cents a word. For further information address Kansas Farmer, Topeka, Kan.

C. W. Parson's Duroc Sale. On Saturday, June 7, C. W. Parsons, Harper, Kan., sold 46 head of spring and fall yearling sows and glits. The offering was in the pink of condition and should have sold for more money, but the local conditions for crops in the southwest part of the state are not good and the local support among farmers was poor. There is certainly much credit due Mr. Parsons in presenting such a nice offering. While he made a great sacrifice in selling at this time of the year, we predict that every one sold will prove a bargain and make money for the purchaser. Mr. Parsons is a young man in the breeding business, but he knows how to grow and develop good hogs. The 46 head, including a number of late fall glits, sold at an average of better than \$52.



For lack of space we omit report in full. Col. Lafe Burger did the selling.

Preservative Value of Natural Asphalt. It is a surprising fact to many that not only did natural asphalt exist thousands of years ago, but that its remarkable preservative qualities were known to the ancients from almost remotest periods of antiquity. Even though the knowledge of this wonderful product of Nature was lost during the middle ages, the rediscovery of natural asphalt in modern times finds it just as valuable as in days of old. Its value is increasing daily in these practical times because of its recognized utility in many ways and places. There are many deposits of this material in different parts of the world, but by far the largest supply of natural asphalt of uniform quality is obtained from the asphalt lake on the island of Trinidad and Bermudez Lake in Venezuela, South America. First, we have the asphalted city streets—the material which has revolutionized street-paving methods and done wonders toward reducing the nerve-racking noises incident to city life. And the use of natural asphalt has also extended to country roads, which transforms the former rutty, sandy, dusty, muddy trails into wonderful highways of travel, adding greatly to the joys of the motorist as well as to those who are thus relieved of "taking his dust." Its use does not stop here, for as a waterproofing agent in foundation walls, floors, tunnels, or any masonry below or above ground, natural asphalt plays a vitally efficient part. Even in the form of a paint natural asphalt is said to be a satisfactory preserver of iron fences, steel girders, and metal work of any character, from rust and all decaying influences. New uses are constantly being found for this invaluable product of Nature. This has recently been demonstrated on the farm by the use of natural asphalt for treating posts and

other wood used in or exposed to dampness. Natural asphalt prolongs the life of timber indefinitely when properly treated. Thus the field for this centuries-old product of Nature is ever broadening and is receiving new impetus in our own time and our own country especially, because of the scientific knowledge applied to its practical use.

Foley Has Won the Battle. To establish a herd of registered hogs and invest money in high-priced animals in a locality where crops were as uncertain as in the western half of Norton County a dozen or more years ago, requires unusual energy and a faith such as removes mountains, but the same courage and determination that caused J. F. Foley of Oronoke to leave the home of his boyhood and build for himself a home in a new country sustained him in his desire to build up one of the first great herds of registered Poland Chinas in the western half of the state. It can well be imagined how foolish his transactions appeared to his neighbors and the low prices that must have followed. Scarcity of feed often made the pigs look like scrubs, and he was doubtless humiliated by the comparison his neighbors made. But now the battle is won and the farmers of his and adjoining counties know what Foley has been doing, and many a farmer has good high grade hogs that would never have had them but for the persistence of the man who knew he would win. The herd now numbers over 100, and at Mr. Foley's last winter bred sow sale his best buyers were the farmers of the surrounding country. They paid good prices and are making money from their purchases. Mr. Foley owns Blain's Lot Hadley, bred by John Blain. This boar has done lots of good in the herd, and a number of his daughters are among the herd sows. The other boars are King Hercules and Blue Valley Look. Most of the pigs are by the last named boars, with several litters by noted Iowa boars out of sows bought last winter. Among them is Ott's Big Orange, dam by Sensation, and others sired by Long King dams and sired by Big Ben. Mr. Foley has a great line of sows and is now booking orders for boars and glits for future delivery. He will not hold a fall sale, and offers the entire crop of boars in this way. Write him early and buy your boar when you can ship him at the least cost.

BERKSHIRE HOGS

75 REGISTERED BERKSHIRE SOWS For Sale, sired by Danesfield Duke 10th by Berrington Duke Jr. and Artful Champion by Rival's Champion. These sows are high-class individuals and all trace direct to the great boar, Baron Compton. They are bred to Robin Hood Premier, one of the few line-bred Black Robin Hoods now living, and Ajax, a son of Rival's Lord Premier. Four hundred head in herd.

