

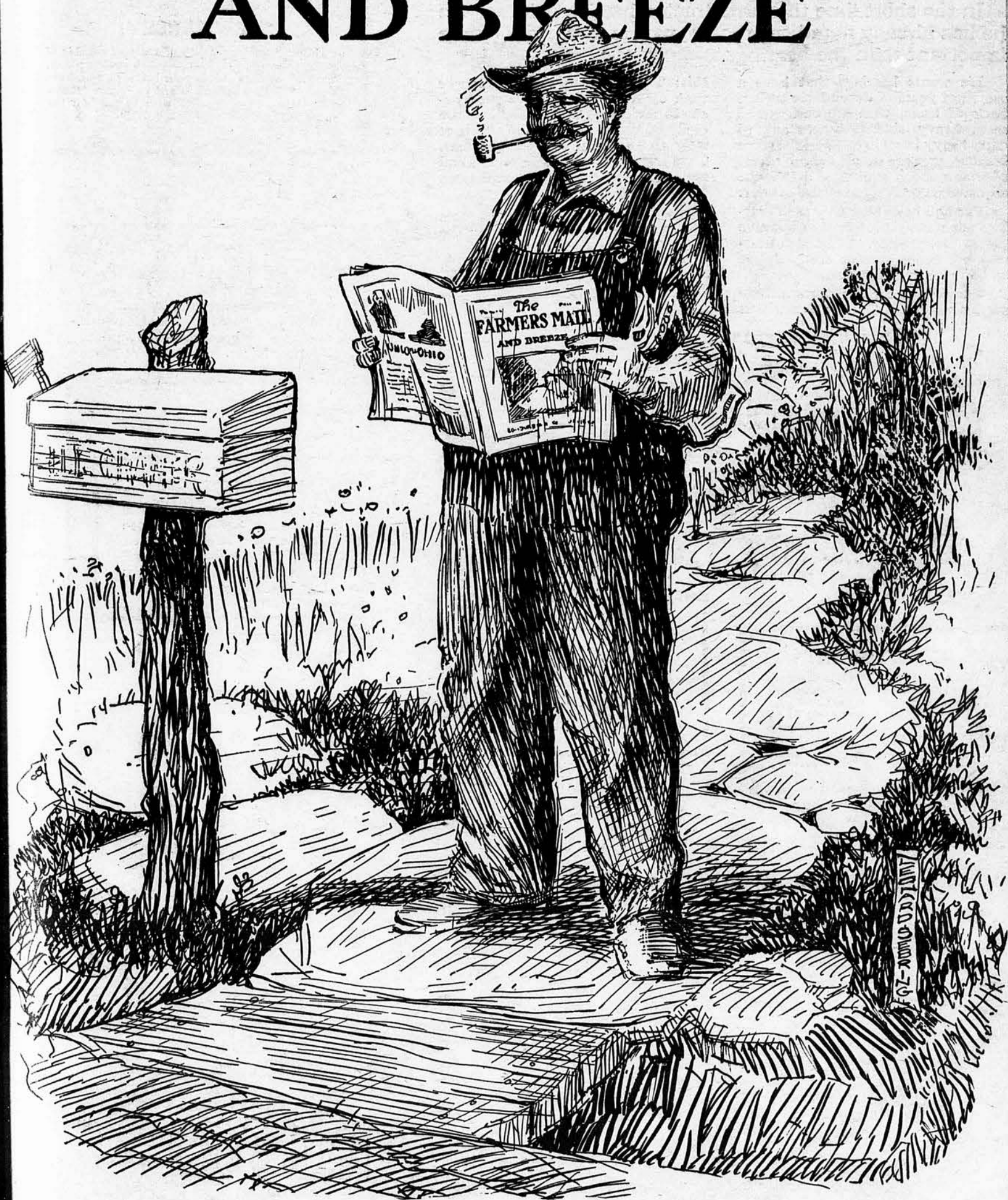
January 26, 1918

The



Price Five Cents

FARMERS MAIL AND BREEZE



North, East, West, South

Farmers are learning that dependable tractors must have dependable bearings

When the American farmer takes up a new type of machine, he demands results.

Experience has taught him to go thoroughly into every detail of design, construction and material that means lasting durability and economical operation.

In the short time the farm tractor has been in service he has already found out that no part of a tractor is more important than the bearings.

He wants bearings that have a record of years of dependable service back of them, that are designed to meet heavy side pressures and to carry heavy loads in one and the same bearing, that are slow to show effects of wear and can easily and quickly be adjusted to correct the effects of wear.

For he knows that only such bearings adequately protect the expensive gears of his tractor. Only such bearings are proof against costly delays and difficult replacements.

One reason for the extraordinary service records of Timken Bearings is

this: They stand up as long or longer than other bearings before wear becomes evident. Then they can be easily adjusted to eliminate effects of wear and are made as good as new. Thus instead of expensive repairs and replacements, you can renew the same bearings indefinitely.

The few letters quoted on this page are samples of many — and the number is constantly increasing.

Write for our free booklet, F-55, "Timken Bearings in Farm Tractors," and you'll see why these men start their tractor buying by looking for Timken Bearings.

THE TIMKEN ROLLER BEARING COMPANY
Canton, Ohio

TIMKEN BEARINGS FOR FARM TRACTORS

CALIFORNIA:

Your letter of the 15th at hand. Please let me know if you can furnish Timken Bearings for the bevel gear case for belt attachment on 12-24 tractor. The gear case is equipped with — bearings. The outside bearing on the pulley shaft became worn causing the pulley to vibrate. Several teeth were broken out of drive gear at different times.

OKLAHOMA:

We want a tractor with four cylinders, four wheels, i. e., two front and two driving wheels in rear, no objection to a chain drive—need about a 20 H. P. on the belt.

Please advise the makes of this description that use your bearings, and to save time, please have them send illustration and quote price.

MONTANA:

Will you please send free booklet E-13, "Timken Bearings for Farm Tractors," and advise if Timken Bearings can be fitted to — 12-25 (7058) Motor, 1917 model.

NEW JERSEY:

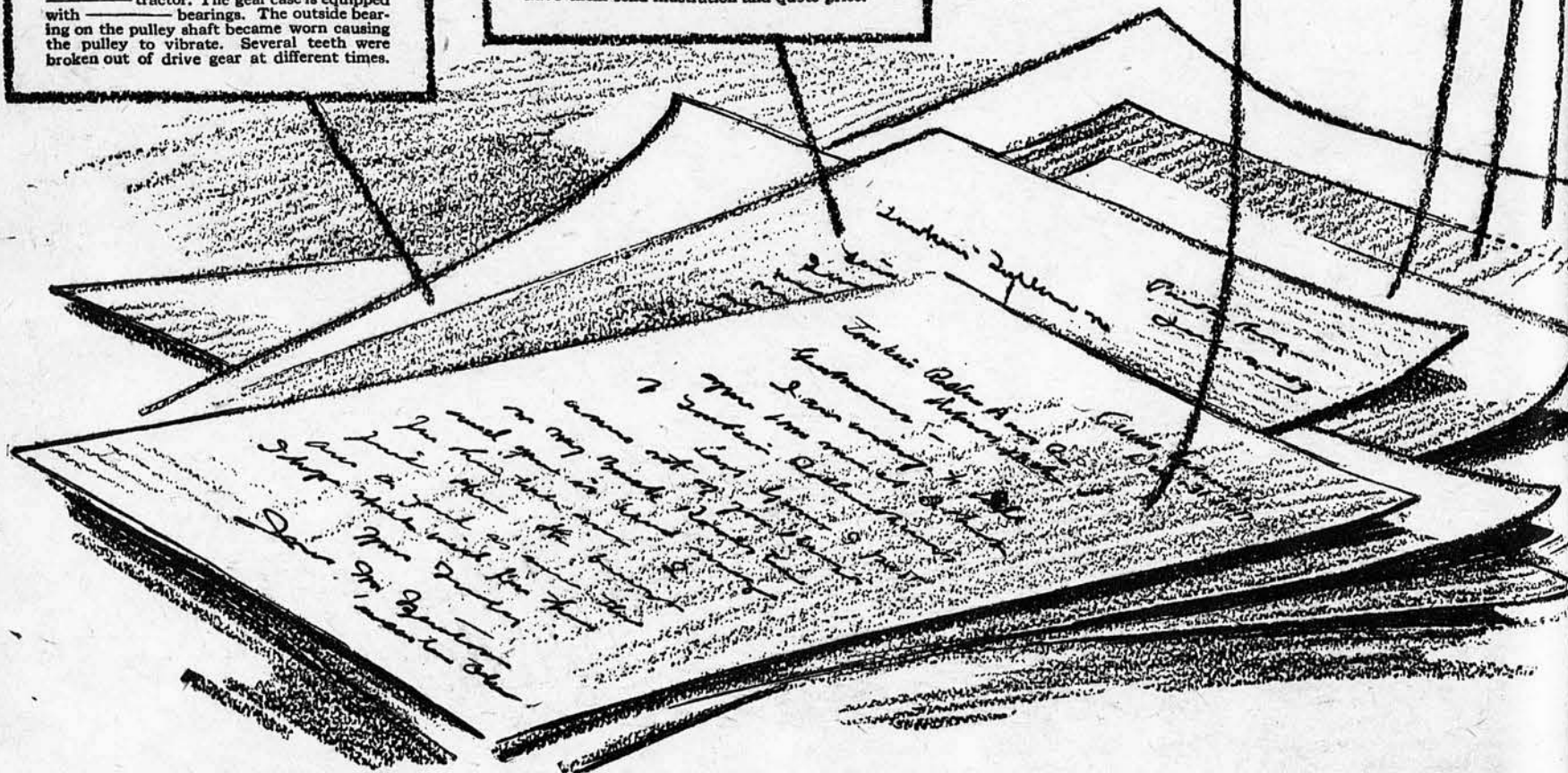
Kindly send me a list of tractors capable of pulling three or four fourteen-inch bottom plows, that are equipped with your bearings, as I have decided that I cannot afford to buy a tractor without your bearings. I wish to consider the caterpillar type as well as the other.

FLORIDA:

I must have a Tractor on my 2-point farm in 60 days. It is hard to select one for my purposes, so I am asking you for a booklet with all makes of Tractors using Timken Bearings only.

