

KANSAS FARMER

For the improvement of the Farm and Home

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SILLO-FILLING SUGGESTIONS

Carefully Plan All Details of Work in Advance

FILLING the silo is one of the rush jobs of the farm. Considerable planning must be done beforehand to have the job move along without delay. Silo filling must be done at the right time in order to have good silage, and frequently weather such as we are having now hastens the maturity of the crop and necessitates filling earlier than planned.

It is a distinct advantage to have a silo in which to store a crop being hastened in its maturity by hot, dry weather. Even a poor, badly burned crop will have considerable value if stored in a silo. Some of the silos in Kansas are already being filled because the corn is drying up.

Silo-filling is a job calling for good teamwork. If you have developed a neighborhood co-operative group and have been filling your silos by this exchange method for several years, filling the silo will not be the task it was when you filled your silo for the first time. Each man of the group will have learned by experience exactly what to do and how best to do it with the least expenditure of labor.

In these days of labor shortage, it is necessary to use machinery to the fullest extent possible. Green corn or other silage crop is heavy material to handle. Cutting corn by hand is too slow and laborious. Even the job of loading the bundles on the wagon requires much hand labor. The use of low, flat-topped wagons for hauling makes this work easier. There are also harvesters equipped with elevators which deliver the bundles direct to the wagons.

Make Plans Early

In order to make time in filling the silo there must be plenty of help to keep the cutter running steadily. Plan to have a clear road to the cutter and also leave enough space so that the loads of fodder can easily be brought to the machine and leave without requiring backing or difficulties in getting away. Select a good foundation for the cutter and set up blower pipe as nearly vertical as possible so as to avoid friction and unnecessary length of pipe. The machine should be set level and securely fastened by stakes and by sinking grooves for wheels. In putting up blower pipe or carrier, care should be taken to securely fasten top at entrance to roof. In building your silo it is well to construct a ladder reaching from top door to outside opening at roof so that it will be easy for a man to go to the top of an empty silo and open the roof door to lower rope or pulley for elevating pipe or carrier.

Time to Cut Corn for Silage

Corn should be fairly well matured, for at this time the plant contains its greatest amount of food material. This stage may be determined by observing the denting of the corn, the drying of the bottom leaves or some of the outside husks. The early dent stage is that

FILLING THE SILO

Plan early for the details in filling your silo.

Inspect the cutter thoroughly before starting.

Cut ripest corn first. Cut in small bundles.

Be sure to do a clean cutting job and cut fine.

Oil all running parts frequently and keep rollers adjusted to hold silage tightly.

See that cutter is given proper speed. This should be figured out before starting and proper pulley secured.

Tramp silage thoroughly, and especially towards the top of silo.

Keep the knives sharp—the cutter bar sharp—and keep the knives adjusted close up to the cutter bar.

Feed evenly—don't overcrowd the machine, but keep it full.

When filling a silo partly filled the day previous, run the blower a few minutes before allowing anyone to go inside. This blows out the gas accumulated over night.

period when the corn is best matured for putting in shocks. If the corn be sowed thick in drills or broadcast, its maturity can be determined by tassel and silk. With cane, kafir or milo the same rule will hold true as to maturity. If the corn is over matured it will be necessary to add water which can best be done by using a hose and putting the water in at the blower, using from one-half to one barrel per load according to

the dryness of the fodder. Where the silage is to be used for fattening rather than milk production, it is important that the corn be mature, and for this purpose it is best to plant an early variety in those sections where a later one will not mature.

Length of Cut

It is absolutely necessary to cut clean and fine. By fine we mean one-half inch or less. If corn is very mature, it

is best to cut one-fourth inch as this will lessen the amount of water required and will insure good keeping. Much of the difficulty in keeping silage is caused by poor cutting, as silage is preserved by fermentation, which can only progress where the juices are liberated. Fine cutting sets free more juice and in addition to this fine cut silage will pack a great deal better than coarse. It is also necessary that the cutting be done cleanly, as poorly cut silage will not pack firmly. The process of fermentation absolutely requires the exclusion of all air. If the silage is not thoroughly packed, small air pockets are formed which interfere with the process of curing and cause moldy or spoiled silage. Practically any cutter can do a clean cut job, if it is properly adjusted and the cutter bar and knives kept sharp.

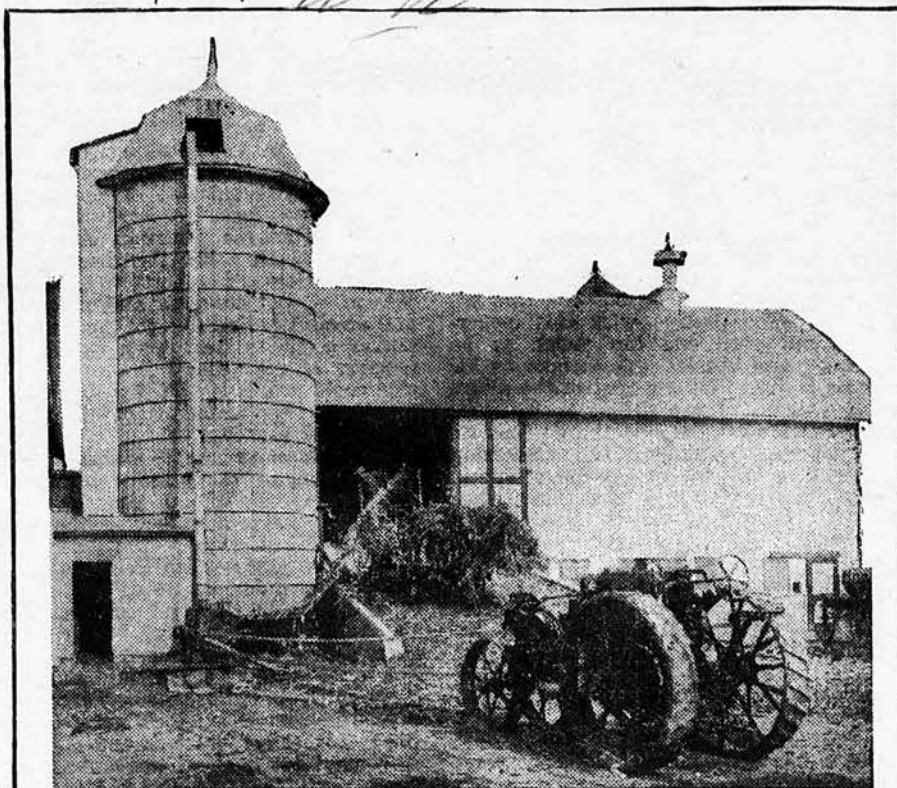
Distributing and Packing

The packing of silage is very important. It assists both in quality and capacity. It is economy to use a jointed distributor, for with this, all parts of the plant will be deposited together and at least one man in the silo can be dispensed with. The labor element alone will pay for a distributor in one season, but there is also a saving in that the distributor conveys the corn, leaves and stalks to any part of the silo desired and insures a better keeping and packing. Give special attention to the tramping of the outside edge next to the wall. See to it that all unnecessary obstacles on the inside of the walls are removed. The wall of the silo should be smooth and tight. A small block tacked against the wall of the silo will often spoil several bushels of silage by relieving the weight and pressure. Make the doors as tight as possible. As the process of filling advances towards the top, packing will be more necessary than at the bottom and extra help can be used at this time. If the silo is refilled, it should be done before the top layer has spoiled. The greatest settling period will take place in from thirty-six to forty-eight hours after filling. Two or three days settling will be ample, but longer will do no harm. With large filling equipment extra help should be used in tramping the silage.

Preventing Waste at Top

It is difficult to preserve all of the corn in a silo. As a rule a few inches on top will spoil. This can be greatly reduced by putting on the top some very green corn or cane. A small patch of corn where ears have been removed will answer fully as well, and sunflowers, weeds, or hay may also be used. Much care should be used in packing the top. Tramp thoroughly over all surface and after it has gone through the sweat for a couple of days, when top material is spongy and warm, tramp again, giving care to pack thoroughly the edges. This will insure good keeping and prevent

(Continued on Page Nine)



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Legislation to Control Packers

CONTROL of the great packing house business of the country is contemplated in the bills before congress known as the Kendrick bill, submitted by Senator Kendrick of Wyoming, and the Kenyon bill by Senator Kenyon of Iowa. There seems to be considerable difference of opinion among live-stock producers as to the desirability of passing the proposed legislation. From John A. Edwards of Greenwood county comes the following article, which was prepared after a meeting of the Greenwood County Cattle Association to discuss pending legislation to control packers:

The Greenwood County Live Stock Association reads with great concern, but no surprise the denunciation by the St. Louis commission merchants, of the Kendrick and Kenyon bills and all other regulation of the packer. St. Louis denounced Roosevelt once in his mission to make packing houses sanitary. The St. Louis commission merchant is more to be pitied than censured. He lives in a packer-owned exchange building. His pens and his rights to operate are packer-given, not God-given. He weighs on a packer scales, operated by packer weigh-masters.

Mr. Heinemann, Secretary of the National Live Stock Exchange, and from the Chicago stock yards, has recently returned from Washington. He states, in a most self-satisfied two-column article, sugar-coated, and seductive, that the effect of the pending legislation in Washington will bring great woe upon the producer. From this article, one would think that the packer and Mr. Heinemann are hostile to this legislation only because of the wrong about to be wreaked upon the disorganized live-stock raiser. He sheds tears that would make a crocodile embarrassed. Mr. Heinemann's stock-yards are also packer owned or controlled.

In his passionate appeal, to the wisdom of Congress, Mr. Heinemann forgets that the Cattle-raisers Association of Texas, and the National Live Stock Association and the associations of other states have unequivocally been on record for months in Washington in favor of the Kendrick bill, or similar measures. He forgets that the live-stock men of this country are lobbying, and telegraphing, and writing, and the pious are praying for the enactment of this measure, which the Chicago secretary states is so destructive to the live stock industry. Mr. Heinemann's loyalty to his customers and the patrons of his exchange arouses the jealousies of the shades of Benedict Arnold. The Chicago commission merchants have blindly and weakly followed St. Louis, and taken their customers to the shambles. Kansas City has neither followed, nor been driven—her commission men are standing steadfast to her patrons. Kansas City has a patriot for president—Ed Houx.

This Association believes that these servile appeals from the stock yards, should only hasten early enactment of the proposed legislation. Commission merchants should not be obliged to rent their offices and use the scales and pens and barns and be compelled to fawn for favors, from the men to whom they sell. We believe a commission man should be allowed his independence of speech and action, and a right to sell and buy on neutral soil. Packer-owned stock yards, besides being exceedingly profitable, give the packer owner unjustifiable advantage over other buyers and over all sellers. The packer, with this ownership, can yard and can weigh as he chooses, and obtain such shrink as his purse desires. He can control the alleys and scales and the deliveries to other buyers. He has the stock yards deposits to influence bankers. His ownership gives him political and voting strength. He has the pens and the offices with which to correct and coerce insubordinate merchants and to reward submissive dealers. He has the inside information on all cattle en route or re-routed. The stock yard's books give him much information regarding the business of his competitors, and lets him know of the coming and going and business of all patrons. The packer owns both ends and the middle.

This Association realizes regretfully, that a few cattlemen, out of many hundred interviewed, have testified favorable to the packer. Ninety per cent of all interviews are not published, and are in favor of the Kenyon or Kendrick bills.

These interviews favorable to legislation are withheld in this hostile propaganda being waged to stampede Congress. These personal and pryed interviews favorable to the packers often say, "Let well enough alone." That is the difficulty—it is not well enough. Or they say, "Don't kill the goose that laid the golden egg." The goose has not laid. It is not the packers who lay golden eggs. When they do lay—it's lemons.

Men and communities who are losing ten to twenty dollars on cows and twenty to forty dollars on steers, or who are shipping them home from market, cannot pay debts and continue business on adages, or chimerical golden eggs. The banks and bankers who are wiring Washington to destroy all legislation, and who are dragging interviews from intimidated borrowers, are the same bankers who put the skids under the Borland resolution. This Association feels that the Kenyon and Kendrick legislation works no injury to the great packing industry. Government supervision of national banks has kept many families from ruin and prevented many bankers fleeing to Canada. Banks enjoy the same confidence and respect, under strict supervision that the packing industry would inherit if similarly guarded. The Comptroller of Currency is a political appointee. He has more power to ruin the banks than the Secretary of Agriculture will have even to embarrass the packers, under the proposed legislation. There is no reason to believe that one system and one appointee can work so advantageously and the other so disastrously. This objection to the Secretary of Agriculture is propaganda—the kind that we learned from Germany. If it is necessary—and it is—to have the deposits of the public under government supervision, it certainly is doubly needful to supervise the billions of pounds of food these deposits purchase. Food is more important than money and much easier manipulated, especially when the hunger of the nation is at the mercy of five highly organized institutions acting as one body.

The anger of the packer toward this legislation is not well-founded, provided his business will survive inspection. The great insurance companies were obliged to submit to state supervision and law. Insurance now is a safe, sound and nationally respected business. Kansas compelled, almost by strong armed methods, the railroads to stay out of politics, to establish a two-cent rate, to abandon the press system, to equalize freight rates, and to otherwise serve the right of everyone, to life, liberty and prosperity. The railroads of Kansas prospered under this populist legislation amazingly. During Roosevelt's time, packing houses were placed under government sanitary supervision, a very necessary procedure. This control was rigorously opposed by packer and live stock industry alike. Government sanitary supervision gave American meat, at home and abroad, both prestige and greatly increased its sale. The packers were benefited by that regulation. Those personal liberties, the loss of which they then decried, as they today clamor for other liberties about to go, made millions for the packers and their stock-holders. Mr. Wiley's pure food regulation and supervision made honest concerns prosper. This Association believes the present proposed regulation of the packers should have been enacted into law shortly after the Sherman Anti-Trust Act. Had such a law then been passed, Herbert Hoover's report to President Wilson of the strength and magnitude and possible invincibility of the American packer could not have been written. A member of the Federal Trades Commission could not have said that he doubted greatly the government's power to ever control the packer.

This Association most strongly urges the passage of the pending legislation. The time is ripe for our American Congress to ascertain which is the more powerful institution, the American packer, or the American Government.

Five companies, acting as one, almost control both in this and other nations, the beef, pork, poultry, butter, eggs, soap, rice, groceries, canned meats, canned fish, fruits, vegetables and plus grain on the board of trade. These same companies influence stock markets and finance other corporations and also own or control banks, loan companies, stock yards, cotton seed plants, and innumerable life-giving necessities. These five companies certainly require regulation infinitely more than the banks and



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other business of this country. This legislation should be passed. is a right due the public, a right delayed, a right that should be obtained without revolution, without concessions and without political agitation. The consuming millions of the world and of this nation, and the producers of this great land are entitled to more freedom of right to prosperity than a one-man market, where retail purchase prices are gauged by corners, or storage or hoards during the days of the fat kid and at figures dictated by greed. Should adequate legislation not now be given by Congress to the American people? The desires, the propaganda and the cupidities of the five multi-millionaire families of this land of equal opportunity—will weigh the crying rights of one hundred and ten million free born American citizens whose natal promise and hope have been equality of opportunity, freedom from human or financial slavery, and joy of life.

EDITOR'S NOTE: We are glad to publish the views of procedure on the proposed packing house legislation. It would suggest, however, that such discussions would be more apt if the various provisions of the legislation in question were given more attention than

(Continued on Page Eight)

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THE FARM PAPER OF KANSAS

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MAKING WHEAT THE GOAT

A most unsound and superficial plan for reducing the high cost of living was seriously discussed in Washington last week. In fact the announcement was made in the newspapers that since bread is the staff of life, the first attack in cutting down prices would be made on wheat. While the government guarantee when made was supposed to be a minimum, in effect it is being made a maximum. A billion dollar appropriation stood at the disposal of Mr. Barnes to be used in making the guarantee good if necessary. The wheat production is falling so far short of the expectations a few months ago that the problem has been changed from trying to hold the price up to the guarantee to a fight to keep it from going down to all bounds. The proposition was simply to use the billion dollars in holding down the price to the farmers in order that consumers might have cheaper bread.

This and other suggestions for reducing the high cost of living or of overcoming the difficulties by increasing the wages of those who toil in this, that, or the other industry are about as futile as working a real cure as the administration of an opiate to a patient suffering from some serious and exceedingly painful disease. It temporarily alleviates the pain, but in no way touches the underlying causes. The futility of trying to make wheat bear the whole burden of the endeavor to reduce the cost of living was clearly and logically pointed out by H. J. Waters in a recent editorial in the Weekly Star. Doctor Waters undoubtedly wrote this under the spur of the announcement that bread must come down first and that the government would buy wheat at the minimum guaranteed price and resell to the mills at a loss. Mr. Barnes had the good sense and backbone to stand out against this proposition, and he should be given the credit for this decision. "It is the height of folly to assume that by forcing down the price of bread all other necessities will follow of their own accord," said Doctor Waters. "Bread is already the cheapest article in our dietary."

