

KANSAS FARMER

For the improvement of the Farm and Home

Volume 57, Number 9. TOPEKA, KANSAS, MARCH 1, 1919. Established 1863. \$1 a Year

FEEDS TO USE WITH SILAGE

Proper Use of Silo Insures Dependable Feed Supply

SILOS should be more generally used on the live-stock farms of Kansas and adjoining states in the near future than ever before, largely because of their efficiency in storing such crops as kafir, cane and corn so that the entire plant will be eaten. Another and most important reason, for Western Kansas, is that by using a silo a surplus of these crops can be stored in the big feed years and carried over to make up for the empty mows and feed bins of the poor feed years which are sure to come. At a cattlemen's meeting a few years ago Prof. W. A. Cochel called attention to the fact that the branch experiment station at Hays wintered a bunch of nearly 200 head of cattle the winter of 1913-14 on crops that were grown in 1912 and stored in the silo. In fact, when some of the most prosperous and successful cattlemen were compelled to reduce their herds that fall the station, by having a surplus of silage carried over from the good feed year of 1912, had been able to increase its live stock holdings. This was a practice which the college and experiment station men had been advocating for several years and it was a happy coincidence that they were able to practice what they had been preaching. No stronger argument for the silo than this can be advanced in sections where short feed years occasionally come. Live-stock production is a type of farming which cannot be carried on without a dependable feed supply, and until this is made certain by planning to store a reserve in silos, live-stock production will always be risky in sections where feed is likely to be short in some years.

In planning to use the silo to preserve forage for feeding stock cattle, maintaining breeding and growing animals or fattening cattle, it should be kept in mind that silage is a bulky, succulent feed, rich in the feed nutrients which produce heat and fat, but very much deficient in those nutrients necessary for growth. When a ration is so bulky that the animal cannot eat enough to make satisfactory gains, concentrated feeds such as corn and cottonseed or linseed meal must be added. When feeding for maintenance only or for making slow growth or comparatively small production it is only necessary to supply protein from some other source. By keeping these facts in mind, the cattleman, whether handling beef or dairy cattle, will find silage the cheapest and most satisfactory feed he can use. It is not too early to be planning for next year's feed and these points must be understood because they have a bearing on the kind of crops that will be grown.

In planning to feed silage it must always be borne in mind that it must be properly supplemented. Where alfalfa can be grown there is probably no more efficient combination of farming and feeding than to grow nearly equal acreages of wheat, silage crops and alfalfa, feeding the alfalfa and silage and wheat straw to high grade cattle. This method permits of a profitable system of feeding without the purchase of high-priced concentrates of any kind. Equally good results will follow the use of cow-pea or clover hay in place of alfalfa, although a larger acreage will be required to pro-

duce equal quantities of hay. If it is impractical to grow leguminous crops of any kind, the silage must be supplemented with limited quantities of cottonseed cake or meal, linseed oil meal or similar concentrated feed rich in protein. The experimental work conducted by the Kansas Experiment Station indicates that the proper proportion of these concentrates to use is about sixty-

five to seventy-five pounds to each ton of silage used. This would mean about one pound daily for calves, 1.6 pounds for yearlings, and two pounds daily for older cattle. If kafir or sorghum hay or wheat straw is used as a considerable portion of the total roughage, thus decreasing the amount of silage eaten, the quantity of concentrated feed should not be decreased, although the amount in

proportion to the silage would be just about double.

The mistake is sometimes made of maintaining breeding cattle on silage alone because it seems to maintain their weight fairly well and under favorable circumstances even produces small gains. It is not satisfactory, however, used alone, because of its deficiency in protein. An ideal ration for breeding cows can be made of silage, alfalfa hay, and some straw, which will provide all the materials needed for the proper development of the unborn calf. If alfalfa cannot be fed, the addition of a pound daily of linseed oil meal to the silage ration will be satisfactory. Experiments at Hays in feeding breeding cows seem to indicate that linseed oil meal is superior to cottonseed meal, although in balancing the ration for fattening cattle and stock cattle the cottonseed meal is preferable.

Many cattle feeders are making large use of silage in full feeding. Because of the bulkiness of alfalfa and silage these feeds should not be depended upon as a fattening ration except with cattle which are very thin at the beginning of the fattening period. They can be brought up to the condition of fleshy feeders or fairly good killing cattle on silage and alfalfa alone, but from that time on the gains will be too slow. To carry cattle to the higher finish there must be an addition of some less bulky feed, such as a mixture of seven or eight parts of corn to one of cottonseed or linseed oil meal. In full feeding cattle without alfalfa or other legume hay, the proportion of corn should be reduced from seven or eight parts to six to seven parts to one of the protein concentrate. In all of these methods of feeding cattle where silage is used they should have access to some dry roughage of low feeding value, such as corn or kafir fodder or wheat straw. Fattening cattle at the beginning of the feeding period will consume approximately fifty pounds daily per thousand pounds live weight when they are given alfalfa, clover or some other legume in addition to silage. As the fattening progresses and the grain ration is increased, the amount of silage is decreased until at the close of the fattening period they will probably not be consuming more than fifteen or twenty pounds daily per thousand pounds of live weight. If the alfalfa or clover hay is fed according to the appetite of the animals, the consumption of alfalfa will be reduced to about one-half of the amount eaten without the hay.

Live-stock farming, and particularly the growing of cattle, is a type of farming making it possible to realize to the fullest extent on the coarse, rough feeds which can be grown under Kansas conditions. In no other way can the full value of these feeds be so fully realized as by storing them in a silo.

You wouldn't play a game of any kind without determining who was the winner when it was finished, would you? Farming without keeping records is the same thing, except that you are liable to wake up some morning and find that you have lost the game when you had thought you were winning.

SILLO PROVES ITS VALUE

GETTING a larger return from the crops grown is a more logical means of increasing profits than attempting to farm more land.

There is no getting around the fact that a silo will increase the live stock capacity of any farm. More live stock on a given number of acres means a larger business—a greater opportunity for the farm owner to realize a good labor wage for himself and family.

Silage is a cheap feed. Men who have kept accurate accounts of the cost of producing silage find that as an average, covering a period of years, it has not exceeded two dollars a ton. Many who use kafir and cane as silage crops have stored these crops in the silo for considerably less than two dollars a ton in good feed years.

Silage is worth from four to six dollars a ton, say these men. They know, because they have kept account of the results in increased milk, butter fat, beef or other live-stock products. What further evidence could the doubter ask as to the economy of the silo in storing feed? And yet probably not to exceed 5 per cent of the farms of Kansas are equipped with silos.

But with all its advantages, silage is not a cure-all. It is a roughage feed. The fodder that goes in is not changed to a concentrate feed. Silage will reduce the amount of grain required in feeding stock quite materially because of its palatability and digestibility, but it cannot be considered as a substitute for grain. On many a farm the profit locked up in the rough feed has been getting away. The function of the silo is to save this lost profit. Almost anyone can sell grain, but the by-products of grain farming represent cost in labor and soil fertility.

If an acre of corn produces thirty bushels of grain, it is easy to figure what this grain is worth. It has an established value on the market. If corn is worth eighty cents a bushel, the thirty bushels can be hauled to market and sold for twenty-four dollars. But how about the fodder upon which this corn grew? Can anyone haul that away and get twenty-four dollars for it? It can be made to return such value, however, if stored in a silo and judiciously fed to good stock, and there are years in which the fodder is the big end of the crop. When no grain is produced the man without the silo must lose a large proportion of what it cost him to grow the crop. Here is where the silo gets in its best work. And best of all, the fertility value of the whole crop is retained and can be returned to the soil.

On the farm where there is plenty of good roughage stored, largely in the form of silage, purchased feeds, such as cottonseed meal, can be profitably fed, and every ton of such feed brought to the farm, in addition to giving good return as feed, brings its store of fertility. A farm stocked to its fullest capacity, with a silo to utilize every particle of fodder grown and so managed that concentrate feeds can be fed with profit, is certain to increase in fertility and productive power.

The cost of the silo and machinery may seem high, but an investment that brings such good returns is not a losing one by any means. Money put into a silo will be more productive than any other investment that might be made on a live stock farm. The coming year should see a great increase in the number of silos bought and placed on the farms of Kansas.

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When a dog isn't hungry he buries a bone. A lot of people haven't that much common sense.—Denver Field and Farm.

What a hopeless jumble this old world would be, cogitates the Christian Herald, if we made as many mistakes as the other fellow.

Good Outlook for Shire Horses

THE status of Shire horse breeding in England has an important bearing upon Shire business in America. It is claimed that at the present time the Shire is perhaps more popular in his native country than he has ever been before. This is in spite of the introduction of Percherons into England. The Shire is the Englishman's horse. He has been developed through many years of breeding for an ideal type. It is only natural that when so strenuous a period as this of the war and the present period of extraordinary activity which follows that the Englishman should cling closer than ever to this great breed which has done such wonderful service for him. The Shire's most marked ability lies in his fitness to do extremely heavy work and to stand up well under the strain of farm and city labor.

"The Shire has ever been the mainstay of British horse-breeding," says W. G. Lynch, secretary of the American Shire Horse Association. "True enough there has been the Suffolk which, if it did not actually compete with the Shire, met the fancy of some who desired a horse with fine limbs and without the feather on the legs. Then there has been the Cleveland Bay, the Hackney and the Thoroughbred. All these had their place and have doubtless been useful in their way. Yet above all the Shire has been the horse of England. He is almost as distinguishing a figure for that country as is John Bull himself. The Shire has not confined his influence to England, but it is said on good authority that his blood has been used in building up and improving some of the other draft breeds.

"Just as Shire stallions in America have sired thousands of great geldings, so have the Shire stallions in England sired almost countless numbers of big, sturdy, useful geldings. At the public auctions in England during the past year average prices for Shire geldings have probably exceeded any prices ever received anywhere. In March a sale averaged \$830 per head. In November a report from England stated that in the county of Herefordshire farm mares were selling for \$1,100 and geldings at \$955 per head. Many individual sales have been even higher.

"The price at which pure-bred Shires in England are changing hands was never more satisfactory except that there are but few offered on the market to take advantage of the high prices. Many of the tenant farmers of England are starting into Shires. They expect to work the mares and to pay the principal part of the rent of their farms from the sale of young Shire stock. As many as 200 new members have joined the Shire Horse Society of England in one month. Men of wealth and men who farm extensively in England are casting their lot with Shire breeders. One of them, E. C. Fairweather of Sussex, has paid \$7,500 for a three-year-old stallion, Boro Draughtman, carrying some of the most desirable blood of the Shire breed. One of the most sensational sales recently was that of a foal for \$7,000. In the same sale another foal made \$4,560, and other sales of \$2,000 and \$4,000 for foals are reported.

"A few Percheron horses have been imported into England, but they are not in any way superseding the popular Shire, nor are they in any way interfering with the popularity of that breed. Those Percherons have been taken into England for a distinct purpose, as is set forth in an editorial in a recent issue of the Scottish Farmer, in which it says, 'Army horses and the determination to produce a breed of such within the British Isles, appears to be the controlling motive for the effort to introduce the Percheron into this country. A Percheron society has been formed and men connected with the Remount Department are chiefly responsible for its organization. The Hon. R. E. Parker, Easton, Norwich, would appear to be the man who has imported the Percheron stallion and mares from Alberta. The aim of the promoters is the production of the horse weighing around 1,200 pounds.'

"An enterprise which has as its aim the production of 1,200-pound army horses certainly cannot interfere with the breeding of big powerful Shires, many of which approach double that weight. In our own United States there are various movements on foot to breed army horses. However, not one of us labors under the delusion that these ef-

forts to produce small or medium-sized army horses will for a day or a moment interfere with our great enterprise of breeding Belgians, Clydes, Percherons or Shires in our own country. In a strikingly similar manner the breeding of army horses in Britain from Percheron foundation leaves the Shire as clear a field in draft horse operation as he has ever had.

"The Shire situation in England offers great encouragement to our American breeders of Shires. The Shire has grown in popularity in his native country and will grow in popularity in the United States. High prices have come for Shires in England. Likewise prices for Shires in our own country will rise. The scarcity of breeding stock in England and the consequent shortage of young animals means that few if any Shires will be available for export to America. Hence the market of our country will find it necessary to depend upon our home breeders to keep up the supply of registered stock. Here is another factor which will cause prices on registered Shires to rise. As soon as it is possible for exportation of horses to Europe to begin there will be an unprecedented demand for animals having a degree of Shire blood. England will need a great many horses and, of course, her land owners and teamsters will want Shires and grades Shires in so far as it is possible to secure them. Thus an analysis of the situation gives hope and encouragement to the enterprising breeders of grade and registered Shires in America."

Live Stock Association Officers

A number of important live stock associations held their annual meetings at Manhattan during Farm and Home Week. The new officers for the Kansas Improved Stock Breeders' Association are as follows: President, Robert H. Hazlett, El Dorado; vice president, Dan B. Casement, Manhattan; secretary-treasurer, C. W. McCampbell, Manhattan. George Ela, Valley Falls; A. L. Stockwell, Larned; and J. C. Robison, Towanda, were elected third, fourth and fifth members respectively of the executive board.

The Kansas Horse Breeders' Association elected D. F. McAlister, of Topeka, president; Prof. F. W. Bell, Manhattan, secretary-treasurer, and W. H. Rhodes, Manhattan, third member of the executive board. The following men were elected vice presidents for the eight congressional districts of the state: Fred True, Perry; G. R. Soward, Baldwin; G. W. Forbes, Cherryvale; William Branson, Overbrook; Ed Nickelson, Leonardville; J. M. Rogers, Beloit; H. L. Salmon, Fowler; J. C. Robison, Towanda.

A. L. Stockwell, of Larned, was re-elected president of the Kansas Sheep Breeders' and Wool Growers' Association, and A. M. Paterson, of Manhattan, was re-elected secretary-treasurer. J. L. Kyle, La Cygne, Kansas, is the new vice president. Those present at the annual meeting voted in favor of the association going on record as desiring to co-operate with other agencies to increase the consumption of sheep products in this country.

The Kansas Swine Breeders' Association elected Fred B. Caldwell, of Howard, Kansas, as its new president. E. F. Ferrin, of Manhattan, was elected secretary; Charles Case, Silver Lake, treasurer, and George Berry, Topeka, as the incoming member of the executive committee. Fred Laptad, of Lawrence, was designated as the delegate to represent this organization at the annual meeting of the State Board of Agriculture. During the business session the swine breeders brought up the question of market prices for hogs and prepared the following resolution addressed to the United States Food Administration:

"Whereas, The price of corn is high and will continue to be so until a new crop is grown, the price of all mill feeds is equally high and labor expensive; therefore be it

"Resolved, That we ask that the minimum of \$17.50 on hogs be maintained and publicly announced until the next feed crop is harvested.

"Whereas, The swine producers of this country have complied with the requests of the government in increasing the pork production 20 per cent, and there is a large number of hogs on hand; therefore be it

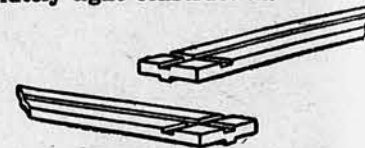
"Resolved, That we recommend a reasonable minimum be fixed on mill feeds until the growing crop of wheat is marketed."

Speaking of Cleansing Agents

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Editorial, Advertising and Business
Offices, Topeka, Kansas

Entered at Topeka Post Office
as Second Class Matter

Published Weekly by The Kansas
Farmer Company, at Topeka

KANSAS FARMER

THE FARM PAPER OF KANSAS

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INCOME TAX REPORTS

In this issue we give the instructions of the Internal Revenue Department on the making out of your income tax report. Owing to the delay in passing the new revenue bill in Congress, the time is now very short, as statements must be in by March 15 unless the time is extended. W. H. L. Pepperell of Wichita, collector for this district, reports that between now and March 15 he can send deputies to assist taxpayers only to county seat towns. The postmaster of each county seat has been notified when the deputy will be in his city. Taxpayers should spread the news among their friends as widely as possible so that all may take advantage of the help offered. Mr. Pepperell feels that the time should be extended and is hoping to receive such information from the department at Washington. In the case of an extension of time he will arrange a new schedule which will provide for a representative of his office at practically every town in the state. He feels that it is an imposition to expect taxpayers to get their reports in on such short notice, but as matters now stand he cannot furnish more help than that indicated above.

Thousands of farmers will have to make out income tax statements this year. The necessity of reporting income to the government acts as a stimulus to more closely analyzing the farm business. It is not easy to keep books on the farm, but it can be done and each year more farmers are doing it. The government in the blanks provided gives recognition to farm bookkeeping by stating that "in case you have complete farm records already summarized, enter the totals from your books in the spaces provided therefor." We would again remind our readers of the Farm Account Book published by the Kansas Bankers' Association and which we can furnish as a premium with KANSAS FARMER.

BUY WHAT YOU NEED NOW

"Buy only what you need and buy it now," is the slogan of a movement started by the National Council of Defense. Its purpose is to stabilize the return to normal conditions following the war period. We are probably all laboring under the delusion that there should be a marked lowering of prices of the things we have to buy in the near future. As a result we simply delay buying what we really need, waiting and hoping for the expected-drop in prices.

It has been announced that steel was lowered \$4 a ton January 1, but this reduction did not apply to makers of farm implements. The \$5 a ton differential enjoyed by the makers of farming implements during the war has been withdrawn and they are now compelled to buy in the open market and are actually paying one dollar more a ton for steel than while the war was in progress. Labor all over the country is fighting hard to keep up the wartime wage scale and it seems almost certain that there can be no immediate reduction in the price of agricultural machinery. In view of these facts, it is not good business to delay too long in ordering what is needed for handling the work of the farm the coming year. Undoubtedly much farm machinery has been used until it is badly worn out and needs replacing. There is little hope of prices dropping in the near future, and it is poor policy to wait until the last minute before buying the tools required to handle the business efficiently.

LIVE-STOCK MAN GOOD FARMER

In addressing the Kansas Live Stock Association at its annual meeting in Hutchinson last week President W. M. Jardine of the agricultural college made the point that the specialist in live stock is too often a better stockman than he is a farmer. President Jardine maintained that the man with perhaps \$75,000 of capital invested, of which \$50,000 is in land and equipment and \$25,000 in this stock, should make as high a rate

of income on the \$50,000 as on the \$25,000 if he is a good business man. This is a point well worthy of consideration. The live stock man who would remain in the business permanently must be a good farmer, for his business embraces crop production as well as live-stock production. In fact the live-stock end of the business is largely conducted to furnish a more profitable market for the crops grown. Many of the by-products of farming can be marketed profitably in no other way than through good live stock. The more productive the live stock farmer makes his acres, the larger he can make his live-stock business, thus enlarging his business as a whole without increasing the number of acres farmed.

President Jardine in his address covered the various phases of the live-stock work as they are being investigated by the agricultural college and experiment station, speaking in considerable detail of the comprehensive studies being made at the Fort Hays branch experiment station in wintering breeding beef cows beginning with the winter of 1913-14, studies in the value of the sorghums as silage crops, the use of barnyard manure to increase crop yields, the pasture improvement work, and the development of means of more successfully combating blackleg, contagious abortion, and other animal diseases. He closed with the following words:

"The live-stock industry is essential to a permanent agriculture for Kansas. Its future growth probably lies in the direction of a greater number of farmers engaging in it. A few animals on every farm is the sound policy for the state as a whole, for this means cheap fertilizer for every farm in maintaining soil fertility, and a year round job for the farmer and his family. But whether large live-stock grower or general farmer, future emphasis must be placed on economy in production. The future live-stock program includes growing more forage crops, utilizing the by-products of the farm either as silage or roughage, increasing acre yields by the careful use of all barnyard manure, and growing animals that are efficient in converting feed into meat.