LOUISIANA:

Will you kindly give us the names of some tractor builders who use Timken Bearings. We are in need of tractors that do not require all of their rated horsepower merely to pull themselves along.



THE FARMERS MAIL AND BREEZE

An Agricultural and Family Journal for the People of the Great West

TOPEKA, KANSAS, JANUARY 26, 1918

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PLANS should be made this winter for the careful conservation of the feeds produced in 1918. It is important to do this while one is planning on the general methods that will be used with the crops next season. We have seen some quite remarkable prices being paid this winter for feeds, and there is every indication that they will be even more extreme next winter. Reports indicate that in many communities as much as \$1 a shock has been paid for small kafir shocks with almost no grain on the stalks. In other places \$10 a ton was paid for the second growth in the hay fields, for harvesting in the latter part of November. We are all familiar with the abnormal prices which have prevailed for alfalfa, prairie hay and grain.

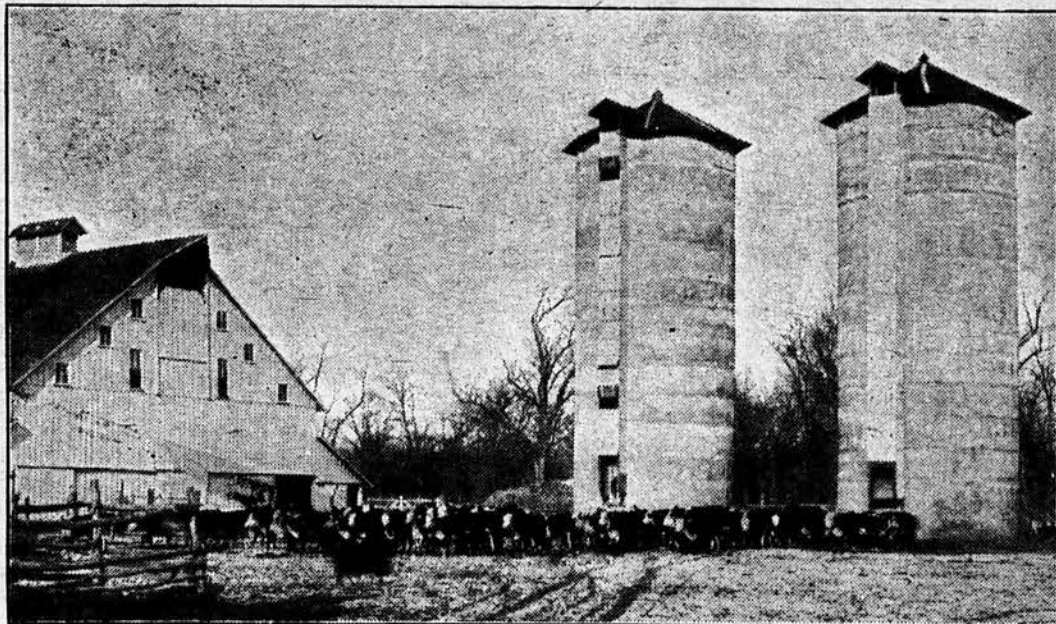
There has been much waste in saving the crops produced in this state in past years. No one has been more willing than farmers to admit this, but it has been justified on the ground that it would not pay to use the finer economies in production which have been known generally but which the producers have been more or less backward about adopting. While that was true in the past it will not be true during the war and for some time afterward. Let's prepare to get the very last unit of nutrition from the feeds which we grow.

Consider the Labor Problems.

How can this be done in the face of the labor situation which we all face? How can John Smith Brown county increase the efficiency of his place in the production of livestock feeds? I don't know, except in a general way, and neither, probably, does John Smith know how Henry Jones of Greenwood county can work out better methods. Except for the general fundamentals which we all know it is very obvious that this is going to be a strictly individual problem which must be worked out on the individual farms. We do know, however, that times are abnormal and that the situation is entirely different from what it was in the past. That being the case, it is plain that every man must give the best possible attention to the factors of production as they apply to his individual farm if he is to make the most profit and be the efficient helper in these war times.

One of the greatest needs in Kansas is for a more general use of silos. In some cases it will be possible to build a silo between now and next fall; at least it will be possible to make an effort to get all that are available. This was not done in 1917. Of course as with all other farm operations the fact that there will be a labor shortage at silo filling time must be faced. I think this will result in silo filling with small crews. Perhaps it will be a mighty good thing if this does occur. More men have been discouraged with silos because of the troubles at filling time than from any other factor. It may be a good thing in some respects to get the agony of silo filling at your farm over quickly, but it is an infernal nuisance to then have to go all the way around the "ring" to help the neighbors in silo filling for two or three weeks. Then when you get done with that work you pick up on your silo and discover to your amazement that it has settled a considerable distance, and that you have a considerable lot of storage space up there that is not being used.

Much of this trouble can be avoided in filling silos with small crews, using the same men in the field and at the silo, and running shorthanded all around. Here is the idea: the fundamental thing to consider in filling a silo on the average farm in Kansas is how quickly the work can be done and how cheaply the cost is a ton of silage that actually goes "over the top." The experience of most of the men who have filled silos with small crews, such as George Dornes of Burlington for example, has shown that



Saving Farm Crops for the Stock

By F. B. Nichols, Associate Editor

the tonnage cost is cheaper when just a few men are used. So fundamentally it may be a good thing next fall if the labor shortage does force farmers to take up the filling with small crews.

Then another thing that will be needed is the cutting of a larger proportion of the corn and sorghum fodder. The prices for all baled hays probably will be abnormally high again, which makes it all the more important that the greatest possible use should be made of the roughage. I have heard many men say that they plan on cutting up all of the corn next fall. The unfortunate experience which some farmers had last fall with the corn stalk disease has increased the effort that will be made in cutting the fodder. The pasturing of stalk fields is a wasteful system of management, and the experiences in 1917 showed that it was a very dangerous thing, also. Of course it is true that last fall was dry, and I know that some men are able, by the use of great care, to pasture fields without loss—which is a happy thing—but the fact remains that every time a dry fall comes along there is much loss. This can be reduced by cutting a much larger proportion of the fodder, feeding some of it before turning into the stalks that are not cut, and then allowing the animals to stay in but a half hour or so the first day, and then increasing the time very slowly. More than that, the livestock carrying capacity of the place can be increased greatly by cutting the fodder instead of pasturing the stalks.

There is a need, of course, for the continuing of the refinements of harvesting such as were observed in 1917 on most places. Farmers in Kansas did the best job last year of raking up the scatterings in the hay fields, of cutting out the sloughs and cutting up close to the fences that they had ever done. I think this will continue to be the rule next season. That is largely where the personal element enters in the management of the individual farm. One has much more enthusiasm for this when hay is selling for \$25 a ton than when it is selling for a third of that price, too. It is equally obvious that it is mighty important to get as much of the hay

under shelter as possible. I don't suppose that it will be possible to build barns in a great many cases, because of a labor shortage, but it will be possible in some cases, and it will pay to put up such improvements where possible just as much as it ever did. While building materials have advanced a good deal in price the advance has not been nearly so much as the advance in the price of hay. But if it isn't possible to build new barns we can at least use the ones which we have efficiently. This has not been done on a great many places in the past. A huge amount of barn room has been wasted because of a lack of care. It will pay mighty well to use it all next fall.

Careful thought also is needed in the planning of the harvesting of the small grain crops, especially wheat. And it may help some if we admit now that the labor situation is serious, and make our plans with this in mind. Of course it is true that in many counties the condition of the wheat is not encouraging, and you can hear some men advancing the theory that there is going to be a failure in many communities somewhat the same as last year. Personally I don't believe it; the history of wheat raising in this state has shown that two failures in the main wheat belt are not likely to occur together. Of course it could come, but it is not probable. I think from what we can tell now that it is probable that we shall have a fairly large crop. If we do have such a crop we are justified now in viewing the labor situation "with alarm." There is going to be but little "floating labor" available, and it is probable that much of this, judging from past experiences, will be almost worthless. How are you going to harvest your wheat, if you happen to have a fairly large acreage?

More Care in Harvesting.

In the face of this labor shortage there is a mighty obvious need for the greatest care in harvesting wheat that we have ever known. The guaranteed price of \$2 a bushel makes it important that none should be left in the fields to waste. It is important to send all the grain across the scales that is possible. We should have less "cutting and kivering" with the binder or header and do a little better job of stacking. Despite this many men will not have enough help, if we have a good crop, to "knock 'er down" at all, or at least it will be very slowly. Careful planning is in order on every wheat farm.

These are some of the things which must be worked out in 1918. Nothing is more obvious than that they are individual problems. Things which may pay on one farm may be very unsatisfactory on a farm across the road. And I suppose that on many places, no matter how well the man in charge uses his labor and equipment, there will be much waste. But the ideal which every man should have is to do the best possible work he can with the conditions he will be compelled to operate under. If he attacks the work of the year in this spirit, and then will think far into the future, to plan the work in the most efficient way, we will get the maximum results on Kansas farms from the season of 1918. And thru it all we shall be happier and accomplish more if we recognize that the conditions are abnormal, and that the factors which formerly governed no longer rule. We are sailing on an uncharted sea, and no man can guess where we shall be when the season ends. There is an appeal in this condition, however, to the man of spirit and ambition. It brings us an opportunity for maximum profits and a call for service at the same time. That Kansas farmers will respond most loyally, as they always have done, goes without saying. That they will get results is equally obvious. When the returns from the Kansas harvests of 1918 are counted it will be found that we have "fought a good fight." Good farm production will be developed greatly.



Farm Labor Problems Will be Especially Acute on Kansas Farms in 1918 During Wheat Harvest if the State Produces an Average Crop.

DEPARTMENT EDITORS

Field Editor.....F. B. Nichols
Farm Doings.....Harley Hatch
Poultry.....G. D. McClaskey

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Passing Comment—By T. A. McNeal

The Farmer and the War

Once in a while I hear someone criticizing the farmers because they complain about taking the boys from the farms to serve in the army.

Generally speaking the person who makes the criticism knows little about the real situation. In other words he is shooting off his mouth without knowing what he is talking about. Let me give one or two illustrations to show what the situation really is.