"The importance of bread is largely traditional and harks back to the time when it was our chief food and the principal item in the family budget. Now the cost of bread is not more than one-tenth the cost of living of the average laborer's family. The people of the cities and towns spend twice as much for picture shows, chewing gum, cigars and street car fares as they do for bread. Generally speaking, the cost of the raw materials is the smallest item in the final cost of the things we buy, and what the farmer gets for most of his products is a small item in the cost of living. When the farmer sells wheat at \$2 a bushel, the average price at present, he gets about \$7.50 for the amount required for a barrel of flour, allowing for the value of the mill feed. This flour will make approximately three hundred 14-ounce loaves of bread, which, at present, retail at 10 cents a loaf, or \$30. If we lower the price of bread to the consumer as much as a penny a loaf and take it all off the price of wheat, the farmer would get \$1.35 a bushel—a price which would put him out of business, without helping the consumer appreciably."

"Cut the farmer's price of wool from 60 cents to 30 cents a pound, and the price of a suit of clothes for which the wearer pays \$40 to \$90 will be reduced less than a dollar. The farmer gets from 60 to 90 cents for the hide re-

quired to make the shoes which retail at from \$7 to \$15 a pair. For the cotton needed to make ten yards of voile, which retails at \$5, the planter gets 35 cents."

"The difficulty is not so much with the high cost of living as it is the cost of high living, as James J. Hill once said. The people in town insist upon an income which will enable them by working a short day, and six days in the week, to support their families in idleness. Farm families, even those worth fifty thousand dollars or more, all work. The woman in town buys things already canned or cooked, because it enables her to stay out of the hot kitchen. The farm woman bakes, cans, sews and washes for all the family, besides adding to the income by raising chickens, and working in the garden. Town children go to school nine months in the year, walking on sidewalks or riding in cars, and loaf mornings and evenings, and the three vacation months. Farm children go to school seven months in the year, walking through the mud, and do the chores nights and mornings and make a full farm hand during the five busy summer months."

"The price of farm products should be such as to give the farmer and his family a living, as a result of the same number of hours of work as the man in town does, and to give them also the same social advantages. If this is not feasible then city people should amend their ways of living and the millions now idle should go to work."

PACKER CONTROL OPPOSED

On the opposite page of this issue appears a rather lengthy statement expressing the demand of the Greenwood County Cattlemen's Association for the passage of the Kendrick-Kenyon legislation providing for supervision and control of the meat handling industry of the country. Naturally this drastic legislation is being opposed by the packers and a so-called newspaper propaganda is being conducted by the Big Five of this industry to show why the bills should not be enacted into law. Producers, however, are divided on the proposition. In fact some of the leading cattlemen of the country are not in favor of the kind of regulation proposed in these bills. At a called joint meeting of the Kansas Live Stock Association and the Missouri Live Stock Association held in Kansas City last week, those present went on record against government ownership of any utility. Here is the way the resolutions adopted expressed the idea of these men on the proposed legislation:

"It is the sense of this meeting that we are opposed to the government operation of railroads and all public utilities, but it is the sense of the producers of live stock here assembled that we do not oppose federal legislation regulating packers or other utilities, providing that said legislation be similar to the laws regulating and controlling national banks. We further believe, however, that we now have sufficient laws to correct any existing evils, if same were wisely enforced."

"On account of the unsettled conditions resulting from the war, it is the sense of this meeting that this is not the proper time for the consideration of drastic regulatory legislation affecting the live stock and meat industry and we further oppose legislation which takes away from any individual or corporation any of the property with which they transact their business in public service."

This puts the organized live-stock producers of Kansas and Missouri on record against the bills now in congress, but on the other hand expresses no opposition and in fact seems to rather favor regulation and supervision such as is typified by the method employed in controlling our national banks.

Another important point was brought out in the discussions and crystallized into the form of a definite statement. This had to do with the proposal that consumers and producers study the situation together. A nation-wide newspaper propaganda directed to city people is being conducted, tending to create the impression that the farmers and producers are primarily responsible for the high cost of living. The resolutions on this point are as follows: "Since agitation to reduce the cost of living has gained great headway, we wish to call the attention of the consumer to the fact that it is the belief of the live stock producers here assembled, that they, the consumers, have not given the economic situation the careful study it deserves else the transportation facilities of the country would not be tied up as they are at this time, to the detriment of both the consuming and producing public; therefore we consider this matter as of such importance that we as producers suggest to the labor organizations that they meet with the live stock producers to confer on the food situation, and that such a meeting be arranged for through the governors of Kansas and Missouri. We welcome the appointment of a consumers' committee composed of consumers, organized and unorganized, to be named by the before mentioned governors. At such a conference the producers of live stock in Kansas and Missouri will be prepared to submit accurate data on the cost of production of the live stock output of their farms. We deem it unfortunate that the functions of the United States Food Administration should have been discontinued in view of the fact that this country is as much under the influence of war conditions today, as when war was in actual progress. Realizing that this situation is of such grave importance, we request President Wilson to re-establish the United States Food Administration and, in the absence at this time of any enabling act, that he request Congress for authority to effect such re-establishment." It was also urged that Herbert Hoover should head the re-established Food Administration because of his unselfish devotion to trust and duty when worldwide liberty was menaced."

PACKERS INVESTIGATED

The nation-wide agitation for relief from the constantly mounting prices on the necessities of life has stirred our government to activity. President Wilson has been holding daily conferences with his cabinet, and the high cost of living has been one of the leading topics for discussion. According to newspaper dispatches, Attorney General Palmer will immediately begin federal prosecutions of the packers. The inference is given that the reports of the Federal Trades Commission will be used as the basis of these investigations. An item from Chicago says that a staff of twenty-five prosecutors will be assigned to the task of gathering the evidence against the Chicago packers.

If these efforts of the Attorney General's office are being made in good faith, it must be assumed that laws now in existence are to be invoked against the

packers. That being the case, one might wonder why the delay in beginning these prosecutions. For months the charges of the Federal Trades Commission have been given the widest newspaper publicity. If a single individual packer was guilty of violating any laws, it has not been fair to him or to the general public to delay hailing him into court and either proving his guilt and meting out punishment, or if the charges could not be sustained, announcing his innocence. Trying cases in the newspapers may be highly spectacular and much easier than getting down to brass tacks in the courts, but it does far more harm than good. One is led to believe that the law enforcement department of our government has had little faith in the value of the evidence obtained against packers in the investigations which have been the subject of the voluminous reports of the Federal Trades Commission.

ECONOMIC CRISIS PENDING

Constant increase in living costs are causing widespread disturbance among wage earners. The demand presented by leaders of railroad labor to President Wilson that prices must come down or wages again go up has created a political and an economic crisis.

The President asked the House to forego its proposed month's recess, and pass legislation specifying that a commission must be created with supreme authority in wage difficulties. The House has agreed to remain in session. Whether Congress passes the legislation asked for, or attempts to repass "the buck" back to the President as the sponsor for the wartime policies which they may claim to be responsible for present wage scales, is the next move in the political game.

"But the economic crisis will not wait for the political game to be played out," says A. M. Loomis, assistant Washington representative of the National Grange. "It is possible that a general crusade against profiteering may prove a temporary palliative, but it will be a palliative only and the situation is dangerous in the extreme. If we do not come down carefully and safely from our airplane with prices and wages, we will come down with a smash. In the last analysis the labor cost includes the overwhelming preponderance of total cost. Just how in the present state of affairs, can that fact be met without a smash?"

"One thing is certain—the farmer because of his environment and condition, cannot be a profiteer. He raises what he can, after gambling with the elements, with drought, and flood, and frost, and all the pests and diseases; and then he sells his product for whatever someone else will pay him for it. He buys his labor and his materials in the open market at whatever someone else charges him. He is neither a profiteer, nor a slacker."

There is no shortage of food. The way to cure the high cost of living, and to swat Bolshevism is summed up in three words—Go to work. Thank God, the farmer does not need this advice."

No convenience adds more to the comfort and well being of the family on the farm than a good system of running water. After it has been in use for some time, the farmer and his family usually wonder how they ever got along without it. Carrying water is hard, tiresome labor and usually must be done at the busiest time, when other work is most pressing.

FIGHTING TUBERCULOSIS

New Legislation Provides Funds for Indemnities and Testing Expenses

By H. R. SMITH

A BILL providing an appropriation of \$1,500,000 for fighting tuberculosis in live stock has just been signed by President Wilson. Of this amount \$500,000 is available for operating expense such as the preparation of tuberculin, the free testing of herds, etc., and \$1,000,000 for the payment of indemnities.

Until recently tuberculosis has been on the increase and the losses throughout the country from cattle which die of tuberculosis on our farms, and from beef and pork condemned at market centers, have been enormous. As a result of aggressive control work inaugurated last year in many states, the disease is now on the decline and will doubtless continue to decline until the annual losses are insignificant. It will probably never be possible to completely eradicate the disease because of its general prevalence among people, from whom it may be transmitted to animals under certain conditions.

That the country was ready for effectual legislation of this sort is shown by the response made by the various states to the proposals made by the last Congress whereby \$500,000 was appropriated for tuberculosis eradication to be used only in those states which would provide at least an equal sum for co-operative work. The results are that forty-three states have already appropriated a total of \$2,248,850, and three other state legislatures are likely to make appropriations before adjournment.

While the Federal and state appropriations amounting to approximately \$3,500,000 for the year represents less than one-tenth of the annual loss to the country from tuberculosis, there is reason to believe that this loss will be reduced one-half in a comparatively few years. Tuberculosis can be eradicated from any herd and reinfection prevented by the proper use of the tuberculin test to determine which cattle are affected, the slaughter or segregation of those that react, the use of disinfectants in the stables where the diseased cattle were kept, and the exercise of precaution in purchasing only animals known to be free from tuberculosis. The Federal and state legislation recently enacted provides not only for the free testing of entire herds at regular intervals, but also provides indemnity with which to reimburse the owners of reacting cattle to the extent of two-thirds of the loss within certain limits of appraised valuation when the cattle are slaughtered. The Federal Government does not pay to ex-

ceed \$25 for any grade animal and not to exceed \$50 for any pure bred. Most of the states have the same limits, though some are higher. The owner in addition to this indemnity receives the proceeds from the sale of the salvage which is nearly the full market value of the meat

if the carcass passes inspection, and approximately eighty per cent of the carcasses do pass inspection. He, therefore, receives a large proportion of the breeding or dairy value of grade cattle and those purebreds having a comparatively low valuation.



THESE pictures were taken May 10, the day the Valley Falls Pig Club started the 1919 contest. On the right is shown Ralph Barnes and his Spotted Poland China pig. The hayrack in the background is loaded with the pigs to be weighed and distributed. At the left Dorothea and Ida Mae Ela are posing with their Hampshire pigs. Dorothea is secretary of the club and holds the record book under her arm.

The Valley Falls Pig Club was one of the outstanding clubs last year. George Ela, a local Hampshire breeder, was leader and is leader of this year's club. This club took the pig club honors at the Kansas Free Fair in Topeka last September, fourteen of the eighteen members showing their pigs. Four different breeds were shown—Hampshire, Poland China, Duroc Jersey, and Chester White.

This year's club started the contest May 10 with twenty-six members, all the pigs being assembled at Valley Falls to be weighed on that date. Only three breeds are represented in the club this year—Hampshire, Poland China, and Duroc Jersey. Most of them are pure-breds and the remainder are high grades. The object of this club is to teach its members how to produce pork at the least possible cost and how to keep accurate records of their work. The Valley Falls Pig Club can be expected to give a good account of itself next fall. Jessie S. McCafferty is club leader for Jefferson County. The following pig club song has been adapted and is enthusiastically sung to the tune of "Mr. Zip, Zip, Zip":

Good mornin', Mr. Pig Club Pig, Mr. Pig and Miss Piggy Mine.
Good mornin', Mr. Hog so fat, you're surely lookin' fine.
Keep on a-growin' till you take the prize,
Grow an inch bigger with each mornin' sunrise,
An' we'll never let you droop or die,
'Cause we're club boys and we'll feed you,
Club boys and we'll feed you,
Club boys and we'll feed you right.

Federal and state regulations are such as to permit the owner of high-priced purebred reactors to keep them in segregation for breeding purposes, if there are no outward indications of the disease, which is true in most cases. Tuberculosis is not inherited and the calves can be raised as healthy if removed from the cow at birth and fed on pasteurized milk or milk from cows which have been tested and are known to be free from the disease. A large number of cattle which react have what are called "closed" cases of tuberculosis, the lesions being encapsulated or surrounded with calcareous material. Such cattle may frequently be kept in the breeding herd for years without their showing any outward signs of having the disease. Dairy cows giving a heavy flow of milk have less resistance than fleshy beef cattle and are, therefore, less successfully maintained as a so-called "Bang herd." Even were it possible to know which reactors are spreaders and which are non-spreaders, it is not safe to permit either to come in contact with healthy cattle, as there is always danger of a non-spreader becoming a spreader of the infection.

With the Federal Government and state or county each sharing one-third of the loss with the owner on the reactors slaughtered, there is no reason why any breeder should not voluntarily place his herd under the supervision of the government or state authorities for regular testing, and there are three principal reasons why he should:

First: If the entire herd passes two successful tests at intervals of not less than six months, such a herd may be certified as an accredited herd, the owner of which is then privileged to make interstate shipments without special tests, nor is he subject to any state retest regulations, the annual certificates answering all state requirements.

Second: The buyers of breeding cattle, whether purebred or grade, are now so particular in wanting only those which are known to be free from tuberculosis that the owner of an accredited herd can command higher prices for his cattle than would otherwise be true.

Third: The owner of an accredited herd has the satisfaction of knowing that the health of his family is less endangered. The statement of medical authorities that a considerable percentage of tuberculosis in the human family comes from infected milk, particularly tuberculosis in children, should make this testing of the greatest possible importance.

New Facts About Worms in Pigs

EVERY hogman is more or less familiar with the appearance of the round worms commonly found in the intestines of pigs. Recent investigations into the life history of these troublesome parasites show them to be a more serious menace than has been commonly assumed. It appears they have several stages of development, some of which have been entirely overlooked in the past, and in addition it seems that they may infest children as well as pigs. The recent researches into the life history of this parasite indicate that pneumonia, thumps, and similar lung troubles in young pigs, and possibly in children as well, are caused by one of the forms of this parasite.

B. H. Hansom of the United States Department of Agriculture is authority for this new information on the worms so commonly infesting our pigs. He has fed the eggs of these worms as they are excreted by hogs to rats, mice, guinea pigs, rabbits, pigs, and lambs. Excepting where they were fed to mature hogs, the eggs have seemed to hatch in the

intestines of the animals into microscopic worms less than one-twenty-fifth of an inch in length. These tiny worms then penetrated the intestinal walls, finally reaching the lungs, where they caused pneumonia. In the case of pigs they often produced symptoms identical with those commonly found in the disease called thumps. Many of the experimental animals were killed at this stage of the disease and careful examination revealed large numbers of the microscopic worms not only in the lungs but also in the tracheas, esophagus, and stomach. A continued study indicated that in the rats, mice, guinea pigs, and rabbits these minute worms worked their way back from the lungs into the intestines and were excreted. In the case of pigs, sheep, and human beings, however, they grew and developed into typical round worms several inches in length. At this stage they lay eggs which are excreted and start a new cycle.

The eggs of these parasites are found to be extremely long lived. In his laboratory experiments Mr. Ransom stored

eggs for five years and found they still retained their vitality sufficiently to develop into worms. The microscopic worms given off in the excreta of rats and mice do not retain their vitality very long and it has been assumed that ordinarily the infection is continued from the eggs excreted by pigs rather than with the microscopic worms passing out with the rat or mouse excreta.

It is not definitely known that all pneumonia and thumps in pigs is caused by the microscopic form of the round worm when it migrates to the lungs, but preliminary investigation indicates that a great many cases are due to this cause. It is interesting to know that young pigs are very susceptible to infection, whereas older pigs are practically immune. It is believed that the young pigs are particularly infected by the dirt clinging to the sow's udder.

Another point to be kept in mind is that the worm eggs may live for a number of years, standing winter cold and summer drouth. The mere fact of no hogs having been on the place for

some time is no insurance against worm infection unless the premises have been thoroughly cleaned and the lot deeply plowed.

After the round worms reach their adult form in the intestines, the stage with which most of us are familiar, they may be dislodged by any one of a number of proprietary worm remedies. The standard home-made preparation is calomel and santonin, at the rate of five grains of calomel and seven grains of santonin per hundred pounds of pig weight. In view of the fact that the lung trouble so often caused by the microscopic, immature worms is fully as serious as the intestinal trouble caused by the adult worms, it would seem the part of wisdom not to rely altogether on curative measures, but to take sanitary steps to reduce the number of worm eggs around the lots, buildings and hog wallows. Precautions of this sort would seem to be doubly worth while in view of the fact that this parasite may also infect children.

ECONOMY OF MILK PRODUCTS

Food Value of Dairy Products Not Appreciated

By RENA A. FAUBION,
Specialist in Dairy Products, K. S. A. C.