"The agricultural college exists only to serve the people of the state. It will be our pleasure as well as our duty to make the work of the college along animal husbandry lines solve the problems that confront you. The amount of service we can render will depend upon the co-operation and assistance we receive from you, collectively and individually. We desire to be regarded as an instrument through which you may work for the promotion of the live-stock interests of the state. Our policies should be in thorough harmony. We welcome constructive criticism and suggestions at all times."

ADVERTISING DAIRY PRODUCTS

Enormous quantities of milk and cheese have been exported during the past two years. This cannot continue and dairymen might as well look back to the market they had five or six years ago in planning for the future outlet for dairy products. Dairy products have such an important place in the dietary of our people that the home market if properly developed should be sufficient to make the business profitable. We must face certain conditions, however.

W. A. McKerrrow, of Wisconsin, in addressing the members of the Kansas State Dairy Association at its annual meeting, stated that the consumption of butter had fallen off 400 per cent and that there had also been a greatly decreased consumption of milk. This in spite of the fact that there is no substitute that can take the place of these products. We need a nation-wide campaign of education on the value and importance of butter and milk in the diet. Owing to the present high price of butter many have discontinued its use. Prices can be too high for the best interests of the producer. Mr. McKerrrow

referred to the feeding of the sufferers in the fire-swept regions of Minnesota last fall with oleo and other substitutes and stated that following a period of this elimination of milk and butter from the diet the children of that section had developed rickets and other results of malnutrition. He said that we see day after day in our magazines and papers advertisements of the various substitutes, but never a line setting forth the vital facts as to the value of milk and butter. In Minnesota the dairy interests were called together to consider ways and means of combating this increased use of substitute products. In all \$125,000,000 worth of products were represented and an advertising campaign started for advertising dairy products all over the state. It is to be taken to the county breeders' association, to the small store keeper and to every possible place where influence can be brought to bear tending to show the real facts about dairy products in the diet.

The advertising of dairy products is being taken up in a nation-wide way by the national dairy organizations. Publicity is now being put out concerning the second National Milk and Dairy Farm Exposition in New York City, which will be held the week of April 21. Nearly a hundred thousand dollars is being put into this exposition to convince the milk-consuming public of the food value of milk and butter and also that milk costs are reasonable. The holding of such an exposition in the heart of a great city will be a distinct boost for the dairy interests of the whole country. The producer of dairy products must recognize that this organized movement to advertise dairy products in a large way is in his interest, for it insures an outlet for the product of the dairy cow.

The dairy and food commissioner of Iowa has just made public a report showing that 88.5 per cent of the selling price of a pound of butter goes for raw material or back to the man milking the cows; 9.3 per cent pays the cost of manufacture, and 2.2 per cent goes in the form of dividends to stockholders. The dairyman's 88.5 per cent in Iowa for 1918 amounted to \$34,344,085. In Kansas, if the same figures hold, which can safely be assumed approximately at least, the producer's portion of the value of the butter sold in 1918 amounted to \$17,493,861. The oleomargarine dollar paid by the consumer is divided as follows, according to the Iowa report: 60.9 per cent for raw material, 8.1 per cent for cost of manufacture, and 31 per cent for profit. It can easily be seen from these figures why in such states as Kansas or Iowa every interest should boost for the consumption of real butter instead of the substitutes. Much of the raw material of oleomargarine is cottonseed oil or coconut oil and comes from the South or the islands of the Pacific. The dairyman need not fear for the permanence of his industry, but he must recognize the necessity of educating people on a large scale regarding the value of his products as food.

DEFENSE OF PACKERS

Captain Dan D. Casement, one of the prominent live-stock farmers of Kansas who has made a success of the business in a large way, argued for a square deal for the packers in his address before the annual meeting of the Kansas Live Stock Association. Captain Casement has only recently returned from France, but he has studied carefully a summary of the report of the Federal Trade Commission on the packing industry, the report of the market committee of the American National Live Stock Association, the statements made by Mr. Morris and Mr. Armour before the Committee on Interstate and Foreign Commerce of the House of Representatives, and finally the Kendrick bill now before Congress. His conclusions are that the Federal Trade Commission report and some of the provisions of the Kendrick bill constitute an attack on the size and expansion of the packers and not on their behavior. He maintained that their conduct and not their size is the

only thing that concerns us or our government, that we should not fear to permit power, we should not destroy it, our only job being to provide that it shall not be abused.

Captain Casement views the demand that the stock yards must be "neutral ground" as a result of the theory that the packers and the producers are and always will be sworn enemies. He does not agree with the purpose of the Kendrick bill to separate the packers from the control of their refrigerator cars, believing that it would cripple their efficiency. He cannot see that the report of the Federal Trade Commission furnished any proof whatever that the ownership of cars or the stock yards crippled competition. Regulation and control are desirable, pointed out Captain Casement in the course of his argument. He said:

"The other provision of the Kendrick bill looks to this very thing and for that reason I am for it. To regulate and control with fairness is a proper function of government and in this case is dictated by sense and necessity. Get, at whatever cost, intelligence and honesty to do the work of supervision. License the packers if need be. Restrain them from committing any abuse of their great power, but do not, either directly or indirectly, try to destroy them merely because of their size. If you do, you are lending your aid to reaction; you are returning to an era that the world has outgrown. Adherence to the morals and economic practices of that era led the packers to do the things that revolt the morals and the conscience of the present, and that have given rise to all the hatred and distrust in which we have held them. The report of the trade commission is, more than anything else, a reflection of that hatred and distrust. Let's call it the last chapter of the old story. Let us not enact reactionary legislation on the strength of it.

"Individual or corporate ownership and administration, held on the track by honest and intelligent government supervision, should preserve the valuable initiative and energy that distinguished the old order, while making industrial ethics conform to the demands of the new. It is no time to indulge envy, revenge or hatred if we are now to profit by the lessons of the war and embody them in our national policies and aspirations.

"I have great respect and admiration for Senator Kendrick. I believe the market committee is honest and sincere; that it has performed a very useful service and that a wide field of usefulness still awaits it. I advocate its continued support. But I feel that the time has come for producers and packers to approach their mutual problems with revised ideas and vision unclouded by the wrongs and contentions of the past. I do not feel that the American National Live Stock Association, in endorsing without qualification the trade commission's report and in advocating legislation based on its recommendations, is approaching this problem in that way."

The views expressed by Captain Casement were probably not popular with the majority of his audience. The packers, however, have no strings on him, and we must take his statements to be his honest convictions following a careful study of both sides of the question. Captain Casement's personal interests are wholly on the side of the producers, for cattle production is his sole business. In conclusion he said:

"Some measure of unselfishness must enter into a just solution of the problem, some ability to see the other fellow's side, some recognition of the fact that packers and producers are in the same boat and must sink or swim together. Without this conception of the situation we are bound to involve ourselves and our country in a long period of trouble and distress. With it I believe we can reach a right solution of our difficulties that will bring us more contentment and will make the packers themselves infinitely better and, consequently, far happier than they have been for many years."

SILO IS VALUABLE EQUIPMENT

By Storing Crops as Silage We Can Feed the World

By A. L. HAECKER, Lincoln, Nebraska

THE silo has proven itself the most valuable equipment on the live-stock farm. Without a silo the live stock farmer is handicapped and cannot make the best use of the various crops grown.

The war is over, but a hungry world is demanding food and that means continued economy in production. The greatest call is for live stock and live-stock products. The cattle of Europe have been greatly reduced in numbers. They are millions of cows short, and this country must supply the deficiencies in dairy and other live-stock products.

The silo most certainly served its part in the winning of the war, but all too few were enlisted. With the present demands for live-stock products the opportunities are right for making good profits in the business of live-stock farming.

Economy of Silo

The economy of the silo is now well recognized. It has proven that it will save ten cents on the production of a pound of butter, forty cents on the production of a hundred pounds of milk, and \$1.50 on a hundred pounds of beef. It also saves labor, insures large milk production and quick fattening. It insures your corn crop, for neither dry weather, frost nor hail can make the crop a total loss where the silo is used.

Silage is the cheapest known source of the feed nutrients known as carbohydrates. This explains why we find silos on our very best live-stock farms. Most of our great dairy records have been made by cows fed on silage and nearly all of the prize-winning fat animals have had some silage in their ration. Success in the dairy and live-stock business almost invariably follows where a liberal use is made of silage.

You can supplement your pasture with a silo. Six times more feed can be raised on an acre put into corn and harvested as silage than where this same acre is in grass. The land is high in price, and it is a losing proposition to keep high-priced land in pasture.

Silage and alfalfa or clover hay makes a balanced ration and wonderful results have been obtained from these two feeds alone. It is of the greatest importance in growing live stock to feed a cheap and wholesome ration during periods of high-priced grains. Good feeding is profitable feeding. You do not have to take my word for this; ask any man who has a silo.

Eight states through their councils of defense saw fit last year to advocate the silo as a means of national defense and the winning of the war. Some of these silo-building campaigns were headed by the governors themselves, who emphatically pronounced the silo one of the most important equipments for economy in production that could be put upon the farm.

Vitamins in Silage

In the corn belt corn is king of all silage plants. We have often marveled at the wonderful feeding value of corn silage. Doctor McCollum, of Johns Hopkins University, through his famous experiments, has made this clear. His nutrition experiments have resulted in some very valuable findings, especially the development of the fact that there are certain substances which are now commonly called vitamins found in the oils and fats of certain food products. These substances are found in the corn plant, and it is probably due to this fact, in some measure, that when preserved as silage the plant becomes such a good feed for live stock of all kinds. The chemist can determine the amount of protein, carbohydrates and fat in any feed, but there are other valuable elements the presence of which he cannot determine. The digestibility of the different feeds is another matter which is hard to determine, but feeding tests with animals will give fairly reliable and dependable results. Corn silage is not only rich in digestible carbohydrates, but it also contains the vitamins, those substances so essential to animal life and development.

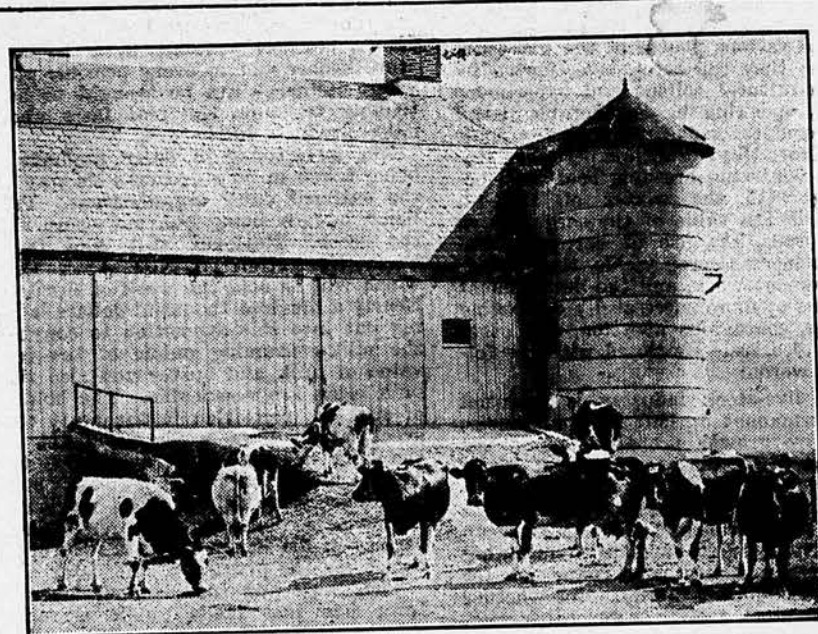
The wise feeder will keep in mind two important points when he makes up his ration: First, it must be a ration which will supply the necessary nutrients for growth or production; second, it must

be a cheap ration, or at least as cheap as he can possibly supply. Silage meets both of these requirements, and to feed well and cheaply silage should be used to make up the basal part of the ration.

In silage we have a succulent feed, which means that it is grasslike, palatable and relished by the stock. It represents the largest amount of good feed that can be grown on an acre. It represents the largest amount of digestible carbohydrates that can be grown on an acre, and it also represents sufficient amounts of the vitamins which are so necessary for the growth, vigor and life of the animal. Briefly this explains why we find the silo towering high where intelligent farming is practiced and where it is necessary to produce the greatest possible income from the acreage. We shall see more silos in the

as silage. Beet tops are easily made into silage and in many parts of the country have become a staple forage for farm animals. Where beets are free from dirt the whole plant can be successfully cut up and put into the silo. In sugar beet growing sections the silo should be used to save the beet tops. As silage these tops make a splendid feed, especially for milk cows, and can be fed with equal success to fattening and growing stock.

The much-despised Russian thistle of the wheat-growing sections of the West and Northwest has been found to make good silage. It will grow where practically nothing else will survive in long periods of dry weather. When these weeds are cut while still green and run into the silo, they make excellent forage and are relished by all farm animals.



SILOS AND GOOD DAIRY BARNs HELP TO MAKE DAIRY FARMING MORE PROFITABLE

future because we want to make our acres earn more and we must feed with greater economy.

Other Silage Crops

Corn is by no means the only satisfactory silage crop. The sorghums are particularly adapted to many of the western and southern states. They produce high-yielding crops in sections of light rainfall. Of the sorghums perhaps kafir is the most valuable. The feeding tests at the Kansas Experiment Station have shown it to be practically the equal of Indian corn. It makes the best of silage for all kinds of stock and its ability to produce large yields with a minimum of rainfall makes it a dependable crop in many sections where corn is most uncertain.

Milo, cane or sweet sorghum, feterita and Sudan grass, all members of the sorghum family, are very valuable as silage crops because of the high tonnage yields per acre and their drought-resisting character.

Beet pulp as produced from the sugar factories has been used for many years

Experiments are now under way at the Hays Experiment Station to determine the exact value of Russian thistle silage as compared with other silage crops.

Sunflowers have also proven to be good silage plants. At the Montana Experiment Station they were tested out as a silage crop during the year 1918. They produce very high yields, often running as high as thirty tons to the acre. The sunflower silage is relished by live stock and has a high feeding value, being nearly equal to corn silage. In many of the western states wild sunflowers are noxious weeds and grow in the corn and kafir fields with such luxuriance that they make up fully one-half of the crop. I have seen corn with wild sunflowers harvested where the sunflowers comprised fully two-thirds of the tonnage. The silage thus produced was not only relished by the stock, but proved high in feed nutrients.

Many other weeds, such as pig weed, rag weed, pigeon grass, and bind weed, also make fairly good silage. For this reason a corn crop which has been taken

by the weeds can be profitably and successfully harvested and stored as silage. The process of fermentation seems to destroy the germination power of the weed seeds so there is little danger of making the land foul by putting weeds in the silo.

In this reconstruction period when the demand is so great for live-stock products, all forage plants should be put to their most valuable use. Many of the hay crops, such as clover, alfalfa, timothy, millet, oats, peas, and soy beans, in wet seasons when hay-making is difficult can profitably be made into silage and in this way be made to yield a full return in feeding value. Practically all our grass and grain crops can be made into silage. Wheat, rye, speltz, barley and peanut vines will make fairly good silage. In the high plateau regions of the West and Southwest where peas and Mexican beans produce large yields, the silo can be used to store these crops and put them in such shape that they can be fed throughout the year or even carried over for two or three years.

Silos Are Cheap

Silos are cheaper now than they were before the war if considered in terms of values of farm produce. The table on this page will illustrate this fact, and these same figures can be applied to any farm equipment. The table given is for a ninety-ton silo, priced at \$300 in 1914 and \$400 in 1919. The market prices on the various feeds given are those of the Chicago market during the first week in January of each year. By averaging the cost for both years it will be found that silos are 36 per cent cheaper than before the war, considered in terms of the value of farm products. It will be observed that while silos have increased in price, they have not increased in the same ratio as the various farm products, and as this represents the commodity of exchange it is safe to say that silos are cheap. Farm produce has a greater purchasing power now than ever before, and the need for farm equipment, especially that which works for economy of production, is very great. The scarcity of live stock and live-stock products and the high prices of all kinds of forage make the silo more necessary than ever before. It is wise to order your farm equipment early, whether it be a silo, a tractor or some farm tool. This is so because it is exceedingly difficult for manufacturers and jobbers to handle the trade unless it be distributed through the season. The tendency is always to delay ordering until late and this makes a rush at the end of the season, often resulting in great difficulty in making deliveries. Many companies offer discounts for early orders. These will amply offset any interest which might be involved. It also affords more time for construction, and slack seasons can be turned to good advantage in this way.

Under present conditions the silo will more than pay for itself every year. The great need of a cheap, succulent feed is recognized by every live-stock farmer and with the silo it is possible to have this in any section of the country. Bulky forage should be grown on the farm where the stock is kept, and if feed must be purchased it should be in the concentrated form. The silo makes it possible to keep more stock on the land, and its use is in harmony with intensive farming methods.

It is poor economy to hold off from the purchase of any needed farm equipment on account of prices, for the chances are that the prices of all such equipment are lower in terms of farm produce purchasing power than ever before.

Now that farming is to be restored to a peace-time basis, lands suitable for meadow or pasture should be reseeded to grass. Regular and satisfactory rotations of crops should be established, and live stock should find a place on a larger number of farms. These readjustments appear to be necessary in order to meet the still urgent demand for meats and fats, as well as to restore sound farm practice.

I do not know of any way so sure of making others happy as being so one's self.—SIR ARTHUR HELPS.

FARM PRODUCE NECESSARY TO BUY 90-TON SILO

JANUARY, 1914		Produce	JANUARY, 1919	
Price	Amount Required		Amount Required	Price
\$0.89	337 Bushels	Wheat	178 Bushels	\$2.25
.85	461 Bushels	Corn	248 Bushels	1.41
.40	750 Bushels	Oats	588 Bushels	.68
.40	750 Pounds	Butter	571 Pounds	.70
.36	833 Dozen	Eggs	571 Dozen	.70
8.00	3750 Pounds	Hogs	2222 Pounds	18.00
9.25	3243 Pounds	Beef	2000 Pounds	20.00
8.00	3750 Pounds	Lambs	2500 Pounds	16.00
15.00	20 Tons	Alfalfa Hay	11½ Tons	36.00

RELOCATING MAIN HIGHWAYS

Remove Main Roads from Hills and Follow Railroads

By W. H. WYLIE, Jennings, Kansas

THE way to go at the road-building problem is to start right and not get excited. Take a steady business view of the situation. Start right and build right. In most instances relocate and build the best possible grade, but don't rush the hard surface. Later, if we cannot obtain a fair price contract, the state can make its own brick, also its cement. Our state abounds in this raw material. If the boys continue to come home, this grading and engineering under competent chiefs will, with other labor in the state, furnish them employment for years to come. Many see an opportunity for much graft in this rush hard surfacing. I have been a resident of Kansas for over forty-seven years, and I know how labor and money has been wasted through inefficiency.

In the early days we often could travel for many miles on our ridge roads without climbing a hill. Today there are no angle roads in the state, except a few stretches adjoining the railroads. Here is a suggestion for real road improvement. Please refer to any road guide map, which shows the many turns of the highway and note the contrast. The railroads run on lines of least resistance, while the highways zigzag continually, turning the square corner whether this happens on a hill top or in a deep ravine. Must the public forever endure this condition? The railroad right of way gracefully follows the line of least grade resistance.

The number of passengers that travel on the highways is greater than the number that travels on the railroads. Why shouldn't the legislature depart from the old-fashioned idea that it is illegal to make a public road except on the roundabout hills of the section line, and give us legislation which will relocate main roads following the railroad right of way? We all know that this is the best possible route to eliminate grade and distance, as is proven by the railway engineers. An additional strip of right of way sixty-six feet wide would be but a trivial matter compared with the saving in making a road.