W. J. GRIST, Ozawie, Kan.

LINSOTT BERKSHIRES

Choice tried sows and fall yearlings for sale, sired by Rival's Queen Premier 114255 and Imp. Baron Compton, bred for summer and fall farrow to Robhood 19th 16595. Also 25 selected boars and gilts ready to ship, February farrow by Robhood and Commander's Majestic. Nothing but tops shipped.

R. J. LINSOTT, Holton, Kansas.

HAMPSHIRE HOGS

ECLIPSE FARM HAMPSHIRE.



Spring pigs, Gen. Allen, Pat Maloy, Messenger Boy blood, three of the great show boars of the breed.

A. M. BEAR,

Medora, Kan.

HIGH QUALITY

HAMPSHIRE.



Headed by T. R. Fancy, prize winner 1912. Am offering Bessie 11382, tried brood sow bred to T. R. Fancy for June farrow.

S. E. SMITH, Lyons, Kansas.

FIELD NOTES

FIELD MEN.

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

PURE BRED STOCK SALES.

Percherons.

Oct. 21-22, 1913—Woodlawn Farm, Sterling, Ill.

Jersey Cattle.

Nov. 3—Alvey Bros., Meriden, Kan. Sale at Topeka, Kan.

Poland Chinas.

Oct. 3—Cline & Nash, Iola, Kan.
Oct. 4—Frank Michael, Erie, Kan.
Oct. 11—Wigstone Bros., Stanton, Iowa.
Oct. 11—D. S. Moore, Mercer, Mo. Sale at Lineville, Iowa. (Big Spotted Polands.)
Oct. 16—Freeman & Russ, Kearney, Mo.
Oct. 20—L. V. O'Keefe, Stillwell, Kan.
Oct. 21—H. B. Walter, Effingham, Kan.
Oct. 21—P. M. Anderson, Lancaster, Kan.
Oct. 22—H. C. Graner, Lancaster, Kan.
Oct. 23—J. H. Baker & Son, Butler, Mo.
Oct. 23—R. J. Peckham, Pawnee City, Neb.
Oct. 25—J. W. Leeper, Norton, Kan.
Oct. 24—A. J. Swingle, Leonardville, Kan.
Oct. 24—A. B. Garrison & Sons, Summerfield, Kan.
Oct. 28—M. T. Williams, Valley Falls, Kan.
Oct. 29—Walter Hildwein, Fairview, Kan.
Oct. 30—Hubert J. Griffiths, Clay Center, Kan.
Nov. 3—Joe Schneider, Nortonville, Kan.
Nov. 6—R. B. Davis, Hartsburg, Kan.
Feb. 7—Wigstone Bros., Stanton, Iowa.
Feb. 10—H. B. Walter, Effingham, Kan.
Feb. 11—H. C. Graner, Lancaster, Kan.
Feb. 11—H. L. Faulkner, Jamesport, Mo.—Old Original Spotted Polands.
Nov. 12—J. H. Harter, Westmoreland, Kan.
Jan. 23—J. Hartman, Elmo, Dickinson Co., Kan.
Feb. 12—W. E. Long, Meriden, Kan.
Feb. 13—J. E. Willis, Prairie View, Kan.
Feb. 14—J. F. Foley, Oronoque, Kan. Sale at Norton, Kan.
Feb. 17—L. E. Klein, Zeandale, Kan.
Feb. 18—J. H. Harter, Westmoreland, Kan. Sale at Manhattan, Mo.
Feb. 19—J. L. Griffiths, Riley, Kan.

Duroc Jerseys.

June 27—Jeff Constant & Son, Denver, Mo.
July 31—W. T. Hutchins, Cleveland, Mo.
Oct. 17—Moser & Fitzwater, Goff, Kan.
Oct. 28—R. P. Wells, Formoso, Kan.
Oct. 31—A. M. Rinehart & Son, Smith Center, Kan.
Nov. 1—N. B. Price, Mankato, Kan.
Nov. 4—E. S. Davis, Meriden, Kan.
Nov. 4—Jeff Constant & Son, Denver, Mo.
Nov. 7—Leon Carter, Asherville, Kan.
Nov. 8—E. C. Jonagan, Albany, Mo.
Nov. 8—C. C. Thomas, Webber, Neb. Sale at Superior, Neb.
Jan. 26—R. P. Wells, Formoso, Kan.
Jan. 27—Ward Bros., Republic, Kan.
Jan. 28—W. E. Monasmith, Formoso, Kan.
Jan. 29—N. B. Price, Mankato, Kan.
Feb. 4—Moser & Fitzwater, Goff, Kan.
Feb. 5—Samuelson Bros., Cleburne, Kan.
Feb. 6—Leon Carter, Asherville, Kan.
Feb. 7—Horton & Hale, DeKalb, Mo. Sale at Rushville, Mo.
Feb. 7—E. G. Munsel, Herington, Kan.
Feb. 10—Kansas Agricultural College, Manhattan, Kan.
Feb. 11—Thompson Bros., Garrison, Kan.
Feb. 12—J. A. Porterfield, Jamesport, Mo.
Feb. 20—John Emigh, Formoso, Kan.
Feb. 21—Dana D. Shuck, Burr Oak, Kan.