WITH butter at fifty-eight cents a pound, cheese not less than thirty-five cents a pound and milk at twelve to fifteen cents a quart, it is natural that the housewife who does not realize the real value of milk, butter, and cheese should use as little of these as possible.

We are just in the beginning of a nation-wide campaign to educate the consumer to the real merit of dairy products. Milk is not only food for infants, but it contains nutrients which should form a part of the diet for everyone. Butter is not a luxury simply to make bread taste better, but is one of the cheapest and most desirable sources of energy. Cheese is a valuable muscle builder and one of the best substitutes for meat.

One quart of milk at thirteen cents a quart is worth as much as twenty-nine cents worth of eggs, thirty cents worth of round beef steak, eighty cents worth of chicken, thirty cents worth of smoked ham, thirty-five cents worth of oranges, or twenty-three cents worth of bananas. The prices given are those quoted in Manhattan for July 21.

On an energy basis, one quart of milk, weighing 2.15 pounds, equals eight eggs—one pound, three-fourths pound of beefsteak, two pounds chicken, three-fifths pound smoked ham, seven oranges, or two and one-eighth pounds of bananas. One pound of butter at fifty-eight cents equals 2.6 pounds beefsteak, 5.9 pounds chicken, 2.2 pounds ham, 5.5 pounds bananas, 9.2 pounds oranges, 11.6 pounds potatoes. One pound of cheese at forty cents equals 4.4 pounds chicken, two pounds beefsteak, two eggs, 4.1 pounds baked beans, four pounds English walnuts, 1.7 pounds prunes. One pound of cottage cheese at fifteen cents equals two-thirds pound beefsteak, seven eggs, one and three-fourths pounds chicken, three and three-fifths pounds cabbage, one and two-thirds pounds bananas. One quart of buttermilk or skim milk at five

cents a quart equals three eggs, one-fourth pound veal, or 1.2 pounds bananas. One quart of ice cream—14.5 per cent butter fat—at fifty cents equals 8.75 pounds strawberries, 5.11 pounds bananas, 6.96 pounds apples, .69 pounds chocolate fudge, 3.42 pounds oyster stew, 3.58 pounds prepared cocoa.

Of course one should not think of eating milk to the exclusion of other foods any more than we would expect to sit down at the table and have only meat, cabbage or eggs for a meal. The idea conveyed is that by using some of the milk along with some of the meat, fruit and vegetables, we can obtain sufficient nourishment without having to eat as much of the more expensive foods as we would were no milk served. In other

words, we would not need a second or a third helping of the high priced foods, as our appetites would be satisfied with one helping along with the milk.

"Milk may be termed a liquid meat." By letting one pint of milk take the place of four eggs a meal we can serve the other four eggs and provide as much food nutrient as if we had served eight eggs, and what is more to the point there would be a saving of eight cents with the present prices. This comparison is not to disparage the use of eggs, which is one of our best foods, but simply used to bring out clearly the economy which results by substitution of milk for a portion of the other foods. In a similar manner we can study each of the food comparisons and see for ourselves that

milk and milk products are economical foods. We should be a healthier people if we would all use more of them.

"Milk is a food which has no waste." Every quart of milk, pint of cream, or pound of butter is consumed to the last drop. This point is worth remembering when you desire to buy a food which will yield you 100 per cent efficiency. Milk is the one universal food which will return the greatest amount of food material or nourishment for the money invested.

Recent experiments conducted by Dr. E. V. McCollum and other noted scientists have proven very conclusively that milk and dairy products are of vital importance to the growth and health of our bodies.

Milk is an all-around food, containing all of the essential food nutrients, protein materials, carbohydrates, and fat. No other single food possesses these food constituents which are necessary to sustain life and promote the growth and development of the body in as well balanced combination for body use as does milk. The fact that milk contains all of these together with valuable mineral matter and growth promoting substances, places milk in a class by itself as a leader of all other animal foods from the standpoint of the ability to sustain life and develop it normally.

Do not handicap the happiness and welfare of yourself or your children by a meager use of so good and cheap a food. If you are fortunate enough to have your own supply of milk, as most farm people do, use it freely.

Lots of land and big muscles will pay, but less land and plenty of active brains will pay better.

Much money is wasted every year by inefficient use of horse labor. Many farms have too few horses in proportion to the men on the farm.



THIS DISPLAY APPEARED IN ONE OF THE SHOW WINDOWS OF MANHATTAN DURING THE DAIRY PRODUCTS CAMPAIGN OF MAY 5 TO 10.—COMPARATIVE FOOD VALUES ARE STRIKINGLY SHOWN

Why Livestock Farmer Needs Silo

By A. L. HAECKER

THERE are thousands of stockmen in this country who need a silo and have needed it for several years. They either have not answered the question or have answered it in the negative, or it may be they have postponed the matter, or felt that they could not afford the investment. The silo should be considered a part of the necessary equipment of a dairy or stock farm, for it has to do with the success of the business. The largest item of expense in keeping a herd of cattle is the feed bill and therefore it is the first question demanding our attention. Labor comes next, but the feed bill is twice that of labor, and the silo strikes directly at this expense item, making a big saving in the cost of feeding. It also produces better young stock and increases production. Practically all of the great milk and butter records of the country are held by cows that have been fed silage. Large, growthy, vigorous young stock are easily and cheaply produced by the liberal use of silage. If you have a silo you may need to answer this question in order to find if you need another. It is surprising to find on our best stock farms not one but often five and six silos.

It is difficult to determine accurately the saving made by the silo when the cost of the ration is considered, for so many conditions enter in which make a variation in the result, but it is safe to assume that from \$10 to \$25 can be saved in the cost of feeding a cow one

year by the use of the silo. It is also safe to say that with silage the cost of butter fat can be reduced from six to twelve cents a pound and the cost of producing a hundred pounds of milk from thirty to fifty cents; a hundred pounds of beef from a dollar to two dollars, and a hundred pounds of mutton from 75 cents to \$1.50. With such a saving it can easily be figured that a silo would soon pay for itself where ten or twelve cows are kept.

The convenience of the silo is well recognized by men who have given it a thorough trial. By properly arranging the silo and the barn it is possible for one man to feed forty cows in thirty minutes and the work can be done with ease and without the use of a horse or wagon. The silo can be considered a time and labor saver.

The silo is a most economic equipment for the storing of forage. When space is considered, eight times more feed can be kept in a silo than in a hay mow. It would be difficult indeed to construct a barn which would hold two or three hundred tons of forage, while it is an easy and simple matter to put up a silo that would hold this amount. There is less deterioration in holding over silage than in holding over dry fodder. I have seen excellent silage that was six years old and this same silage was fed successfully to cattle that seemed to relish it more than new silage.

The silo stands ever as an insurance against forage failures, especially damages by frost and drouth. Any kind of feed which can be grown can be saved in the silo, though it may not mature a grain crop. It makes farming more secure and warrants a cheap and excellent forage for all kinds of stock in both winter and summer seasons.

The heavy, bulky feed on a stock farm should be produced at home, and the concentrates, such as grain and mill feed, can best be purchased. With the fertilizer, which is always found on the stock farm, big crops of forage can be grown. It is not uncommon to see corn fodder produce as much as twenty tons of silage per acre. This feed, grown close at home, can be rushed into the silo and the bulky ration for the year is supplied.

Silos should be provided for both winter and summer. Consider carefully the earning of your pasture. Six times more feed can be furnished on pasture ground if it is put into corn and siloed. The pasturing of land worth a hundred dollars and up per acre is questionable, especially in sections where summer drouths are frequent. As Mr. Van Pelt recently stated, "The summer season is more severe on our dairy cows than the winter." It is fortunate that our summer is only four months long, for if it were eight the chances are we would force our herds dry or starve them to

death. The summer silo in many sections is needed more than the winter. It is better to build two or three silos than one big one. Like canned fruit, make your silos so you can feed off a good layer each day and thus keep the forage fresh and sweet. "Why a silo?" can be answered by considering all of these items, considering the cost of feeding an animal, the cost of production, the cost of your land, the earning power of your farm. Scientifically stated, the silo will lower the cost of digestible carbohydrates, it will make your acres earn more, your stock earn more, your work easier, your storage greater, the production of your cows higher, your farm richer, and with these advantages you will derive more pleasure and profit from your labor.

"Come, hurry up!" said the second hand of a clock to the minute hand. "You'll never get around in time if you don't. See how fast I'm going," continued the fussy little monitor as it fretted round on its pivot. "Come, hurry up," said the minute hand to the hour hand, utterly oblivious of being addressed by the second hand. "If you don't be quick you'll never be in at the stroke of one." "Well, that's just what our young friend there has been saying to you." At this point the clock pealed forth the hour as the hour hand continued: "You see we're in time—not one of us behind. You take my advice—do your own work in your own way and leave others alone."

GENERAL FARM AND STOCK ITEMS

Something of Interest for All—Overflow from Other Departments

A READER asks if any of the experiment stations have tested out Sudan grass as a silage crop. Sudan grass is coming into use as a forage crop very rapidly, and the question of its preservation in the silo is of constantly increasing interest. Perhaps many of our readers will be considering the matter of using Sudan grass in filling their silos this year. Tests have been made by the Oklahoma Experiment Station with the best of results. No difficulties were encountered and excellent silage was made from Sudan grass. In 1915 an experimental silo was filled August 17. The crop was seven feet high at the time and the seed just in the dough stage. Analysis showed that the total dry matter content was 23.6 per cent. The silage was taken out September 30, and was found to be of good quality. The acidity was 1.62 per cent, or about the same as average corn silage. The cows seemed to prefer it to good corn silage.

The following year a second growth of Sudan grass was put into a silo September 26. The heads had opened, but no seed had formed. The dry matter content at this time was found to be 25 per cent. The silage from this second crop of Sudan grass was removed from the silo December 30 and tested in the feedlot. It was of excellent quality with about the proper amount of acid to make it palatable to the stock.

It is evident from these tests and from the experience of farmers who have tried Sudan grass as a silage crop that it may be used with the best of results. It belongs to the same group of plants as cane and kafir and contains sugar enough to insure proper fermentation at any stage of its growth. In the Oklahoma tests analysis of the silage showed that in total digestible nutrients and dry matter it was about ten per cent inferior to good corn silage.

Building Hog Crates

Shipping crates are used extensively in the transportation of breeding hogs and in the shipment of exposition animals to fairs and shows. The type of crate the Department of Agriculture specialists have developed and are now recommending has several advantages. It is built with the greatest economy of lumber possible without sacrificing efficiency. It can be easily handled, and provide comfort without loss of space for the hog in transit. A circular of the department tells how to build the crate.

The side slats of the crate recommended are nailed on the outside, where they are just as secure and safe, and by which the same amount of lumber will give two inches more space than if the slats were placed on the inside, as is commonly practiced.

The front of the crate is closed by putting in a board standing endwise instead of nailing slats crosswise, the commonly accepted procedure. The former method is better because the end can be opened readily and the hog can walk out with ease instead of being forced to back out, as in the ordinary crate. In addition, when the slats are nailed crosswise, especially when the crate is used for old hogs, they may be pushed off or broken into while in transit and sometimes allow the hogs to escape.

For a properly constructed crate, the sides should be made first, and the floor, top, and ends built around them. The floor should be laid crosswise, which will make the crate stronger. Only good, strong boards should be used. One 12-inch board or two 8-inch boards are sufficient for the ends. A block should be nailed to the floor one inch from each end to keep the end boards from slipping inward. The crate should be built to fit the hog to be shipped and should be large enough for comfort. A well-built crate may prevent serious injury to the hog in transit. A crate of suitable size for a hog weighing from 250 to 300

pounds is two feet wide, four feet eight inches long, and two feet eight inches high.

In building the sides of the crate it is essential to use nails sufficiently long to allow one-fourth-inch clinch, the nails being bent crosswise of the grain of the wood. The nails in the end boards are not clinched and the nail heads are left to protrude enough so that the nails can be removed easily with a claw hammer. The usual top cross board just above the animal's hind quarters is omitted.

Barley Good Feed for Hogs

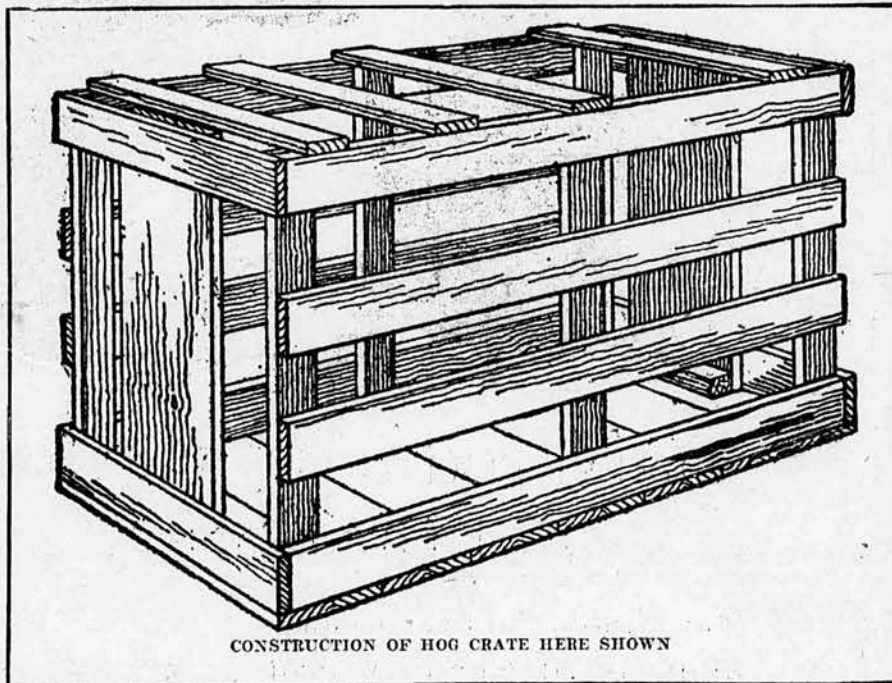
Barley is an efficient feed for hogs when fed with tankage, and is almost equal to corn in fattening hogs for market, according to results obtained in two feeding trials, the second of which has just been completed at the Purdue University Experiment Station.

"To secure information on the comparative values of corn and Indiana grown barley and on methods of feeding barley to fatten hogs, six lots of 125 pound shoats were fed for sixty days," said C. M. Vestal of the animal husbandry staff who had charge of the feeding. "Two lots were fed corn and tankage, two lots barley and tankage and two lots corn, barley and tankage.

consumed \$13.10 and \$13.17 worth of feed respectively for each one hundred pounds gain, while those receiving the corn, tankage and barley, free choice, ate \$13.61 for every hundred pounds of fat they put on, and those with the mixed feed ate only \$13.09 worth. The lot making the greatest daily gain, 1.71 pounds, received a mixed ration of 46 parts corn, 46 pounds barley, and 8 parts tankage, and the cost for this lot was \$13.09 per hundred, the lowest of any lot.

Better Farm Water Supply

Too few of the farms of Kansas have an adequate water supply. There are farms without number where the well that was dug by the original homesteader is still the only source of water for the stock as well as the house. It may be located out by the barn or down in the pasture, making it necessary to carry all the water required for home use, or it may be located close to the house and the horses led to it three times a day and there watered from a pail, a tub or trough or tank of some kind. But wherever it is, it is the same as it was twenty-five, maybe forty years ago. The old wooden bucket may have been taken out and replaced by an iron pump, and



CONSTRUCTION OF HOG CRATE HERE SHOWN

There were eight hogs in each lot and all were self fed. In three of the lots the feeds were mixed before being put into the feeder and in the other three the hogs were given their choice."

The results show that the usual rating of ninety per cent of corn efficiency is a safe standard for barley when fattening hogs. In this trial, barley was more than ninety per cent as efficient as corn.

The hogs fed barley and tankage according to appetite—in separate compartments of the self feeder—ate an excessive amount of tankage.

If barley is cheaper per hundred than corn, a greater reduction in cost of gains results from forcing the hogs to eat more barley by mixing it with the corn and tankage.

These further facts were brought out by the experimental work:

That barley should be ground, rolled or soaked when used as a hog feed; that finely ground barley is not palatable to hogs—they like it medium or coarsely ground; that barley is a good feed for growing shoats or stock hogs; that it produces a good firm quality of pork.

Barley when ground, rolled or soaked is not injurious in anyway. If soaked it should be fed while in fresh condition—a rule which applies to all hog feeds.

It cost \$13.39 to produce a hundred pounds of pork in one lot receiving corn and tankage and \$14.11 on the other, and those receiving barley and tankage

it may be this pump is run by a windmill, when the wind blows, or by a gas engine, when the gas engine can be induced to run, but there progress has stopped. On that farm many animals go thirsty in hot weather, and many a farmer and his family have to drink at meal time water that has stood in the kitchen water pail for hours because they all feel too tired to walk way down to the spring for fresh water.

I lived in the California desert for a good many years and there I learned the real value of water. But strange to say the people in the desert, where it scarcely ever rains and where dew is unknown, are better supplied with water than nine tenths, perhaps ninety-nine one-hundredths of the farmers of Kansas. There water is a necessity and they prepare for it. If the Kansas farmers would put forth one-fourth the expense on a water supply that those dwellers in the desert must, it would eliminate water shortage during draught periods.