The other day I met a farmer I have known for many years. I knew him when he was so poor that he hardly knew where his next meal was coming from and probably all his earthly possessions, including his clothes, would not have invoiced more than \$25. He has hung on and prospered. He has no complaint to make about the opportunities he has enjoyed. I think that at a moderate estimate he is worth \$60,000. I know that his personal check would be honored readily by his home bank for \$10,000. He is a successful grain and stock raiser. He is not an old man but is getting well up toward 60, and is rather broken down physically. He has just one boy at home, who is within the draft age and unmarried. The boy is a capable young fellow, a splendid worker and endowed with good judgment. He is in class one. He can make no claim for exemption on the ground that he has dependent relatives, for his father has ample means to support what there is left of his family in comfort without doing any more work. "My earliest recollection," says the young man's father, "is holding my father by the hand and toddling by his side when he was going to enlist as a soldier during the Civil war. I have inherited a love for my country and would hate to think that my boy would not be willing to fight for it now. But, if he is called, as I suppose he will be, I cannot for the life of me see how I can carry on my big farm. I have found it impossible to get competent help at any price. So if the boy goes to war all I can do is to farm just a little of my land. Possibly I may be able to cultivate 80 acres, and the other 2,000 I am afraid will mostly go uncultivated. This means that my farm will produce hardly more than enough to feed myself and the remaining members of my family, while it ought to produce enough to supply 100 or more soldiers with grain and meat. Will the government be benefited by taking my boy away from the farm and putting him into the ranks?"

"It is idle to tell me that I can hire someone to take the boy's place. I know from experience that I cannot. I am no worse off than some of my neighbors. I have a neighbor with a big farm and stock ranch. He has two boys; one already has gone to France and the other is listed in class one. This boy is an exceptionally competent man with stock. My neighbor has 400 head of steers which the boy is taking care of. Now, if the young man is called into the service his father, who is getting well along toward 70, simply cannot take care of the cattle or run the farm. What he will have to do will be to sell his stock and quit. That means that there will be 400 less beef cattle on that ranch next year. Would it not be better for the government to let this competent young man stay at home and raise beef steers and wheat than to send him to the trenches?"

Now these two farmers and stock raisers are not lacking in patriotism. They are both in complete sympathy with the government, and wish to do their duty and have their sons do their duty, but it is a condition and not a theory they are up against. Competent farm help is almost impossible to obtain. I have here an offer from a farmer and stock raiser who wishes to enlist in the service, altho more than 10 years beyond the draft age, to pay \$50 a month and board and washing for a competent hand to take his place. That would mean, unless the farmer earned a commission by merit in the service, that he would sacrifice his time and \$20 a month cash to get the opportunity to serve his country.

I have been out among the farmers in different parts of the state. I have not found them either lukewarm or ignorant concerning the causes of the war. I do not say that all of them are loyal and willing to do all they can, but I will say that so far as I have had an opportunity to talk with them they were entirely loyal. But a good many of them do talk to me like this: "They tell us that our government and the allies will need every bit of grain and meat that can be raised in this country, but how can we produce to the limit unless we can somehow get

labor that is worth something? It is not a question of wages. We simply cannot get the help that is worth having at any price." They admit that just as a selfish proposition they should be glad to produce more while prices are high and profits large, but they cannot do it unless they can get competent farm labor.

If the government will grant furloughs to the men in the training camps for a month or six weeks next summer during the harvest season and let them go out and help harvest the crops it will aid a great deal. It will not solve the whole problem but it will help.

So before you criticize the farmer try to find out what the real facts are and then try to put yourself in his place.

There is a great deal of misapprehension concerning the knowledge and skill required to be a good farmer and stock raiser. Among a good many persons the impression still remains that about all that is required to make a first class farmer is physical strength and a willingness to work hard. That never was true, but it is true that before the age of modern machinery less skill was required. Now a farmer must have a fair knowledge of machinery and be capable of running and caring for an engine if he is a competent farmer.

A hired man who is ignorant and careless may easily do damage amounting to several times his wages. Here is an illustration. A farmer I know hired a man who said he knew how to run a tractor. As a result of the man's ignorance and carelessness he nearly ruined an expensive tractor in a few days. It cost this farmer \$300 and the loss of 10 days' time just when he needed the tractor to plow his wheat ground. The ignorance of the hired man in this case damaged the farmer many times the amount of the wages he was paying.

There may be an impression that almost any man can feed stock, and yet a man who does not understand feeding stock is likely to waste half the feed and at the same time not keep the stock in a thriving condition. Any man who has lived on a farm knows that it requires experience and judgment to know how to feed stock successfully, and it requires experience and good judgment to know how to care for stock generally.

Take the case of sheep. I speak of sheep because raising sheep was the principal business on the farm on which I was raised. There is greater profit in raising sheep today than in raising any other kind of stock and a greater profit than there ever was before in raising sheep, but a man who does not understand how to feed and care for the flock might easily make a failure of the business even now. Sheep are subject to many diseases which are fatal if not looked after and checked in time, but which generally can be cured by proper care. Then when it comes lambing time, unless the keeper of the sheep understands his business he is likely to lose more than half the lambs, while a careful shepherd will save practically all of them.

To get a good lamb crop it is necessary first to have the ewes in a healthy condition; second, the ewes should be kept where they are sheltered from the storms, and third, the weak lambs must be looked after as soon as born. An inexperienced man will not do the things necessary, and the result is a great loss. When we consider that fat lambs 5 or 6 months old are selling on the Kansas City market at \$17 a head we realize that the loss of a few means a good deal of money to a sheep raiser.

I mention these facts to show how important it is to the country at this time to have men on the farms who really know their business.

Looking Backward

(Continued from Last Week)

Buildings in the corporation center were heated and lighted from a central heating and lighting plant, and members of families had the choice of either doing their own cooking or of taking their meals at the corporation dining halls and paying for them at actual cost. It was soon discovered that not only better meals were served at the corporation dining halls than most of the private cooks were able to prepare, but that the cost was considerably less.

The corporation had no police force but maintained a small force of night watchmen whose duty it was to guard against fires. Immoral or disorderly conduct was sufficient cause for expulsion from the corporation. The only rule of the corporation was that every resident should behave

in an orderly, gentlemanly or ladylike manner, otherwise get out.

In the schools the children were trained under the care of experts whose business it was to study the character and natural talents and tastes of every child with the purpose of developing each in the way nature intended and putting such child into the line of work best adapted to it. In connection with the work in the schools a child was required to spend a part of the day in some kind of useful labor, it might be performing such tasks on the farm as were suited to its strength and mental development or in the mills or factories.

Under scientific soil cultivation and fertilization it was found that within ten years the average yield of wheat on the corporation farm had increased from 12 bushels an acre to 60; corn from an average of 20 bushels an acre to 100. All other crops showed a like increase and failures were unknown. In the matter of livestock no animal was retained on the farm which did not show a profit above the cost of feeding and caring for it. A most careful study of the soil was kept up in the schools so that when any element was found to be lacking in soil fertility it was immediately supplied or steps were taken to supply it.

As much interest was taken in the matter of beautifying the yards and indeed the whole corporation farm as was taken in the cultivation of the soil and the improvement of the livestock. Landscape gardening was taught in the schools with as much care as was the science of agriculture, and by the most accomplished masters. Every yard bloomed with flowers and was beautified with well trimmed shrubbery. The paved roads were lined with well cared for trees where birds were encouraged to build their nests and rear their young.

The department of hygiene connected with all the schools in these corporation cities made the most thorough study of health conditions so that in the course of time disease was practically banished. Children reared in the most healthful manner and among the most delightful surroundings grew strong, self-reliant and with polished manners befitting a royal race reared under the most favorable conditions. The arts and sciences were cultivated carefully as was the study of the best literature.

As a rather unlooked for development the character of the religion of the country gradually changed. Professional preachers like professional lawyers went out of vogue. People ceased to hypocritically pretend to believe what as a matter of fact they did not believe. No longer were the myths, traditions and history of the half savage tribes which Moses had led out of Egypt regarded as sacred records directly inspired by the Almighty, and no longer were children taught that it was necessary to their salvation to believe that God had ever ordered the wholesale massacre of old men, defenseless women and helpless children. With the dying out of the primitive and unreasonable faith there was a fear that religious and moral chaos would follow. On the contrary there grew up a rational religion untainted with superstition and fear.

The old method of disposing of the bodies of the dead by burial was discarded as heathenish and unsanitary and horrible, and in its place came cremation and the preservation of the ashes of the departed in tasteful buildings erected for that purpose.

As time progressed it was found that fewer laws were needed. The incentives to crime ceased to exist. It had been made apparent even as early as the latter part of the 19th century that crime was largely the result of education and environment. It had been found even then that in certain neighborhoods the policeman was never needed and crimes were never committed. The remedy was apparent. Make the conditions which banished disorder from certain communities universal and the favorable conditions would be universal. It had long before been demonstrated that men on the average are much alike; that placed under unfavorable conditions the most moral will rapidly degenerate and that on the other hand the criminally inclined will, under favorable conditions rapidly improve.

The managers of the corporation farms recognized these well proved principles, and took care that the surroundings should be calculated to develop the best there was in the inhabitants from their earliest childhood. Great attention was given to music, to painting, to sculpture and to dress. Dressing became an art. To dress in bad taste was considered little less than a crime and to be rude, boorish and uncultivated an intolerable disgrace.

Physical training was given as much attention as mental and scientific training, so that even as long ago as 1990 visitors from other countries were struck with the grace, beauty and intelligence of the people. With the development of these corporation farms there grew up a real democracy and a passionate love of country such as had not been dreamed of a century before.

As the methods of cultivation of the soil advanced it was found that an average of eight acres was ample to support a family in luxury and as a result there came to be as many as 3,200 families instead of 1600 to conduct the great farm. It also was necessary to have a population of at least 8,000 to care for the factories, mills, schools and other things necessary to the well being of the citizens, so the population of every corporation center grew to be about 25,000. As has been said, with the development of these corporation centers there grew up a passionate love of and devotion to the republic. It has been a beautiful custom for many years for the people to gather at sunset and as the silken folds of the star spangled banner are lowered to join in

mighty chorus in honor of their country and their flag.

During 1917 there appeared before Congress a man who made the startling statement that he had discovered the law of cosmic force and had an invention by which it might be applied to machinery. The members of Congress were so much impressed by the talk of the inventor that with little opposition they passed a bill granting him the right to manufacture his invention, protecting him from outside infringement but granting to the government of the United States the full right without the payment of any royalty to the inventor to use the machine and manufacture it. The possibilities of the invention as pictured by the inventor sounded like the dream of a disordered mind, but the inventor impressed the members of Congress with his sanity as well as his modesty.