Sixty-six feet, perhaps, would be wide enough on the level land, and that is only eight acres per mile. Where high grades and deep cuts are needed it would require a wider strip. The roadway should be at least thirty feet wide when paved. Where the railroad runs at an angle of forty-five degrees, as it often does, it cuts out 32 per cent of distance over the section line. This does not include the additional distance in climbing and descending the hills of the section line. Add to this the many dangerous 90 degree turns, and the numerous railroad crossings, the public will save at least a third in time and power.

Why we have not made this change years ago is a mystery to many. If we fail to relocate these roads, it is certain that later generations will. For instance, the early settlers of Seattle, Washington, thought that the hills were good enough to build over, but some ten years ago a later generation spent millions of dollars to regrade a large part of the city. It also cost hundreds of thousands of dollars to tear down buildings, or to lower them to the new levels.

The sentiment for hard surface is now very strong. In my estimation it would be criminal to pave without first engineering the best location. Speaking of hard surface, the best brick pavement is the cheapest, even if it costs two or three times as much. Cheap hard surface will become choppy under heavy, high-speed traffic. When a hard surface starts to break, the impact and friction of driving wheels is very great. In time our highways will carry as heavy tonnage as our city streets do, and at a much higher speed, which requires a more solid foundation than the same traffic at low speed.

The difference in distance, when it comes to paving, will save the cost of many new road locations. Practically 100 per cent of our people are interested in the best roads it is possible to build. Every one travels the highway for business, health or pleasure; and I know they all will favor the "adjoining" plan on all main roads, except in a few favored localities where the country is level. Even then, to pass through the

town, the road has to strike the railroad. In such cases it should follow the railroad later to reduce distance. When my family and I, while touring, strike a stretch of highway following the railroad, we consider it a special treat.

Now that the United States and the several states are going to spend millions of dollars for good roads, we should see that these great sums are used to the best advantage and put where they will do the most good. This is impossible if we follow the old section lines.

A Nebraska farm paper estimates that cars pass over the O. L. D. highway at the rate of fifteen an hour. Counting four persons to the car, and ten hours travel over the road each day, that is a total of six hundred passengers each day. If we shorten our mileage and time a third, which I believe can be done, think what a saving this alone will be in the decades to come, for present-day traffic is not nearly as heavy as it will be later.

The motor vehicle will be used for all time, so let's not equip for speed and pleasure and rapid freight transportation and then spoil it all through lack of engineering efficiency. Are we, the people who own the state and practically pay the building and traffic costs of all railroads, so entirely inadequate in civil engineering efficiency? For fifty years the railroads have been showing us how.

Perhaps some law, or the lack of good up-to-date laws, handicaps us in this good work. If so, let us change them in this legislature. Let us have laws that will give the people of Kansas the best of roads. Kansas is the natural lane for travel between the East and the West. Western Nebraska is too sandy, while Oklahoma is not to be compared to Kansas as a highway route. Most railroads running through Kansas can be adjoined by a highway that could not be equalled by any other route.

Let us beware of cheap hard surface, as many towns in Kansas have found them unsatisfactory. In paving, the crown should be extremely mild, for, as we all know, this crown changes the center of gravity on each vehicle to the right-hand wheels, thus throwing a disproportionate weight on the road bed.

Last fall I received the following letter from P. St. J. Wilson, acting director of the highway division of the Federal Department of Agriculture:

"Your letter of November 25, with in-

closed clipping, has been received.

"It is interesting and encouraging to note that the farmers of the country are taking so lively an interest in the details of road improvement, especially along such lines as indicated in your letter. When the farmers fully realize that roads have more than a purely local significance, it will doubtless lead to a much better type of road construction than many of our rural communities have enjoyed in the past."

The clipping Mr. Wilson refers to was what I had written to "Motor Highway" one year ago. With the clipping I enclosed a letter along the line of the preceding statements.

My only incentive for writing this is to convince people that we are building roads without due consideration. We should have a law fixing the charge for right-of-way, the same as the railroads have. While this right-of-way would, in most instances, take the best of the land, it would not as a rule include any buildings. Change the Wyandotte Constitution if it interferes and allow us to develop. Conditions have changed in the last three-score years.

A highway adjoining a railroad could be used 365 days in the year. Those living on higher ground on either side could follow along their ridge when going to this highway, and not have to cross a number of hills and snow-bound cuts. Where the highway runs along the south side of the railroad it would be practically immune from snow blockade. Where it is absolutely necessary for a highway to cross the railroad between stations, the crossings should be made at an angle of 45 degrees, thus eliminating the right-angle turns.

Sand and natural structural material is generally found near the lower streams where the railroads run. Highways adjoining railroads would cut time, distance and power 25 to 35 per cent, and in many cases 50 per cent, and cut out the sharp turns and railroad crossings which cause many accidents and deaths each year. The heavy telephone lines could run along this highway, and no doubt the railroad could deliver car lots of material at points along the route, as they do for their own construction work, at a reasonable extra charge. Only one bridge would be needed instead of two or more where the ravines fork farther back from the larger streams.

The sixty million dollars asked for by the Good Roads Association is not an excessive amount if it is used to build

the best possible roads; a good earth road built in the best possible manner like, for instance, the Hockaday highway west from Wichita, or the Meriden highway between Wichita and Newton. The grade is wide and the crown mild, but firm and solid. This style of road can be maintained for much less than the interest on a paved road. It can be dragged after rains and sprinkled during excessive dry spells for a fractional part of the interest on a paved road.

When a road becomes so dry that dust chugs start, it runs down very rapidly. Sprinkling before the road becomes very dry will prevent this. On all main roads the crown should be standardized. Let us locate and build road foundations before the paving is put on. A paved road needs to be fully as deep and strong at the curb as in the center, as the heaviest weight is always there, owing to the change in center of gravity. I would prefer to travel a level dirt road to a paved hill road. Roads are generally an index to the town and community through which they pass. The road is one main feature of a community.

The narrow paved roads of the East are not suitable for western conditions. The East uses the one-horse plow and the one-horse wagon largely, while we use four horses abreast and haul a hundred bushels to a load.

My relocation plan applies only to the main highways. The section line will endure for all time except where automatically vacated owing to the proximity of the direct line highway. The highway should cross the railroad only in the towns. It should follow the main streets through town and then strike for the railroad.

Books on Bees

Beekeeping is a most fascinating and profitable business and as a side line can be successfully conducted on many of our farms. Interest in bees and honey production is increasing. The beginner has so many things to learn that it is almost necessary that he study some good books on the subject. Some very practical and useful books have just come to our attention. They are: "First Lessons in Beekeeping," by C. P. Dadant, which is especially adapted to those starting with bees without any knowledge whatever of how to handle them; "A Thousand Answers to Beekeeping Questions," by Dr. C. C. Miller, who for twenty-two years has answered the queries of subscribers to the American Bee Journal; and "Practical Queen Rearing," by Frank C. Pellett. These books are all published and sold by the American Bee Journal, Hamilton, Ill.

Production Cost Investigations

The Department of Agriculture has carried out investigations for a number of years in regard to the cost of production or distribution of cereals, live stock, milk, and other products. It has shown a reluctance to make these investigations public. Authoritative data on the cost of distribution of whole milk in many of the large cities was ready for publication in the spring of 1917. The editorial staff which carries on a rigorous censorship of all material offered for publication would not give endorsement to this data because, as it was stated, it would "lend itself to propaganda purposes" and was just what the milk producers' organizations were looking for to bear out their contention that they were not receiving reasonable prices or fair treatment from the distributors. In fairness to the Bureau of Markets, it should be said that data on the milk question is now being published in bulletin form. Farmers should also remember that the Department of Agriculture is supported by popular taxation which gives to strongly organized commercial interests such as the milk distributors an opportunity to protest against the publication of any facts which might be construed as "unfriendly," all of which is an argument for the proposed Temple of Agriculture at the national capital which can make investigations and publish findings without reference to the wishes of milk distributors or others.—CHARLES A. LYMAN.

GOOD ROADS LINK TOWN AND COUNTRY

By G. C. WHEELER

NOTHING can do more to bring town and country into close harmony than good roads. If the roads are impassable in muddy weather, people living two or three miles out from town might just as well be twenty-five miles away. Town and country should by all means become better acquainted and both parties should be doing their share in this road-making business.

Good roads mean as much to town people as to those of the country, because the town cannot exist except as it is supported by the people of the country who must use the roads. They will go to that town reached by the best roads. We have noted instances where the worst roads were those from the city limits to the business part of town. Farmers who have kept up their end of the road work cannot feel otherwise than grouchy when they strike the worst road of the whole trip at the city limits. Good roads radiating from every business center will bring town and country together, encourage co-operation and in every way lead to progress. This sort of road building should appeal more strongly to farmers and the people of the small towns than would the building of a few trunk lines. These roads leading out from the various towns immediately begin to bring returns on the actual investment and this will stimulate the building of more and still better roads. Before we are aware of it the trunk lines will be a reality through the linking together of these roads radiating from the business centers.

GENERAL FARM AND STOCK ITEMS

Something of Interest for All—Overflow from Other Departments

BECAUSE there was a poor market for less than carload lots of lambs in Ada County, Idaho, an association was organized in August by a few members of the county farm bureau to handle them co-operatively. Forty-five sheep producers were in this organization and the first shipment consisted of 450 lambs. The price offered by the local dealers was \$8 a hundredweight, but they would not handle more than a few at a time. The price received by the association was \$14 a hundredweight net. This deal alone gave the farmers \$2,700 more profit.

Cane vs. Corn Silage

On the animal husbandry farm of the agricultural college at Manhattan last summer yields of silage were as follows: Corn, 3½ tons to the acre; kafir, 7 tons; cane, 9 tons. There was no grain produced by any of these crops. The season was unusually dry about Manhattan. Rains which fell at critical times in surrounding localities missed this particular section. It is a condition liable to happen in any year.

Dr. C. W. McCampbell, head of the animal husbandry department, is thoroughly converted to the idea of depending on cane as a standard silage crop. Its value as a feed has been fairly well established, but another test is under way this winter with calves being full fed for market. Two lots are each being fed all the corn they will eat, two pounds daily of linseed oilmeal, three pounds of alfalfa hay per head, and all the silage they will consume, one lot getting cane silage and the other corn silage. Care will be taken to see that the calves in each lot consume equal amounts of silage. Samples of the silage are being tested regularly for acidity and moisture. So far the cane silage has been a little higher in moisture and lower in percentage of acidity.

This comparison of cane and corn silage is an interesting test to watch, but the striking thing is the relative tonnage yields of the two crops. The calves are now eating about twenty-two pounds of silage daily and seven pounds of corn.

Inspection of Seed Grain

Inspection of Kanred wheat and other seed grains by inspectors of the Kansas Crop Improvement Association was recommended at the thirteenth annual meeting of this organization held in Manhattan during Farm and Home Week. The reason given for proposing this plan was that no state or government funds are available for such inspection.

A motion was adopted providing for the inspection of crops in the field or bin by a duly appointed representative of the association upon the application of the growers for such inspection and the payment of a two-dollar fee to cover cost of each inspection. Farmers who are not members of the association may have their fields inspected upon the payment of a fee of \$2.50, 50 cents of which goes into the treasury of the association as a membership fee. This inspection is to determine the percentage of mixture of other varieties, if any, the presence of smut, quality of the grain, etc. All inspected seed will be included as such on seed lists issued by the association and distributed throughout the state.

Pure seed legislation was also considered and the association went on record as being in favor of general seed legislation.

The following resolution was adopted and sent to the agricultural committee of the state legislature at Topeka:

"Resolved, That the Kansas Crop Improvement Association does hereby go on record as being unanimously in favor of the passage of the act regulating the labeling, branding and sale of agricultural seed."

It may be of interest to the members of the Kansas Crop Improvement Association to know that such a law is before the legislature at the present time. It has passed the house and the prospects are good for it being passed by the senate.

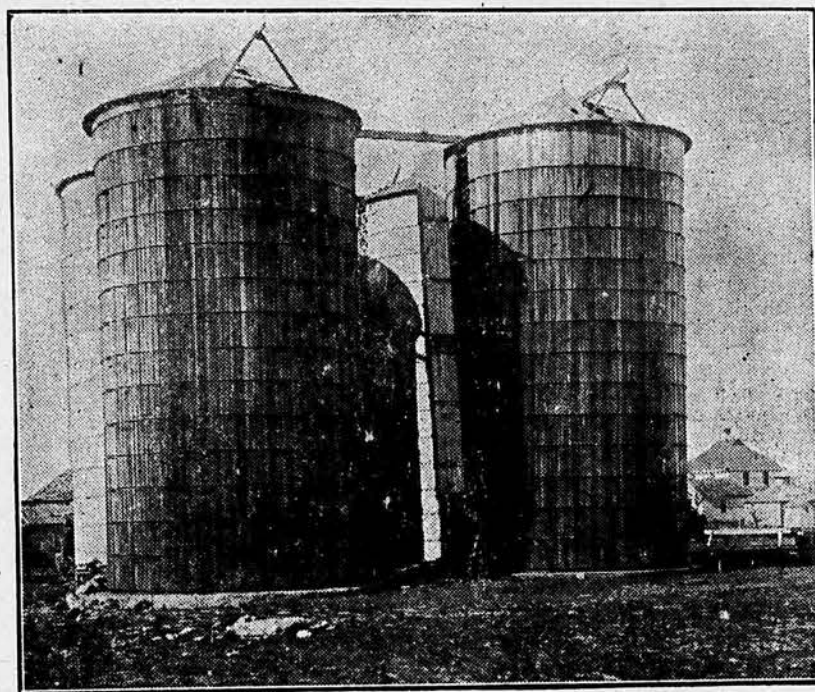
After considerable discussion the following prices for Kanred seed wheat of-

fered for sale the coming season were adopted: Recleaned, f.o.b. sacked, \$3 per bushel, plus sacks; recleaned, f.o.b. bulk, \$2.75 per bushel; not cleaned, f.o.b. bulk, \$2.50 per bushel; not cleaned, sold at machine or bin, \$2.40 per bushel.

These prices are suggested to the growers with the idea of preventing too wide a diversity in prices being quoted. It is not the intention of the association to require that they be followed. They are based on replies to a questionnaire sent to growers of Kanred wheat asking for the growers' ideas in regard to these matters.

Approximately 50,000 acres of Kanred wheat were planted the fall of 1918. The increase in the demand for seed of this variety will be great the coming summer and fall. As the wheat becomes more widely known, there will be an increase in the requests from outside the state for seed.

The secretary of this organization, B. S. Wilson of Manhattan, reports that the indications are for a good increase in the membership the coming year.



BATTERY OF FOUR SILOS ON FARM OF E. B. GREEN, CHASE COUNTY.—CAPACITY, ELEVEN HUNDRED TONS.—SURPLUS SILAGE WAS SOLD FOR FIVE DOLLARS A TON IN THE FALL OF 1913

The annual dues are 50 cents and should be sent to Mr. Wilson. The following men were elected to office for the ensuing year: President, Fred G. Lap-tad, Lawrence; vice president, H. L. Cudney, Trousdale; secretary-treasurer, B. S. Wilson, Manhattan; directors: John Brox, Atchison; W. H. Shaffer, Columbus; Chris Vandeventer, Manhattan; S. C. Salmon and H. Umberger, Manhattan. C. C. Cunningham, of Manhattan, was appointed as chief inspector.

Windmill Irrigation

Irrigation of the garden at the needed time will not only save the entire crop of vegetables but will also aid in producing a better quality and greater quantity per acre. Reports from sixty windmill operators in Western Kansas show an average of about four acres irrigated by each plant. The average cost per plant was \$155 without reservoir and the average reservoir costs \$41. The cost of equipment has probably advanced along with the cost of vegetables.

The ordinary house well with a wind mill will generally furnish in Kansas a sufficient supply of water to irrigate the family garden. If a reservoir can be constructed, the size of the garden can be enlarged to perhaps four or five acres, but this area is as large as can be supplied by the average windmill. The western part of Kansas requires more water to raise a satisfactory garden than the eastern part, but there is more

wind for power in the western than in the eastern part.

The garden should be so planned that the rows will run with the water. If the ground is rough it should be leveled enough for the water to reach all portions of the garden and not cause a pool in the low spots. A gentle slope of about two inches in a hundred feet from one end to the other is ideal, but a steeper grade can be used by making small dams between the rows and holding the water until the ground is soaked. If it is not possible to make the ground uniformly level, let the furrows follow the contour of the ground, always maintaining as near as possible the fall of two inches in a hundred feet. The disadvantage of winding rows in place of straight rows is principally one of looks. If the garden is to be worked by hand the rows should be about eighteen or twenty inches apart with a furrow between for water. If the garden is to be worked by horses the rows must be wider, perhaps thirty-six inches.

The supply ditch should be of a size to furnish water for half dozen or more

in connection with the opening of this Washington office:

"The order of Patrons of Husbandry is a positive and virile force in American life. This is due to the wisdom of the founders of the order as evidenced by its growth and its numerical strength today; and their far-sightedness in building the Grange upon the principles of real representative democracy. First they provided for a broad foundation in each subordinate Grange of the men and women actually engaged in the business of agriculture and home making; and then that these interests are served by actual representatives, chosen in the pure American way, constituting the state and national organizations. Thus indubitably the Grange brings to bear in the expressed views of these representative bodies on state and national questions, and its position on national legislation and administration, the sound judgment reached by long and mature consideration participated in actively by the largest single constituency representative of American agriculture."

"The very 'checks and balances' which have operated to make democracy safe in America, the wonder and the admiration of the great students of the science of government, are found to be duplicated in the principles of the Grange. In actual practice its work has been found to be safe, well considered, and progressive. The very method prescribed for its consideration of national and state questions prevents radicalism; yet in spite of this it has taken the great American democracy a half century to come abreast of Grange thought which declared in its earliest statements for prohibition of the liquor traffic, equal suffrage for men and women, technical education for agriculture, rural delivery of mail, the parcels post, etc."

"The opening of the Washington office of the National Grange is only a step in the modest desire of the representatives of this great constituency of American farmers and farmers' wives to more adequately serve this membership in making plain to those in more or less temporary and executive authority, the views of sound and progressive country thought on national problems, and the reaction of the country people to governmental activities. Washington is a long way from the average American farm home; the ways of government do not run parallel to those of average country life. Men in government positions wish honestly to represent, but may not know what is in the minds of those they wish to honestly represent. The opening of this office is one step in the work of making the way shorter and clearer by which the members of this order, and the true friends of agriculture, may be in closer touch with their servants in governmental positions, and thereby help make American democracy more safe and more enduring."

"Through this office, when its facilities are developed, the Grange hopes to be in close relationship with every department of the national government which is working with the problems of rural life; as in the past it hopes also to be constantly heard on all proposed legislation affecting the business of agriculture. For these purposes it hopes to have the advice and co-operation of the agricultural press of the country as well as of all others who may be interested in these great subjects."

Salary Increases

T. P. T., a farmer of Riley County, writes that he read with much interest the article in KANSAS FARMER on appropriations for our agricultural college. He says:

"This is a farmers' institution more than any other of our state schools and it is a very difficult matter to compute in dollars and cents the value derived by a student attending this institution. As a very large proportion return to the farms and carry out in practice what they have learned at the college, we have no way of knowing definitely of how much value their education is to them."

"As to the financial side of the question, while we know it requires an enormous sum of money to run this institution, yet the amount asked for the next

New Grange Office Opened

The Washington office of the National Grange, Thomas C. Atkeson being the representative in charge, has been opened pursuant to a resolution adopted by the National Grange at its session held in Syracuse in November, 1918, and is now at the service of every state, Pomona and subordinate Grange, and of every one of the hundreds of thousands of members of this order in the thirty-three Grange states; and, so far as its facilities will permit, of every other true friend of American agriculture and country life.