It does not cost much to find, when you have to do it in order to live at all, to put up a supply tank, fill it by windmill or gas engine, and pipe it to the house and barn. And what a relief when you come in tired from the field to turn a faucet and have all the fresh water you want for the stock, or to have the wife turn a tap in the kitchen instead of carrying water up a long hill. And how much better for the stock than

drinking water from a dirty pond, or waiting till you feel like pumping them a fresh tubful. I am a firm believer in good roads. I find it hard to live where I can not travel the highway any day in the year, but I would never vote to spend a dollar to macadamize a highway along the whole side of my place and direct into the city until I had a water supply with water pressure wherever I needed it, and I speak from experience for I have had both.—R. B. Leavenworth County.

The Fair as a Teacher

Fairs and expositions have had a most important part in the progress made in this country during the past one hundred years. The fair season is just beginning and thousands of people will come under the influence of these exponents of progress during the coming weeks.

"It may be said that the agricultural fair of today is one great big institute where folks who are interested in what the fair reveals can see what has been, what is, and what can be done in the various lines," says B. H. Wike, in Farm and Ranch. "That it is a grand teacher is a general verdict, but even here the plan is ignored in many ways. I can not remember a fair of the past where, if I attended, I did not make it a point to stamp on my mind some important fact from science, ways of living, or some other relation that affected my life afterwards in a way that helped life to appear much more worth while. Today the state fair is the annual event which can be said to be the ultimatum of the year's work reviewed, and it is the one which everybody should attend if at all possible. Nor should the smaller fairs be neglected. The county, the township and others of like nature are beneficial in community building."

"Take plenty of time to go through the exhibits. Too much hurry without asking as many questions as you like of the exhibitors in charge of the various sections makes your visit to the fair of little benefit, unless you go there purposely to throw the time away in frivolous wandering over the grounds. This day and age of the world demands that everybody stop, look and listen. How well these words apply to us all, as we go by the various exhibits which the different exhibitors have taken so much pains to prepare and place before you that you might make life more worth while and so do something not only for yourself, but also for your country. If you never ask a question, you need not ever expect to know how a certain farmer raised such fine corn, or how it comes that this and that method so well in spite of a thousand and one adverse things that may to you have seemed general over the country, but which you could not get around. Remember the saying about entertaining angels unawares; and if this does not in a great sense apply also to the visitors at the fairs, then nothing more need be said. You may think you could not be told anything but what you already know. But after some talking with some exhibitors you may find indeed that he too is really more of an angel than you had at first imagined."

"When it comes to visiting the fair it pays to remember as much as possible so that you can recall it afterwards, provided you have what is known as a reliable memory, or else keep a note book in which you can put things down in black and white. Better the note book plan than any other, for memory is often treacherous. Take it easy and sit down often where you can both rest and observe and write down what you want. You will be surprised at the amount of valuable material you can gather in this way. Improvements and discoveries go on constantly and last year's results, though considered at the time dependable,

will perhaps at the next fair be proven worthless to follow, in comparison, by the results which are on hand to prove it. Free literature on an exhibit is valuable for looking over in your quieter hours at home. The latest and standard, and in fact all machines, from autos to farming implements are there for demonstration if the visitor desires, and he can then see and compare all the good points and choose according to his tastes. It is the same with everything else shown at the fairs, as well as how the operator does his part the best and easiest way."

Pig Clubs at Big Fairs

A popular part of the swine displays at our big fairs has been the section devoted to the Boys' and Girls' Pig Clubs. Phil Eastman, secretary of the Kansas Free Fair, reports more interest among the young breeders this year than at any time since pig clubs became state-wide. Paul R. Imel, state pig club leader, also is authority for the statement that pig club exhibits at Topeka this year will be larger and better than ever before.

Mr. Imel will make the entries for all club members. Boys and girls wishing to show pigs should send their entries to Mr. Imel at Manhattan. He has made the following suggestions to those planning to send pigs to the big Topeka exposition:

First: Have the pigs tame and so fitted that they will attract the attention of the judges.

Second: Be sure whether or not you live more than fifty miles from Topeka. The pig club prizes are divided into two groups—one for boys and girls living within fifty miles of Topeka, and one for those living more than fifty miles away.

Third: Be sure that entries are in early enough to be turned over to the secretary of the fair before Saturday, August 30.

Every boy and girl in Kansas who is a member of a state pig club will find it worth while to attend the Free Fair and enter a pig. Seven prizes for a total of \$54 are offered for contestants living within a radius of fifty miles of Topeka, and eight prizes or a total of \$67 for contestants living more than fifty miles from Topeka. All pigs will be judged as fat hogs and not as breeding stock. As many entries are received as are expected, it will be quite an honor to take one of the prizes, but even those who do not get awards will be well repaid for their time and trouble.

The educational advantages offered to the boys and girls who attend will be worth the cost of the trip many times. They will be able to meet others doing the same work they are doing, and will get to talk with them and see the successes they have attained.

Also, there will be many other interesting things in other departments for the boys and girls to see. The corn clubs, the garden clubs, the canning clubs and the garment-making clubs will have large displays that will be of interest to them, and the boys who are interested in machinery will be able to spend days watching the demonstrations of all the modern farming machinery that will be running each day. For the "Little Housewives" there will be the thousands of things women are interested in, among them the culinary department, the floral displays and the embroideries and needle-work.

Raising Calves on Substitutes

As the marketing of whole milk increases the need for raising calves with as little milk as possible becomes greater. Many dairymen are searching for some milk substitute. Many of the feeds which have been tried have given some degree of success, but nothing has as yet been found to be a complete or satisfactory substitute for milk. It is not likely that any mixture or feed combination will ever be found that will completely take the place of milk during the first two months of the calf's life.

There are a number of so-called milk substitutes on the market. These are usually sold in the form of calf meals and if carefully used will give good results. Those who try to raise calves on

these substitutes should understand in the beginning, however, that calves raised on calf meals will not be as fat and sleek in appearance as those raised on milk. It is possible, however, to have growthy, healthful calves by a system of feeding in which some of the milk substitutes are used, providing they are given careful attention. Calf meals can be bought in the proprietary form ready prepared or they can be mixed at home if the proper ingredients can be purchased. In some cases the home mixed meals are at least equal to the ones bought on the market and as a rule considerably cheaper. It is not always possible, however, to get the necessary materials.

The Missouri Experiment Station, in reporting tests which have been made in raising calves on milk substitutes, states that a calf meal in order to give success should be made up of ingredients that are easily digested and that are not too expensive. A few of the most com-

monly used materials are as follows: Fine corn meal, flour middlings, low-grade wheat flour, ground rice, oatflakes, barley malt, cocoanut meal, linseed meal, flaxseed meal, blood flour, blood meal, and dried skim milk or skim milk powder. Skim milk powder is not absolutely essential and it is rather expensive, but many of the calf meals that have given the best results have contained considerable amounts of it.

The cost of calf meal is variable. At present, it may be bought, ready mixed, at prices ranging from \$4 to \$10 a hundred pounds. The average retail price is approximately \$5. In large quantities, the meal may usually be bought at a considerably lower price. There is nothing to indicate that the highest priced meals are superior to some of the more moderately priced ones.

One home-mixed calf meal, known as the Purdue Mixture, which has given good results is composed of equal parts by weight of hominy feed, linseed meal,

red dog flour, and dried blood. Each of these constituents can be bought at a reasonable price and mixed at home. Another mixture used with success at the Indiana experiment station consists of eight parts corn meal, three parts dried blood, and one part oilmeal. Still another mixture that has been recommended is one made up of 44 pounds ground oat flakes, 20 pounds ground flaxseed meal, 10 pounds flour middlings, 22 pounds fine corn meal, and 3 pounds blood flour.

Many other mixtures can be used that will give good results provided: First, the proper nutrients are present; second, the feeds are of a nature to promote good physical condition; and third, the nutrients are present in an easily digestible form.

When the farmers adopt the forty hour week, part of the problem will be to find a substitute for eats.



Compared to the entire industry, our business is small

The United States produces an immense amount of meat. Swift & Company does a big business, but compared to the nation's total, our output is small. It is like comparing one big apple to a whole tree of fruit.

We handle only about 12 per cent of the dressed meat of the United States. There are 302 national packers and 944 local ones competing with us.

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per cent of the country's butter, eggs, and poultry.

Our tanneries handle less than 15 per cent of the hides made into leather in the United States.

Our soap factories make less than 10 per cent of the soap output.

Compare these small percentages with the proportions handled by large corporations in other industries, and you can easily see that Swift & Company is not so large after all.

Swift & Company, U.S.A.

Founded 1868

A nation-wide organization owned by more than 30,000 shareholders



Colorado Cheap Farming Land

It is a privilege to live in this part of Colorado. We have 300 days of sunshine each and every year. Cool summers and pleasant winters. Every tubercular person who comes here in time and lives in the country gets entirely well. This part of Colorado where I live is called the Divide Country. It is 40 miles east of Colorado Springs. This is a nice gently rolling prairie, almost level, very deep soil, slightly sandy loam, with a fine clay subsoil. Shallow wells furnish plenty of nice, soft water. There are school houses, high schools, churches and rural delivery everywhere. This part is in the middle of the rain belt, where we raise large crops of every kind each and every year. We raise corn, wheat, rye, oats, millet, sorghum, alfalfa, Sudan grass, beans, potatoes and all kinds of garden vegetables. Corn makes 35 to 60 bushels per acre, spring wheat 20 to 30 bushels, fall wheat 20 to 40 bushels, oats 50 to 70 bushels, all other crops in proportion. Apples, grapes, plums, cherries, gooseberries, currants and strawberries do extra well. My first cutting of alfalfa and rye hay is now in the stack, have about 100 tons. You surely will have to look a long time to find a better country at any price. Some of the very best land with fair improvements can still be bought at \$18 to \$20 per acre. My honest opinion is that this land will sell for \$40 to \$50 per acre within two years.

I want to tell every person who reads this article that I am not a real estate agent—I am a farmer and stock raiser and am now living on my ranch and have been for more than twelve years. I have made big money every year farming and raising stock. There has not been a crop failure in the twelve years that I have lived here. Five of my near neighbors each raised more than 3,000 bushels of corn last year. One of my neighbors has made over \$5,000 off his corn alone each year for the last three years in succession. This farmer thinks his corn this year will bring him \$7,000. Any land offered for sale by me is fully as good as the land on which these big crops of corn is being raised. We never have hot winds or cyclones and there are no chinch bugs or Hessian fly, no hog or chicken cholera, no rats, crows or buzzards, plenty of natural rainfall each year to mature all crops. As to my honesty and financial standing I refer you to the First National Bank of Colorado Springs, Colo. If you are interested in this part of Colorado, write for literature which will be mailed you at once free of charge.

I guarantee all of anybody's expenses both ways if they come and find any false statements in this advertisement. Show this to your lawyer or banker, get their opinion of this proposition. For further information address

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Stock Raising in Western Canada
is as profitable as Grain Growing

In Western Canada Grain Growing is a profit maker. Raising Cattle, Sheep and Hogs brings certain success. It's easy to prosper where you can raise 20 to 45 bu. of wheat to the acre and buy on easy terms.

Land at \$15 to \$30 Per Acre
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Railway and Land Co's. are offering unusual inducements to home-seekers to settle in Western Canada and enjoy her prosperity. Loans made for the purchase of stock or other farming requirements can be had at low interest.

The Governments of the Dominion and Provinces of Manitoba, Saskatchewan and Alberta extend every encouragement to the farmer and ranchman.

You can obtain excellent land at low prices on easy terms, and get high prices for your grain, cattle, sheep and hogs—low taxes (none on improvements), good markets and shipping facilities, free schools, churches, splendid climate and sure crops.

For illustrated literature, maps, description of lands for sale in Manitoba, Saskatchewan and Alberta, reduced railroad rates, etc., apply to Superintendent of Immigration, Ottawa, Canada, or

F. H. HEWITT, 2012 Main St., Kansas City, Mo.
Canadian Government Agent

WESTERN CANADA
Farm Lands
Low Prices

Spend Less Time on Road

If we ask farmers what their biggest problem is today, nine out of ten say, "A shortage of help"—there isn't help enough to go around and there isn't time enough to do all the farm work that ought to be done.

Under present conditions the conservation of time is of greater importance than ever to the farmer—an hour saved here, another there, mounts up in the course of a year.

Time spent working in the field is directly productive—it results in larger crops or more acreage. Time spent on the road is, in a sense, non-productive—to reduce this time is the aim of every busy farmer, so that the greatest possible amount of field work can be done.

Sometimes an adequate hauling equipment means more than saving time—it saves money. One Iowa farmer with his motor truck was able to market his oat crop quickly when oats were eighty cents per bushel. His neighbor was not so well equipped and when he finally got his crop to market oats were only sixty cents, and on 6,000 bushels the loss almost paid for a good motor truck.

Light on the Road Ahead

You have been motoring—or wagoning, or walking, or otherwise proceeding—along a fairly good road with nothing to indicate that it would not continue fairly good, and then you have run suddenly into an impassable place, mired down, and had seventeen assorted sam-

ples of hades getting out. Everybody else has had the same experience—road maps to the contrary notwithstanding. The road map is a good thing, but it shows what the road used to be, not necessarily as it is. Roads change—mightily rapidly, sometimes. A downpour of rain and the road is washed out; a night of snow, and it is cluttered up beyond passing, though it may have been perfect yesterday. If there were some way of knowing what the road is to-day, of reading it on a card or map like you do the weather, for instance—

Well, that is one of the new things that the United States Department of Agriculture is undertaking to arrange for you. Henceforth, the weather bulletins will show road conditions. The work was begun by the Weather Bureau as an aid to winning the war. At first the service applied merely to motor transportation in some Eastern States. Then the demand for it became pretty general and very insistent. So, without any special appropriation to take care of it, the Weather Bureau is undertaking in certain states to add daily news of road conditions to its other services. The work can not be perfected all at once. Dependence will have to be placed, for a while on free information from localities. But the service will be given to the fullest extent possible this year.

The man who has lost faith in profits from horse raising may not be handling the right sort of horses.

MECHANICS ON THE FARM

Items of Interest About Automobiles, Engines, Tractors and Motorcycles

Grinding Leaky Valves

NO INTERNAL combustion engine can deliver its full power unless it has the proper amount of compression.

The most common cause of poor compression is a leaky valve. Both the intake and exhaust valves must fit perfectly in order to maintain the compression. It is usually an easy matter to detect a leaky valve by turning the engine over on the compression stroke. If it does not require the usual amount of strength to do this, it shows that there is a leak somewhere. The first place to look for it is at the exhaust valve. This valve is subjected to extreme heat since the hot exhaust gases are forced out past it on the scavenging stroke of the piston. A small piece of hard carbon or grit lodging under this valve may start it leaking. Even though the carbon or dirt may not be found under the leaky valve when the investigation is made, it may remain there long enough to allow the hot gases to pass through for a short time, and this will often be enough to erode a small passage through which the mixture will escape under compression. Or if the carbon or dirt holds the valve open for a few revolutions, the burning gases escaping during the power stroke may make a deposit of burned oil and carbon on the valve stem which will prevent it from fully seating after the particle of carbon or dirt which started the trouble has been pounded loose and passed out with the exhaust.

It pays to keep the valves in proper condition and they should be inspected frequently. It is not at all a difficult matter to grind a leaky valve unless it is in exceptionally bad condition. The method of getting at the valves to grind them is usually apparent upon a casual examination of the engine. In some cases the valves may be in cages which can be removed for grinding. In others they will be in the cylinder head, which can be removed, while in some cases they will be in the engine casting itself, but will be uncovered when the cylinder head is removed.

To grind them remove the valve spring and clean the valve and the valve seat with kerosene. Make sure that the valve stem and the sleeve through which the stem moves are free from burned oil and other gummy substances which tend to slow up the valve action or prevent proper seating. Valve grinding compounds can be purchased from practically any machine shop or garage where gas engine repair work is done. The compound should be applied to the part of the valve which rests upon the valve seat.

Then put the valve in place and with a carpenter's brace and screwdriver bit, or a heavy screwdriver, the valve should be partially revolved under a small amount of pressure, ten or fifteen times, then lifted off the seat and given about half a turn, replaced, and the oscillating motions repeated. The grinding compound will soon work from between the two surfaces and more should be added as required or that which has worked from between the surfaces replaced. The grinding should be continued until the valve makes perfect contact with the seat. This can be determined by an examination of the surfaces. Spots which are not making good contact will usually look dull and will permit the compound to remain on them after it has been forced from between the surfaces which are making good contact. In grinding valves do not make a complete revolution, merely oscillate it from a quarter to a half turn, as making complete turns has a tendency to cut rings completely around on the valve and valve seat, increasing rather than diminishing valve troubles.