Chester White and O. I. C.

Oct. 14—George E. Norman & Sons, New-town, Mo.
Oct. 16—J. S. Kennedy, Blockton, Iowa.
Nov. 3—Live Bros., Meriden, Kan. Sale at Topeka, Kan.
Nov. 18—J. D. Billings, Grantville, Kan.

Hampshires.

Nov. 4—H. D. DeKalb, DeKalb, Iowa. Sale at Council Bluffs, Iowa.

Real Estate.

June 22—Stoneback Bros., Morganville, Kan.
F. L. Newton, Clay Center, Kan., Manager.

Andrews's Big Spotted Polands.

James Andrews of Andrews Stock Farm, Lawton, Mo., a leading breeder of old original big spotted Polands, reports spring litters doing fine. He has one of the best lots of big growthy spotted pigs in the history of Andrews Stock Farm, and his fall offering will attract breeders wanting the big spotted easy-feeding kind.

Tilley Visited.

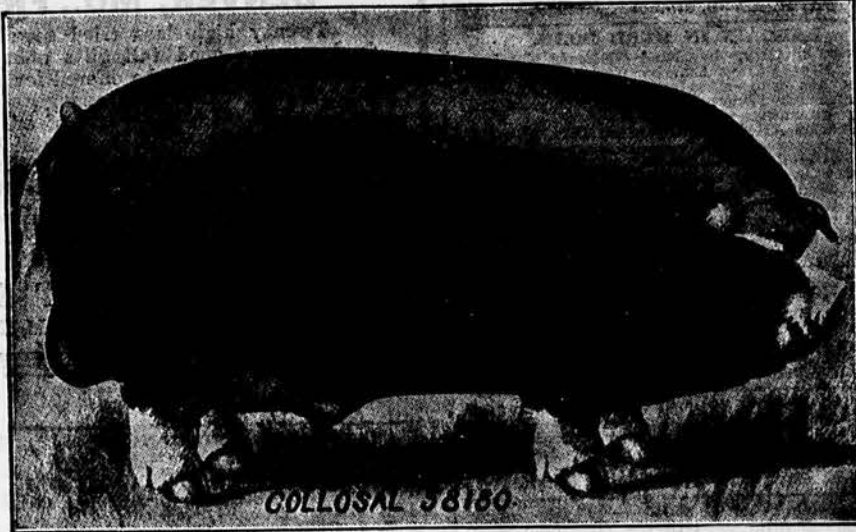
A Kansas Farmer fieldman recently visited Wes Tilley, Poland China and Hereford breeder at Irving, Kan. Mr. Tilley is one of the very successful breeders in his territory, and has one of the largest Hereford herds in Northern Kansas. He has about 125 spring pigs. We will have more to say about them a little later.

R. N. Riggs's Big Polands.

R. N. Riggs, Lawson, Mo., one of the progressive breeders of big-type Poland Chinas, reports spring pigs doing fine. Mr. Riggs has an extra lot of youngsters this year. They are of the best big-type blood lines and he will have one of the good fall offerings.

Nelson Berkshires.

J. M. Nelson, Marysville, Kan., has his usual good bunch of pigs, although not many in numbers. His present herd boar is Rob Robinson, a massive fellow now being fitted for the fall fairs. He is assisted by Robhood 4th by Robhood and out of the great sow, Berrington Bell, and Star Lee 2d. Some fall gilts are also being fitted to show along with aged herd and young herd.



L. R. McClarnon's Herd Boar That Is Making Good.

Hampshires Sell Well.