Mr. Atkeson has the following to say

biennium is less in proportion than that of some of the other institutions. It is a regrettable fact that such a large number of the instructors have left the agricultural college during the past year for the simple reason that institutions of like character have offered them larger salaries than were paid here. Surely Kansas is just as able to keep our good men and women here as to let them go elsewhere.

"It is true the purchasing power of a dollar is just about half of what it was two years ago. But while we are in favor of a reasonable increase in the salary of our instructors, what about the common laborer around this institution? His dollar will not purchase any more of the necessities of life than will the dollar of those higher up in the scale.

"True the laborer has had a small raise in salary, and he should have, but what the farmer taxpayer objects to is the raising of the annual salary of some \$500 to \$1,000, and raising the salary of the laborer \$50 or \$60. If this increase in pay is asked for because the dollar will not buy as much as formerly, let us not overlook the fact that the same increase in prices is really greater for the man who is drawing a salary of \$65 to \$75 a month than it is to the man who is drawing a salary of from \$2,000 to \$5,000 a year. Let this salary business be equally distributed and the farmer taxpayer will be better satisfied.

"The writer is in a position to know how some of our men are paid, and we believe they do not receive nearly enough salary, while others are receiving a competent salary for the service rendered. We believe in equal justice to all concerned."

Most Economical Fertilizer

Kansas farmers spent half a million dollars on commercial fertilizer last year. At the present time bone meal is the most economical fertilizer to buy. This statement is based on figures furnished by C. O. Swanson, of the Kansas Experiment Station.

A ton of bone meal contains from 240 to 270 pounds of phosphorus, and from 16 to 24 pounds of nitrogen. The cost of phosphorus in bone meal figures around 17 cents a pound, depending on the valuation put on the nitrogen. This may be placed as low as 20 cents a pound, and even then the phosphorus is obtained cheaper in bone meal than in any other fertilizer.

Acid phosphate is, next to bone meal, the most economical fertilizer to buy. A ton of acid phosphate contains 140 pounds of phosphorus but no nitrogen nor potassium. Phosphorus in acid phosphate costs somewhat more than 20 cents a pound.

The phosphorus in the acid phosphate is practically all in the water-soluble, or most available, form. Very little of the phosphorus in bone meal is in the water-soluble form, yet tests made at the experiment station have shown that phosphorus from bone meal, pound for pound, has given as large increases in crop production as phosphorus from acid phosphate.

The ordinary mixed commercial fertilizer, which is usually sold under a brand name and which calls little attention to its composition, is the most expensive for the farmer to buy and use on his farm crops. These mixed fertilizers usually contain from 70 to 100 pounds of phosphorus; from 16 to 33 pounds of nitrogen, and from 16 to 33 pounds of potassium per ton.

In these mixed fertilizers, under present conditions, the nitrogen costs 50 cents a pound and the potassium 36 cents a pound. The phosphorus varies all the way from 16 to 30 cents a pound. The lower prices of phosphorus are obtained when its source is bone meal.

Phosphorus is the element which the Kansas farmer needs most to buy in commercial fertilizers. Nitrogen and potassium can be obtained more cheaply from other sources. A ton of alfalfa hay contains 50 pounds of nitrogen, 56 pounds of potassium, but only 5 pounds of phosphorus. A ton of barnyard manure contains 15 pounds of nitrogen, 24 pounds of potassium, but only 4 1/2 pounds of phosphorus.

Results of Dairy Farming

A dairy farm of 120 acres just west of Topeka recently sold for \$50,000. O. E. Walker bought this farm in 1900, paying \$6,000. He has handled it as a dairy farm and in the period he has followed dairying it has increased in

productive capacity until one acre will now grow as much feed as three at the time he went on the place and began milking cows. The farm is carrying about seventy-five head of cows and young stock. All the rough feed needed is grown on the farm. Silage and alfalfa have been the mainstay in feeding the dairy stock. Mr. Walker has settled on cane as his regular silage crop because it produces a much larger tonnage and can be put into the silo in the right condition with more certainty than corn. He has learned that cane silage when the crop is allowed to become well matured gives splendid results as a feed.

In the early days Mr. Walker hauled a great deal of manure from the stables of Topeka. In those days many horses were kept for driving purposes and teamsters were hired for hauling manure from the stables to a common dumping ground. Mr. Walker simply arranged with these teamsters by paying a small sum in addition to have them dump the manure on his farm instead of the common dumping ground. The value of manure is recognized now and it commands a sale price.

During the past few years the milk from this farm has yielded a return of about \$7,000 a year. All the improvements on this farm including the \$10,000 house, have come from the profits of the dairy herd. The maximum number of cows ordinarily milked has been about forty. The milk is turned over to a distributor who handles Mr. Walker's milk exclusively at a wholesale price of 35 cents a gallon.

The new owner of this farm is the well known Poland China hog breeder, Fred B. Caldwell, of Howard, Kansas, who is making this change because of the many advantages offered by the Topeka location in conducting his purebred hog business. The dairy feature of the farming will probably be continued by Mr. Caldwell.

Cow Test Report

The Arkansas Valley Cow Testing Association has a long list of cows producing more than forty pounds of butter fat during the month of January. Appleman Brothers have the highest herd average for the month, which is 1,700 pounds of milk and 60.647 pounds of butter fat. The following table gives the names and records of the cows in this list:

Owner—	Pounds Milk	Per Cent Fat	Pounds Butter
Joe Keys, H.	1,550	3.7	54.25
Joe Keys, H.	1,445	3.7	53.465
F. H. Bock, H.	1,553	3.2	49.696
F. H. Bock, H.	1,420	3.2	45.440
F. H. Bock, H.	1,187	3.5	41.545
F. H. Bock, H.	1,070	3.8	40.660
F. H. Bock, H.	1,268	3.6	45.648
F. H. Bock, H.	1,249	4.5	56.205
Lee Frame, S. H.	983	5.2	51.116
Lee Frame, S. H.	828	4.9	40.572
A. C. DeWitt, J.	853	5.0	42.650
A. C. DeWitt, H.	1,218	3.7	45.066
J. R. Pringle, H.	1,187	3.4	40.258
J. R. Pringle, H.	1,435	3.4	48.790
J. R. Pringle, H.	1,187	3.8	45.106
Jake Leendertse, H.	1,128	4.3	48.504
Jake Leendertse, H.	1,209	3.9	47.151
Jake Leendertse, H.	1,339	3.5	46.865
Jake Leendertse, H.	1,088	3.9	42.432
Appleman Bros., H.	1,435	3.5	50.225
Appleman Bros., H.	3,072	3.4	104.448
Appleman Bros., H.	1,724	3.4	58.616
Appleman Bros., H.	1,553	3.0	46.590
Appleman Bros., H.	1,376	3.8	52.288
Appleman Bros., H.	1,590	3.4	54.060
Appleman Bros., H.	2,182	3.6	78.552
Appleman Bros., H.	1,947	3.6	70.092
Appleman Bros., H.	1,513	4.2	63.546
Appleman Bros., H.	1,640	3.8	62.320
Appleman Bros., H.	1,383	3.6	49.788
B. R. Gosney, H.	1,311	3.2	41.952
B. R. Gosney, H.	1,268	3.3	41.844
B. R. Gosney, H.	1,547	3.3	51.051
B. R. Gosney, H.	1,525	3.4	51.850
B. R. Gosney, H.	1,990	2.6	51.740
Stubbs Farm, H.	1,628	3.8	61.864
Stubbs Farm, H.	1,429	4.0	57.160
Stubbs Farm, H.	1,541	3.0	46.230
Stubbs Farm, H.	1,804	3.0	54.120
Stubbs Farm, H.	2,043	3.1	63.333
Stubbs Farm, H.	1,460	3.9	56.940
Stubbs Farm, H.	1,432	2.9	41.528
Stubbs Farm, H.	1,575	2.9	45.675
Stubbs Farm, H.	1,680	2.9	48.720
Stubbs Farm, H.	1,714	3.3	56.662
Stubbs Farm, H.	1,866	2.5	46.650
Stubbs Farm, H.	2,685	3.1	83.235
Stubbs Farm, H.	1,249	4.6	57.454
Al Howard, H.	1,699	2.8	47.572
E. V. Swinehart, H.	1,411	3.0	42.330
C. L. Goodin, H.	1,845	3.0	55.350
C. L. Goodin, H.	1,500	3.0	45.000
C. L. Goodin, H.	1,246	4.0	49.840
Fred Harvey, H.	2,353	3.0	70.590
Fred Harvey, H.	2,161	3.2	69.152
Fred Harvey, G.	1,665	4.0	66.600
Fred Harvey, H.	1,373	3.8	52.174
Fred Harvey, H.	1,659	3.0	49.770
Fred Harvey, G.	961	5.0	48.050
Fred Harvey, G.	1,187	3.0	42.732
Fred Harvey, G.	1,240	3.4	42.160
E. B. Greene, H.	1,101	3.8	41.838
E. B. Greene, H.	1,265	3.5	44.275
E. B. Greene, H.	1,296	3.9	50.544
E. B. Greene, H.	1,240	4.0	49.600
Walter Craven, H.	1,491	3.6	53.676

H. stands for Holstein; J. for Jersey; G. for Guernsey, and S.H. for Short-horn.

When anyone has offended me I try to raise my soul so high that the offense cannot reach it.—DESCARTES.

SAVE

~~\$10.00~~ TO ~~\$15.00~~

\$20.00 TO \$30.00

per cow per year

with a

DE LAVAL

CREAM SEPARATOR

Formerly, with butter-fat at 25 to 35 cents a pound, a De Laval Cream Separator saved \$10 to \$15 per cow per year over gravity skimming.

Now with butter-fat selling at 50 to 65 cents a pound, and even higher, the saving with a De Laval is doubled.

If you have only two cows and are selling cream or making butter, a De Laval will soon save enough to pay for itself.

With butter-fat at present prices you need a De Laval more than ever before, and if you already have an inferior or half-worn-out separator, your cream loss with such a machine is too big to be neglected.

The best cream separator you can get is the only machine you can afford to use these days, and creamerymen, dairy authorities and the 2,325,000 De Laval users all

agree that the De Laval is the world's greatest cream saver. They know from experience that the De Laval skims the closest, lasts the longest and gives the best service.

Order your De Laval now and let it begin saving cream for you right away. See the local De Laval agent, or, if you don't know him, write to the nearest De Laval office as below

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OVER 2,325,000 DE LAVALS IN DAILY USE



WRITE FOR GALLOWAY'S 1919 SEPARATOR BOOK

Get Galloway's new low 1919 price. Learn latest features of new improved Galloway 1919 Sanitary Separators. Thousands now in use. Over 4000 new 1919 models ready for immediate delivery. Skins closer, is easily cleaned than any other. Never gets out of alignment. All working parts run in oil spray. Has all rounded corners—no breaking up of butter-fat globules—and many other great features. All told in big new 1919 book. Send for it.

DIRECT FROM GALLOWAY—FACTORY PRICE

You can get a Galloway new improved 1919 Separator at a big saving because it comes direct from factory. The cost is less than wholesale. Four sizes, \$75 lb., \$100 lb., \$150 lb., \$200 lb. at four low direct factory prices. **SEND A POSTAL TODAY** Get your copy at once. Start factory dealing and save money at once. Goods shipped from points near you to save freight. Write!

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High or low wheels—steel or wood—wide or narrow tires. Steel or wood wheels to fit any running gear. Wagon parts of all kinds. Write today for free catalog illustrated in colors.

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Only \$2 DOWN ONE YEAR TO PAY

38 Days the New Butterfly Jr. No. 2's.

Light running, easy cleaning, close skimming, durable.

NEW BUTTERFLY

Separators are guaranteed a life-time against defects in material and workmanship. Made also in four larger sizes all sold on 30 Days' FREE TRIAL and on a plan whereby they earn their own cost and more by what they save. Postal brings Free Catalog Folder. Buy from the manufacturer and save money.

Albaugh-Bower Co., 2101 Marshall St. Chicago

How Pigs Are Lost

It will soon be time for the pigs to arrive. Are you ready for them so you can be sure of saving a high percentage of the pigs farrowed? The causes of the various losses which occur were investigated by J. B. Price of the Illinois University. He made a study of 192 farms and found the losses distributed as shown in the following compilation:

Overlaid by sows, 29.13 per cent; farrowed weak, 22.34 per cent; farrowed dead, 15.88 per cent; killed, 10.09 per cent; eaten by sows, 4.59 per cent; aborted, 4.55 per cent; scours, 3.43 per cent; thumps, 1.78 per cent; necrobacillosis, 1.56 per cent; cholera, 1.01 per cent; miscellaneous, 5.64 per cent.

The Other Way About

"I see you are keeping a cow."
"Wrong, neighbor, wrong; she's keepin' me."—Hoard's Dairyman.

Comparing Imports With Exports

DURING the war period we have sold to other countries products greatly in excess of our purchases. This is by some assumed to be a condition coincident with business prosperity. Producers of live stock and other agricultural products are vitally interested in what happens as we get back to normal conditions, and the relation of exports to imports has an important bearing on the question.

In his address at the twenty-second annual convention of the American Live Stock Association held in Denver last month, the president, Ike T. Pryor, called attention to the fact that for a considerable period of time in the early stages of our national life the value of our imports exceeded that of our exports. As usual in new countries we were also large borrowers. Beginning in the late seventies, the value of our exports slightly exceeded that of our imports. That excess has been gradually growing year by year, and we have thus repaid much of our debtor balance to other nations. By the year 1898 the value of our exports exceeded that of our imports by more than a half billion dollars. With some variations, that average excess was maintained up to the end of 1914. During 1915, because of the war and the general inflation of prices, the excess value of our exports over imports was approximately two billion dollars; and for the past three years the annual average has been about three billion dollars—resulting in a tremendous trade balance in our favor. We have absorbed billions of dollars' worth of our securities held abroad, and are today a great creditor nation, with direct loans or credit to our allies aggregating more than eight billion dollars. "We should not expect, however," said Mr. Pryor, "to continue to sell annually three billion dollars' worth of commodities more than we buy. Indeed, after world conditions become more nearly normal, we shall be fortunate if the value of our exports equals that of our imports. For a few years, no doubt, it will exceed it, but in a diminishing ratio; for the time is not far distant when we shall have to buy from other nations as much as or more than we sell them, in order to preserve the international trade equilibrium, and give them an opportunity to pay to us their large war debts. We cannot forever go on extending credit to other nations; for in time this would be as bad for us as for them. These basic facts seem to have escaped the attention of those who are so vigorously championing an unlimited extension of our future trade in manufactured articles.

Has Plan for Future

"It is this inevitable readjustment following our present abnormal trade balance that most vitally concerns the agricultural and live stock industries. True it does not immediately confront us; but if it be the policy of this nation to artificially foster and promote an increased trade in our manufactured articles, in exchange for larger imports of raw materials and food and meat products from wherever available, it is now time that those engaged in the live stock and agricultural industries should consider how they will be affected. Shall we plan our business on the basis of a continuance of large exports of meat and other food products, or on the theory of a speedy decline in both volume and value of such exports, and the possibility of increased importation, instead of exportation, of some classes of meat-food products?"

"You may remember that in 1914—the year following the passage of the Underwood Free List Bill, placing live stock, meats, and wool on the free list—this country imported about \$36,000,000 worth of meat products—mostly beef from Argentina. This exceeded the value of our exports of beef products for that year. Had it not been for the war, the imports of beef into this country from Argentina and other South American countries might have been materially increased. The situation of 1914 may return.

"During 1918 our exports of meat-food products of all kinds were the largest on record by a wide margin. Recently the Food Administration has estimated that the foreign requirements of such products for 1919 will greatly exceed those of 1918. Reports as to live stock conditions in England and on the continent are conflicting. Under date of December 9, 1918, the Bureau of Markets of the Department of Agriculture sent out a compilation of the last

official figures showing estimates of live stock in the United Kingdom, France, and Denmark, compared with the pre-war period. These figures show a shortage in those countries of four million cattle, six million hogs, and fourteen million sheep. They do not at all confirm the startling shortages repeatedly claimed by the Food Administration. According to the estimates of the Department of Agriculture, the United States had on January 1, 1918, ten million more cattle and thirteen million more hogs than on January 1, 1914, and about the same number of sheep—much more than sufficient to offset the shortage in the countries named. The marketing of live stock in this country plainly indicates an increased supply. Some shortage abroad exists, but its extent and the necessities of foreign consumers have not yet been accurately determined. Everything points to a large foreign demand for meat products during 1919, and possibly in 1920, but in lesser volume. After that our exports of meat products will likely return to the pre-war basis.

Marketing in 1918

"The marketing and slaughter of cattle and hogs last year was the largest on record. The 15 per cent increase in hog production desired by the Food Administration was more than fulfilled. Stocks of meat in storage are large, and apparently adequate for all demands; and still the Food Administration and the Department of Agriculture are urging increased production of meat food animals, on the theory that foreign demand will increase rather than decrease. I hope their conclusion is correct. I believe the United States has more than a normal supply of meat animals, and that it is ample to meet all reasonable anticipated demands on us from abroad, and for our domestic consumption, despite the liquidation during the last year. With our export of meat products decreasing after 1919, and our supply increasing—or, expressing it another way, with a marked increase in our meat supply, which is possible, and a decrease in our export of meat after that period, which is probable—it may prove disastrous to our industry. Therefore the problem that confronts the cattlemen is to regulate supplies in 1920, and thereafter, to the needs of domestic consumers; for that is the only sure and unailing market for our product. Even our home market may be affected by importations of beef from other surplus countries.

"Our government is not prepared to protect live-stock producers from the disasters that would follow over-production. No plan has been evolved to satisfactorily determine costs of production and to stabilize prices on such a level. The work of ascertaining the cost of production of farm products and live stock was undertaken by a bureau of the Department of Agriculture; but, after more than a year's work, the data assembled and the basis used were not considered, by the Secretary of Agriculture, as dependable; so the entire work will have to be gone over. The plain fact is that we stock men are asked to assume all the risks that might follow the plea of our government for an increased production, and take our chances of securing a fair return. If the Food Administration were to continue, and there were a certainty of orders for our allies and others being placed through it, on prices under its control, the situation would be different. Stockmen have not forgotten the many ruinous seasons when prices were far below the actual cost of production, resulting in the loss of millions of dollars. These periods of heavy supply and unprofitable prices, followed by general discouragement in the industry and the resultant lighter supplies and higher prices, have been all too frequent. They are the great evil in our industry. In his last annual report, Secretary Houston, of the Department of Agriculture, well said: 'The restoration and maintenance of conditions which will justify confidence in the live stock markets and the meat packing industry is the greatest single need in the present meat situation in the United States. It seems desirable, therefore, that the necessary legislation be enacted at the earliest possible moment.'

In concluding his remarks Mr. Pryor expressed his conviction that one of the war agencies of this government that should be continued, at least in some modified form, is the United States Food Administration. It is necessary to justly distribute our surplus meat and

Profits

Every progressive farmer aims for the greatest profits. He must therefore be businesslike in his methods. He multiplies the returns from his labor by increasing his crops with

Empire Fertilizers

They have made high records in crop production. This year they should pay better than ever because of the great demand and prospective high prices of staple farm products. They have wonderfully increased the yields and improved the quality of all kinds of farm crops.

How to Make Money with Fertilizers

is the title of a 53 page book containing information every farmer needs in relation to the proper use of fertilizers; it shows where profit is to be found, and how to get it. It is different from other fertilizer books and is not a catalogue. We will send it to you free. Simply mention this paper and ask for the book. Consult our free Agricultural Service Bureau on soil, crop or fertilizer problems.