By carefully observing the condition

of the valves every time an engine is inspected for valve trouble, one can learn to tell by the looks of the top of the valve whether or not it is leaking. In many cases if a valve is holding perfectly an even deposit of soot will be found over the top. If gas is escaping past a valve while it is closed no soot will be found, or else on only part of the valve. The gas rushing through the leak will keep the surrounding surfaces clear of soot or carbon and the metal is apt to be of a reddish color. By observing the top of the valve and the bearing surfaces at the valve seat one can make sure whether or not a valve has been holding. There is no use grinding a valve which is holding, it cannot be improved and may be injured. Clean the stem and sleeve and wash off the seat with kerosene but don't grind it.—Tractor Farming.

Legislation to Control Packers

(Continued from page 2.)

the above article. The bills are too long to be given space in our columns, but copies can be obtained from members of Congress. The following explanation of the Kendrick bill accompanied the favorable report on it from the Committee on Agriculture and Forestry of the Senate, made February 24, before the old Congress adjourned. The same bill has been resubmitted in the present Congress.

The bill is threefold in effect.

First—It provides that every person or corporation engaged in the business of handling, slaughtering, preparing, or marketing live stock or live-stock products in interstate commerce shall operate under a license to be issued by the Secretary of Agriculture upon application.

Second—In order to prohibit the common ownership of meatpacking houses and stockyards, it is provided that no common carrier shall unload live stock at a stock yards owned in whole or in part by a licensee engaged in the slaughtering of live stock.

Third—In order to place refrigerator cars at the disposal of the general public under the same terms and conditions that apply to other means of transportation, the bill provides that no common carrier shall, after the expiration of six months from the date of the passage of the bill, employ any privately owned refrigerator cars, except upon the condition that they may be furnished by the carrier, with the approval of the Interstate Commerce Commission, to any person making reasonable request therefor.

Licenses under the bill are forbidden to engage in unfair and discriminatory practices, to conspire with one another, or to combine to prevent competition or to establish monopoly.

The Secretary of Agriculture is authorized to make such investigation of the books of all licensees as may be necessary to ascertain all facts relating to the carrying on of the businesses of licensees. Whenever, in his judgment, such investigation indicates a violation of the terms of the proposed act, the Secretary of Agriculture is authorized to make report thereof to the proper United States attorney, and whenever a licensee has been found guilty of violating any of the prescribed conditions, the Secretary of Agriculture is given the power to suspend his license for a period not to exceed two years, but only after having afforded the licensee reasonable opportunity to be heard by the Secretary of Agriculture in person.

With regard to the section intended to divest the packers of all ownership, direct or indirect, in stock yards, in order that no unnecessary hardship may thereby be worked upon any licensee, it is provided that the prohibition against the delivery of live stock at any yards owned by a packing-house licensee shall not become effective for a period of two years. Furthermore, the Secretary of Agriculture is given the discretion to extend this period of grace for two additional years, if it should appear necessary to prevent loss.

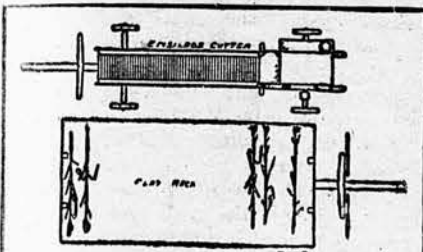
Silo-Filling Suggestions

(Continued from Page One)

much loss at the top. If silage is to be used immediately after filling, no spoiling is necessary, for the silage can be taken out and fed during the process of fermentation. When spoiled silage is taken off the top it should be put where stock, especially horses, will not eat it.

Selection of Cutter

When you buy a new cutter, the size should be selected according to your requirements and according to the power available. One thing should be borne in mind, that is, that a cutter of a reasonable size, one that does not require splitting of the bundles, is much easier to feed than a smaller machine. Wherever possible, it is a good plan to own your own machine, so you can fill your silo at just the right time, can take the job



METHOD OF LOADING WAGON TO MAKE UNLOADING AT CUTTER EASIER

more slowly which will result in your getting more into the silo and getting it filled in better shape.

Belt Arrangements

Perhaps no one point in the handling of the cutter is more important than the pulley size. This is a point that must be looked after in each particular case, as there is no standard of belt travel among the tractor manufacturers and the result is that a pulley which might be right for one tractor would be entirely wrong for use in connection with another.

As an illustration, suppose you were to buy a cutter that was just the right size for your tractor, but the size and speed of your tractor belt pulley were such as to drive the cutter too fast. If you were to set up the machine and try to operate it in this way, you would find that owing to the increased capacity resulting from the excessive speed of the cutter, the tractor did not have sufficient power. This would force the speed of the tractor down, slow down the entire outfit and your blower would clog.

The rule for determining the required size of the cutter pulley is to multiply the number of revolutions of the tractor crank shaft by the number of inches in diameter of the drive pulley on the tractor; and that number divided by the number of revolutions that the silo cutter is to be driven. The result would be the diameter of the pulley required on the silo filler at the point where it takes the power from the tractor. The following example in which the diameter of the engine pulley is thirty-six inches, the number of revolutions per minute 250, and required speed of silage cutter, 600 revolutions per minute, illustrates the method: 250 multiplied by 36 gives 9,000; that number divided by 600 gives 15, the required diameter in inches of the pulley for the cutter.

Long belts are better than short ones wherever possible, as the additional weight of the belt prevents slipping. However, where the power is light, a short belt is better, as it takes more or less extra power to handle a long belt.

Setting Up and Starting

Try to set the machine as near level as possible and as close to the silo as possible, so that the blower pipe can be set perpendicularly. If the pipe is set on a slant, the cut feed has a tendency to settle on the lower side with a result that it takes more power to elevate. Before starting the machine, go over it carefully and see that all bearings are well oiled, see that all bolts are tight, especially the bolts holding the cutter bar and the knives. Look over the knife adjustment to see that the knives just barely touch the cutter bar steel, as they pass them, start up the cutter and let it run idle for a few minutes. After

this stop it again, go over the bolts and nuts again, then start it up and feed it very slowly at first, until you are sure that the machine is all right.

Feeding the Machine

Always feed the machine evenly—try to keep it well filled at all times, but do not overcrowd it. Over-crowding of the machine almost invariably means breakages, as it throws an extra strain on the entire cutter. Jerky feeding also results in a poor quality of cutting. When the cutter is kept continuously filled, all of the corn is properly held in place by the rollers and the result is clean cutting. Anyone will readily understand that if the machine is not thoroughly filled, the tension on the rollers becomes lessened. A certain amount of the feed is dragged through by the knives, and escapes being cut.

Operation and Adjustment of Cutter

The most important adjustment of the cutter is that of the knives and cutter bar. The cutter bar should invariably be adjusted up to the lower roller, so as to prevent the latter from winding. The knives should be adjusted up to the cutter bar, so they barely touch. The cutter bar and knives should both be kept sharp. As long as this is done, that is as long as they are properly adjusted and sharp and the proper amount of tension on the rollers, good cutting should result. Do not make the mistake of expecting the knives to run too long without being sharpened. No set of knives will hold its edge longer than one day and they should be changed and resharpened at least that often. If the corn is sandy or hard, they will require sharpening even oftener than this. A good practice is to use two sets of knives and equip the cutter with a knife grinding attachment so that one set can be sharpened while the other is in use. The saving in power alone will more than

pay for the extra set of knives in one season's run. Be careful after having done any work about the machine to see that all of the tools are cleared away. Frequently a wrench or other tool is left on the feed table. Anything of this kind is likely to cause damage to the cutter. Go over the machine frequently and see that all bolts and nuts are tight, particularly those on the cutter bar casting and knives. Keep the machine well oiled and when through with it for the season clean it thoroughly, grease it and put it away in a dry place.

Carefulness in following out the instructions of the manufacturer and in using good judgment in taking care of a machine of this kind will more than double the life of the cutter.

Webworm Damaging Alfalfa

During the last two weeks, several reports have reached the Kansas Experiment Station entomologist of the garden webworm seriously injuring alfalfa. Although this insect occurs throughout the United States it is most serious in the Central Mississippi states. Several times it has proven a serious enemy to alfalfa in this state. The larvae feed normally on the pigweed or carcle weed, from which they sometimes receive the local name of "careless worm." It is usually only when they become abundant on the weeds that they migrate from them to attack crops, such as alfalfa, corn, and garden truck.

The moth is yellowish, buff or grayish-brown in color, with a wing expanse of about three-quarters of an inch. The eggs which are laid on the food plants soon hatch, and the tiny worms begin feeding. In feeding, the worms spin a fine web, which gradually envelops the plant, of which nothing is left but the skeleton of the leaves when the worms are abundant. The worms vary in color

from pale and greenish-yellow to dark yellow, and are marked with numerous black dots. The worms become full grown in about three weeks in summer when they descend to the ground and pupate in small silken cells on or just below the surface. The moths emerge in about one week, so that in midsummer the complete life cycle occupies about one month. In Kansas, there are three or four generations a year, the last generation passing the winter either as larvae or pupae in silken lined cocoons in the soil.

Usually the farmer does not notice the trouble until the plants are covered with webs and are seriously injured. Just as soon as the worms are noticed the alfalfa should be cut in order to save as much of it as possible for hay. If it is full of the web and the droppings of the worms, it should not be fed to horses, but may be fed to cattle. In raking and handling the hay many of the worms will be killed while others will perish in the hay.

The plowing of infested weed fields in late fall or winter and thorough disking of alfalfa will be found to largely control the pest. When it appears on garden crops it may be readily destroyed by at once spraying or dusting with Paris green or lead arsenate. The destruction of the weeds upon which it feeds is very important in preventing the undue increase of the pest.—GEO. A. DEAN, Entomologist, Kansas Experiment Station.

"Bob White" is an extremely useful bird to the farmer through its weed-seed eating habits in the winter and insect-eating habits during the summer.

Legal advice from laymen is sometimes expensive. It is advisable to secure legal information from the proper source.

Cletrac

TANK-TYPE TRACTOR

(Formerly known as the Cleveland Tractor)

Plows on the heels of the Harvest

The actual experience of farmers everywhere proves conclusively that wheat yields are increased from 5 to 8 bushels an acre by plowing immediately after harvest.

But this is usually the hottest and busiest season of the year when men and horses tire easily.

With the Cletrac Tank-Type Tractor you can actually plow right on the heels of the harvest—and do it so quickly that you will not interfere with cultivating, haying or other routine work.

Through the most extreme heat the Cletrac contentedly and steadily does a job that would kill a team. It will work all day and all night if necessary. You can drive it unmercifully—and in return get an increased yield of better quality, that will often pay the whole cost of the tractor in one season.

Prompt plowing after harvest enables your soil to soak up and store away moisture that would otherwise be lost.

But remember the Cletrac does far more than merely plow. That is only the beginning of its work. Its distinctive tank-type construction en-

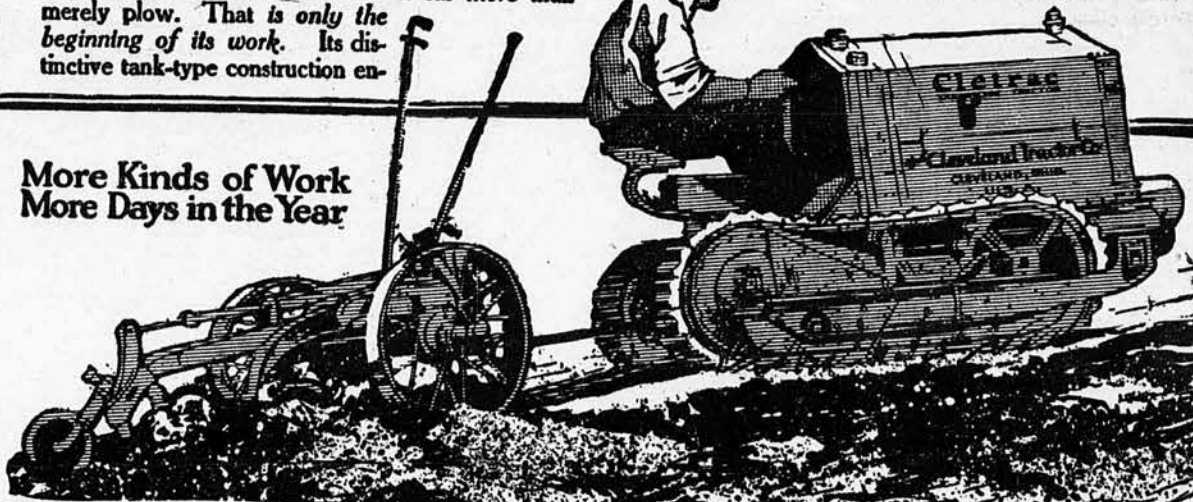
ables it to go almost anywhere—particularly over soft plowed ground or moist or sandy soil where the average tractor would flounder or "dig itself in". All the power of the Cletrac is used to pull the implement. And because of its 600 square inches of traction surface it doesn't leave two packed down tracks of earth behind it.

The Cletrac is extremely economical to operate, using kerosene, distillate or gasoline. Most owners are using kerosene or distillate.

Send for our booklet "Selecting Your Tractor". It will be a real help in solving many of your most difficult problems. And order early as we cannot promise prompt delivery later on.

The Cleveland Tractor Co.
19097 Euclid Ave., Cleveland, Ohio
The largest producers of Tank-Type Tractors in the world.

More Kinds of Work
More Days in the Year



THE HOME-MAKER'S FORUM

ETHEL WHIPPLE, Editor

Letters from readers are always welcome. You are urged to send in helpful suggestions, to give your experiences, or to ask questions. Address the Editor of this Department.

Fashion Not a Safe Guide

CLOTHES may not make the man, but they make a lot of difference in the impression he makes on other people as well as in his own self respect. Women have been criticized for spending too much thought on dress. A better criticism, in the opinion of Miss Leona Hope of the Illinois College of Agriculture, would be that women do not spend enough intelligent thought on dress. Understanding the art of good dressing is an indication of wisdom, not vanity. We quote the following paragraphs from Miss Hope's circular entitled "Fashion: Its Use and Abuse."

Dress Means of Self Expression

The function of dress is not limited to protection and modesty. Clothes offer a tremendous opportunity for self-expression. Says Henry James in that splendid book, "The Portrait of a Lady: "What shall we call self? Where does it begin? Where does it end? I know a large part of myself is in the clothes I wear. I've a great respect for things! One's self for other people is one's expression of self; and one's house, one's furniture, one's garments, the books one reads, the company one keeps—these things are all expressive." Therefore in the words of I. B. S. Holborn, "If all this be so, if the inner man can only express itself through the outer, of what paramount importance it becomes that the outer power of expression be as beautiful as possible, and how great the part this element must play in life."

Evils of Fashion

Novelty rather than art, loss of personality, adulteration, extravagance, high prices, and positive disability are some of the evils which follow in the train of fashion. When a woman purchases a pair of novelty shoes she does not receive the value of her money in excellent material and workmanship. Part of the money, and a very large part, is spent solely for the satisfaction of wearing "the latest." Extravagance is not confined to money, however. Think of the time and anxious thought wasted in futile attempts to keep up with the kaleidoscopic changes in dress.

Remedies for Evils of Fashion

We cannot escape from clothes, but we may escape from fashion. There are those who think that the remedy for the evils attendant on constantly changing fashions is to adopt a standardized dress; others advocate uniforms for women. Some have gone so far as to suggest a national costume. Futile suggestion. It is not national costume which we need so much as fine national taste.

Standardized dress will never be popular. Women are too fond of indulging their love of pretty things. The tailored suit is the nearest approach to standardized dress we may hope to attain. Even in that everyone does not wish to wear a Norfolk jacket, neither is a Norfolk jacket becoming to everyone. However, in the tailored suit women have reached the acme of good dressing for the street.

The Standardized Wardrobe

One possible solution of the problem of ever-changing fashion is to arouse women to the realization that fashionable clothes are not beautiful simply because they are fashionable. "Queer, quaint, and quizzical," as one of our popular fashion magazines describes them, they frequently are, but they are not always beautiful. Every woman should study her own individuality, her own proportions, lines, and coloring, her defects as well as her good points. She should study herself in the same im-

personable manner in which she studies other people. Is the head small? Is the waist too long for the height? Is the neck short? Are the shoulders high? After honest, critical study she should choose only those clothes which are suited in proportion, line, and color to her particular type, subduing her defects and emphasizing her good points. If clothes exactly suited to her may be found in the fashion magazine, she may adopt them. When a woman thus finds by intelligent study the type of dress suited to her particular self, she should cling to that type, even though it brings disagreement with prevailing modes. This does not necessarily limit one to the point of having all one's dresses made exactly alike. The essentially personal features may be retained while still permitting sufficient latitude for fashion. In this way fashion can be made to serve us and we shall cease to be her slaves.

Clothing Budgets

Few women make a clothing budget. If they did they could not follow the vagaries of fashion so easily. A budget requires a certain portion of the income to be set aside for clothes, also a plan usually made on a three-year basis—two important limitations. If one has a coat which is a part of a three-year plan it cannot be discarded—granting that one has sufficient self-control to resist the temptation—simply because there is such a "darling" on sale for only \$39.98. A budget may thus control expenditure and check extravagance. A budget planned on a three-year basis also leads toward conservation in dress. If a woman plans to use a garment three years, a tailored suit for example, she is careful to have about it nothing by which the exact year of its birth may be ascertained.