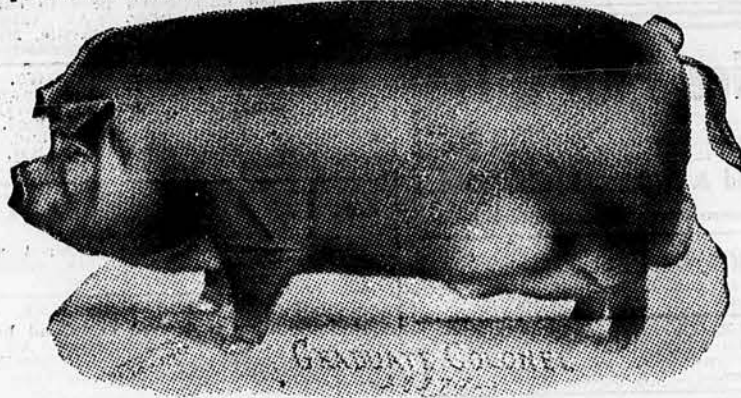
S. E. Smith, Hampshire breeder, Lyons, Kan., writes as follows: "Am writing to say Kansas Farmer sure gets the business. Am all sold out of gilts and want my ad changed back to original wording. I have decided to offer for sale one of my best brood sows, Bessie 11382, out of Bessie 9376 and Reno's Boar 4321. Runs back to Col. Stone and Medora Duke blood lines. She is bred to T. R. Fancy for farrow June 28."

Hamaker Visited.

George S. Hamaker, the old-time Poland China breeder located at Pawnee City, Neb., has his usual good lot of spring pigs numbering about 80 and mostly sired by the herd boar, Orange Tecumseh, out of A Look Grand sow. This is, we think, the best boar ever seen on the farm. Others are by Smooth Big Bone 2d and Giant King. Mr. Hamaker also has about 80 extra choice fall gilts that he will reserve for his winter bred sow sale.

Garrison Poland Chinas.

A. B. Garrison & Sons, the old-time big-type Poland China breeders of Summerfield, Kan., announce a sale for October 24. The Garrisons have a fine lot of about 90 spring pigs nearly all sired by Blue Valley Price by Blue Valley Quality, others by Gold Dust Metal. A couple of large sows sired by Colossus have litters by Bell's Long King, the splendid son of Long King's Equal. This firm breeds Shorthorns also, and has a herd of about 60 females headed by My Choice, a 2,200-pound son of Choice Goods.



Graduate Col. 28279. A Champion Sire of Breed and at Head of G. C. Norman Herd at Winfield, Kansas.

Hartman Has Eighteen Boars.

J. J. Hartman, Elmo, in the southern part of Dickinson County, Kansas, is again advertising in our columns. He offers for immediate sale 18 big strong lengthy boars of summer and fall farrow. They are as good as or better than pigs of such age usually are. They were sired by Blue Valley Jr. and Hartman's Hadley, a son of Nox All Hadley, with a few by the previous herd boar, King Elmo. These boars are out of unusually large fine sows. Mr. Hartman has about 30 choice fall gilts that he will run on alfalfa this summer and hold for his bred sow sale January 23.

Arkell Offers Herd Boar.

James Arkell, Poland China breeder, Junction City, Kan., offers his splendid breeding boar, First Quality 60266. This boar was sired by Blue Valley's Quality and his dam was the great breeding sow, Blue Valley Ex by Exception, tracing to Expansion. Full brothers to him are heading the herds of A. B. Garrison, Summerfield, Kan.; W. V. Hoppe, Stella, Neb., and D. C. Loneragan, Florence, Neb. First Quality is one of the best breeding boars ever owned in this state. Mr. Arkell finds it necessary to make a change in order to supply his customers with new breeding, and for this reason offers him fully guaranteed at the low price of \$75. Anyone in need of a good tried sire should write at once.

J. W. Elliott's Shropshires.

J. W. Elliott, Polo, Mo., owner of one of the best flocks of Shropshire sheep in the West, has an extra fine lot of lambs this

year and will also have an outstanding lot of rams ready for service for the trade. Mr. Elliott's flock was established over 20 years ago. His foundation stock was the best he could buy, and his motto has always been "Improvement." His flock has always been headed by imported rams and for many years it has been famous for the high quality of the breeding stock sent out. Breeders should keep this flock in mind when wanting high-class Shropshires. Watch for announcement later.

Dairy Class Seen Cows.

Last week the advanced class in dairy judging of the Kansas Agricultural College, accompanied by Professor Fitch of the Dairy Department, were the guests of Topeka dairymen, the class visiting the Holstein herd of H. B. Cowles and the Guernsey herd of Mr. O. E. Walker, incidentally visiting and inspecting the publishing plant of Kansas Farmer. This week the class, accompanied by Professors Reed and Fitch, were the guests of R. J. Linscott at his Jersey farm near Holton. Mr. Linscott had invited several neighboring Jersey enthusiasts to his farm, and the visit was turned into a Jersey picnic. Mrs. Linscott treated

the visitors to an elaborate dinner. The Linscott herd is composed of excellent individuals and all are on yearly tests and are making very creditable records.