If we have no agent in your town, we want one. Write for our nearest agent's address or write for an agency for yourself.

The American Agricultural Chemical Company

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501-B Commonwealth Trust Building, St. Louis, Mo.

other food products where they are most needed among the hungry in Europe. It is also essential in order to prevent any over-exportation of such products as may be needed for home consumption, and it can be of material benefit in stabilizing our markets. Its pledges to producers must be fulfilled.

Getting Into Pure-Breds

Every ambitious and progressive live stock man hopes some time to be able to grow pure-breds only. The most simple and inexpensive way to get started in the business of breeding registered cattle is to buy two or three females and keep the female increase. This will soon accumulate a considerable and valuable herd at small cost. A good plan is to sell from the surplus of the grades and of course the surplus bulls from the registered females. The plan involves the keeping of a good bull, which means a better standard in both the grade and the full blood increase. This is a plan that any farmer can follow and gradually grow into the pure-bred business where larger profits are assured. It doesn't involve any radical change from the established methods, but it will have a tendency to improve the appearance not only of the herd but the farm and the practices involved in its management. In these days when corn and hay and all of the items of feed and investment have increased, it becomes necessary to grow a class of live stock that will insure a satisfactory return. A small number of registered cattle of the right type will make a considerable reduction in the carrying cost and show a better net income than a larger number of grades. This is a good time to turn his grades and put in a few registered females. It is the better standards that will take care of these higher costs of maintenance. Our readers will do well to give a little thought to this matter and shape their plans to meet the situation.

David Lubin Is Dead

David Lubin, founder of the International Institute of Agriculture, which now maintains headquarters at Rome, Italy, and American representative to the institute, recently died of pneumonia.

It was Lubin who obtained from the king of Italy the palace in which the institute held meetings and a \$60,000 a year appropriation. Not a cent of this

GOOD SEEDS
GOOD AS CAN BE GROWN
Prices Below All Others
 I will give a lot of new sorts free with every order I fill. Buy and test. Return if not O. K.—money refunded.
Big Catalog FREE
 Over 700 illustrations of vegetables and flowers. Send yours and your neighbors' addresses.
R. H. SHUMWAY, Rockford, Ill.

Before Spring Work

Best time to clip is in the spring, when coat is heavy and animal is soft. Short hair means healthier pores and prevents sickness. A horse kept in good condition in the spring stands better chance of remaining healthy all year. The best way to clip is with a Stewart No. 1 Ball Bearing Machine, \$9.75. Send \$3.00, pay balance on arrival, or write for catalog.

CHICAGO FLEXIBLE SHAVE COMPANY
 Dept. A122, Twelfth St. and Central Ave., Chicago, Ill.

BOOK ON
DOG DISEASES
And How to Feed
 Mailed free to any address by the Author
H. CLAY GLOVER CO., Inc.,
 118 West 31st Street, New York

EVERGREENS HILL'S 30 Hardy, Tested Varieties
 Fine for windbreaks, hedges and lawn planting. All hardy, vigorous and well rooted. We ship everywhere. Write for free Evergreen book, illustrated in colors.
D. HILL NURSERY CO., Box S 221 Dundas, Ill.

RAISE BELGIAN HARES For
HUGE PROFITS easily and pleasantly made. We furnish stock and pay you \$5.00 a pair and express charges for all you raise. Contract and book "Fortunes in Hares" by mail free. **NATURAL FOOD & FUR ASSOCIATION**
 Dept. 57 MILWAUKEE, WIS.

— OTTAWA —
Business College
OTTAWA, KANS. CATALOG FREE

ever reached his pocket. His work was wholly unselfish. He also organized the California Fruit Growers' Association and a number of other co-operative institutions.

There is nothing—no circumstance—that justifies temper or resentment.—R. H. Newcomb.

Making Income Tax Report

INCOME tax reports must be filed on or before March 15. Returns are required of every single person whose net income for 1918 was \$1,000 or more, and from every married person or head of a family whose net income was \$2,000 or more. The exemptions under the new act are the same as under the 1917 act, \$1,000 for single persons and \$2,000 for married persons and heads of families. The rates, however, have been increased. Under the new act the normal rate is 6 per cent on the first \$4,000 of net income above the exemptions and 12 per cent on net income above that amount.

Revenue officers will visit every county in the United States to assist taxpayers in making out their returns. The date of their arrival and the location of their offices may be ascertained by inquiring at the offices of collectors of internal revenue, postoffices and banks. Their duty is to furnish taxpayers with blanks, answer questions as to how to fill them out, swear taxpayers to their returns and accept payment of the tax.

This service is all without cost to the public. Failure to see the revenue officer, however, does not relieve the taxpayer of his obligation to file his return within the time specified by law, on or before March 15.

To farmers the Bureau of Internal Revenue offers this advice:

Get out your pencil and paper and begin figuring on your gross and net income for 1918 in order that if it is necessary to call upon a revenue officer for aid you may be able, without difficulty, to supply him with the general information needed in making out your return.

"Gross income" includes all the money you received during the year 1918 from the sale or exchange of stock, crops, wood, produce, or anything raised on the farm. If you bought farm produce from another farmer and resold it, you must include the profits under gross income.

The value of farm products is not considered taxable income until reduced to cash or the equivalent of cash. If crops produced by you in 1917 were sold in 1918, the amount received therefor is to be returned under gross income in your 1918 return. The value of crops and stock produced in 1918 and on hand December 31 of that year need not be considered, but should be included in your return for the year in which they are sold.

If you exchanged farm products for groceries, merchandise, etc., you must include the value of such merchandise in your return of gross income.

"Net income," upon which the tax is assessed, is gross income less certain deductions provided for by the act. These include all business, but not personal or living expenses. In computing net income the farmer may deduct the amount paid for labor in preparing his land for the crop and for its cultivation, harvesting and marketing.

The cost of feed, seed, and fertilizer used are also deductible items. The cost of stock purchased for resale may be deducted if the proceeds from such sales are returned as income.

The cost of minor repairs to the barn and other farm buildings, but not the dwelling, may be deducted, and also the cost of repairs to farm machinery and fences. The cost of materials for immediate use and farm tools which are used up in the course of a year or two, such as binding twine, stock powders, spades, etc., also may be claimed.

The cost of farm machinery such as a tractor or threshing machine represents "capital investment," and as such is not an allowable deduction. There may be claimed a reasonable allowance for depreciation of farm buildings other than the dwelling, farm machinery, work horses, and work wagons, and stock purchased for breeding purposes. No depreciation on stock raised or purchased for resale is allowed.

The farmer may deduct taxes paid or accrued during the year 1918 except income taxes and taxes assessed against local benefits of a kind tending to improve the value of the property. Losses sustained from fire or other casualty, or from theft, may be claimed if not compensated for by insurance. If a farmer in 1918 sustained a loss in any transaction entered into for profit, outside of his farming interests, he may claim the

amount as a deduction. Such deduction was not allowed under the preceding act. Debts ascertained to be worthless and charged off within the year may be deducted.

These and other deductions allowed taxpayers will be explained by the revenue officers who will visit your county. To the taxpayer who has kept books the making out of an income tax return will not be difficult. Those who have not are urged by the Bureau of Internal Revenue to accept the offer of assistance from one of these government experts.

If the taxpayer desires he may pay the tax in full at the time of filing the return, or in four installments, the first of which is due on or before March 15, the second on or before June 15, the third on or before September 15, and the fourth on or before December 15. For failure to file an income tax return on time the penalty is a fine of \$1,000 and an additional assessment of 25 per cent of the amount due.

For "wilfully refusing" to make a return and pay the tax within the time prescribed, the penalty is a fine of not more than \$10,000 or one year's imprisonment, or both. A similar penalty is provided for making a false or fraudulent return together with an added as-

essment of 50 per cent of the amount due. The penalty for failing to pay the tax when due is a fine of not more than \$1,000 and an added assessment of 5 per cent of the unpaid amount, plus 1 per cent interest for each full month during which it remains unpaid.

Multiple Horse Hitches

KANSAS FARMER has made reference to the experimental work done by Prof. E. A. White, of the Illinois Experiment Station, in devising more satisfactory and efficient methods of hitching horses for farm work. In his address before the convention of the State Board of Agriculture in Topeka last January, Mr. Dinsmore pointed out the necessity of working horses more efficiently. A most comprehensive presentation of the work done by Professor White appears in the 1919 Percheron Review. It is illustrated with drawings and cuts and the principles employed in hitching and driving six-, eight- or ten-horse teams by the tying-in and bucking-back system are made so clear that anyone can understand them. Only members of the Percheron Society or men directly interested in Percheron horses will be furnished copies of the Review, but some reprints have been made of this special article which will be furnished to all who ask for them by Wayne Dinsmore,

secretary of the Percheron Society of America, Union Stock Yards, Chicago. This work should help the business of breeding good draft horses all over the country, and we hope this printed matter on "Multiple Horse Hitches" will be widely distributed among those interested in draft horses.

Water for Live Stock

A failing water supply sends more stock prematurely to market than lack of feed. J. E. Payne, of Parsons, points out that during some years the amount of stock which can be kept on many of the farms is limited by the water supply. Some men have remedied this by digging more wells. Some have made ponds which have met their needs. Still some communities seem to be short of water.

If we must cut down the stock to the amount we can water during the driest year, stock raising will soon be discouraged. But every year we see our creeks out of banks. Enough water ran away from us last spring to water all our stock several years.

The problem of holding the flood water is too large for individual farmers to solve. Community storage has been suggested, and each farmer can make small ponds to be connected with the community reservoirs.



Tractor Makers Admit It!

ABOVE are starting instructions which appear on a nationally-known tractor, other tractor makers issue similar instructions. The manufacturers know that starting a tractor is a man's-sized job. The candid ones admit it.

But the back-breaking cranking job is still there. At best it's much harder than spinning an automobile engine—the flywheel is heavier, the cylinders are larger and there is more bearing surface to cause friction.

The only way to permanently and dependably avoid this needless work is to be sure the manufacturer equips the tractor you buy with the

CHRISTENSEN STARTER

CARBURETION PRINCIPLE

No electric wires or batteries to get out of order. A starter built especially for tractors and heavy trucks—it stands the jolts and jars.

The Christensen Starter operates by a new principle—neither electricity nor air. It joins fuel and air in an explosive mixture which it supplies to the cylinders in their regular firing order, under compression sufficient to start the engine turning. The ignition system fires the mixture, giving you a sure start even from a stone-cold

engine—with any grade of fuel—in one to four seconds.

Adopted by the fire departments of New York, Philadelphia, Detroit and twenty other large cities for their fire apparatus because of its absolute dependability.

Lauson Tractors for 1919 will be Christensen-Started. Write for free booklet which tells you all you want to know about the Christensen.

Christensen Engineering Company, 825 First National Bank Bldg., Milwaukee

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 60,000 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.

SEEDS

SEED CORN, VERY SELECT, THE 90-bushel kind. While it lasts, bushel, \$3.00. Rates to dealers. Wiltse, Rulo, Nebraska.

CHOICE RECLEANED EARLY WHITE oats, \$1 per bushel. Ernest Lamaster, Halliwell, Kansas.

EARLY OHIO AND TRIUMPH SEED and table potatoes, unirrigated, 90c bushel. Wickham Berry Farm, Salem, Nebraska.

RECLEANED ALFALFA SEED FOR sale at \$9 per bushel. Write for free sample. C. Markley, Belle Plaine, Kansas.

PRIDE OF THE NORTH NINETEEN-DAY, ear or shelled, \$3 bushel f.o.b. Malvern; sacks, 50c. P. Kilmartin, Malvern, Iowa.

ONE CARLOAD OF SELECTED BOONE County and Reid's Yellow Dent seed corn for sale. Prices right. C. P. Butler, Farmington, Kansas.

FOR SALE—WHITE SILVER SKIN bottom onion sets, run 10,000 to the bushel, \$4.75 bushel. C. G. Curtis, Reference Citizens Bank, Hutchinson, Kansas.

PURE GOLD MINE AND BOONE COUNTY White seed corn, selected, shelled, graded, \$4 per bushel. Samples free. J. F. Feigley, Enterprise, Kansas.

FOR SALE—SEED CORN, TOOK FIRST premium, adapted for dry season, heavy yield under favorable conditions. Roy Lampert, Wahoo, Neb.

SEED CORN, GERMINATION, SNOW Flake, 92; Yellow Dent, 95; nubbed, hand-shelled, price \$3.75. Will Smiley, Silver Lake, Kansas.

SHROCK KAFIR SEED—GREAT DRY weather crop, 1918 seed. Clean and of sure germination, for sale by grower, 15 cents per pound. James D. Wilson, Route 5, Parsons, Kansas.

GUARANTEED SEEDS—ALFALFA, \$9.00 bushel; kafir, \$2.50; millet, \$2.25; cane, \$2; sumac, \$3.65; Schrock, \$3.50; seed corn, \$3; Sudan, 15c lb. If you need any seeds, write us, we have them. We ship everywhere. Sacks free. Meier Seed Co., Russell, Kan.

SUDAN GRASS, 15c; CHOICE ALFALFA, 19c; choice scarified white blossom sweet clover, 25c; choice red clover, 37c; pink kafir, 7c; white kafir, 4 1/4c; all per pound, sacked, f.o.b. Lawrence. The Barteldes Seed Co., Dept. A, Lawrence, Kansas.

FOR SALE—JAPANESE HONEY DRIP sugar cane seed. Four acres of forage will fill a 100-ton silo. It is the dairyman's greatest friend—his salvation. It saved us, it will save you. Registered Holstein bulls and Alredale pups also. Gillett's Dairy, El Paso, Texas.

DWARF AND STANDARD BROOM CORN seed, Ted Top Can, Dargo, Hegari, Sorgo, Feterita, Schrock, Kafir, \$7; Dwarf Cream and Red Maize, Amber and Fodder Orange Cane, Dwarf Kafir, Common Millet, \$6; Sudan, \$18. Freight prepaid; express, \$1 more. Good seed, well re-cleaned. Claycomb Seed Store, Guyton, Okla.

CATTLE

LACK OF HELP INDUCES ME TO offer a car load of best dairy cows, high grade Holsteins and choice Jerseys. Jersey Cream Dairy Co., Monett, Missouri.

HIGHLY BRED HOLSTEIN CALVES, either sex, 15-18th pure, from heavy milkers. Two to seven weeks old, beautifully marked. \$25, crated and delivered to any station, express charges paid here. Send orders or write. Lake View Holstein Place, Whitewater, Wisconsin.

THE STRAY LIST.

TAKEN UP—BY ALBERT MATTI OF Cottonwood Falls, Toledo Township, Chase County, Kansas, on the first day of November, 1918, one white face heifer, three years old, no marks or brands. C. O. Coe, County Clerk.

TAKEN UP—BY F. W. JEFFREY, OF Elmdale, Diamond Creek Township, Chase County, Kansas, on November 1, 1918, one two-year-old heifer, color red, white face. No marks or brands. C. A. Coe, County Clerk.

TAKEN UP—BY HERMAN WERNING, of Flush, Pottawatomie Township, Pottawatomie County, Kansas, on the 30th day of January, 1919, one cow, color roan, three or four years old. Brand on right hip. J. B. Claywell, County Clerk.

TAKEN UP—BY C. J. JOHNSON OF Roxbury, Gypsum Creek Township, McPherson County, Kansas, on the first day of May, 1918, one red and white heifer, about four feet high, mark lower part of right ear. Appraised at \$25. A. J. Cederholm, County Clerk.

NOTICE IS HEREBY GIVEN THAT ON the 23d of November, 1918, nine head of cattle were taken up as astray on my premises in Bonaville Township, McPherson County, Kansas; age, long yearlings; color red, marked as follows: Five of said cattle have horns and are ear-marked with "V"-shaped section cut from center of rim of each ear; three of said cattle have no horns and are ear-marked same as the five described above; one has horns and is ear-marked in right ear with "V"-shaped section cut from under side of ear. George Paulson. A. J. Cederholm, County Clerk.

WHEN WRITING TO ADVERTISERS PLEASE MENTION KANSAS FARMER

DOGS.

AIREDALES, COLLIES AND OLD ENG-lish Shepherds. Pups, grown dogs and brood matrons. Large instructive list, 5c. W. R. Watson, Box 128, Oakland, Iowa.

HONEY.

DELICIOUS EXTRACTED HONEY—TWO 60-pound cans, \$29.75. Wesley Foster, Producer, Boulder, Colorado.

DELICIOUS, LIGHT-COLORED, EX-tracted honey gathered by our own bees from alfalfa and sweet clover. Guaranteed pure. Can containing 60 pounds, \$15.25; case of two cans, \$30. You pay freight. Frank H. Drexel, Crawford, Colorado.

HORSES AND MULES.

FOR SALE—THE SURPLUS STALLIONS from small herd of registered Percherons. Lanyon-Stock Farm, Gresham, Neb. Branch barn, Harrah, Okla.

REAL ESTATE.

LISTEN—NICE 60-ACRE FARM, \$2,000, terms. Timber 160, \$1,600. McGrath, Mount View, Missouri.

NORTHEASTERN COLORADO IS THE place to buy your farm. Get my list of bargains at once. Barrett Land Co., Akron, Colorado.

GOOD FARM AT AUCTION, 3 MILES northeast of Canton, Kansas, March 11, 198 acres, 50 wheat, 15 acres alfalfa, good barn, silo, fair house. Write for particulars. J. S. Hoover, Canton, Kansas.

BARGAIN FOR QUICK SALE—640-ACRE improved ranch, 1 1/4 miles county seat, Cheyenne Wells, Colorado. All tillable, third cultivated, fenced and cross fenced. Good buildings, cement block house, running water, bath, toilet, etc. Good soil, prize winning crops, fine climate. Need money in manufacturing business, otherwise would not sell. No trades. Write immediately. Milton D. Jones, Aurora, Illinois.

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%—price \$10 to \$15 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. Oliver, Santa Fe Land Improvement Company, 405 Santa Fe Bldg., Topeka, Kansas.

FARMS WANTED.

IF YOU WANT TO SELL OR EXCHANGE your property, write me. John J. Black, 56th St., Chippewa Falls, Wisconsin.

WANTED

WANTED—100 WHITE ESKIMO-SPITZ puppies about six weeks old. Brockway's Kennels, Baldwin, Kansas.

SEEDS—ALFALFA, SWEET CLOVER, millet, kafir corn, Sudan. Mail samples, advising quantity for sale, to Mitchellhill Seed Co., St. Joseph, Mo.

TRACTORS.

FOR SALE—HAPPY FARMER TRAC-tor, 12-24. L. A. Engle, Wlota, Iowa.

Milliner's Glue

The woman who makes or trims some of her own hats will find milliners' glue a great help in making flowers, foliage and rosettes, or ribbon bows, or in keeping the velvet smooth on the hat frame.

When covering a hat frame, apply the glue evenly to the wrong side of the velvet and to the hat frame. Allow each to become dry, then stretch the velvet or other covering material over the frame. Smooth this carefully and allow it to dry thoroughly.

To make lined ribbon bows, place the ribbon flat on the table and cover the entire length with milliner's glue. Lay the wire down the center of the ribbon, place the second piece of ribbon over the first, press the two pieces firmly together and smooth out any wrinkles. Allow this to dry before making into a bow.

A copy of the little daily paper that was printed on board President Wilson's ship, the George Washington, on the way to Europe was sent home by a Downs man to his family, according to the Downs News and Times. The name of the neat three-column paper is The Hatchet, and its motto "We Cannot Tell a Lie." It is an unusually clever little sheet, claiming "the largest circulation on the Atlantic Ocean."