The Keypoint of Good Dressing

Granting that it is possible to escape from the slavery of fashion and its attendant evils, what shall be the standard of dress? The keynote of good dressing is appropriate dressing. The woman who wears a dressy chiffon waist, a picture hat, and a decorated face veil to a picnic is not well dressed, no matter how pretty her mirror may pronounce her. Fitness to purpose is a fundamental element of good dressing which needs much emphasis at the present time. High-heeled slippers and shoes for school, white shoes in rainy, muddy weather, elaborate hair dressing suitable for the society woman, and earrings are violations too frequently found among school-girls. The period of girlhood being so short, it is a pity that young girls do not appreciate what a wonderful and beautiful thing it is and desire to prolong rather than to shorten it by prematurely appearing as full-fledged society women.

Decency a Fundamental

Decency is also a fundamental in dress. Waists so thin that a woman must shave under the arms in order to wear them are not decent. Skirts so tight that they reveal rather than conceal the figure have been worn recently and are about to return. Sumptuary laws were enacted in the fourteenth and fifteenth centuries which permitted only people of very high rank to wear indecently short skirts and coats. Such laws might be enacted today with excellent effect. Furthermore, why should one desire to show her dress shields and underwear to the public? Artists advise students to go to Nature. The advice might be followed in regard to clothes. "Although not born with a silver spoon in his mouth, the animal is at least born with his

clothes on, and Nature has considered appropriateness, beauty, and decency." What more could human beings ask?

Unity in Dress Essential

Unity is another essential in the costume of a well-dressed woman. Many costumes remind us of the description of one of Portia's suitors who "bought his doublet in Italy, his round hose in France, his bonnet in Germany, and his behavior everywhere." In the matter of color especially there seems to be a great disregard of unity. Gray shoes, pink stockings, dark-blue serge dress, red tie, gold-covered coat and purple hat, form a garish combination, but it is not an imaginary illustration. The woman of moderate means will find that it not only insures distinction, but also economy to decide on the color that most becomes her, then to make that color the dominant note in her wardrobe.

Again, there are outfits in which the feet are dressed for an evening party, the head for an afternoon reception, and the remainder of the body for a work-a-day world. In these examples the costume is merely a haphazard collection of unrelated things. There has been no plan, no consistent idea throughout. Here the budget may also act as a corrective agent. When a woman plans for three years, she is quite likely unconsciously or consciously to consider harmonious relationships. The wardrobe is necessarily considered as a whole. This insures unity.

Care of Clothes

It is said that Americans are recognized abroad by their run-down heels. Heels certainly indicate plainly one's standard in regard to the care of clothes. Perfectly cared-for clothes not only express good taste, but preserve their wearing quality. The perfect freshness of good grooming is an actual asset.

One's costume, however, may express fitness to purpose, decency, unity, and excellent grooming and still not be beautiful in the way that a work of art is beautiful. To achieve this, one's taste must be cultivated. The unchanging laws of beauty must be studied and applied not with the thought that we

shall all become great designers, but in order that we may be able to select suitable designs from those already prepared and intelligently work them out, adapting them to our own special needs.

Drinks From Fruit Juices

The principal charm of a fruit drink lies in the smooth blending of the various flavors. Unless the fruit juices have been well sweetened before bottling, supply the needed sugar in the form of a sugar syrup. Otherwise the juices and the sugar must be mixed and allowed to stand together for several hours before being served. For the syrup, allow one cup of sugar for each cup of water and boil them together for about ten minutes. It saves time and fuel to make a quart or so of this syrup at a time and bottle it boiling hot in sterilized pint jars for subsequent use.

A small amount of some strongly acid juice should always be added to the fruit drink to give it acidity. The juice of rhubarb or gooseberries is sufficiently sour to take the place of lemon juice for this purpose. Orange juice may be substituted for lemon juice, adding to it a small quantity of cider vinegar.

Add to the fruit juices enough of the sugar syrup to sweeten them, add enough acid juice to give the desired zest, and dilute the whole to taste with shaved ice or with ice water. Weak green tea makes a good foundation for a fruit punch.

Stuffed Pickled Peppers

Wash and scald whole green peppers for two minutes in boiling salted water. Remove a slice from the stem end, take out all the seeds and the white pulp. Pack the cavity solid with finely chopped cabbage seasoned with salt and celery seed, replace the end and sew it on with coarse thread. Pack the peppers, stem end up, in stone jars, cover them with hot vinegar, and put a weight on to keep them under the vinegar. Allow them to stand for several weeks before serving them. For serving, cut them in one-

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fourth inch slices. Chopped celery or carrot may be used in place of or with the cabbage.

Grape Jam

Wash grapes picked from the stems, remove with thumb and forefinger on the stem, one by one, to separate the pulp from the skin. Heat the pulp over the fire until it softens and changes color a little, then with a wooden spoon rub the pulp through a puree strainer, leaving the seeds in the strainer. To the pulp add the skins, and sugar to equal the weight of the skins and pulp. Mix thoroughly and let cook about fifteen minutes, can, and store.—Extension Division, Michigan Agricultural College.

Scalloped Potatoes

I. Remove the skin from boiled potatoes and cut in slices one-eighth inch thick. Arrange the sliced potatoes in layers in a buttered baking dish, covering each layer with white sauce—made with three tablespoons flour, two tablespoons butter, one-fourth teaspoon salt, and a few grains of pepper to each cup of milk. Sprinkle the top with buttered crumbs and bake for about twenty minutes. As a variation, a layer of sliced hard-boiled eggs may be added after each layer of potatoes. Grated cheese or minced ham may be used in the same way.

II. Wash, pare, and cut in one-eighth inch slices four potatoes. Put a layer in a buttered baking dish, sprinkle with salt and pepper, dredge with flour, and cover with one-half tablespoon of butter. Repeat. Add hot milk until it may be seen through to the top layer. Bake one and one-fourth hours, or until potato is soft. Slices of bacon or fresh salt pork may be added to top of potatoes if the amount of butter is lessened.

Texas Hash

1 cup rice
1 small onion
1 cup fat
1 pound round steak chopped fine,
or hamburger
2 cups tomatoes
1 teaspoon salt
1 teaspoon pepper

Cook rice in boiling salted water until tender. Brown onion in the fat, add the meat and cook ten minutes, add tomatoes, rice, and seasonings. Put into baking dish and bake twenty minutes in a moderate oven.

Slow baking on inexpensive cake made with one or two eggs will produce cakes of larger volume and finer texture, say experts in the home economics kitchen of the Department of Agriculture. Bake cake of this type one hour.

True economy in the preparation of meals for the family lies not only in buying wisely but also in making the most possible use of what is bought.

A hood suspended over the kitchen range and connected to the flue in the chimney will gather all the steam and smoke and carry them away.

FASHION DEPARTMENT

Price of All Patterns, 10 Cents



No. 2928—One-Piece Dress: Cut in three sizes—16, 18 and 20 years. Size 18 will require 4½ yards of 44-inch material. Width of skirt at lower edge is about 1½ yards.

Nos. 2964-2891—A Pretty Costume: Waist 2964 cut in seven sizes—34, 36, 38, 40, 42, 44 and 46 inches bust measure. Skirt 2891 is cut in seven sizes—22, 24, 26, 28, 30, 32 and 34 inches waist measure. To make this design for a medium size will require 5½ yards of 36-inch material. Its width at the lower edge is 1½ yards. Two separate patterns, 10 cents for each. No. 2795—Girls' Dress: Cut in three sizes—12, 14 and 16 years. Size 14 will require 4½ yards of

36-inch material. No. 2952—Girls' Dress: Cut in four sizes—8, 10, 12 and 14 years. Size 12 requires 3¼ yards of 36-inch material for the dress and 1½ yard for the guimpe.



No. 2779—Ladies' House Dress: Cut in seven sizes—34, 36, 38, 40, 42, 44 and 46 inches bust measure. Size 38 will require 5½ yards of 36-inch material. Width at lower edge is about 2¼ yards. No. 2770—A Simple Apron: Cut in four sizes—small, 32-34; medium, 36-38; large, 40-42; and extra large, 44-46 inches bust measure. The medium size requires five yards of 36-inch material. No. 2958—Maternity or Invalid Skirt: Cut in four sizes—small, 22-24; medium, 26-28; large, 30-32; and extra large, 34-36 inches waist measure. The medium size will require 3¼ yards of 40-inch material. No. 2949—Ladies' Shirtwaist: Cut in seven sizes—34, 36, 38, 40, 42, 44 and 46 inches bust measure. Size 38 requires 2½ yards of 36-inch material.

Maternity or Invalid Skirt

Skirt model 2958, illustrated on this page, is very desirable. It is fitted with a corset girdle which will stay the figure without causing discomfort or inconvenience. The waist size and length over front and hips is adjustable. This design is good for all dress materials. The width at lower edge is about two yards.

Crepe de chine, Georgette crepe, taffeta or satin could be used for ladies' shirt waist 2949. The model is in slip-on style, and is suitable for any of the materials now in vogue.

In 2779 we have another popular house dress, easy to make, easy to adjust, and easy to iron. The design is suitable for gingham, seersucker, percale, lawn, or flannelette. There is surely no reason why every housewife should not have all the "cover all" aprons she needs with such a pattern as 2770. This apron is cut in one piece, requires little material, is quickly made and easily laundered. These aprons are neat when made of light figured percale and trimmed with blue, pink, or black finishing braid to match the figure, or made of dark percale and trimmed with white braid. Plain pink or light blue with white rickrack

braid on neck, sleeves, and belt is very effective.

The simple, graceful lines of 2795 are very becoming to the young girl. This is a good model for lawn, organdie, dimity, nainsook, taffeta, or satin. The tucks on the sleeves may be omitted, and the skirt may be finished without the tunic. No. 2952 will make a good school dress. The lines are simple and the development is easy. The guimpe could be made of batiste, crepe, or lawn, and the dress of any wash fabric, or of serge, satin, taffeta, gabardine, or voile.

No. 2928 is a charming one-piece dress for which linen, satin, taffeta, velvet, serge or gabardine are suitable materials. The cuff on the skirt may be omitted. Waist 2964 and skirt 2891 make a very attractive combination for organdie, challie, or plain or figured voile. Bands of embroidery in colors would form a suitable trimming, or the dress could be developed in blue taffeta with bands of taupe georgette.

The fall pattern catalog or style book containing 550 designs of ladies', misses', and children's patterns is now ready. Send us ten cents in silver or stamps if you would like to have it. Address

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Fashion Department, Kansas Farmer, Topeka, Kansas, for the style book or for patterns. Order patterns by number. And don't forget to give the size. In ordering for adults, give bust measure for waist patterns, and waist measure for skirt patterns. For misses and children give number of pattern and age.

Fall and Winter Style Book

The Fall and Winter, 1919-1920 pattern catalog, or style book, is now ready. It contains 550 designs of ladies', misses', and children's patterns which will give you ideas for planning your fall and winter wardrobe. Some points for the needle are also included, illustrating thirty of the various simple stitches. Ten cents in silver or stamps mailed to the Fashion Department, Kansas Farmer, Topeka, Kansas, will bring it to you.

Was This You?

Someone at Mankato wrote us under date of August 5, ordering little girl's dress patterns 2835 and 2390 in the four-year-old size, but failed to sign her name. We hope she will see this and write us so that we will know where to send the patterns.

The Sculptor

I took a piece of plastic clay
And duly fashioned it one day;
And as my fingers pressed it, still
It moved and yielded to my will.

I came again when days were past.
That bit of clay was hard at last.
The form I gave it still it bore,
And I could change that form no more.

I took a piece of living clay,
And gently formed it, day by day,
And moulded, with my power and art,
A young child's soft and yielding heart.

I came again when years were gone.
It was a man I looked upon.
That childhood impress still was there;
Reward for all my love and care.—Selected.

It is not a bad plan when you are baking or boiling beans or making chile con carne to cook more than usual and can a quart to save the time of cooking some other day when you are busy or when unexpected company arrives.

Classified Advertising

Advertising "bargain counter." Thousands of people have surplus items of 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. Your advertisement here reaches over 80,000 farmers for 5 cents a word per week. No "ad" taken for less than 60 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.

AGENTS WANTED

AGENTS—MASON SOLD 18 SPRAYERS and Autowashers one Saturday; profits \$2.50 each; square deal; particulars free. Rusler Company, Johnstown, Ohio.

AGENTS—MAKE A DOLLAR AN HOUR. Sell Mendets, a patent patch for instantly mending leaks in all utensils. Sample package free. Collette Manufacturing Co., Dept. 102, Amsterdam, N. Y.

AGENTS MAKING \$200 WEEKLY: Everyone wants it. Formulas for 200 beverages to be made at home. Book form. Send \$1 for copy and territory proposition. Act quickly. Buyers' Export Agency, 487 Broadway, New York.

Position—Farm Manager

EXPERIENCED, RELIABLE, AGRICULTURAL College graduate wants position as farm manager in live stock line for term of years. Address, 140 Hill St., Topeka, Kan.

TRUCK DERRICK

TRUCK DERRICK—ONE MAN CHANGES heaviest racks, boxes, etc., on and off wagon. Satisfaction or money returned. Write for circulars. Local agents wanted. F. Love-ring, Fremont, Neb.

CATTLE.

PRACTICALLY PURE-BRED HOLSTEIN calves, either sex, beautifully marked, six weeks old, from registered sire and choice heavy milking Holstein cows; \$30.00, delivered to any station by express. Paid here. Send orders or write. Lake View Holstein Place, Whitewater, Wis.

HOGS.

BIG-TYPE POLAND CHINAS—L. J. Hilly, Enterprise, Kan., will sell at public sale August 21, 1919, at 1 p. m., seventy head of registered and cholera immune hogs, twenty-three bred sows and litters, also April and May pigs. Herd smooth, one of the best, standard, smooth, 7 feet 8 inches long.

HOGS, sows are bred years before they mature quickly, and the females are the prolific breeders on earth. Write for information. Mention this paper. The Blue Hog Breeding Company, Wilmington, Mass.

DOGS.

FOR SALE—HIGH CLASS FOX AND Wolf Hounds. J. M. Horn, Cassidy, Mo.

RABBIT HOUNDS, FOX HOUNDS, COON, opossum, skunk, squirrel, dog, setters. Pointers, Brown's Kennels, York, Pa.

BEAUTIFUL WHITE ESKIMO SPITZ puppies, males \$6, females \$5 each. Earl Scott, Belvidere, Kansas.

FOR SALE—COLLIE PUPPIES, WEANED perfect markings, workers. Frank Barrington, Sedan, Kansas.

AIREDALES, COLLIES, AND OLD ENG-lish Shepherd dogs. Trained male dogs, brood matrons, pups all ages. Flemish Giant, New Zealand, and Rufus Red Belgian rabbits. Send 6c for large instructive list of what you want. W. R. Watson, Box 123, Oakland, Iowa.

AUTO TIRES.

TIRES—FORD, \$6.75; LARGER SIZES equally low. Lowest tube prices. Booklet free. Economy Tire Co., Kansas City, Mo.

FARM LANDS—TEXAS.

BIG CROPS IN NORTHWEST TEXAS on the new line of the Santa Fe. The Federal Railroad Administration has authorized the completion of the new Shattuck branch of the Santa Fe Railroad to take care of this year's big crops—wheat, oats and sorghums. This will open for immediate settlement and development a large block of my land in a wheat and stock farming section of Ochiltree and Hansford counties in Northwest Texas near Oklahoma state line, where the first crop has in a number of cases paid for the land, and where cattle and hogs can be raised at low cost. Land is of a prairie character ready for the plow, no stone, stumps, no brush to be cleared, at attractive prices on easy terms. Climate healthful, rain falls during growing season. Write for free illustrated folder, giving experience and results settlers have secured in short time on small capital. T. C. Spearman, 927 Railway Exchange, Chicago, Ill.

FARM LANDS—KANSAS.

SOUTHWEST KANSAS IS DEVELOPING fast. Farmers are making good profits on small investments. It is the best place today for the man of moderate means. You can get 160 acres for \$200 to \$300 down, and no further payment on principal for two years, then balance one-eighth of purchase price annually. Interest only 6 per cent—price \$12.50 to \$20 an acre. Write for our book of letters from farmers who are making good there now, also illustrated folder with particulars of our easy purchase contract. Address W. T. Cliver, Santa Fe Land Improvement Company, 405 Santa Fe Bldg., Topeka, Kansas.

POULTRY.

SINGLE COMB BROWN LEGHORN hens, \$1.50; March pullets, \$1.25; March cockerels, \$1. Show birds, ask price. Paradise Poultry Farm, Carona, Kansas.

POULTRY WANTED.

RUNNER DUCKS WANTED—BANTAMS for sale or trade. Emma Ahlsted, Lindsborg, Kansas.

NON-FERTILE EGGS, HENS AND spring chickens, good demand. Ship direct. Coops and cases loaned free. "The Copes," Topeka.