Like most great inventions this one met with unlooked for difficulties and violent opposition. It was ridiculed as the product of a disordered intellect and akin to the impractical schemes for perpetual motion which were plentiful during the 19th century. As it would, if successful, necessarily revolutionize business and render almost valueless a vast amount of expensive machinery, it was opposed on purely selfish grounds as well as by reason of the natural skepticism of the people. The inventor struggled against the tide of opposition and merciless ridicule but finally died broken-hearted and a nervous wreck in 1925, but not before he had completed a working model which demonstrated some of the possibilities of his invention.

A son of the great Italian inventor Marconi, even more gifted than his noted father, took up the work where the wearied inventor laid it down and overcame all of the difficulties that had hindered the progress of the inventor. As might be surmised the effect was more than startling; it was revolutionary. By the combination of certain metals the incomprehensible cosmic force, which is able to take vast planets many times larger than our own and hurl them through space with vast rapidity and for untold millions of years with no indication of diminution of power, was harnessed and made to do the will of man. This did away with the necessity for the carrying of fuel, and the engines were reduced in weight so a child might lift one amply capable of supplying power for an airship sufficient to carry at least 100 persons with all necessary baggage and equipment for their comfort. Neither was it necessary to rest or stop except for taking on passengers or freight or for putting them off at their several destinations. With unwearied wing the airship provided with the new mysterious power could circle the earth in an uninterrupted flight.

The possibilities of this new power suggested to daring inventors the possibility of passing outside the influence of our own planet and visiting our distant neighbors in other worlds. This, it was at once recognized, would necessitate the building of a vast airship on which could be carried not only the necessary food for the journey but it also would be necessary to have apparatus for the manufacture of heat sufficient to combat the awful temperature of the interstellar spaces and also to manufacture oxygen sufficient to sustain life during the voyage. Astronomers estimated that after leaving the atmosphere which surrounds the earth the travelers would encounter a cold of approximately 500 degrees below zero, and that unless oxygen and heat could be manufactured in sufficient quantities to supply the voyagers after leaving the atmospheric belt which surrounds the earth, death would be the result. The possibilities of risk were so great as to stagger the imagination and appall the strongest heart, but men continued to dream of the possibility of the journey. Every time they gazed into the unclouded heavens on beautiful nights in Kansas and watched our fellow planets as in turn each became the evening star and flamed in beauty and brilliancy through the night the desire for the great adventure was increased.

It was not, however, until the year 2000 that the daring attempt was made. A brilliant scholar and man of mechanical genius by the name of Frank Thomas finally built a machine with which he and some equally daring companions determined to make the journey. A biography of this daring adventurer developed the fact that his mechanical genius was inherited. His family tree showed that his great, great grandfather during the early part of the twentieth century was at the head of the school for mechanical apprentices conducted by what was then the most successful of the great railroad corporations of that day. This interstellar ship was fitted with several cosmic engines of the most improved pattern, each working independently of the other and each sufficiently powerful to propel the ship if all the others failed. The ship on the interior was fitted with a cosmic radio heater capable of raising the temperature more than 500 degrees if necessary, and an oxygen manufacturing machine capable of manufacturing oxygen sufficient to sustain 50 persons. The ship's larder was supplied with condensed food of the most nutritious character, but so condensed that a pound of it contained 50 times as many calories as ordinary food of the same bulk in its natural state. The ship was of course supplied with the most nearly perfect appliances for measuring the speed of the ship, the temperature and for taking photographs of planets they expected to visit on the way.

On January 1, 2000, Thomas and his ten companions entered their car, turned the switch which set the machinery in motion and started on their journey, the most daring and thrilling ever undertaken by man. This interstellar ship was capable of speeding through space at the rate of 2,000 miles an hour. Within a minute after it left the earth it was beyond the range of the most powerful telescope, and sweeping thru space at the rate of more than 33 miles a minute. At the close of the fifth day, looking thru the windows of plate glass with which the great air ship was provided, the men saw apparently rushing toward them with incredible speed a great globe.

It was the moon. The sight was at once thrilling and depressing. They saw our satellite rolling thru space but at close range it was not the thing of beauty it seems on a clear night when we see it riding thru the heavens. They looked out on a dead world. On its surface there was not a sign of life, not a living creature nor a sign of vegetation. Vast caverns yawned, amid stretches and unbearable cold it went thru its eternal round. As the voyagers rushed across its horizon they were filled with the melancholy reflection that as they now was so in time would be the world on which they lived. It might be millions of years but the same would come when our beautiful world also would grow cold and die. The miserable human beings would crowd closer and closer together at the equator to get advantage of the little remaining warmth where the natural was failing, but the process of destruction would go on till the last miserable beings had perished, and the dead world would swing on carried by this strange cosmic force, until possibly swerving from its orbit it would be drawn by the attraction of the central

luminary until it was dashed to destruction in the furnace fires of the sun.

Hour after hour, day after day and month after month the great airship flashed thru space at the rate of almost 50,000 miles a day, but it was not until 20 months had passed that the wearied travelers were gladdened with the sight of a beautiful planet on which even at a distance they could see indications of busy life and luxuriant vegetation. It was, as might be guessed, the planet Mars. It was on September 1, 2001, that the great interstellar ship Kansas settled down like a great beautiful bird on a fertile plain of our neighboring planet which had for more than a century excited the greatest interest among astronomers. Opening the doors of what had been to them for 20 long months a prison, Thomas and his companions stepped out on the soil of a world known only thru the speculations of astronomers. They at once felt a strange elation and lightness which at first they could not understand until they remembered that astronomers had long before asserted that the atmosphere of Mars probably was much lighter than our own and that the attraction of gravitation was much less. As a result the weight of specific gravity of all bodies in Mars was much less than on the earth. Astronomers also had surmised this fact but the travelers found that the difference was much greater than astronomers had supposed. In fact they discovered that a body weighed not more than one-tenth as much in proportion to its bulk as on our earth, so the men in the party weighing here on earth 175 pounds discovered that their weight on the planet of Mars was only 17 pounds.

As a result of this Martians were vastly lighter and more active in their movements than the inhabitants of this planet. The travelers indeed found the Martians a most sprightly, intelligent and interesting people, and more enterprising than the people of our own planet. This striking difference in specific gravity resulted in some curious things, that is, curious to the travelers from our earth. For example, they were invited to attend a baseball game played by two major league teams. When they went to the ball park they discovered to their astonishment that it was three miles square and that the bases of the diamond were one mile apart. The outfielders stood two miles from the home plate for it was not uncommon for a strong batter to send a fly out to the center or right or left field, a distance of three miles. At home the travelers had never seen even the best professional runners do a mile in better than four and a half minutes, but they were informed that when a Martian base runner slowed down to less than a mile a minute he had to go back to the bush leagues, being no longer fit for major league service. In running bases the travelers were told that the slide was not often practiced, but in place of that the best base runners vaulted over the heads of the intervening basemen, often springing lightly into the air to the height of 50 feet or more and clearing a space of 200 feet at a single bound.

It is hardly necessary to say that the visit of the travelers from this earth excited tremendous interest among the scholars and men of science on the planet Mars. The head of the greatest of the Martian universities sent them a special invitation to visit the institution and talk with him and the other members of the faculty concerning this world which had excited as much interest among astronomers of that planet as Mars had among our own astronomers.

Conversing concerning the impressions which had prevailed here about this planet, the earthly visitors said that our astronomers had been much puzzled by alternating dark and light lines on Mars which they had concluded might be an extensive system of canals. The Martian astronomer smiled at this statement, and remarked that it must have occurred to the earthly astronomers who advanced this theory that the inhabitants of Mars must have been fond of unnecessary labor, as a canal in order to be visible to the most powerful telescope on the earth would have to be several hundred miles in width. "You will observe or must have observed as you approached our planet," said the Martian, "that we have on our planet several lofty ranges of mountains, running almost parallel to one another. In the morning these mountain ranges throw long shadows to the west and in the afternoon and evening equally long shadows to the east. It undoubtedly is these mountain ranges and their shadows which your astronomers took for a system of canals."

Observing that all the Martians were tall, athletic and of practically the same height, the visitors asked for an explanation. "Our scientists long ago discovered," replied the chancellor of the Martian University, "that where persons were under-sized it was a case of arrested development which could be remedied by a stimulation of the pituitary gland, and likewise where there was a tendency to overgrowth the action of the same gland could be checked and regulated. It also has been the policy of the people of our planet to prevent the reproduction of diseased and deformed persons and those deficient in brain power. We have long held it to be not only humane but in accord with sound economics that all children should be well born. We have held that it was manifestly unfair to bring children into the world of Mars handicapped by a deficient mentality or inferior physical capacity and then expect such children to keep up in the race with children of superior powers. We have held that to expect that a person so hampered could hold his own in the race of life would be as unreasonable as to expect a one-legged man to run as fast as his brother who had the use of two well-developed legs."

"While we believe in the stimulus of healthful competition we hold that all persons should start fairly in the race and if it be, as is necessarily the case at times despite our best endeavors, that some are stronger and more capable than others then we place a handicap on the stronger. In other words we require him to carry the greater load in proportion to his greater physical or mental strength."

When told that at least until recent years it had been the custom on earth to give the easiest places and the greatest rewards to those endowed with the greatest strength and greatest mental ability, the chancellor was filled with amazement and asked if that was the rule in the families on earth. "Is it your custom?" he asked, "to give the strongest children in the family the best clothes and the choicest foods and the best beds while the weak and crippled have to take the scraps thrown to them by their stronger and more favored brothers, and is it your family custom to make these less favored children dress in rags and sleep in the outsheds in order that their stronger and more capable brothers and sisters may live in idle luxury and wear expensive clothing?"

The earthly visitors were compelled to acknowledge that a family run on that plan would be regarded with great disfavor on earth by their neighbors and that if the parents and the stronger brothers and sisters should so treat their weaker brothers and sisters they might be subject to mob violence. They also hastened to inform the puzzled chancellor that the custom in all families of standing on earth or at least in the republic of

the United States was to show especial kindness and favors to such children as were not well endowed by nature, that the strong brothers and sisters were expected to defer to their weaker brothers and sisters, to give them the best clothing, and the softest beds, holding that it was but fair that the stronger should bear the burdens of the weaker. "And if this is praiseworthy in the family," asked the chancellor, "why is it not a good policy also for the state?"