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.

The Convenient Kitchen

GRANDMOTHER'S kitchen was a large one, but there was a reason for it," said Mrs. Mary Whiting McFarlane to the women taking the course of lectures in home economics given at the Kansas Agricultural College during Farm and Home Week. "There was a large family and all the girls helped with the housework. Grandmother had a number of assistants, and they all had to be under the eye of their superintendent, who was grandmother. If she had had to keep house in a big house with a dairy and a nursery and a separate room for each particular kind of work, she could not have done it. If we have to keep house under the same conditions as she—that is, if several people work together—we will need a large kitchen, too. The small kitchen which is the dream of the architect, in which you can stand in the center and reach everything, is built for one person. It is true that you can have everything handy in a small kitchen. You can have everything handy in a large kitchen, too. It is largely a matter of planning to have things assembled where they are to be used.

"The only two things that really belong in the kitchen are the preparing of food and the clearing away of it, although many other things are often carried on in the kitchen. These two processes of preparing food and clearing it away are in no way related, and it is well to bear this in mind in planning the arrangement of the kitchen.

"One of the big essentials in a kitchen is plenty of light. You can provide light and still conserve wall space by making the windows high, but I think at least one window should be low enough to provide a view for the housewife at her work and also for little children who will probably be in the kitchen. A kitchen should also have plenty of ventilation, providing for cross currents of air if that is possible.

"Another important thing is the floor. A hardwood floor is expensive and costs have a way of counting up. If you cannot have a hardwood floor you can at least have the inlaid linoleum and that has the advantage of being easily cleaned and comfortable. They tell us cement floors can be made comfortable by using a mat. I have never used a mat long enough to be sure of that, but it is very tiring to have to walk or stand on a cement floor, and in winter it is cold.

"Painted walls and ceiling require a great deal of work to keep them clean. I never got so tired of anything in my life as of a painted ceiling. An ideal plan is to have the upper part kalsomined and the lower part painted. There always are brushes that can be used to kalsomine or tint walls and that is a great deal easier than scrubbing them. The lower part of the wall is not hard to wash. Papered walls are not very sanitary for the kitchen. The steam gets in behind them.

"Have your sink the right height. I do not like an inclosed sink. There are too many unpleasant possibilities. It gets damp and things may get spilled, and sometimes there are cockroaches. It also tires the person working at the sink to have to keep her toes back of the doors. Wherever it is possible to have the stove adjusted to your height, do so. The cabinet should have hooks and shelves so that all the things that are to be used there can be kept there. All shelves should be built for the special purpose for which they are intended. Do not let the carpenter or the contractor just put in shelves without any reference to the thing for which they are to be used. The ideal shelf I think is one not too wide, so that the little things can not hide behind the big ones. One way to avoid that and to make the shelves easy to clean is to leave a space of about a half inch between the edge of the shelf and the wall.

"The best book I know on the subject of the efficient kitchen is 'The New Housekeeping,' by Mrs. Frederick. Mrs. Frederick is a real housekeeping effi-

ciency engineer. She has a model kitchen on Long Island. Her book will repay careful study.

"We usually like to finish our work and get out of the kitchen as quickly as possible, but most of us spend a great deal of our time there. My ideal of an efficient kitchen is one so pleasant that I like to stay there and that my work there is a joy. There is no room in the house that repays more careful planning."

Does Child Fit Into Home?

Does your child fit into the home? Or has the home been made over to fit the child? . . . If the children are old enough to wait up for father to come home, do they squabble and quarrel and monopolize the conversation so that there is never a chance for a word between father and mother? Or do they unobtrusively fit into the home picture so that it is immeasurably more complete than it was before they came?—American Motherhood.

It's You

If you want to live in the kind of a town That's the kind of a town you like, You needn't slip your clothes in a grip And start on a long, long hike. You'll only find what you left behind. For there's nothing that's really new. It's a knock at yourself when you knock your town. For it isn't your town—it's you. —Exchange.

Select for your garden only well known, hardy varieties. Purchase from well known firms, and order early. Be willing to pay a higher price for good fresh seed.

FASHION DEPARTMENT

All patterns, 10 cents.



No. 8980—Ladies' Shirtwaist: Cut in sizes 36, 38, 40, 42 and 44 inches bust measure. Graceful frills in graduated outline give this shirtwaist a distinctive quality. They are gathered under the collar at each side. An interesting tucker is set in at the front of the waist. The long sleeves are gathered into straight cuffs which are finished with dainty frills at the wrists. **No. 8988—Girls' One-Piece Dress:** Cut in sizes 8, 10, 12 and 14 years. The front of the dress is shamed in a long, narrow V-shape, as far as the normal waist line. A plain vest of white is set in to form the square neck, and the rather large round collar rolls high at the back of the neck. The large pointed pockets are cleverly folded back to form straps. **No. 8987—Ladies' Dress:** Cut in sizes 36, 38, 40 and 42 inches bust measure. The surprise closing and the wide tuck on the skirt give the new one-sided effect to this dress. A narrow shawl collar of checked silk gingham is the sole trimming of the waist. The three-gored skirt is gathered at the slightly raised waist line.

HELPFUL POULTRY HINTS

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

Problems of Incubation

THE incubation season is now at its height. Many people are certain to experience poor hatches and some are going to blame the incubator when they themselves are to blame. Back of the eggs in the machine may be poor breeding stock, improper feed, wrong methods, and bad housing. In some cases the incubator may be at fault, but such cases are in the minority.

At the very foundation of the successful breeding and rearing of live stock of any kind, lies vitality. Especially is this true with poultry. The short time that the chick is in the embryonic stage; the quick growth which it makes; the comparatively short life of the chicken; the immense amount of food which it consumes, digests and assimilates; and the strain of manufacturing and laying a sufficient number of eggs to make that chicken profitable, all tell upon the constitution of the fowl. Thus unless the poultryman uses his very best breeding stock, and uses good judgment in making his matings, and sees that vitality is coursing through every vein, he is certain to suffer more or less because of this neglect.

Don't use immature stock. Yearling hens, hens which have laid during one pullet year, are much better breeders than pullets that are from seven to fourteen months old. Many good poultrymen use their best hens until they are four years old. If you find an especially good breeder among either the males or females, you would make a serious mistake by disposing of that fowl at any reasonable price if you expect to stay in the poultry business.

One common fault which is found among poultrymen in all sections is their inability to distinguish high and low vitality, vigor and lack of vigor in fowls. They know when a chicken is near death's door if afflicted with some of the more common diseases, but if it is a fowl with a well marked plumage or a good shaped comb or one possessing some other characteristic which they especially admire, they too often overlook the long snaky head, the sunken eye, the thin breast, and other evidences of weakness and lack of vitality. It will pay any poultryman to give days of careful study when it comes to selecting the stock for his breeding pens. Mistakes here are costly. It means a season's work lost to say the least, and you may never be able to recover from the effects of mistakes in breeding made in a single season.

A great many poultrymen make the mistake of buying eggs or stock or baby chicks promiscuously and don't know anything about the breeding back of them. No man can afford to take chances like that. It is simply a leap in the dark. You should know something about the breeding back of your stock, their former good health, their ability to produce a large number of eggs and to fertilize a reasonable percentage of them. Don't take the other fellow's word for this unless he guarantees to back his statements. Raise your own stock, at least the males that head your flock, or else find out something about the class of stock upon which you expect to base your hope of success or failure.

Incubators are a necessity if you expect to raise any great quantity of stock. Incubators are also necessary if you expect to get off any large quantity of early chicks, which you should do. Also remember that you cannot afford to set the first of your hens that go broody. These have been your winter layers when eggs are high. If you set these hens, you are then hatching from too many females that waited un-

til spring before they started to lay. Get busy with your machines and make 1919 the banner year for poultry in America.—T. E. QUISENBERRY, Leavenworth, Kansas.

Combine Utility and Quality

A hen, in order to be classed as a genuinely good one, should be equally capable of going in the show ring and taking a ribbon or of going on the yard and making a record as a layer. And the breeder, in order to get the advantage of the best and broadest markets, must breed for a combination of utility and standard quality instead of following the tendency to become either a fancier or a utility breeder. That is the advice of Rob B. Slocum, a poultry specialist of the United States Department of Agriculture, and is based largely on returns obtained on the poultry farm of the department at Beltsville, Md., where many of the exhibition males used have 200-egg production in their pedigrees.

"Except in few more or less isolated cases," says Mr. Slocum, "there is nothing in the standard requirements directly opposed to utility, and the buyers during the past few years have shown an increasingly insistent demand for fowls that have egg-producing ability back of them."

Fanciers, Mr. Slocum points out, are too prone to put the appearance of the fowl above everything else and thus to neglect the egg-laying quality, while on the other hand unsuccessful fanciers are likely to turn completely to the egg-producing side of breeding without any attention to "points." Either of these attitudes, he says, is an obstruction to the best development of poultry raising in the United States.

"The Department of Agriculture," he continues, "encourages poultry breeders to develop flocks along breeding lines to secure a combination of good production, vigor, and uniform standard type. That goal is readily attainable through careful selection of breeding stock, and those who follow the policy suggested may confidently expect the most attractive markets."

Have the Brooder Ready

Buyers of chicks should have a brooder such as is required for the number of chicks bought, ready, warmed, and regulated when the chicks arrive.

If for any reason the brooder is not ready, take the chicks from the shipping box in a warm room, feed and return to the box; repeat at intervals of three hours until the brooder is ready.

For the first few days give very close attention to regulating the brooder for the comfort of the chicks. This is the most troublesome state in the operation of a brooder, and the most critical period in the life of the chick.

Emergency Brooder

Delay in delivery of a brooder sometimes puts a novice in a quandary as to what to do with chicks. A brooder for temporary use may be made as follows:

Take a box, without cover, about 18 to 24 inches square and 10 inches high. In one side, next the bottom, cut an opening 3 inches high by 10 inches long for the chicks to pass through. Protect this opening with a strip of cloth, tacked at the upper edge, having perpendicular slits from the lower edge to within half an inch of the top to give the chicks passage.

This box, covered on top with a piece of old blanket or quilt, may be used without heat when the outside temperature is 70 degrees F. or over. For lower temperature a jug or a large bottle of hot water should be placed in the box and refilled as often as necessary to keep the chicks comfortable.

"Early to bed" is a rule that won't do for hens; not if the poultryman is looking for high egg production. The early-to-roost and late-to-rise hen is one that should find its way to the roosting pan.

MAKE YOUR HENS LAY NOW

YOU want eggs to sell at these war-time prices, and you want to do your full part toward increasing the world's food supply.

Speed up the laying. Get your hens in finest laying trim by feeding Dr. Hess Poultry Pan-a-ce-a. It helps to make poultry healthy—to make hens lay—to make chicks grow.

Mating time is here. Now's the time to put your hens and roosters in the pink of condition. If you want chicks that will live and develop rapidly, if you want early broilers, if you want pullets that will develop into early winter layers, then feed the parent stock Dr. Hess Poultry Pan-a-ce-a.

Remember, it's the singing, scratching, industrious hen that lays the healthy, fertile eggs that will hatch into strong, livable chicks. Feed Pan-a-ce-a for results. Buy according to the size of your flock—a penny's worth for every hen to start with. A good rule for feeding is a tablespoonful once a day for every 20 to 25 hens.

The dealer from whom you buy Pan-a-ce-a will return every cent you pay him if it does not do what is claimed. 30c, 75c and \$1.50 packages. 25-lb. pail, \$3.00; 100-lb. drum, \$10.00. Except in the far West and Canada.

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DR. HESS STOCK TONIC
A Worm Expeller. A Conditioner for Spring Work



Dr. Hess Instant Louse Killer Kills Lice

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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.

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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

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Satisfactory Results

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(Oldest and largest seed corn growers in Central West)

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Our book, "CARE OF BABY CHICKS," and a package of GERMOZONE are the best insurance against chick losses. Those formerly losing more than 50% of their chicks now raise better than 90% per cent. If you have never tried GERMOZONE, we will send you a book and package as above. You will be satisfied, 75c; 60 days' trial. We trust you.

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O. H. LEE CO., Dept. 415, Omaha, Neb.

RELIABLE POULTRY BREEDERS

PLYMOUTH ROCKS.

SEE MY AD IN FEBRUARY 1, PAGE 8. Farnsworth.

WHITE ROCK COCKERELS, \$3 TO \$5. Photo free. Eggs for hatching. Mrs. John Ramsey, Fort Scott, Kansas.

BARGAINS IN BARRED ROCKS AND EGGS. Pekin duck eggs. W. D. Steele, Chillicothe, Missouri.

BARRED ROCK COCKERELS AT FARMERS' prices. Western Home Poultry Yards, St. John, Kansas.

WHITE ROCK COCKERELS—ONE FOR \$5, two for \$9, three for \$12. Henry Luers, Columbus, Nebraska.

FOR SALE—PLYMOUTH ROCK COCKERELS. Price, \$2.50. E. F. Houghton, Chanute, Kansas.

WHITE ROCKS—LAYERS, WINNERS. Eggs, fifteen, \$2; 45, \$5; 100, \$8. Mrs. J. M. Craven, Butler, Okla.

RINGLET BARRED ROCK EGGS—PEN stock, \$2 and \$3 fifteen; range, \$1; parcel post paid. R. Sonnenmoser, Weston, Mo.

BEAUTIFUL BLUE BARRED RINGLET Rocks, cockerels at \$3 each. Eggs in season, \$6 hundred, \$1.50 fifteen. Mrs. W. L. Houts, Box 77, Route 1, Hebron, Nebraska.

BARRED PLYMOUTH ROCKS—PURE-BRED selected, farm raised stock. Eggs for hatching, 5c each. Mrs. W. C. Bocker, Solomon, Kansas.

SUNNY SIDE BARRED ROCK COCKERELS, pen matings. Bradley and Thompson strains, \$5 to \$10 each. Satisfaction guaranteed. Almeda Siler, Wells, Kansas.

BARRED PLYMOUTH ROCKS—THOMPSON Ringlet strain. Pen and utility flock eggs for hatching at live and let live prices. A. F. Siefker, Defiance, Missouri.

BARRED ROCK EGGS FOR HATCHING—Light and dark matings. Good layers. Special matings, \$5 per fifteen range, \$6 per hundred. C. C. Lindamood, Walton, Kansas.

EGGS FROM SPLENDID LAYING strain Barred Plymouth Rocks, \$8 per hundred prepaid for the season. Write your wants. Mrs. Ed Snyder, Fontana, Kansas.

HIGH-SCORING BARRED ROCK EGGS, fifteen for \$3, best pens; others, \$1.50-\$6.00 hundred. Woods Duroc Farm, F. F. Wood, Wamego, Kansas.

PARK'S 200 STRAIN BARRED ROCKS—Utility, one setting, \$1.75; 100, \$7.50; pedigree, one setting, \$2.25; 100, \$9. R. B. Snell, Colby, Kansas.

BRED-TO-LAY BARRED ROCKS—FINE, large, hardy hen-hatched, free range, heaviest winter layers. Eggs, setting, \$1.50; hundred, \$8. Guaranteed. Belmont Farm, Topeka, Kansas.

BARRED ROCKS—BRED FOR SIZE and eggs. Eggs from five special pens. Write for mating list. A son of champion Chicago cockerel, 1917, heans Pen 1. Hiram Patten, Hutchinson, Kansas.

WHITE ROCK COCKERELS (FISHEL strain direct, farm raised), discounted. We must have the room. While they last, our \$5 birds for \$3; our \$7.50 and \$10 for \$5. Weigh seven to ten pounds. No brass or disqualifications. Shipped on approval. Chas. Blackwelder, Isabel, Kansas.

WHITE PLYMOUTH ROCKS, NO BETTER anywhere. Have bred them exclusively for 26 years and are extra good layers. Eggs, \$2 and \$3 per fifteen, from five pens; \$5 per fifteen from first pen. Expressage or parcels post prepaid. Thomas Owen, Route 7, Topeka, Kansas.

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EGGS FROM PURE-BRED LIGHT Brahmas. Setting of fifteen, \$1.25; 100 for \$7. Albert Reetz, Tobias, Nebraska.

HIGH GRADE LIGHT BRAHMA COCKERELS, \$3. Eggs, \$1.75 per fifteen, \$3 per thirty, prepaid. Frank Krey, Enid, Okla.

LIGHT BRAHMA EGGS, \$2.50 and \$3.50 per fifteen eggs; \$4 and \$6 per thirty eggs. Geo. W. Craig, 2081 Wellington Place, Wichita, Kansas.

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WHITE ORPINGTON, SINGLE COMB—Hundred eggs, \$6; cockerels, \$3. J. A. Russell, Corning, Iowa.

SINGLE COMB BUFF ORPINGTON eggs, \$6 per hundred. Mrs. Henry M. Schumaker, Clifton, Kansas.

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BIG BLACK LANGSHAN COCKERELS and pullets, fancy and utility; also eggs. Guaranteed. H. Osterfoss, Hedrick, Iowa.

PURE BLACK LANGSHAN COCKERELS—Hens and eggs. Mary McCaul, Elk City, Kansas.

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BUFF ORPINGTON DUCK EGGS—Mrs. Fred Sieglinger, Stillwater, Okla.

SEVERAL BREEDS

STRICTLY PURE-BRED COCKERELS, S. C. White Orpingtons and R. C. Silver Wyandottes, \$2 each. Eggs, \$1 for fifteen, \$5 a hundred. Mrs. Wm. Imhoff, Hanover, Kansas.

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S. C. W. LEGHORN COCKERELS, \$1.50. W. T. Graham, Haven, Kansas.

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EXTRA CHOICE EGGS FOR HATCHING, \$2 to \$5 for fifteen. Single Comb Dark Brown Leghorns. Better than ever. Cocks and cockerels for sale. John W. Moore, Poplar Bluff, Missouri.

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ROSE COMB BROWN LEGHORNS—Roosters won five state prizes. One, two dollars; two, three dollars; six, eight dollars. Prize eggs, thirty, \$2.90. Rufus Standiford, Reading, Kansas.

PURE SINGLE COMB BROWN LEGHORNS, Tormohlen strain. Winter layers. No better farm flock. Eggs, range, 100, \$7; pen, fifteen, \$3, postpaid. Mrs. D. A. Wohler, Hillsboro, Kansas.

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EGGS FROM HEAVY WINTER LAYING S. C. W. Leghorns, bred for winter laying for years. Won third and fourth pen for monthly record, second pen for monthly record, and fourth pen for yearly record, at American egg-laying contest at Leavenworth, Kansas. Write for prices. H. M. Blaine, Sylvia, Kansas.

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PRIZE WINNING RED SUSSEX COCKERELS. Sunnyslope Farm, Stillwater, Okla.

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NARRAGANSETT TURKEYS, STOCK and eggs for sale. Mrs. John Mitchell, La-fountain, Kansas.

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LEADING VARIETIES, 20c DELIVERED. Request folder. McCune Hatchery, Ottawa, Kansas.

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ROSE COMB WHITE WYANDOTTE cockerels, \$2.50 and \$3. Mrs. H. C. Johnson, Route 4, Manhattan, Kansas.

CHOICE ROSE COMB WHITE WYANDOTTE cockerels from a well known strain, \$3 and \$5 each. C. O. Philbrick, Ord, Neb.

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SILVER WYANDOTTE EGGS—FIFTEEN, \$1.75; fifty, \$4; hundred, \$7. Mrs. Edwin Shuff, Plevna, Kansas.

THOROUGHbred ROSE COMB WHITE Wyandottes, cockerels from winter layers, \$2.50, \$4, \$5. Mrs. K. Siegert, Blackwell, Oklahoma.