HONEY.

PURE EXTRACTED HONEY—SIXTY-pound can, \$12.25; two, \$24.00. Frank H. Drexell, Crawford, Colo.

HONEY—CHOICE ALFALFA, 60 LBS., \$12.50; 120 lbs., \$24. Amber Dark Honey, 60 lbs., \$11; 120 lbs., \$20. Bert W. Hopper, Rocky Ford, Colo.

TANNING.

LET US TAN YOUR HIDE—COW, HORSE or calf skins for coat or robe. Catalog on request. Crosby Frisian Fur Co., Rochester, New York.

SEEDS

KANRED SEED WHEAT, \$3.00 PER bushel, sacks extra. J. H. Taylor & Sons, Chapman, Kansas.

INSPECTED KANRED SEED WHEAT for sale. Write for a list of members of the Kansas Crop Improvement Association having Kanred seed for sale. B. S. Wilson, Secretary-Treasurer, Manhattan, Kansas.

FARMS WANTED.

WANTED—TO HEAR FROM OWNER OF good farm for sale. State cash price, full description. D. F. Bush, Minneapolis, Minn., 1E.

THE STRAY LIST.

TAKEN UP—BY JASPER COCHRAN, OF Windom, McPherson County, Kansas, on the 29th day of June, 1919, one sow, weight 300 pounds; color black with white spots, white feet and stripe in face, slit in right ear. A. J. Cedarholm, County Clerk.

TAKEN UP—BY J. N. THOMAS, SIX miles south and eight miles east of Pratt in Pratt county Kansas on July 23, 1919, one pair of mules, weight about 900 pounds each, color gray, diamond brand on right hip of each animal. Pair appraised at \$300. Grace McDowell, County Clerk.

TAKEN UP—BY T. J. McCABE OF R. R. 4, Kansas City, Kansas in Wyandotte Township on the 25th day of June, 1919, one Hereford heifer, weight 600 pounds; color red and white. White face, white on hind legs, white switch, white ring around left ear, no horns. Appraised at \$60. William Beggs, County Clerk.

Corn Harvester

CORN HARVESTER—ONE-MAN, ONE-horse, one-row, self-gathering. Equal to a corn binder. Sold to farmers for twenty-three years. Only \$25 with fodder binder. Free Catalog showing pictures of harvester. Process Corn Harvester Co., Salina, Kansas.

SITUATION WANTED.

EXPERIENCED MAN WITH FAMILY of three wants job on farm. Please state wages paid and full particulars. Address C. E. Hagee, Arno, Mo., Douglas County.

LADIES—THIS AD AND \$1.00 WILL bring a wonderfully prepared and exquisitely perfumed greaseless day cream, it blends invisibly into the tones of the skin, helps to build tissue and eradicate wrinkles. Nature's Damask of Beauty. A better cream is not made. Also one package of shampoo preparation which removes dandruff, tones the scalp and leaves the hair light and fluffy. Compare these with any on the market and you'll admit there are none better. Bowman Laboratories, Box 51, Coronado, Calif.

REAL ESTATE.

FOR SALE Choice farms in northeastern Kansas, near Atchison, St. Joseph, Kansas City and Topeka, at right prices, fine crop and good soil. Come and see or write.

E. T. LEHMAN,
Jefferson County, Nortonville, Kansas.

"I have always felt that the daylight saving law was a fool law," said Senator A. B. Cummins of Iowa recently. "Perhaps it would get some of the people up a little earlier who have not the energy to get up otherwise. We tried to repeal it at the last session of congress. I get up myself at half past five and get to my office by seven and I cannot see any particular sense in having a law to compel me to get up. It is a matter of energy."

HELPFUL POULTRY HINTS

Practical Ideas on How to Fill the Egg Basket and Increase Profits

EXPERTS state the hens of the United States lay an average of sixty eggs each a year. Take an ordinary flock, cull out the old, the weak and the poor ones, saving only the pullets and yearling hens that are active layers and the average can be brought up to 120 eggs a year per hen. Thorough culling will double the egg production without increasing by a single cent the cost of production. There are many large flocks that average twelve dozen eggs per year per hen and every poultry raiser should determine to keep his flock up to or above this standard. A few flocks average 175 to 180 eggs and the best breeders are trying to establish flocks of hens that average 200 eggs per hen a year. They have not succeeded as yet.

The Laying Hen

Egg production is influenced by several factors, among which may be mentioned the hen, the methods of housing, the feed and the general care. All are related in some way to each other, but the relationship between the hen and the feed is the most important. Therefore, it is advisable, at the outset, to study the hen and to note what constitutes a good egg-producer.

A laying hen should be healthy. Activity in scratching and foraging is an indication of health; the weak fowl is rarely active and does not forage far from the poultry house. She remains on the perch after the others have gone in search of food and returns to roost early in the afternoon. The fowl that forages far out in the fields is usually the one that is in search of food to make eggs. The head and its appendages also show indications of health and vitality. The strong fowl has a broad head with a short, well-curved beak. The eye is bright and full; the wattles and comb, bright red and of medium size. A very large comb does not necessarily indicate the best health, and has the disadvantage of being frozen in severe weather. However, a hen with a shrunken comb, a long flat head, and a correspondingly long beak, should never be used for breeding purposes; she is rarely a profitable layer. Beautiful plumage indicates health; it should be smooth, fully developed, glossy and brilliantly colored. Dull plumage indicates weakness.

The shape of the body is an important characteristic. A laying hen has a deep, broad body, indicating abundant space for a large digestive and reproductive system. Unless a hen can consume and digest a large quantity of feed, she cannot produce a steady yield of eggs. The legs should be of medium length, strong, and placed well apart. The neck should be short and thick; the breast full and round, and the keel well covered with meat. The tail should be carried erect; this characteristic is more noticeable among male birds than among pullets or hens.

A hen must have a keen appetite and must consume large quantities of food if she is to produce eggs economically and maintain a healthy body. Unless she is able to digest and assimilate food, thus keeping her body strong and healthy, it is useless to expect a profit in the production of eggs. Loss of appetite is regarded as a symptom of many common diseases. A sick hen is unprofitable.—F. S. JACOBY.

Feeding Laying Hens

On most of the Kansas farms it is a far too common practice to let the hens shift for themselves during the summer months, or at most to throw them a little grain only. On some farms under some circumstances this may be all right, but in many cases fowls handled in this way will seldom be in condition to be

profitable producers the following and winter. In most cases it will found safest to feed a well balanced ration to the hens during the summer season as well as through the winter months, with the exception that they will get all the green feed they need the range during the summer. All the heavier breeds will keep active ranging for insects and tender shoots when fed some grain. In fact they consume only so much of the feed as applied to supplement the feed picked. It is only the stock that has been through the summer in good condition that can be expected to lay many winter eggs, for heavy egg production is particularly winter egg production is a great drain on the vitality of the hen.

The poultry specialists of the Kansas Experiment Station recommend that scratching feed consisting of two grains at least be fed. Corn, kafir, milo, and wheat are good grains for scratching ration, and the most economical of these should be used. Variations in this grain ration should be made as the prices of the grains change. In addition to this, the feeding of a mash recommended mixed in the following proportions: Six pounds finely ground chop, six pounds wheat bran, the pounds wheat shorts, and two pounds commercial meat scrap. The successful handling of hens depends as much upon how they are fed as upon what they are fed. Just as there are several routines feeding that are equally satisfactory. The one suggested here has been used with excellent success in connection with the ration given above.

The first thing in the morning a feed of grains is well scattered in a bed of litter of straw, so that the hens will be compelled to work vigorously in scratching it out. This usually keeps the hens busy until between ten and eleven o'clock. At noon the self-feeding dry-mash hopper is opened and left open during the afternoon. If the hens are not running on pasture, as much green feed is given as they will clean up in a half hour. If mangers are used they should be supplied at least two hours before sundown. A liberal feed of grain is given. The hens should go to roost with full crops; therefore there is no objection to throwing down a little more grain than they will consume.

The proportion of about two pounds of scratch feed to one pound of mash should be maintained. However, when the hens are laying a large number of eggs they require more moist feed than when only a few eggs are laid. It is sometimes necessary to close the mash hopper or withhold the scratch feed in order to maintain these proportions.

Fresh water should always be given in the morning and again at noon. The fowls need the fresh water in warm weather, and changing the water at noon in cold weather will prevent freezing except in the case of extreme temperatures.

Egg-Laying Contest

The agricultural college and experiment station of Washington closed its second egg-laying contest last fall with the highest pen records ever made in America. The records are as follows: The first pen, Single Comb White Leghorns, averaged per bird 252.2 eggs; the second pen, Barred Plymouth Rocks, 251.6 eggs, and the third pen, Rhode Island Whites, 238 eggs. Single Comb White Leghorn No. 251 laid 311 eggs. Thirty-one per cent of the hens laid over 200 eggs each, while the contest average was 171 per hen. These records were made by hens kept in flocks of thirty-

Practical Books for Progressive Farmers

Every farm home ought to contain one or all of the practical books on agricultural subjects described on this page. All of these books have had large sales and many will be found in Kansas farm homes. Read the descriptions of the books and if there are any here which you do not already possess, order it now at the bargain price. Do not delay ordering, even if you are too busy to read now. We have only a small supply of these books, especially the best ones. After our present stock is exhausted we will not be able to offer the books at these prices, and some of them we will not be able to get at all. Therefore, take our advice and order now.

BORMAN'S BOOK ON SORGHUMS

This book shows how kafir, milo and cane fed to live stock will increase your farm cash and feed income. It is a book not only of value to sorghum growers, but is equally valuable to every farmer of the Southwest, whether he grows sorghums or other crops.

This book is printed in large, clear type, on a fine quality of book paper, and is full of illustrations. It contains 310 pages and is substantially bound in cloth.

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The Story of the Soil

This valuable book by Cyril G. Hopkins is written in novel form and is as interesting as any novel you ever read. But the book is not published for pleasure only. It contains the essential facts of how to fertilize, how to restore flooded or worn out lands, what are the plant foods, soil formation, etc. This is printed in large clear type on fine quality book paper and contains 360 pages.

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By H. R. Smith

Any farmer or stockman can get valuable hints out of this book. It is not written for the beginner, but for the farmer and stockman who already has had successful experience in stock feeding. It covers feeding for milk production, feeding for beef production, feeding sheep, feeding hogs, feeding poultry and feeding horses. This book contains 412 pages printed in clear type on heavy book paper, illustrated.

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Handy Book of Facts

This is a book of general information, not about farms and farming, but business, law, medicine, history, etc. It contains information of every day use on almost every subject. The book contains over 250 large pages, every page crammed full of information and statistics, things you are likely to want to know any day.

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This book is a short cut in arithmetic. It contains grain tables, interest tables, discount tables, weights, measurements, etc., so that by simply referring to the tables you can get the answer to your problems without figuring them out.

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Cement Workers' Handbook

This book is written not for the professional cement worker, but for the man who intends to do his own cement work at home. It covers more than fifty subjects on cement and its uses in construction, including posts, floors, ceilings, walls, silos, and many others. This little book is nicely gotten up, is printed on good book paper and bound in cloth. It contains 100 pages.

PRICE, 25 CENTS, or given free with one yearly subscription to Kansas Farmer at \$1.00.

ATLAS OF THE WORLD'S WAR

This is a large 64-page paper-covered book full of information, maps, charts and diagrams about the late war. This atlas was published just before the close of the war and while the maps and information are accurate, it does not contain information as to happenings after November, 1918, and for this reason we were able to purchase them at a bargain and can offer them at the price of 25 cents each.

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HOLSTEIN CALVES

CHOICE HOLSTEIN COWS FOR SALE

One carload fresh Holstein Cows—One carload heavy Springers
These cattle are extra good. A few choice registered bulls.

HOPE HOLSTEIN FARMS - - - HOPE, KANSAS

SAND SPRING HOLSTEIN FARM

FEDERAL AND STATE TUBERCULIN TESTED.
The first fourteen cows to finish the A. R. O. yearly test on our farm averaged 13,329.6 pounds milk, 522.6 pounds butter fat, in 348 days, and eight were first calf heifers, and we are breeding them better. Our last bull calf went to St. Joseph Orphanage, Abilene, Kan. The man who buys a bull from our herd finds us working for him all the time. Our Aim—Production, Individuality and Breeding.

FARMERS! MILK HOLSTEINS. SUPREME DAIRY BREED OF THE WORLD.
E. S. ENGLE & SON - - - ABILENE, KANSAS



\$150,000 for Prizes,
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Breeders of Holsteins unanimously voted to quadruple the fees for recording transfers of their cattle sold, and spend the income therefrom to place the merits of this greatest of dairy breeds before the public. If interested in

HOLSTEIN CATTLE

send for our booklets and inform yourself on how to make money in breeding dairy cattle.

HOLSTEIN-FRIESIAN ASSOCIATION OF AMERICA,
Box 114, Brattleboro, Vt.

HOLSTEIN CATTLE SALE

At Farm Near Hutchinson, Kansas,
August 27, 1919

100 Head Cows and Heifers

Consisting of thirty head pure-bred registered cows and heifers; seventy head high-grade heifers, 2's and 3's. All will freshen this fall and all bred to registered bulls. All in good condition. I am selling some valuable cattle. Please send for catalog and come to my sale.

F. L. MARTIN
Hutchinson - - - Kansas

HOLSTEINS!

We are offering a choice selection of both registered and high grade springer cows and heifers. Also pure-bred bulls and young females. All reasonably priced. Come and see them or write.

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Collins Farm Holsteins

A chance to purchase 40-pound breeding. We have choice sons of the great 40-pound bull, Vanderkamp Segis Pontiac, for sale. The dams of these bulls have creditable A. R. O. records. Price reasonable. Write or come and see our herd.

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Six to eight weeks old, nicely marked and excellent individuals, from registered sires and choice heavy milking cows, \$30 each. We pay express.

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Breeders exclusively of pure-bred prize-winning record-breaking Holsteins. Correspondence solicited.

HOLSTEIN HEIFERS

Nineteen choice Holstein heifers for sale. Three pure bred. Ten to freshen soon. Write for prices.

C. A. FEES, R. 4 - WICHITA, KANSAS.

BRAEBURN HOLSTEINS

Looking for a bull? I can generally offer you choice of half a dozen, by two different sires. That saves time and travel.

H. B. COWLES
608 Kansas Avenue - Topeka, Kansas

BUTTER-BRED HOLSTEINS

Three choice registered Holstein bulls, ready for light service, and some bred heifers to a 32-pound sire.

J. P. MAST - SCRANTON, KANSAS

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FOR SALE
A bunch of registered Shropshire rams ready for service, priced worth the money.
HODARD CHANDLER,
Chariton, Iowa.

SHROPSHIRE SHEEP

Twenty pure bred unregistered Shropshire rams for sale.
K. HAGUE - PEABODY, KANSAS.

POLAND CHINAS

CLINTON HERD

BIG TYPE POLAND CHINAS
Is ready to ship you a spring boar that will make you a real herd boar, sired by Giant Buster's Equal. Will sell a few trios not related. We have satisfied customers in 25 different states and can satisfy you. Everything immune and we record them.

P. M. Anderson, Holt, Missouri

Big-Type Poland Weanling Boar Pigs
Bargain prices. Satisfaction guaranteed.
Isaacs Stock Farm, Peabody, Kansas.

CHOICE LOT OF POLAND CHINA BRED SOWS AND GLITS FOR SALE.

A Few Fall Pigs.
CHAS. E. GREENE
Townview Farm - Peabody, Kansas

MYERS' POLAND CHINAS

Large spring pigs in pairs or trios, priced to sell. Write your wants. Annual fall sale, October 14.
H. E. MYERS - GARDNER, KANSAS

POLAND CHINA BOARS

For Sale—25 Spring Boars by Giant Lunker by Dishier's Giant and out of Old Lady Lunker, from my best herd sows. These pigs are good, the tops from 80 head, priced reasonable.

H. R. Wenrich, Oxford, Kan.

SPOTTED POLAND CHINAS.

SPOTTED POLANDS.
Last call for early boars. Order glits early.
T. T. Langford & Sons, Jamesport, Mo.

DUROC JERSEYS.

Woodell's Durocs

A choice lot of extra well bred glits bred for late farrow. Few fall boars.
G. B. WOODDELL, WINFIELD, KANSAS.

OTEY'S DUROCS

One spring yearling sire, fall boars by Pathfinder Chief 2d, "the mighty sire." Real herd headers. Priced right. Would exchange for good glits.

W. W. OTEY & SON, WINFIELD, KANSAS

HIGHVIEW DUROCS

FOR SALE—TWENTY FALL BOARS
By Repeater, Golden Repeater and Pathfinder. Guaranteed and priced to sell quick.

F. J. MOSER - SABETHA, KANSAS

MULEFOOT HOGS.

KNOX KNOLL MULEFOOTS

Nothing for sale but Spring Glits. Orders now taken for September litters. One boar of serviceable age.