As a result of this marvelous journey of Thomas and his companions, a regular system of communication was established between the two planets, and within the last few years excursions to the moon and the various planets are not uncommon.

(The End)

Don't Forget the Boys in the Camps

From an Address by Governor Capper at a Patriotic Rally at Coldwater, Kan.

Did you ever try to put yourself in the place of the young fellow who is leaving home for the training camp and for the battlefield in a foreign land? He goes bravely. Apparently he goes cheerfully. But he goes knowing he may never again see the dear faces and the familiar scenes of the dearest place in all the world to him—his home, his old home neighborhood, the town and the people he has always known.

Then comes the day when the shores of his native land fade from his view. For days he sees nothing but water and sky. Home and the home folks seem a million miles away. Later he finds himself in a strange land, amid a strange people speaking a language he does not know. He is leading a new, a most trying, a vastly uncomfortable mode of life. Nothing is familiar or natural, not even the place in which he lies down at night. All the time he is being trained to meet a strange and savage foe. There are nights of watchfulness, hours of idle waiting in the day time, a wretched existence in dark and cold and damp trenches, and finally the summons to go over the top. About all there is left in his consciousness of a world in which once dwelt the spirit of God, of kindness and humanity is the memory of home and the home folks.

It is said that homesickness even affects horses, that amid strangers and strange surroundings, these dumb brutes have been known to refuse food. Imagine the ache then that often must come to the heart of the stoutest-hearted young soldier, when in the strange world into which he is transported there come to him thoughts of home. There is no feeling known to human beings that finds them so utterly forlorn and wretched, so pathetically and hopelessly deserted, friendless and bereft, as homesickness.

To be homesick is no reflection on a man's courage, or manhood. The best men are likely to feel it most. I have seen with my own eyes repeatedly at a training camp in which were thousands of young men not more than 100 miles from home, how eagerly mail time was awaited. How there was always a stampede for the hoped for letter and paper from home when the soldier mail carrier came in sight. How small scraps of information, bandied back and forth between men from the same locality, were given eager attention. A spirit of happiness seemed to light up the entire camp.

If you were to ask me what in my opinion would do most to make the American soldier a first-class fighting man and bring him home again safe, sound and clean of soul, my guess would be that it would be frequent letters from home and copies of the old home paper. Cheerful letters from mother, sister, wife, or sweetheart, filled with little inconsequential details of home affairs and the doings and the goings and comings of those at home, in the neighborhood and in the old home town. Letters from home make a soldier's life bearable. They hearten him like a strong tonic. He knows the love in that home is reaching out to him, far across the sea, to the land of hate and war, and that love is a shield and buckler to him in moments that try men's souls and test their manhood.

Some of these men virtually have had no home, other than the locality from which they entered the army or the navy. It is here that such admirable organizations as the "Thirty-One Club" of Council Grove, Kan., help most. This club was formed to write letters and send papers to the Morris county boys in the service, and it is doing a most Christian and patriotic service. It keeps posted in a public place the name and address of every man who has entered the service from Morris county, and those who know them may write to them, which both the board and the club urge them to do. I cannot praise this plan too highly. I wish that this community and every community and the neighborhood having more than a very few men in the war would adopt it. Nothing will accomplish so much for the wellbeing of your young soldiers who are fighting for their homes and the homefolks in a foreign land, or are getting ready to fight for them, than the knowledge that thoughts and love and affection of the homefolks is following them day by day.

Arthur Capper
Governor.

Good Results With Fall Strawberries

Many Kansas Farmers are Taking an Interest in This New Crop, Especially for the Home Gardens

By George M. Darrow

MUCH INTEREST has developed recently in Kansas in certain varieties of strawberries which bear fruit after the usual season. These so-called "everbearing" sorts produce fruit in early summer and under favorable conditions continue to do so until autumn. Heretofore the everbearing varieties have been grown chiefly by amateurs and by commercial growers who have tested them in comparison with ordinary sorts; however, a sufficient number of trials of these varieties has been made to indicate their real value for home use and for market in certain sections of the country.

Two leading varieties of this type of strawberry, the Progressive and the Superb, are notable not only because they produce fruit from the time of the usual crop until late summer or autumn, but also because they are exceptionally resistant to leaf-spot diseases. They are also very hardy. The Progressive has been found to withstand the winters of the Middle West better than any other variety except the Dunlap, one of its parents. The Superb, also, is hardier than most varieties of strawberries. Another remarkable characteristic of these varieties is that if their blooms are killed by frost they soon flower again. Therefore, in sections subject to late spring frosts, which often destroy the crop, these varieties are particularly valuable.

During the latter part of the Nineteenth century the Alpine strawberry was hybridized with large-fruited varieties which bear crops only in early summer, and, as a result, many "perpetual-fruiting," "autumn-fruiting," or "four-season" varieties, as they are called, bearing good-sized fruit, are grown in Europe. Among the best of these are the St. Antoine de Padone, St. Fiacre, St. Joseph, Merveille de France, and Louis Gautier, none of which has proved desirable in North America.

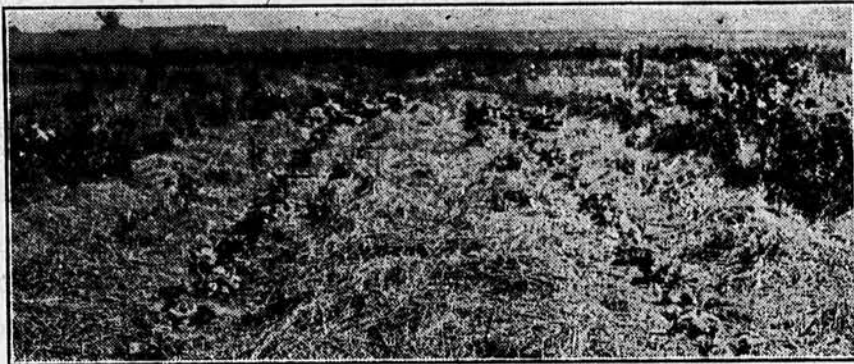
In this country most of the everbearing strawberries have had a very different origin. On September 28, 1898, Samuel Cooper, of Western New York, while examining his field of strawberries, noted a plant with several runner plants attached, all of which were bearing blossoms and fruit in all stages of development. The plants among which these were found were of the Bismarck variety, which is reported to be a cross between the Van Deman and the Bubach. Mr. Cooper set apart these plants which were bearing fruit in the autumn and named the variety the Pan American.

From the Pan American have been developed the leading everbearing varieties. Mr. Cooper has introduced the Autumn, Productive, Superb, Peerless, Onward, Forward, and Advance—all descendants of the Pan American. Of the varieties which have been widely tested to date, the Superb is the most valuable. The value of the Advance, Forward, Onward and Peerless varieties has not been determined, altho the Peerless seems to possess characteristics which may make it more desirable than the Superb.

Harlow Rockhill of Iowa also has produced many everbearing varieties, using in his work the Louis Gautier, one of the European everbearers, the Pan American, and many of the standard varieties which under normal conditions fruit only in early summer. The Americus and the Francis are the result of a cross between the Louis Gautier and the Pan American. Mr. Rockhill's best-known variety is the Progressive, a cross between the Dunlap and the Pan American. Other varieties originated by Mr. Rockhill are the Iowa and the Standpat, both of which are results of crosses between the Pan American and the Dunlap.

The varieties of everbearing strawberries in the trade at present are Advance, Americus, Autumn, Forward, Francis, Iowa, Onward, Pan American, Peerless, Productive, Progressive, Standpat and Superb. In addition, a variety known as the Minnesota No. 1017, distributed by the Minnesota State Horticultural society and the Minnesota Agricultural Experiment station has been introduced. Only two of the varieties introduced, the Progressive and the Superb, have been widely grown as yet. The Americus is grown to a slight extent and the others very little. The Minnesota No. 1017 has been tested widely in Minnesota and is grown to a slight extent in surrounding states.

Growers of the Progressive and Americus varieties agree that a more fertile soil is required for them than for the ordinary sorts. The berries of both of these varieties are rather small, and a fertile soil is needed to increase their size. Another reason for their need of a fertile soil is that all the everbearers require a larger supply of moisture than do the sorts which produce only plants



The Everbearing Strawberries Should be Mulched Carefully; This Will Hold Down the Weeds and Keep the Berries Out of the Dirt.

after the early-summer crop of fruit. A slight deficiency in the moisture supply seriously affects the size and quality of the berries, but does not noticeably affect plants producing runners only. A soil classed as very fertile contains a large amount of humus, and one important effect of a large humus supply is to increase the moisture-holding capacity of the soil. Any soil, therefore, containing large amounts of humus, or to which humus has been added by turning under green-manure crops or by the application of stable manure, will be better able to supply sufficient moisture, and one especially well supplied with humus should be selected.

The Superb and other varieties having similar characteristics, however, should be grown on a soil which is rather low in nitrogen. In soils that are too rich, varieties of the Superb type bear a good crop in the early summer and then make a rank growth of leaves and runners throughout the rest of the growing season, just as do the ordinary early-summer sorts. Under such conditions, little fruit will be secured in the summer and autumn. For the best results, these varieties should be grown on a soil in which the supply of nitrogen is somewhat deficient for ordinary vegetable and fruit crops. The soil, however, should have an ample supply of moisture throughout the season, or water should be supplied by irrigation. This peculiar soil requirement of the Superb—that is, a soil somewhat lacking in nitrogen, but having a good supply of moisture—is one reason why it has not been so popular in some sections of the United States as the Progressive. On the other hand, the irrigated sections are especially well adapted to the Superb on soil types low in nitrogen.

Since the Superb and other varieties of its type should be grown on soil somewhat low in nitrogen, fertilizers containing nitrogen should not be applied ordinarily to plantations of these varieties. If fertilizer is applied, it should contain only phosphoric acid and potash.

Progressive and Americus need fertile soils, and stable manure usually can be applied with profit to plantations of these varieties. As much as 20 tons an acre may be used with good results, and some growers use even larger quantities. It will be found most satisfactory to apply the stable manure to the land the year previous to that in which the strawberries are set. Weed seeds in the stable manure can then germinate and be destroyed, while if the stable manure is applied directly to the plantation the cost of eradicating the weeds will often be considerable. Commercial fertilizers are rarely used with these varieties.