ROSE COMB WHITE WYANDOTTE cockerels, \$3, \$4 and \$5. Special rates on three or more. Mrs. Geo. Rankin, Gardner, Kansas.

SILVER LACED WYANDOTTE HATCHING eggs, selected stock, per setting \$1.50; 100 eggs, \$6. Peter Hoffman, Route 1, Pretty Prairie, Kansas.

EGGS—WHITE WYANDOTTES, KEELER strain. Utility, \$1.50 fifteen, \$4 fifty, \$7 hundred. Pen extra good, \$2 fifteen. Mrs. M. M. Weaver, Newton, Kansas.

THOROUGHbred ROSE COMB WHITE Wyandottes, hatching eggs from utility winter layers, \$2 per fifteen, \$8 per hundred. Eighteen years' experience. Mrs. K. Siegert, Blackwell, Oklahoma.

QUALITY ROSE COMB WHITE WYANDOTTES, great winter laying strain. Eggs, fifteen, \$1.75; thirty, \$3; fifty, \$4.50; hundred, \$8. Satisfaction, safe arrival guaranteed. Garland Johnson, Mound City, Kan.

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GET WINTER EGGS! BUY LONG'S bred-to-lay velvety red S. C. cockerels. Mrs. Geo. M. Long, St. John, Kansas.

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ROSE COMB RED COCKERELS, \$2.50, \$3.00 each. Tom Cranshaw, Route 2, Maple Hill, Kansas.

SINGLE COMB RED COCKERELS, \$5 TO \$10. Eggs. Maple Hill Poultry Farm, Lawrence, Kansas.

HIGH GRADE RHODE ISLAND RED hens, \$1.50. Chas. McFadden, Morland, Kansas.

R. C. R. I. EGGS, \$1.25 PER FIFTEEN; \$7.50 per hundred; cockerels, \$5. V. E. DeGeer, Deerhead, Kansas.

S. C. REDS—EGGS FROM BLUE RIBBON winners, \$2, \$3, \$5 and \$10. H. L. White, 1747 N. Waco, Wichita, Kansas.

HIGH CLASS SINGLE COMB RED cockerels. Dark red, long back, and low tail. Large husky fellows, \$3 and up. Nel W. Peterson, Mason City, Neb.

FOR SALE—SINGLE COMB RHODE Island cockerels, 200-egg strain, \$5 each. Eggs in season. Write me for prices. W. W. Baker, Boone, Nebraska.

THOROUGHbred ROSE COMB RHODE Island Reds, bred for laying and good color. Setting eggs for sale, price \$2 per setting or \$5 per hundred. Ed Schafer, Leon, Kan.

PURE-BRED ROSE COMB RHODE Island Red cockerels, dark red birds, \$3 and \$5. Eggs in season. Maple Hill Farm, Meriden, Kansas.

ROSE COMB RHODE ISLAND RED eggs from the flock that has never missed the blue ribbons in any show; two-fifty per fifteen; seven-fifty per hundred. Mrs. S. M. Williams, Fairfield, Nebraska.

S. C. REDS AND WHITE ROCKS—Raise your prize winners from our reliable baby chicks and hatching eggs. We guarantee safe delivery and good fertility. Reliable Poultry Farm, University Place, Neb.

S. C. R. I. RED EGGS FROM PEN, 15 per fifteen; utility, \$5 per hundred. Rib-seeker strain, bred for eggs, size, shape and color. Winners wherever shown. Satisfaction guaranteed. Mrs. Waldo Chapman, Braymer, Missouri.

Beautiful Waterproof Apron FREE



This is not an ordinary apron, but is made of beautiful waterproof material which gives the appearance of the finest quality of checked ging-ham.

EASILY CLEANED

The waterproof material of which this apron is made will keep clean much longer than any ordinary apron, and it can be easily washed with soap and water or cleaned with gasoline without injury to the fabric or color.

COLOR

We can furnish these aprons in either light blue checked or pink checked. In ordering, state color wanted.

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The aprons are 30 inches ling and 28 inches wide, with bib 94 by 10 inches.

OUR OFFER

This apron will be mailed FREE and POSTPAID to anyone sending us one new or renewal subscription to KANSAS FARMER at \$2.00.

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KANSAS FARMER COMPANY, Topeka, Kansas. one new or renewal subscription to KANSAS FARMER for two years at \$2.00.

FARMER two years and one Waterproof Apron, color.....

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RAIN OR SHINE

One and One-Half Miles West of Town

One Hundred and Ten Choice Holsteins SELECTED FROM OUR TWO HERDS

This offering consists of thirty registered pure-breds, including ten fine young cows, some with seven-day records, some with ten months and yearly semi-official records; ten registered heifers from A. R. O. dams and five fine heifer calves; several well-bred young bulls from dams up to 22 pounds butter per week.

Eighty high grade cows and heifers, twenty in milk now with first and second calves, all tested in county testing association. Forty heavy and near springers in fine condition for spring and summer milkers. Twenty yearlings and heifer calves.

All stock old enough is tuberculin tested and sold to be right. We have bred Holsteins since 1908. We have been members of the first testing association in Kansas since 1913.



Ask for catalog and mention this paper.

W. H. Mott, Pedigree Man

Auctioneers—J. T. McCullough and Others.

Kentucky Jacks at Private Sale

E. P. Maggard, with the firm of Saunders & Maggard, Flemingsburg, Ky., has shipped 21 head of jacks to Newton, Kansas, and they will be for sale privately at Johnson's Barn. This is a well bred load of jacks, and they range in age



from coming three to matured aged jacks; height from 14 to 16 hands. We will make prices reasonable. Any one wanting a good jack will do well to call and see them. Barn two blocks from Santa Fe depot, one block from Interurban. Come and see me.

SAUNDERS & MAGGARD, Newton, Kansas

Duroc Sale Postponed

On account of the severe storm February 14, W. W. Zink, Turon, Kansas, will hold his sale

March 4, at Turon, Kan.

COTT'S JERSEY SALE, MARCH 6

AT FARM FIVE MILES SOUTH OF TOPEKA

I am a one-cow man, starting with Birdie Mercury by Diploma's Mercury, dam Shaw-Daisy; Birdie Mercury dam of Pride of Topeka, that won state butterfat test over all sows in a 72-hour test at Kansas State Fair as a four-year-old. After being fresh four she gave milk 71.6 pounds, fat 3.261. She won a prize every time she was showed. Her sister, Warder's Fair Lady, is the mother, grandmother, great grandmother of my ring of eleven head of pure-bred Jerseys at my public sale March 6.

MES H. SCOTT, RURAL ROUTE 1, TOPEKA, KANSAS.

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Annual Jack, Jennet and Stallion Sale

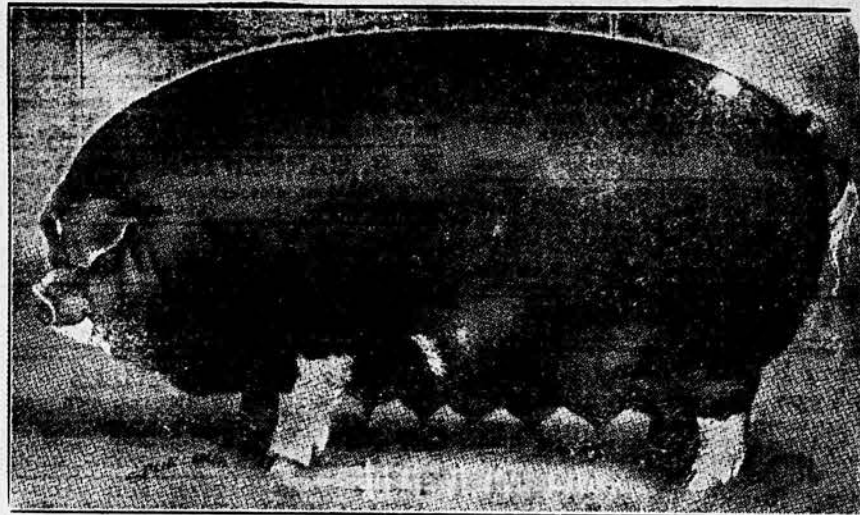
To Be Held in Savannah, Missouri, March 13, 1919
Consisting of twenty-four large, black, registered jacks, the best offering I have ever made; fifteen bred jennets; five Percheron stallions, weight 1,800 to 2,100 pounds. All good ones. Write for illustrated catalogs.

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ADVERTISING PAGE FOR READY BARGAINS

Townview Big Type Polands Sell March 7, Peabody, Kans.



SALE HELD IN TOWN

Forty head of great big Spring Gilts, Fall Yearlings, and Sows, all bred to the three great breeding boars owned at Townview Farm—

King Wonder's Giant 77326
Walter's Expansive Sid 78784
Big Timm Jr. 87545

FIVE CHOICE SPRING BOARS, READY FOR SERVICE

Remember the date and be there

Everything immune and registered. Send for descriptive catalog.

Chas. E. Greene, Peabody, Kansas

Duroc Sow Sale Postponed

On account of the extreme weather conditions and bad roads it was necessary for me to postpone my Bred Sow Sale until

Thursday, March 6, 2 p. m.

Sale will be held in McPherson. Send for catalog, also look up previous advertising.

B. R. ANDERSON - - - McPHERSON, KANSAS

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ADVERTISING PAGE FOR READY BARGAINS

SHORTHORN CATTLE.**USE A SHORTHORN BULL**

And add 200 pounds to every steer you raise. A load of Shorthorn yearlings sold for \$20.75 at Denver in January, the record price for feeders. Four loads of Shorthorn steers brought \$324, \$361, \$358, and \$349 per head at Chicago in December. Why not start a Shorthorn herd by putting in two or three registered females and keeping the female increase? You would soon have a valuable herd at small cost. Pure-breds pay the best.

SHORTHORNS With Quality

For Sale—Three Scotch herd bulls, royally bred and individually extra good, representing the Brawith Bud Emerald and Orange Blossom families. Also ten head of Scotch topped females bred and regular producers. All good colors, weight from 1,250 to 1,600 pounds. Come and see me.

H. H. Holmes, Topeka, Kansas
Route 28

PRAIRIE VIEW Shorthorns

Seven Head of Scotch-Top Bulls. Reds and roans, one year old in February and March. Good growthy fellows, priced to sell.

J. R. Ely - Marion, Kansas

SHORTHORN BULLS

For Sale—Ten bulls, seven to fifteen months old; Scotch and Scotch topped. Two Scotch bulls by Type's Goods, one a Bra- with Bud, the other a Duchess of Gloster. All in good condition and priced reasonably.

S. B. AMCOATS, CLAY CENTER, KANSAS
Write Me Your Wants

MAPLE HILL STOCK FARM
Three registered Shorthorn bulls: One coming two-year-old, \$150; two ten months old, \$100 each. Scotch Collie pups, \$3 and \$5 each. Pedigrees furnished.

CLARENCE LACEY, MERIDEN, KANSAS

Shorthorn Bulls & Duroc Gilts
Service bulls at \$125 and up to \$200. Come and see them or write me your wants.

KLONDYKE VALLEY FARM
F. C. Houghton **Dunlap, Kansas**

MARK'S LODGE RED SHORTHORNS
For Sale—25 well bred cows and heifers bred, priced reasonable. A few young bulls by Double Diamond by Diamond Goods. Price, \$150. Come and see my herd.

M. F. MARKS, VALLEY FALLS, KANSAS

POLAND CHINAS

Deming Ranch Poland Chinas.
Big-Type Poland China Hogs

For Sale—Fifty spring boars, real farmer boars and herd boar prospects; 100 bred sows and gilts. Write or come and see our herd.

Deming Ranch, Oswego, Kan.
(H. O. Sheldon, Herd Manager)

OLD ORIGINAL SPOTTED POLAND CHINAS
Eighty head tried sows and gilts, bred and proved. Satisfaction guaranteed. Write your wants to The Cedar Row Live Stock Farm, A. S. Alexander, Burlington, Kansas.

Send for catalog of the great
Poland China Bred Sow Sale
Held at Peabody, Kansas, March 7.

Do it Now!
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JOHNSON'S BIG-TYPE POLAND CHINAS
Herd boar Over There No. 95555, the greatest son of Caldwell's Big Bob. A few bred sow and gilts for sale. Bred sow sale March 8.

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HOGS! HOGS! FOR SALE!
Big Registered Poland Chinas and English Berkshires that weigh and win. S. C. Brown Leghorn Chickens that lay. See or write

S. Y. BURKS, BOLIVAR, MO.

Oak Grove Stock Farm Polands
The blue ribbon herd of Spotted Polands. Fall pigs sired by O and O 25th, are immuned, recorded and the very best of breeding. Also choice Barred Rock cockerels, \$3 and \$5 each.

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LONE CEDAR POLAND CHINAS—A splendid lot of bred gilts by Big Chimes, a great son of Big Hadley Jr. and out of high class mature sows; also a few tried sows and fall pigs. All immuned. A. A. Meyer, McLouth, Ks.

LANGFORD'S SPOTTED POLANDS
Bred gilts, tried sows, herd boar prospects.

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ERHART'S POLAND CHINAS

Have a few bred sows and bred gilts priced reasonable. All immuned. Several fall boars ready for service. Write your wants.

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Seed Corn of early and late varieties.

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15 Large Mammoth Black
Jacks for sale, ages from 2 to 6 years; large, heavy-boned. Special prices for early sales. Twenty good jennets for sale. Two Percheron stallions. Come and see me.

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Moline, Elk County, Kansas

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Registered mares heavy in foal; weanling and yearling fillies. Ten mature stallions, also colts. Grown ourselves on dam side; sires imported.

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Registered Jacks and Jennets. Good individuals, good colors. Have some choice young jacks that are priced to sell quick.

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

MAURER'S HOLSTEIN FARM is offering some exceptionally good registered females from yearlings to matured cows; also a fine lot of high-grade spring cows and heifers. All reasonably priced. Come and see them or write

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CLAIM SALE DATES.

Jacks and Jennets.

March 13—G. M. Scott, Reo, Mo.
March 25, 1919—H. T. Hineman & Sons, Dighton, Kan.

Holsteins.

March 12—E. S. Engle & Son, Abilene, Kan.
March 25, 1919—Kansas Holstein Breeders' Association sale, Topeka. W. H. Mott, sale manager.

March 26—B. Wilcox & Son, Topeka, Kan. W. H. Mott, Herington, Kan., sale manager.

May 12—A. S. Neale, Manhattan, Kan.

Shorthorns.

March 6—J. C. Robison and O. E. Torrey. Sale at Forum, Wichita, Kansas.

Jersey Cattle.

March 6—James H. Scott, Route 1, Topeka, Kansas.

Poland Chinas.

March 4, 1919—Jones Bros., Hiawatha, Kan.
March 5, 1919—Schmitz Bros., Seneca, Kan.
March 7—Chas. E. Green, Peabody, Kan.
March 8—V. O. Johnson, Aulne, Kan.

Duroc Jerseys.

March 6—F. J. Moser, Sabetha, Kan.

H. O. Mott, of White City, Kansas, owns one of the good herds of Poland Chinas in that part of Kansas. The herd boar now at the head of the herd is Black Chief by The King of Kansas Jr., his dam being Hutchins Beauty, a splendid brood sow that was bred by W. H. Harter, Westmoreland, Kansas. Several of the herd sows are from very popular blood lines of the useful Poland China hog, one by Missouri Governor, he by King Ex. 3d, a boar bred by W. A. Baker & Son, Butler, Mo., and was one of the real big-type boars. His dam, Big Mary 2d, was one of the largest Poland China sows in Missouri and was bred by hCharles Z. Baker, Butler, Mo. Another sow in the herd is Mabel by Big Superba by Superba, the grand champion Poland China boar at San Francisco World's Fair, 1915. Orange Spot is also one of the herd sows sired by Blue Valley Orange by Blue Valley Hadley. This sow was bred by the noted breeder, John Blain. A feature of the herd of Mr. Mott at this time is the choice lot of young stock, both boars and gilts, that have been produced from the high class of brood sows kept in the herd.

The second annual Poland China bred sow sale of H. E. Myers, Gardner, Kansas, was held at the farm as advertised February 22, and resulted in the disposal of forty head of bred sows and bred gilts at an average price of \$97 per head. This was considered a remarkable sale held under unfavorable weather conditions. The local support by breeders and farmers in the vicinity was a strong factor in making this sale. The offering was presented in just plain breeding condition, not fat or pampered but handled in a way that will insure a nice profit on each lot sold. While no sensational prices figured in the auction, the averages were very satisfactory to Mr. Myers.

"The Fairview Idea" is the title of a story of the new rural life by Herbert Quick, which has just come from the press of the Bobbs-Merrill Company, Indianapolis. In it Mr. Quick creates an entire neighborhood, with its love stories, its tragedies, its anxieties, its pleasures, and does it all in terms of farm life. Its purpose is not to point to a "back to the farm" movement. The Fairview idea is rather how to stay on the farm. It is a worthy successor to "The Brown Mouse" by Mr. Quick, which was published several years ago and had a large sale. "The Fairview Idea" sells for \$1.50 net.

The Poland China sale of A. J. Erhart & Son, Ness City, Kansas, held at Hutchinson on February 19, resulted in the disposal of fifty-eight head of bred sows and gilts at an average of \$186.30. Forty head of choice sows bred to the Big Sensation boar averaged \$226.25. The offering was the best lot ever sold by Erhart & Son. No sensational prices were made, but the averages were very fair, yet low enough to permit of liberal investments of high class breeding stock. Erhart & Son have made an enviable reputation by breeding the large farmer hog that makes good both on the farm and in the show ring. The 1,204-pound boar, Big Sensation, is conceded to be the largest hog of any breed, and sows bred to him are in great demand among breeders and farmers that are growing a large hog for the market. Erhart & Son have sold breeding stock from their herd for breeding stock in fifteen states and are doing a great work to improve the Poland China breed.

The Poland China sale of F. Olivier & Sons, Danville, Kansas, February 18, resulted in the disposal of forty-eight head of bred sows and bred gilts at an average of \$188.35. The offering was presented in splendid breeding condition and was one of the good lots to be sold in any sale this spring. The Oliviers have supplied breeding stock to head herds from the Pacific Coast to the Gulf of Mexico. They have bred and shown Poland Chinas at all the leading fairs for forty years and have always been among the winners, and a feature of their herd at this time is the three promising herd boars, Black Buster by Giant

HOLSTEIN CATTLE.

Life of a
Dairy Cow

A Dairy Cow in No Country lasts to above six to ten years. Age, accident and failures constantly cause cows to be sent to the butcher. Cows of the Holstein-Friesian breed are large, weighing 1,000 to 1,500 pounds, and make an excellent quality of beef.

HOLSTEIN CATTLE

Send for our booklets—they contain much valuable information.

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

Registered Holstein Bulls

Two to 12 months old. Some from A. R. O. cows and sired by Dutchland Colantha Sir Oliver. Excellent individuals and priced to sell, as I wish to purchase more females.

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HIGH GRADE HOLSTEIN

Calves, either sex, from heavy producers, well marked, 4 to 6 weeks old, 15-16ths pure, \$25 each, crated and shipped to your station. Express and all charges paid here.

Highland View Place, Whitewater, Wis.

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We offer cows and heifers due to freshen soon. Also a few choice calves ready for shipment. Write us for prices, etc.

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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.

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BUTTER-BRED HOLSTEINS

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

J. F. MAST, SCRANTON, KANSAS

SEGIST & STEPHENSON, WOLTON, KANSAS
Breeders exclusively of pure-bred prize-winning record-breaking Holsteins. Correspondence solicited.

GOLDEN BELT HOLSTEIN HERD
Herd headed by Sir Korndyke Bess Hello No. 165946, the long distance sire. His dam, grand dam and dam's two sisters average better than 1,200 pounds butter in one year. Young bulls of serviceable age for sale.