Kansas Farmer Sells Shorthorns.

We have sold out everything of serviceable age. Nothing older than last of July calves, so you will please cut out our ad for the present. It will probably be some satisfaction to you to know that although we carried a little (not much) outside advertising, our sales which were very satisfactory are all to the credit of Kansas Farmer. We will have a few exceptionally good calves to offer for fall service, also may decide to sell a few females, and will send copy as soon as they are ready.—G. A. LAUDE & SONS, Breeders of Shorthorns, Rose, Kan.

Bred Duroc Sows and Gilts.

J. A. Welsha of Dillon, Dickinson County, Kansas, starts a card in this issue offering 30 tried Duroc Jersey sows and gilts bred for fall farrow. This stock is choice. The sows are among the best on the farm and are splendid and regular breeders. The herd numbers 125 head and must be reduced. The sows were sired mostly by the boar, College Lad, a son of Tatarax, and the gilts by the big 800-pound boar, Kansas Kruger, by Missouri Kruger. The sows are bred to Kansas Kruger and the gilts to Isenberg's Choice by Quivera. His dam was by M. & M's Colonel. The foundation of this herd was secured from the very best

herds of this state and Missouri. Mr. Welsha can ship over the Missouri Pacific, Union Pacific, Rock Island or Santa Fe. He guarantees every representation and will take pleasure in selecting something that fills your requirements. When writing him please mention Kansas Farmer.

Baldwin's Durocs.

R. W. Baldwin, Conway, Kan., is offering for sale March boars sired by Model Again, Long Lad and Tatarax Boy. They are priced reasonably too, only \$12. Look up his ad and write him, kindly mentioning Kansas Farmer.

Buy Your Wife a Pair of Good Scissors or Shears or a Sewing Outfit.

You can't work your farm with poor tools—your wife can't do all the sewing, mending and patching for the whole family without good scissors, shears or a sewing outfit. Ask her which she needs in this line and then go ahead and buy her the finest. Keen Kutter scissors, shears and sewing outfits have positively no equal in America. The blades are made of solid steel and are held firmly together at the joints by a patent nut, bolt and screw, making it impossible for any looseness or play between the blades. The handles are shaped for easy work. Keen Kutter scissors and shears will cut the thickest fabric or snip the finest thread. They are made by the Simmons Hardware Company, who authorize their dealers to say this to you: "Buy these scissors or shears—if you do not find them absolutely perfect, return them and get your money back."

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10 SHORTHORN 10 BULLS 10

Sired by Double Champion and White Mystery, out of my best cows, priced reasonable.

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25 extra good young bulls and 7 first class young stallions for sale at bargain prices. Also young cows and heifers.

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Chas. Morrison & Son, Phillipsburg, Kan.

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In order to reduce the size of herd we offer choice registered cows of large frame and splendid milkers at very low prices considering quality.

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350 big-type Mulefoot hogs of all ages for sale, from champion herd of America.

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Herd headed by Sterling Prince, one of the largest and best 2-year-old boars of the breed. Assisted by Chief Price's Wonder, one of the best sons of the great breeding boar, Chief Price Again. Young stock for sale. Better than your grandpa ever raised.

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I now offer a tried herd boar, an excellent individual and breeder, priced where any good farmer can buy him. Also three January boars.

H. B. WALTER, EFFINGHAM, KANSAS.



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The mammoth 2-year-old grandson of the great Expansion is the sire of the great line of spring pigs I am offering for sale at weaning time. Either sex. The dams of these pigs are a splendid bunch of brood sows of the Black Mammoth breeding. None better in big-type Polands. Write for descriptions, breeding and prices. Book your order early and secure choice, mentioning Kansas Farmer.

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TEN FALL BOARS, ready for service. Price, \$25 and \$30. Good ones, sired by Wedd's Long King. Wedd's Expansion and Big Logan Ex. Order quick. These bargains won't last.

GEO. WEDD & SON, Spring Hill, Kan.

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Our fall boars are now all sold. We are booking orders for the finest bunch of spring pigs we ever raised. If you want the great big-boned Spotted Poland Chinas, write us. Also young Jersey bulls and heifers.

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SIX CHOICE SEPTEMBER BOARS

Sired by a son of Big Orange and out of large sows. Immune and ready for hard service. Also fall gilts, bred or open, and a lot of spring pigs, both sexes, and one Shorthorn bull 16 months old. Visitors always welcome.

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