Plants of the everbearing type should be set at the same time as those of other varieties. The amount of fruit secured the first year, however, depends to some extent upon the time of setting. If the plants

are set as soon as the ground is in condition in the spring, a larger crop will be secured than if they are set later. The plants also have opportunity to become established and to develop better root systems before beginning to fruit. If they are set rather late in the season, they show less tendency to make runners than when set very early.

The everbearers are grown under the matted-row and the hill systems of culture, and growers have been very successful with each. Under the hill system only the plants originally set are kept for fruiting, no runner plants being allowed to develop. Under the matted-row system, however, runner plants are allowed to root and form beds varying in width from a few inches to 3 or 4 feet. Larger crops of the everbearers probably can be secured the first year under the hill system than under the matted-row system. The cost of raising them, however, will be greater, as a much larger number of plants are set than under the matted-row system.

One of the most important factors in determining which system is to be used is the fruiting habit of the variety selected. Thus, the Americus, Francis, Standpat and Progressive varieties fruit on the runner plants almost as soon as the runners take root, while the runner plants of other varieties bear very little fruit or none at all before the following year. During the first year, from a certain number of plants to start with, the varieties mentioned usually will produce larger crops if they are allowed to form runner plants freely than if kept in hills. The Superb, Peerless, Autumn, and some others bear more during the first year if not allowed to make runners than if runner plants are allowed to form.

The plant-making ability of a variety, however, should be considered before deciding upon the system to be used. The Americus, Autumn, Francis, Pan American, Productive and Standpat do not make runner plants so freely as the Progressive, Superb, and certain others, and thus are better adapted to hill culture than the last-named sorts. In ordinary practice, therefore, the Progressive should be grown under the matted-row system and the other varieties under the hill system, except, however, in sections where the Superb and others of its type are kept for a spring crop.

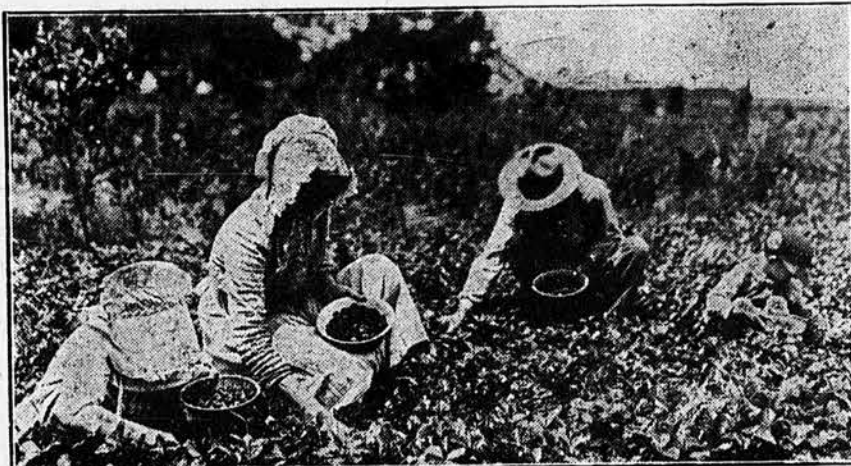
Under the matted-row system the plants should be set at the same distance as ordinary varieties, such as the Dunlap, Gandy, and Glen Mary—that is, from 18 to 36 inches apart in rows which are 3½ to 4 feet apart. When set 2 by 4 feet, 5,445 plants will be required to plant an acre. About 50 plants, the number needed to set a square rod, should supply a small family with berries throughout the season.

Under the hill system the plants should be set the same distance as are the ordinary varieties. If set 18 inches apart in rows 3 feet apart, 9,680 plants an acre will be needed; if 18 inches apart in double rows in which the single rows are 18 inches apart and the double rows 4 feet from center to center, 14,520 plants an acre will be required.

Flower stems begin to appear soon after the plants are set. Unless the plants are well established, these flower stems are a severe drain on the vigor of the plants, while very little good fruit will be secured from them. For this reason all flower stems which appear before the plant is established thoroughly should ordinarily be removed. If, however, growing conditions are favorable, the plants may become established very quickly and the removal of the flower stems will not be necessary. When growing conditions are not favorable, the flower stems should be kept picked off until into July. Berries begin to ripen about a month after the flower stems are allowed to develop fruit, and continue to ripen until freezing weather occurs.

Tillage should be very thoro, even more thoro than for the varieties that fruit in early summer, and unless a mulch is used it should be continued from early spring until late autumn. In periods of drouth, the cultivator should be used as often as once a week, for without an adequate and constant moisture supply a large crop of fruit cannot be matured. Tillage should be shallow, especially near the plants, so as not to injure the root system or loosen the plants in the ground. A cultivator with many small teeth is best adapted to such use. The outer teeth of the cultivator which run next to the rows should be shortened so they will not disturb the roots of the plants.

When planted on some types of soil the berries are likely to become gritty if the tillage is continued thru the fruiting season. To keep them clean, many growers use a mulch of hay or straw



Everbearing Strawberries Can be Grown on Many Farms in This State, and They are Popular With Most Families.

How Are You Helping to Win the War?

Here's a Chance to Get \$10, and in Getting It Aid Some Other Patriot Who May Be Slow in Falling Into Line

WE AMERICANS have learned the lesson of giving, since the Great War began. Our contributions to the relief funds of the time have proved it. And we are learning to lend and to save. But too many of us are individualists—that is we seldom tell anyone how we manage our economies. Some otherwise perfectly normal human beings seem to consider it strictly private business, whereas the truth is that many a man and many a woman hasn't the faintest idea how to save altho willing enough to do it to the point of discomfort.

Of course we know the farmers of the country are going to produce the biggest crops they have ever turned out, and we know their families are more likely to do without things than are many families in the cities. But it won't do to stop at big crops. We must help others to help the country.

Once in a while we meet a man or a woman who says "I don't just see how my eating cornbread for a week or doing without meat for two days is going to help the soldiers in France." Such persons need enlightenment, the enlightenment you can give them by telling how you manage, how you save, how much can be set aside for the allies in a week if every one of the 20 million homes of America does without some article for a few days.

Here's Your Chance to Earn \$10.

In order to get this needed information and spread it among the hundred thousand or more readers of the Farmers Mail and Breeze we are offering, this week, to pay \$10 for the best article describing the way in which a farm family is doing its part in solving the big problem of the war—the food problem. This story must not be more than 800 words in length, and it will be just as likely to win if it contains only 500 words. We want you to set down plainly just what is eaten in your home; how the meals are planned; how the men folks act about it; what your family and your neighbors say about the war—in short your article ought to be really helpful to the person who needs help. We simply must get behind the National Food Administration and work hard.

For the first acceptable article we shall pay \$10 immediately, and for the second best \$5. All manuscripts should be in this office not later than February 9, and must be addressed The Food Editor, The Farmers Mail and Breeze, Topeka, Kansas. No manuscript improperly addressed will be considered.

If you have a typewriter—and every farm family ought to have one—put the lines at least two spaces apart. If you use a pen or pencil write on only

one side of the paper and put the lines far enough apart to permit editing if necessary.

Never Mind the Grammar.

Don't worry about grammar or language. What we want is facts, and a person who loves America can save food in ungrammatical sentences just as well as a professor in Harvard could do it.

Those are the terms. Get busy. If by any chance you haven't entered into the saving spirit don't let another day go by without making your plans.

The first and most important rule to put in force in your kitchen is substitution. You don't have to starve or even to go hungry; not for one moment, altho it might be an illuminating experience for a few Americans to miss a meal or two.

Substitute. You can fill up on cornbread if you try and let the wheat flour go to the soldiers. Can't you see how the supply would be increased immediately if 20 million housekeepers cut down their flour purchases one-half?

The allies—the men who are fighting for you and yours, need the foods which can be most readily shipped. These are wheat, meat, fats, and sugar.

Now, this country has at its disposal just so many tons of wheat, meat, fats, and sugar—just so many and no more. Out of this quantity the amount that can be shipped to the allies and our own soldiers depends on how much of that wheat, meat, fats, and sugar we as a nation can keep from using. Every bit we don't use means that much extra they can use.

Just as a suggestion we are offering here this brief table showing how to substitute:

SOLDIERS NEED:	YOU CAN USE:
Wheat.....	Corn Oats Barley Rye
Butter.....	Cottonseed oil Peanut oil Corn oil Drippings
Lard.....	
Sugar.....	Molasses Honey Sirups
Bacon.....	Chicken Eggs Cottage cheese Fish Nuts Peas Beans
Beef.....	
Mutton.....	
Pork.....	

For cooking

The most important single substitute in that list just at present is corn. And that means corn meal. Is corn meal being used at your home these days instead of wheat? And if not, why not?

Special Days for Saving.

And is your family observing the system of special saving by which the entire country is trying to aid in accumulating supplies for the allies? This is the plan:

Every day—1 meatless meal.

Every Tuesday—A meatless day.

"Meatless" means that no meat (beef, pork, mutton, veal, and lamb) is to be eaten. And no preserved meat—beef, bacon, ham, or lard.

Every Day—1 wheatless meal.

Every Wednesday—A wheatless day.

"Wheatless" means that no wheat products are to be eaten.

Every Saturday—A porkless day.

This is in addition to Tuesday. And "porkless" means that no fresh or salt pork, bacon, lard, or ham is to be eaten.

This scheme does not so radically change the program which most families have always followed as to create hardship. But it does create system. And it helps to make one big family out of the whole nation. The housekeeper in Portland, Maine, who serves only cornbread on Wednesdays knows that the women out in Portland, Oregon, are doing the same thing. It is just as if on every Tuesday, Wednesday, and Saturday, the whole nation were sitting down at one big dining table together, all united in the single endeavor to help win the war.

Is your family at that table?

Answer These in Your Story.

How many wheatless meals a week does your family ordinarily have? How many meatless? To what extent has your family increased the number of wheatless and meatless meals a week since this country entered the war?

Do your men folks growl about the meatless days or the substitutes?

Do you grind your corn meal at home?

Of what peculiar value to soldiers in the field and sailors aboard ship are each of these: wheat, meat, fats, and sugar? The domestic science department of your high school or the agricultural college will give you the information.

Remember the date, February 9, and don't forget to address your article to the Food Editor, The Farmers Mail and Breeze, Topeka, Kansas.