S. M. KNOX - HUMBOLDT, KANSAS.

Selecting the Ram

The first point to consider in a ram is masculinity. A ram should show the character in his sturdy build, his strong, bold head, full front quarters, and his general appearance at a glance. He should also possess the characteristics of the breed he represents. Never select a ram that does not show vigor and plenty of size for his respective breed. Avoid the sluggish, small-boned individual.

In going over the individual, follow a definite system. For ease in the matter you might follow the plan as follows: First, stand off a little distance from the individual and get a general view of him, as to general appearance and character. Start at the head, notice the width between the ears, then the length of the neck. A ram should have a short neck, neatly attached at the head and the neck. Next, notice the depth of the chest by placing one hand on the top of the shoulders and the other between the front legs. While you are doing this you can determine the width of the chest on the floor. Then determine the strength of the back by placing the hand with fingers closed with a firm pressure on the back, and go back toward the tail. Always avoid an individual with a weak back. Determine the width of the loin by placing the hands on back side of loin. You want a full hind quarter, carrying the width throughout. The depth of the hind quarter is determined by placing one hand on the back just in front of the tail head, the other in the twist. A deep, full twist means a deeper leg of lamb. To determine the size of the leg of lamb, place the hands about the leg close up to the body. Every individual should carry a full leg, as this part constitutes one of the most valuable cuts. Next, determine the

character of the fleece by parting it on the shoulder, and on the thigh. The wool should be of good character, bright and show a uniform staple. Always notice the color of the skin. A bright pink skin indicates health.

After you have made your selection give rams good care so that they will be in the best breeding condition. Breeding and individuality are important, go hand in hand with proper feeding. G. L. BIGFORD.

Let the brood sow live out all summer in the open on succulent pasture, developing bone and muscle.

FARM AND HERD NEWS NOTES

G. C. Wheeler, Live Stock Editor
W. J. Cody, Manager Stock Advertising
O. W. Devine, Field Representative

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CLAIM SALE DATES.

Percheron Horses.
Oct. 15—P. E. Lill, Mt. Hope, Kansas.

Red Polled Cattle.
Aug. 20—I. W. Poulton, Medora, Kan.

Holsteins.
Nov. 14—Holstein Calf Club Sale, Topeka, Kan. W. J. O'Brien, manager.
Nov. 15—Breeders' Holstein Sale, Topeka, Kan. W. J. O'Brien, manager.

Poland Chinas.

Aug. 21—Earl Bower, McLouth, Kan.
Sept. 27—Ketter Bros., Seneca, Kan.
Oct. 3—Ezra T. Warren, Clearwater, Kan.
Oct. 4—Geo. Morton, Oxford, Kan.
Oct. 7—Jones Bros., Hiawatha, Kan.
Oct. 8—Dr. J. H. Lomax, Leona, Kan.
Oct. 9—Herman Groninger & Son, Bend, Kan.
Oct. 6—Ross & Vincent, Sterling, Kan.
Oct. 13—H. L. Glover, Grandview, Mo.
Oct. 20—C. M. Hettick & Sons, Corning, Kan.
Oct. 14—H. E. Myers, Gardner, Kan.
Oct. 15—H. B. Walter & Son, Ellington, Kan.

Oct. 16—A. J. Erhart & Son, Ness City, Kan.
Oct. 17—Adams & Mason, Gypsum, Kan.
Oct. 20—P. M. Anderson, Holt, Mo.
Oct. 22—Fred G. Laptad, Lawrence, Kan.
Oct. 23—McClelland & Sons, Blair, Kan.
Oct. 24—Dubauch Bros., Wathena, Kan.
Feb. 11—Ross & Vincent, Sterling, Kan.

Durocs.

Aug. 20—W. T. McBride, Parker, Kan.
Oct. 22—Fred G. Laptad, Lawrence, Kan.
Nov. 7—Kempin Bros., Corning, Kan.
Feb. 14—John W. Pettford, Saffordville, Kan.

Spotted Poland Chinas.

Feb. 14—R. W. Sonnenmoser, Weston, Mo.
Oct. 11—R. W. Sonnenmoser, Weston, Mo.

Chester Whites.
Oct. 21—Chester White Pig Club Sale, Topeka, Kan. W. J. O'Brien, manager.

Hampshire Hogs.
Aug. 23—Geo. Elia, Valley Falls, Kan.

R. Hague of Peabody, Kansas, owner of one of the good flocks of Shropshire sheep in this state reports his flock doing well. Mr. Hague has been breeding pure bred Shropshire sheep for many years and has found them the most profitable stock on his farm. A feature of his flock at this time is the choice lot of young stock including a lot of extra good rams.

S. M. Knox of Humboldt, Kansas, owner of the famous Knox Knoll herd of Mulefoot hogs, reports his herd doing well. He also reports a good demand for Mulefoot breeding stock. A feature of his herd at this time is the fine lot of spring glits. This year Mr. Knox bred a lot of his choice sons for September farrow.

Tredway & Son of Allen Center Stock Farm, LaHarpe, Kansas, owners of one of the choice herds of pure bred Jersey cattle in Kansas, report their herd doing fine. This is one of the heavy producing Jersey herds in this state and a feature at this time is the choice lot of young stock from high producing cows and by sires backed by records.

C. A. Fees of Wichita, Kansas reports his Holstein herd doing well. A feature of his herd at this time is the choice lot of heifers including some pure breeds. A lot of them will freshen soon.

Gust Claussen of Russell, Kansas, breeder of pure bred Chester White hogs, reports his herd doing fine. A feature of his herd at this time is the choice lot of spring glits of popular breeding.

The Poland China bred sow sale of A. J. Erhart & Son's was held at Hutchinson, Kansas, Wednesday August 6th, under very favorable weather conditions. The offering was presented in splendid breeding condition and sold at fair prices considering the extreme hot weather. No sensational prices were recorded or records broken, but the averages were very fair yet low enough to permit of liberal investment in breeding stock. The top price was paid for No. 1, black, a splendid two year old sow going to Moorland Farms, Keeto, Okla. at \$250. This will probably be the last sale of this kind made at Hutchinson, Kansas by Erhart & Son's as they move to their new home at Oregon, Mo., September 1, where they will continue to breed the big Poland Chinas.

SHORTHORN CATTLE.

WANT SHORTHORNS THAT COMBINE
BEEF AND MILK



We receive many inquiries for Shorthorns that combine beef and milk. We urge that all who are handling Shorthorn cows join the Milking Shorthorn Cattle Club of America, J. E. Torney, Secretary, 13 Dexter Park Avenue, Chicago. Grass-fat Shorthorn steers have topped the Chicago market. In the Record of Merit there are listed 830 Shorthorn cows of all ages whose records average over 8,000 pounds of milk annually. Send for literature.

AMERICAN SHORTHORN BREEDERS ASS'N
13 Dexter Park Avenue - Chicago, Illinois

ALL SCOTCH SHORTHORNS

Herd headed by Walnut Type, a grand son of White Hall Sultan, and Silver Plate, a son of Imp. Bapton Corporal. A few young bulls for sale. Robert Russell, Muscotah, Ks.

SHORTHORN CATTLE

For Sale—Five young Scotch bulls and ten head of females, bred or calves at foot.
H. H. HOLMES, R. F. D. 28, Topeka, Kan.

HORSES AND MULES.



Percherons--Belgians--Shires
Some choice stallions and mares for sale. All registered. Terms. Fred Chandler, Route 7, Chariton, Iowa. Above Kansas City.

PERCHERON SALE

I will sell twenty registered Percheron horses, stallions, mares and colts, serviceable and well bred, at public sale, October 15, 1919.

PERCY E. LILL, MOUNT HOPE, KANSAS

RED POLLED CATTLE.

RED POLLED BULLS

Twelve head coming two-year-olds and twenty head of coming yearling bulls. This is an extra nice and well colored bunch of bulls sired by top sires. Inspection invited.
E. E. FRIZELL & SONS, FRIZELL, KAN.

RED POLLS, BOTH SEXES, BEST OF BREEDING.
Charles Morrison & Son, Phillipsburg, Kan.

AUCTIONEERS.

LIVE STOCK AUCTIONEER—Fifteen years' experience. Wire for date.
JOHN D. SNYDER, HUTCHINSON, KAN.

BREEDERS' DIRECTORY

ANGUS CATTLE.
Geo. Dietrich, Carbondale, Kansas.
RED POLLED CATTLE
Mahlon Groenmiller, Pomona, Kansas.
Horn Dorset Sheep
H. C. LaTourette, Rte. 2, Oberlin, Kan.

CHESTER WHITE HOGS

FOR SALE—Pure bred Chester White pigs, best blood lines. Prices reasonable.
GUST CLAUSSEN, - RUSSELL, KANS.

HAMPSHIRE HOGS

Registered Hampshire Hogs—Sows and Spring Glits, bred or open. Choice spring boars. Double treated. Geo. W. Elia, Valley Falls, Kansas

JERSEY CATTLE.

DORNWOOD JERSEYS

Our registered Jersey bulls cannot be surpassed for quality and price. Come and see them or write for description.

Route 1 - Topeka, Kansas

BROOKSIDE JERSEYS

REGISTERED JERSEY BULLS, few old enough for service from Eminent Flying Fox dams, sired by Idalia's Raleigh, a son of the great Queen's Raleigh. Write for prices.
THOS. D. MARSHALL, SYLVIA, KANSAS.

ALLEN CENTER STOCK FARM

Registered Jersey bulls of choice breeding from high producing cows. Ready for service. Priced low. U. S. Government tuberculosis test.

TREDWAY & SON, LA HARPE, KANS.

POLAND CHINA REDUCTION SALE

At My Farm Near

McLouth, Kansas, August 21, 1919

FORTY-FIVE HEAD OF SELECT POLAND CHINAS

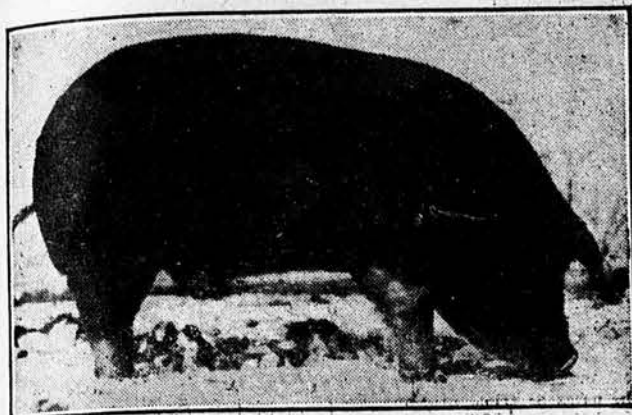
Twenty head large fall yearling gilts, several bred for fall litters; five spring gilts sold open; five tried brood sows bred for September litters, and fifteen choice spring boars.

I am changing locations and have sold the farm I now live on and am selling a choice lot of breeding stock that I would not sell if I was not moving to a new place. Everything is guaranteed right in every way. Please send for catalog and come to my sale.

ALL IMMUNED and insured for one-half selling price for one year from date of sale.

EARL BOWER - **McLOUTH, KANSAS**

Auctioneers—Col. J. C. Price, Col. H. Metzger



Bower's Bob, by the Champion, Caldwell's Big Bob

RED POLLED CATTLE SALE

At My Farm Near Medora, Kansas

WEDNESDAY, AUGUST 20th, 1919



I have sold my farm and will change locations and am obliged to sell thirty-two head of my cattle, consisting of

FIFTEEN MATURE COWS BRED, AND SEVEN COWS WITH CALVES AT FOOT (ALL HEIFER CALVES)

Four 2-Year-Old Heifers Bred, Five Yearling Heifers Sold Open, and One Extra Good 2-Year-Old Bull

All the cattle are registered and guaranteed right in every way. They are a useful lot of farmers' cattle and are of the milking kind of Red Polled cattle. They will make money for any farmer who will give them a little care and feed. Please send for catalog and come to my sale.

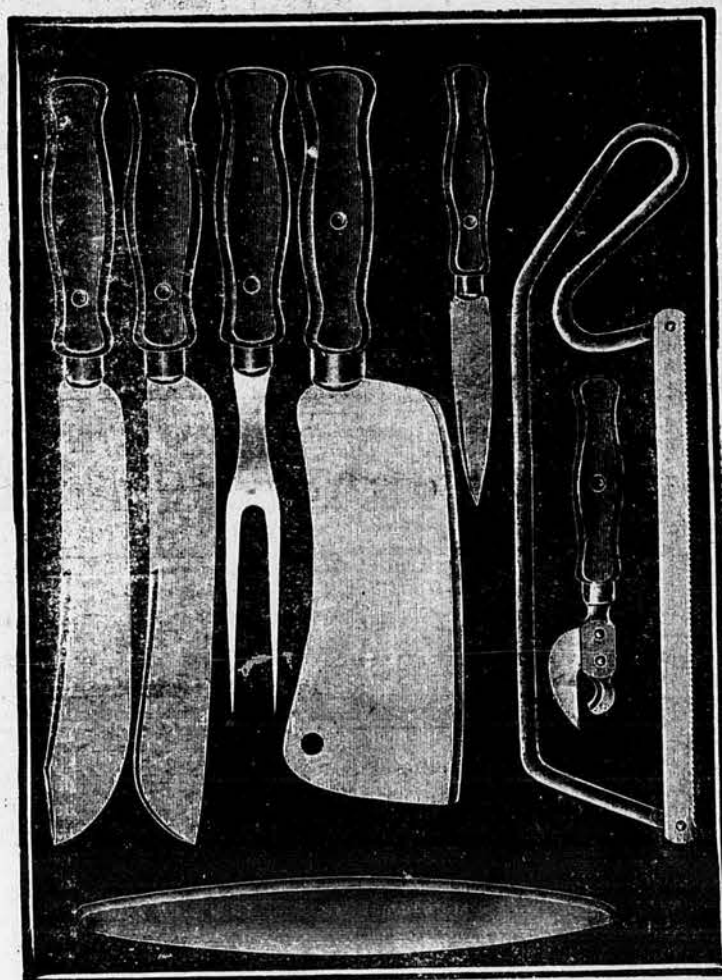
I. W. POULTON, MEDORA, KANSAS

Ten miles north of Hutchinson, Kansas, on the Rock Island and Frisco Railways.

Auctioneers: Col. John D. Snyder, Col. R. E. Talbert

Eight Piece Kitchen Set

FREE



This fine and useful eight-piece Kitchen Set, consisting of bread knife, carving knife and fork, meat cleaver, meat saw, paring knife, can opener and sharpening stone, is a practical necessity in every household. The bread knife and carving knife have eight-inch blades, the cleaver a five-inch blade, and the other articles are in proportion as shown in illustration. Every article in the set is guaranteed and will be replaced if found defective. It is a genuinely good kitchen outfit. Send for yours today.

SPECIAL OFFER.—Send us two yearly subscriptions to Kansas Farmer at \$1.00 each—\$2.00 in all—and we will send you **FREE** and **POSTPAID** one of these eight-piece Kitchen Sets. Use order blank below.

ORDER BLANK

KANSAS FARMER, Topeka, Kansas.

Gentlemen: Enclosed find \$2.00 to pay for one year's subscription for each of the following:

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19th. Annual Kansas State Fair

HUTCHINSON, KANSAS, SEPTEMBER 13-20, 1919

UNDER THE AUSPICES OF THE STATE BOARD OF AGRICULTURE

Big Annual Agricultural and Live Stock Event of Kansas. The Natural Meeting Place of the Breeder and His Buyer. Seventeen General Educational Departments.

Send for catalog now and make your entries and reservations early. New Live Stock Pavilion—New Mineralogy Building—New Swine and Sheep Pavilion—New Addition to the Big Grandstand—New Walks and Drives.

Three Days Harness and Running Horse Races

Two days Auto Races and Auto Polo every day and night. Grand Free Attractions and Music. The Grand Victory and Patriotic Pyrotechnic Panoramic Spectacle of the Battle of Chateau Thierry, together with free acts and grand music, will provide an entertainment each night that will have no superior at any of the great fairs of America. Send for catalog or information.

H. S. THOMPSON, Pres.

A. L. SPONSLER, Secy.

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Why Have Tractor Troubles?

YOU have a sturdy piece of machinery that does splendid service if it has correct lubrication.

It is conservative to state that 85 percent of tractor troubles are traceable directly to insufficient lubrication.

Lubricating oil is inexpensive—the cost of a burned-out bearing will pay for the lubricants necessary to keep the machine in order for months, and your tractor will not be out of commission when you need it.

The Standard Oil Company (Indiana) manufactures three lubricating oils for tractors—

Heavy Polarine Oil

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One of these three oils is the correct oil for your tractor, and the chart prepared by the Standard Oil Company (Indiana) Engineering Staff will tell you which one will give the best results in your particular tractor.

Consult the nearest Standard Oil representative. He

has the chart and will be glad to show it to you.

We have just published a 100-page book, "Tractor Lubrication," prepared by our Engineering Staff, which you will find a valuable reference book, and we believe it will save you many days of tractor idleness with the resultant money loss.

It's free to you for the asking. Address

Standard Oil Company, 910 S. Michigan Ave., Chicago, Ill.

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