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CHOICE HOLSTEIN CALVES
12 Heifers and 2 Bulls, highly bred, beautifully marked, and from heavy producing dams, at \$25 each, crated for shipment anywhere. Safe delivery guaranteed. Write

FERNWOOD FARM, WAUWATOSA, WIS.

ANGUS CATTLE

Dietrich's Aberdeen-Angus

Aged bulls, fifteen choice spring bulls. Females, all ages.

GEO. A. DIETRICH, CARBONDALE, KAN.

Cherryvale Angus Farm

Is offering six choice Angus bulls ranging in age from 9 to 11 months. All sired by Roland L. No. 187220.

J. W. TAYLOR

Route 8 Clay Center, Kansas

ANGUS BULLS

For Sale—Seven head bulls from 7 months to 3-year-old herd bulls. Priced to sell. Write your wants or come and see my herd. I mean business.

FRANK OLIVIER, JR., Danville, Kansas

GUERNSEY CATTLE.

GUERNSEY BULLS

Good individuals of serviceable age, of May Royal, May Rose, Masher Sequel, Raymond of the Free breeding. Write or come and see them. They are priced to move.

ADAMS FARM, GASHLAND, MISSOURI

Twelve miles from Kansas City.

MULEFOOT HOGS.**KNOX KNOLL MULEFOOTS**

Orders now booked for February litters. Catalog and prices on request.

S. M. KNOX - HUMBOLDT, KANSAS

Buster and out of the great brood sow, Black Belle; Columbus Wonder by Big Bob Wonder, and Olivier's Big Timm. These young sires will be fitted and shown at the young state fairs next fall and are promising prospects for first prize winners.

W. W. Zink, of Turon, Kansas, was compelled to postpone his Duroc Jersey bred sow sale advertised for February 14 until March 4 on account of the severe snow storm. The sale will now be held in a comfortable sale barn in Turon on March 4. The offering promises to be one of the best lots to be sold in any sale this year.

John Linn & Son, of Linndale Farm, Manhattan, Kansas, owners of one of the high class herds of pure-bred Ayrshire cattle in the West, report their herd doing well. In selecting foundation stock for their herd they purchased animals backed by records regardless of price, and the result is a herd of producers. The first eight two-year-old heifers they have tested have averaged 9,192 pounds of milk with an average test of 4. per cent fat, the best record being that of Alta Drummond Bell, which made 11,017 pounds of milk and 404.16 fat, the state record for senior two-year-old. This heifer is a daughter of Alta Drummond of Oakland, a cow that made a state record for Ayrshires with 96.2 pounds fat in thirty days. She has also given more milk in a single day than any other Ayrshire, 84.7 pounds.

S. M. Knox, of Knox Knoll Stock Farm, Humboldt, Kansas, reports his big herd of pure-bred Mulefoot hogs doing well. A feature of his herd at this time is the fine lot of February litters. Knox Knoll Farm is also the home of one of the choice herds of Shorthorn cattle in Kansas.

The Poland China bred sow sale of C. S. Nevius & Son, Chiles, Kansas, was held as advertised at the farm February 17 and resulted in the disposal of fifty head at an average of \$95.35. The top price of \$300 was paid for No. 1 in the catalog, which went to the good herd of Bert Harriman, Pilot Grove, Missouri. The offering was presented in splendid breeding condition. Every sow or gilt sold was a prospect for a brood sow showing for a litter. Nevius & Son handle their hogs in a way that insures their future usefulness. The reports on the sows sold in the last year's sale averaged eight pigs for each sow and every one made good in her new home. The sale was one of the good ones of the season. No records were broken or sensational prices recorded, yet the average was good.

H. W. Mollhagen, of Bushton, Kansas, and George Lenhart, of Abilene, have purchased Walter Copia Champion 101262, the senior herd bull in H. B. Cowles' Braeburn herd near Topeka. "Champ" is a descendant of a strong infusion of the De la Netherlands-Korndyke blood lines which his herd has followed for a good many years, is a grandson of King Segis, whose blood is much in demand at present. His sire died young, but he has a 33 and a 34-pound daughter out of only thirteen tested, which gives him, perhaps, a better percentage of 30-pound daughters than any of the other twenty-one sons of King Segis that have produced 30-pounders. His dam, a third young, but she broke four world records as a two-year-old. So "Champ" is every right to be as good as King Korndyke Saddle Val and King Segis Fontaine Count, and King Segis Fontaine Korndyke, who are by other sons of King Segis, some dams scarcely more celebrated than he. It is fortunate for Kansas dairymen that he stays here; and it is fortunate for him that he is to be used in two good herds by owners who are among the most successful record makers in the state and who will give him a chance to show whether he is as good as these distinguished cousins of his. This sale is another proof that a tried bull, if good enough, does not have to go to the sausage maker as soon as he has done all he can for one man. The new owners pay enough for him to buy half a dozen bull calves of good quality, and his predecessor in the time herd brought more annual rental for free successive years after his first owner got through with him than many buyers are to pay for a young bull.

The sale of Spotted Poland Chinas of Everett Hayes, Manhattan, Kansas, on February 18, resulted in the disposal of forty-

five head at an average of \$95.10. No records were made or sensational prices obtained, yet the average was very fair and the total results of the sale were very satisfactory to Mr. Hayes.

Frank Olivier, Jr., of Danville, Harper County, Kansas, has built up one of the real breeding herds of Angus cattle. They have proven very profitable on the farm and a feature of the herd at this time is the number of high class bulls in the herd ranging in age from yearlings to aged herd bulls.

H. H. Holmes, of Topeka, Kansas is the owner of one of the good herds of Scotch Shorthorns. The herd now numbers seventy-five head of registered cattle and is headed by Viscount Stamp, a pure Scotch bull. He is assisted by Brawith Bud, a pure Scotch bull. The cows in Mr. Holmes' herd are a very fine lot and represent all the most popular families of the breed. Mr. Holmes has shown his herd at the leading state fairs from Iowa to Oklahoma and has always stood well with competition of some of the best herds in the country. A feature of this herd at this time is a lot of strong stock bulls and herd bulls that rank in breeding and individuality with the best herds in the West.

C. W. Mollhagen, of Girard, Kansas, owner of Rosedale herd of Duroc Jersey swine, reports his herd doing well. Mr. McClaskey has built up one of the high class Duroc herds in Kansas. He has all the popular blood lines and the big, quick-maturing type. A feature of his herd at this time is the very fine lot of bred gilts and outstanding young boars.

G. M. Scott, of Rea, Missouri, owner of one of Missouri's oldest and most famous jack farms, has announced March 13 as the date of his annual sale of jacks, jennets and stallions. His offering will consist of twenty-four big black registered jacks, fifteen head of choice jennets, and five high class Percheron stallions weighing from 1,800 to 2,100 pounds.

E. E. Frizell & Sons, of Frizell, Kansas, owners of one of the largest and best herds of Red Polled cattle in the state, report their herd doing well. A feature of the herd is the choice lot of young stock, including a fine lot of young bulls by ton sires.

The Poland China sale of Ross & Vincent, Sterling, Kansas, on February 20 resulted in the disposal of forty head of bred sows and bred gilts at an average price of \$89.50. The offering was presented in splendid breeding condition and was one of the real profit making lots sold this year. No high prices were recorded, yet the average was very fair. The local snowstorm kept a number of breeders from attending the sale. Had weather conditions been favorable, a much higher average would have been made. Ross & Vincent own one of the good herds in Kansas and have furnished seed stock to start a number of herds. They buy the best and breed the best. They grow their hogs in a way that insures their future usefulness.

The Poland China sale of Bruce Hunter, Lyons, Kansas, was held as advertised at Lyons on February 21. Owing to unfavorable conditions only a small crowd of farmers and breeders were present. The roads were blocked with snow in all directions and the local support was not strong. The forty-six head sold for an average of \$87.40. No sensational prices were recorded or records made. The top price of \$215 was paid for No. 18, a first prize gilt at the Kansas State Fair. The entire offering was presented in good breeding condition and should have sold for more money.

W. D. Brigham, manager of the Adams Farm, Gashland, Missouri, reports their fine herd of pure-bred Guernsey cattle doing fine and a good demand for high class breeding stock. The Adams farm herd is one of the record-bred heavy producing herds of Guernseys now assembled, and a feature at this time is the fine lot of young herd material.

B. R. Anderson, of McPherson, Kansas, announces that his postponed Duroc bred sow sale will be held in McPherson on Thursday, March 6. The offering of Duroc bred sows catalogued for this sale is one of the good ones to be presented this season.

in Henry's teams, and now looked her over more carefully. She was a well-made mare, general-purpose type I suppose some would say, weigh about 1,350 pounds, clean-legged and well set up. As I looked her over I thought what a shame she had never been bred. I knew she hadn't been bred for Henry never raised a colt.

Just as I came out of her stall our neighbor, Jake M—, drove up. The mare on our side of the team was the same kind of a mare as Fan, except much larger in the middle, and a little heavier, and I knew her for a dependably good mare. I judged, too, she must be about Fan's age, and an idea popped into my head.

"Boys," I said, "maybe we can learn something." Then I told Jake what we had been talking about and asked him about the mare he was driving. It developed that she was sixteen years old and had raised eight colts, having been first bred at five, and having lost only one colt. She had failed to breed the last year. When it came to the value of her produce Jake had to draw on his memory some and on our combined judgment more, but as he had four of her colts at home, two of them at work, and had sold only four, we were able to get within a few five-dollar bills of the total, which we computed at \$1,300. One team of matched mares about a year apart in age and weighing about

JACK AUCTION

of World's Champion Blood

AT FAIRVIEW JACK FARM

Dighton, Kan., Tuesday, Mar. 25

SEVENTH ANNUAL SALE OF THIRTY JACKS, THIRTY JENNETS AND FOUR YOUNG PERCHERON STALLIONS

These Jacks Are the Big, Heavy-Boned, Heavy-Bodied Jacks That Get the Big Mules

Most of the young jacks are the blood of Kansas City 9194, our world's grand champion jack at the Panama-Pacific International Exposition, San Francisco, California, 1915 and of Pharaoh, champion at the Tennessee State Fair in 1910 and at the Kansas State Fair in 1913.

The mature jacks are tried breeders, including

Superior, a 15:3 Five-Year-Old, the Big, Heavy-Boned, Drafty Kind

All jennets old enough are bred to Kansas Chief, the world's grand champion jack. They include the Kansas State Fair champion jennet in 1918, Fannie Long by Dr. Long by Dr. McCord. She is now heavy in foal to Kansas Chief.

Sale will be held in sale pavilion at the farm three and one-half miles south and one mile east of Dighton, Kansas, Tuesday, March 25, 1919, beginning at 10 o'clock a. m. Trains will be met at Shields on the main line of the Missouri Pacific and at Dighton on the A. T. & S. F. Dighton is on the Kansas-Colorado Boulevard, a good auto road, and is forty miles north of Cimarron on the main line of the A. T. & S. F., and forty miles south of Grainfield on main line of U. P. with a good auto road from each place. Catalogs ready to mail March 10.

H. T. HINEMAN & SONS

DIGHTON, KANSAS

Auctioneers

Col. John Snyder, Hutchinson, Kansas; Col. F. M. Holsinger, Moberly, Mo.; Col. Boyd Newcomb, Wichita, Kan.; Col. McCormick, St. John, Kan.

3,200 pounds, he had sold at \$460. She had been bred each time to the best draft sire available. We agreed that Jake's Lil was probably as good a worker as Henry's Fan, and that Lil had probably lost a total of a year's time from work in raising eight colts.

But Henry was a long way from convinced that it had paid Jake to breed his mare. "Yes, but look at what it has cost you to raise those colts," he exclaimed to Jake. To which Jake responded, "Well, Henry, I don't know just what it has cost me in corn and hay and grass. But I do know it has not cost me anything in dollars that actually went out of my pocket except for service fees. And as long as the actual dollars don't go out, the way I farm, and some dollars keep coming in, from a colt sold now and then, or a steer, or a few pigs, why, I must be getting ahead a little bit anyway, don't you think?"

And I don't believe any of us thought we had entirely wasted that rainy morning on the farm. Jake's "actual dollar" argument impressed me, and I see more clearly why live-stock farming is safe farming, especially where a man breeds his own stock. Certainly it must be the outgoing dollars that hold some farmers back.

Make Farming Profitable

In his address in Manhattan during Farm and Home Week Dr. R. A. Pearson, president of Iowa State College, emphasized the importance of agriculture in the reconstruction period just before us. "It must be remembered," said Doctor Pearson, "that in this country there are more farmers than any other class. When their business is doing well, business everywhere is good. Everything possible should be done now to make agriculture attractive to those who are engaged in it and to others who really ought to return to it.

"Among other things this means, of course, the maintenance of fair prices for agricultural products. If farmers have reason to think that they are not treated fairly, great numbers of them will leave the farms and go to towns and cities and profoundly affect the labor situation by increasing the number of unemployed.

"When we remember how universal is

AYRSHIRE CATTLE.

Linndale Farm Ayrshires



MARGINALIA'S BEST NO. 25750

Record 11,260 pounds milk, 411.14 pounds fat. Get this cow's last son for your next herd bull. He is nearly all white and will be ready for fall service. He is sired by Elizabeth's Good Gift. Price, \$250.

We also have two younger bulls at \$100 each.

JOHN LINN & SON
Manhattan - - - - - Kansas

DUROC JERSEYS.

Duroc Bred Sows and Gilts

For Sale—Several well bred sows and bred gilts bred for early March and April litters, priced to sell. Also a few spring boars. First check or draft gets choice. Sold on an absolute guarantee or your money back.

JOHN A. REED & SONS, LYONS, KANSAS

DUROC JERSEY SWINE

For Sale—Bred gilts and a few young boars. Popular blood lines and good individuals. Also booking orders for spring pigs at weaning time. Priced reasonable and satisfaction guaranteed.

C. W. McCLASKEY - GIRARD, KANSAS

HIGHVIEW DUROCS

Home of Repeater by Joe Orion King and Golden Repeater by Pathfinder. **For sale**—spring boars and a few bred gilts. I guarantee satisfaction or your money back.

F. J. MOSER - SABBETHA, KANSAS

R. H. DIX & SON'S DUROCS

For Sale—One choice spring boar, a real herd header. Twelve spring gilts bred to Giant Crimson by G. M.'s Crimson Wonder, a prize winning boar. Priced reasonable for quick sale. Write today.

R. H. DIX & SON, HERINGTON, KANSAS

WOODDELL'S DUROCS

I am going to slash prices on boars the next thirty days. If you want a good boar at a bargain, write at once.

G. B. WOODDELL - WINFIELD, KANSAS

farming and how many are engaged in it we appreciate what it would mean to this country to have even a small portion of them decide to change their work from the country to the town. On the other hand, if farmers are satisfied there will be a tendency to draw with the better class of agricultural labor from the town to the country and thus tremendously relieve a trying situation."

Horses Self-supporting

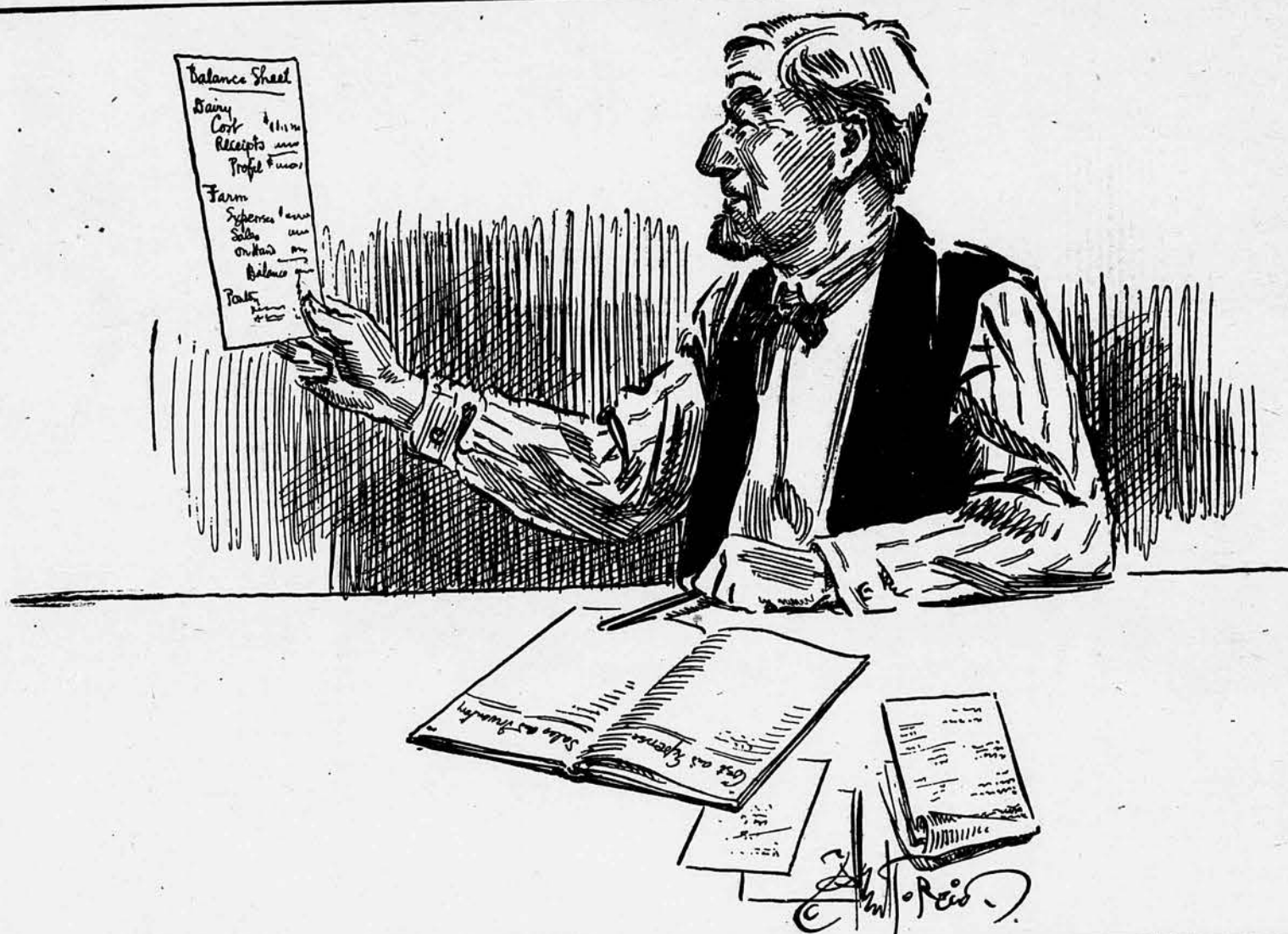
Two ways of handling the horse business were illustrated and compared recently by a writer in the National Farmer and Stockman. They involved the history of two mares, and the men concerned were considerably surprised at the results of this figuring. The story of the man who related the incident follows:

It was a barn-door conversation that I got up to it. I had gone over to see my K— about some lime we were working together, and we were standing in the barn door talking, with the rain dripping from the eaves before us and my horses munching their hay back of us. It was a contented-like day on the farm, with nothing very exciting to talk about. One of the horses down at the other end of the row of stalls made me fuss and Henry walked down and spoke to him. As he came back he tapped the old brown mare on the rump and said, "Mac, there's an old mare that's made me money. Good worker, never sick, tough, and always on the

How long have you had her, Henry?" asked. "Well, let's see," he figured. "I bought Fan when she was three, and she's seventeen now." And he added, "I paid \$100 for her then. She's earned her way and more." I had noticed the mare casually from time to time as I had seen her at work

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