Growing Sweet Clover on Kansas Farms

The Acreage of This Profitable Legume is Increasing Rapidly; Excellent Returns are Obtained on Poor Soils

By C. A. Helm

SWEET CLOVER is often considered a pest. Such a conclusion has little foundation. Sweet clover can be more easily eradicated than alfalfa. It is much more difficult to secure a stand of Sweet clover than it is to get rid of the crop. The opinion that Sweet clover is a pest probably is drawn from its persistence on waste land. Its existence is due largely to the fact that the plants produce a large amount of seed which results in new plants every year. Any method which prevents the plants from producing seed for two seasons will completely destroy the entire crop. Sweet clover also may be cleared from a field by plowing the land and planting a cultivated crop, which should be handled in a manner similar to a crop following alfalfa or timothy sod.

It is unsafe to assume that Sweet clover will thrive on all Kansas soils. It is, however, a common opinion that it will grow on the poorest soil to be found. This conclusion usually is based on the fact that Sweet clover thrives well on waste areas. It must be remembered that roadsides, draws, and other uncultivated areas usually are quite fertile. Any soil that is not subjected to continuous crop removal naturally contains a relatively large amount of plant food even tho the soil be in poor physical condition. That Sweet clover grows wild on heavy clay soils, and on sandy, gravelly, and other rocky points is an indication, however, that it is adapted to a wide range of soils. That it can be grown successfully on many soils unfit for profitable alfalfa or Red clover production has been demonstrated. It is apparent that on thin rocky or badly worn upland soils, sour soils, or soil having a tight subsoil near the surface, Sweet clover should at first be tried on a small scale. The price of seed and difficulty in securing a stand, combined with the possible loss of the land for one season, makes this practice logical.

Sweet clover will be most beneficial to the soil and produce a better yield if the soil is inoculated. A large area of Kansas soils is naturally inoculated for Sweet clover, since the same bacteria works on both alfalfa and Sweet clover. On rather worn or poor soils it is a good practice, if one is not certain that the soil is inoculated, to inoculate before seeding. This can be done in two ways.

The soil culture method is the one that appeals most strongly to the farmer, especially when he knows of a field in the locality where the soil is thoroly inoculated for a given crop. The presence of such inoculation is indicated by numerous nodules on the roots of the particular leguminous plants growing in the soil.

Such soil when taken from the surface 6 inches, allowed to dry somewhat, and is thoroly sifted can be applied to the land to be inoculated with a fertilizer grain drill. When applied with the drill and seeded thru the holes directly into the ground, 200 pounds an acre will be ample.

Where no drill is available and it is necessary to broadcast by hand, the amount required an acre will be at least 100 pounds greater. When the field is to be inoculated by broadcasting the soil by hand, the harrow should follow immediately to cover the inoculating soil, as the sunlight is very injurious to the bacteria. Transferring large quantities of field soil great distances is expensive, and the farmer is always taking the risk of introducing new and troublesome weeds as well as plant pests.

Many farmers who prefer the soil culture method and yet who do not care to handle large quantities of soil use what is known as the glue method of applying the soil culture. The seed to be inoculated

should be moistened with a sticky solution which may be made of one part liquid glue to 19 parts of water, or if preferred, 1 part corn sirup or sorghum molasses to 5 to 10 parts water. The solution should be just sticky enough to be felt with the fingers. Very little of this solution will be required as 1 quart of solution will moisten a bushel of seed. After the seeds are moistened thoroly with this solution, the soil should be sifted carefully. Two thicknesses of common window screen will make a satisfactory sieve. The seed should be stirred all the time to insure a thoro distribution of soil on the seed. Five pounds of fine soil will be ample for every bushel of seed, but it should be thoroly sifted as it is applied so that no pebbles or large clods will go into the seed.

A stand of Sweet clover is as difficult to obtain as a stand of alfalfa. For best results, a well prepared seedbed is necessary. If fall seeding is practiced, the land should be plowed early, and well compacted tho well pulverized on the surface. A good wheat seedbed is a good seedbed for Sweet clover. If Sweet clover is to be spring sown, the land should be prepared in the fall as spring seeding should be done early.

Sweet clover may be sown with or without a nurse crop. If the land is relatively free from weed seed, seeding it alone is to be preferred. However, on weedy land a light seeding of wheat, rye or oats may constitute a nurse crop. It may be necessary, especially in dry seasons, to cut the nurse crop off for hay. Harvesting the nurse crop for hay will be beneficial to the Sweet clover in practically any season. If this practice is followed, oats as a nurse crop is preferable. If the nurse crop is left until maturity, wheat is preferable to oats. In all cases the nurse crop should be seeded at not more than three-fourths, preferably one-half, the normal rate.



Less Gears Cut Upkeep Cost

"I have plowed hundreds of acres with my Heider, pulling three fourteen-inch plow bottoms," says one farmer, "and in one year's time I have had only 40 cents worth of repairs."

Do you know of any other tractor that can equal this record? This is simply one of the many advantages of the Heider special friction drive—backed with 10 years of unbeatable service. Friction transmission means fewer parts—less trouble—less chance for breakage—easy control—7 speeds forward or reverse with one lever. Especially designed manifold burns.

KEROSENE OR GASOLINE

Switch from one fuel to the other at any time without carburetor changes. Standard 4 wheel construction, heavy duty 4 cylinder Waukesha motor, Dixie high tension magneto, with impulse starter, Kingston carburetor, Perlex Radiator, S. K. F. Bearings.



Model C, 12-20 H. P.

Built to fit the needs of the average farm. Powerful enough to pull 3 plows and do it well—light enough to work over soft plowed ground pulling discs, harrows and drills. Easy to control, pulling binders, mowers, hay loaders, etc.



Heider Model D, 9-16 H. P.

Carrying Rock Island No. 9 two bottom plow. Handiest plowing outfit you could own. Your hands operate the tractor while your foot raises or lowers the plows. Automatic power lift. Gets into fence corners easier than you ever could with a team. Sold with or without plow attached.

Write for Tractor catalog.



Use Rock Island Tractor Plows and get good plowing no matter what tractor you own. With 2, 3 or 4 "CTX" bottoms. "Front furrow wheel lift." Extra high clearance.

The Rock Island Line includes Plows, Discs, Planters, Seeders, Cultivators, Listers, Hay Rakes, Hay Loaders, Manure Spreaders, Cream Separators, Gasoline Engines, Stalk Cutters, etc. Write for farm tool catalog.

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If they do not give you absolute satisfaction, take them back and get your money or a new pair free.

Boys' overalls like men's.

Should your dealer be out of your size, write

LAKIN-McKEY
St. Scott, Kansas.

Jayhawker's Farm Notes

BY HARLEY HATCH

Real Winter Arrived at Gridley. The Cold Went to 64 Degrees Below in Vermont. You Won't Forget a Real Blizzard. The Mail Carrier Failed to Come. Co-operation Pays at Burlington.

WINTER came down on us this week like a 10-ton safe falling from the top of the Woolworth building. The largest part of 4 inches of snow which fell January 10 is piled in the east and west roads again, especially along wheat fields and meadows. The wheat fields retain part of the snow, however, which will help greatly in protecting the plants from the 12-below weather we are having these nights. Luckily the sun shines out during the day, which allows the stock to get the kinks out of their backs for part of the time, at least.

But if you think we are having it cold here in Kansas just listen to the news which came the first of the week from my old Vermont home. Barton, the town in which I was born, reports 48 degrees below zero while for three nights running the mercury went to more than 40 below, and at no time, day or night, did it go above zero during that cold week. Newport, the county seat or shire town as they call it back there, is located at the foot of Lake Memphremagog where the north wind gets a 25-mile sweep right down from Canada, and as a result Newport reports 64 below zero, which is cold enough for anybody unless he belongs to the Bolsheviks.

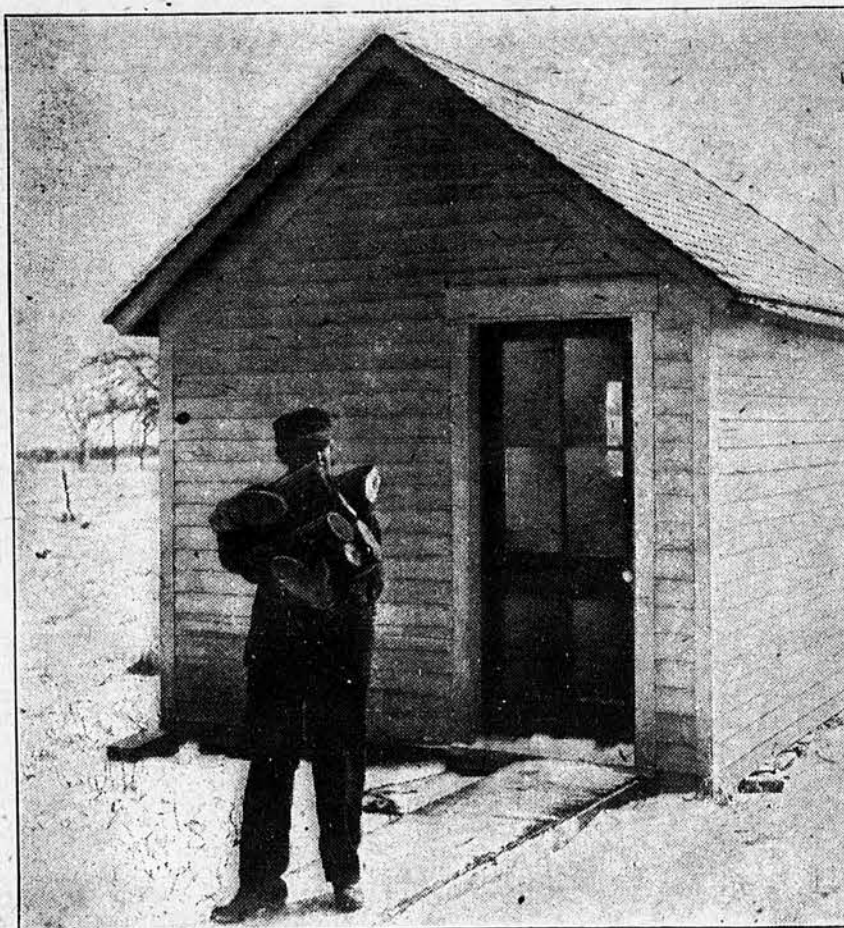
Right here I wish to take exceptions to the tale you so often hear of not feeling the cold in the North. I notice that most of those persons who tell this tale have never lived in the North or else they have been there but a short time when the weather was exceptionally mild. I lived for several years but 1/2 mile from the Canada line, and since that time I have been gradually working south. So far from feeling the colder as I move south I find it warmer and more pleasant with each southern move. On a par with this tale is the one of not feeling the heat in the South as you do in the North; my experience has been that the farther south you go the hotter it gets and the more you mind it in the summer. In the matter of weather you can't eat your cake and have it too.

The stockholders of the co-operative store at Burlington held their semi-annual meeting this week. They made

the division of profits for the last six months as follows: to the stockholders, 4 per cent; to stockholders who bought goods, 8 per cent on the amount bought, and to non-stockholders 4 per cent. The number of stockholders is now about 280, and the amount of capital stock on which the foregoing dividends and rebates were declared is not quite \$4,000. The dividend to stockholders for the first half of 1917 was the usual 4 per cent, while rebates to stockholders and non-stockholders were 10 and 5 per cent respectively. The total net profits divided during the first six months was slightly more than \$2,400, while for the last half the amount was \$1,700. So the profits for the year were greater than the whole amount of the capital stock; not bad business, is it?

This store follows the Rochdale plan of dividing profits and extends credit to no one. It also does not attempt to cut prices; it takes the regular merchants' profit and at the end of every six months divides with its customers. To start a price cutting war is fatal to a business with limited capital and it makes plenty of enemies, and the friends who partake of the benefits of the price war are mighty transient ones. Price cutting and trade wars are responsible for most of the failures of farmers in co-operative ventures, and the founders of the big Burlington business knew this and determined to avoid it.

The stockholders of this store have always been paid 8 per cent per annum; any profits above that have always been divided among those who bought goods. Non-stockholders get just half the rebates stockholders do, which is calculated to make every man who does any amount of trading become a stockholder. The immense trade this store has on so limited a capital is accounted for by the fact that the profits, aside from a fair interest, do not go to the stockholders but to the ones who buy the goods. This store has never paid less than 3 1/2 and 7 per cent rebates since it began business in 1913; in addition to this the prices are as low as any in the county, and the quality of the goods is the best. The fact that it gives no credit makes the business doubly safe. There are but few stores in Kansas having a capital of less than \$25,000 that do so large a volume of business as this Burlington store of less than \$4,000 capital.



Cold Weather Arrived at Jayhawker Farm, and the Fuel Supply Available in the Shed Was Mighty Helpful in Making the House Comfortable.

Instead of having one Sunday this week we have had three. We had no mail from Thursday until Monday, which is a record for us. So far as I can remember we have never before missed mail two days in succession. The carriers from Burlington made their rounds on both days the Gridley carriers missed, but their roads are in different communities; the Gridley carriers pass thru much meadow land from which the snow blows and piles up in the roads. I did not blame the carriers for not coming, badly as I wanted the mail for Sunday reading. The fact that on one morning the mercury stood at 12 below and the next at 18 below fully excused them in my mind. I also am prepared to excuse the peaches for not bearing next summer.

That bitter cold morning of January 12 brought to my mind strong memories of that date just 30 years before—January 12, 1888. On that day came the worst blizzard to Northern Nebraska that territory ever experienced. The air was filled with a flying mass of powdered ice which no living thing could face, and the mercury went to 40 degrees below zero. That anyone caught out in that storm could live seems a marvel, yet many did live and found shelter. In our county five persons lost their lives while the number of cattle which perished remains uncounted to this day. One neighbor lost 110 head; of his large herd the only ones saved were a few that found shelter in and around an abandoned claim shanty. I was going to school at the time and stayed that night in the school house. All iron articles were highly charged with electricity, and they remained so until about 4 o'clock the next morning, when the storm began to abate. We had early found that the stove was highly charged and frequently tested it with the hatchet used to chop kindling, and it was not until nearly morning that we found the stove had lost its electrical power. I have told this tale to many persons not acquainted with such storms and I knew by the way they looked at me they thought I was a liar, but to one familiar with that storm the truth is known.

I have often heard those not familiar with the genuine blizzard say that no storm could be bad enough to "lose them" within their own yard. Such persons cannot even imagine the terrible fury of the storm; no one can face it; his breath is taken, his face filled with the powdered ice with which the air is full, he cannot see his hand held out before his face and once the sense of direction is lost the terror of the storm is so great that few know what they are doing. If I were given my choice of passing thru a tornado or a real blizzard I would take the tornado every time. They talk of blizzards in Kansas but Kansas never saw a genuine blizzard. Language cannot describe such a storm but the genius who first found the name did as well as poor human limitations allow. Newspaper reporters dignify a snow squall by the name of blizzard but had they ever witnessed one they would save the name for the real thing—and would not use it perhaps once in 50 years and they might live in Northern Nebraska, too, for not since 1888 has that state been visited by such a storm. Let us hope it never will be again.

Successful Community Fairs

The educational and recreational benefits of community fairs may be had, inexpensively, by any community if the co-operative plan suggested by Farmers' Bulletin 870 of the United States Department of Agriculture is followed. The community fair is described as a county fair with commercialized amusements omitted. The community fair serves as a feeder to the county and larger fairs. One Middle Western county recently had a county fair composed of 72 community exhibits. There were no races or side shows, and the 10,000 visitors spent their time in inspecting its exhibits and in wholesome recreation. This bulletin may be obtained free on application to the United States Department of Agriculture, Washington, D. C.

Where Work is Appreciated

There is nothing that gives me more pleasure than to boost for Capper for Senator. I hope to see Arthur Capper in the President's chair in the near future. I honestly believe he will be there sometime. T. E. Randall.

Independence, Kan.

Here's Another of the Winners

Ira Martin of Anderson County Cleared \$561.28 in 1917

BY EARLE H. WHITMAN
Assistant Manager

WHEN a boy can make \$560 in a year, with an original investment of \$35, he may feel that he has made a mighty good start. Ira Martin of Anderson county, winner of second prize in the Capper Pig Club for 1917, made the money, and in the following story he tells how he did it:

"We were reading about the Capper Pig Club Boys in the Farmers Mail and Breeze. Papa said, 'Why don't you join them this year?' I had sent my name in for 1916, but Mr. Case wrote that Anderson county already had a member. This time I filled in the coupon right away and Mr. Case notified me that I had been chosen a member for 1917.

"I borrowed the money from Arthur Capper and bought my sow from W. A. McIntosh, Courtland, Kan., for \$35. She was shipped by express to Welda and arrived November 18.

"I fed my sow 1 pound of bran and 1 pound of shorts, mixed together in warm water, and four or five ears of corn a day. I weighed her February 5 and began keeping record. She weighed 310 pounds. When I got her, she weighed 210 pounds.

"My sow farrowed eight fine pigs, February 12, three males and five females. I put her in a small house and kept a fire until the pigs were old enough to stand the cold. I always gave them a good bed.

"I fed my sow the same amount until March 1. I then increased the feed to 1½ pounds each of bran and shorts and 4 pounds of corn a day. From April 10 to April 20 I gave the sow and pigs only corn and water because they were getting a few spears of grass, which made their feed too rich. I weaned them April 20 and began giving them slop again. I gave them 2 pounds each of bran and shorts and let it soak from one feeding to the next. I always put in a handful of linseed meal. They were turned on rape and oats pasture May 1, and June 1 we ran out of corn and gave them 2½ pounds each of bran and shorts.

"My sow weighed 300 pounds on July 1, having lost 10 pounds since February 5. I quit feeding the pigs August 15 and only gave them water. I had fed up to that time 357 pounds of bran and shorts, 100 pounds of linseed meal, 100 pounds of tankage and 494 pounds of corn.

"When the pasture began to dry up, I fed a little green corn. From September 20 to November 15 I fed them 6 pounds of bran and 1 pound of linseed meal a day. I began to feed corn October 1. I gave them 24 pounds a day until October 15, then increased it to 30 pounds. I increased it to 40 pounds on November 1.

"I sold a male pig for \$35 on Novem-

ber 10. He weighed 165 pounds. On November 12 I sold another for \$35. That one weighed 200 pounds. November 17 I sold the last male pig for \$30. It weighed 195 pounds. I then had five gilts left. I fed them 4 pounds of bran and 1 pound of linseed meal and 25 pounds of corn a day.

"I have fed 357 pounds of shorts \$4.28, 813 pounds of bran \$9.76, 186 pounds of linseed meal \$4.19, 100 pounds of tankage \$2.75, 2,638 pounds of corn \$26.38, and pasture for five months for pigs \$6, and two months for sow 30 cents.

"I have enjoyed the contest work and taking care of my pigs. I am going to keep my sow and five gilts next year, so will not have time to keep record of one of them separate. I was offered \$50 for some of my gilts, but did not sell them.

"I may not win a prize, but I have made a good profit and I think it has been worth while for what I have learned."

Ira doesn't tell you all the interesting facts. With his eight pigs he produced 1,758 pounds of pork at a contest price of \$53.66, or an average cost a pound of a fraction more than 3 cents. With \$100 received from the sale of male pigs, five gilts now on hand worth \$50 apiece, his sow doubled in value, and nine fall pigs averaging 85 pounds, Ira figured that his total profit for his year's work amounted to \$521.28. That was before he knew he had won second prize of \$15 in the contest for 1917, and a \$25 pig offered by W. A. McIntosh of Courtland for the best record made by a boy who purchased a sow from his herd.

The profit record that Ira Martin has to his credit is unusually large, but when you consider the fact that a large number of boys made \$300, and that the average profit was more than \$100 apiece for the 275 boys reporting, you may be sure that every boy in the Capper Pig Club for 1918 will have a mighty good chance to finish the year with a bank account. One club member says the boys in his county are all right, but that their fathers aren't sure they want their sons to take up the contest work. Come on in, fellows, and bring your dads with you to show them what it means to them really to be in partnership with the boys they want to keep on the farm.

I suspect the fine records made by members of the 1917 Pig Club made boys more eager to get into the club, for three counties have completed their membership since last week. They are Atchison, Allen and Reno. I think it is only fair to give Bill Brun, the live county leader of Atchison, much of the credit for filling his county. Bill simply wouldn't let the matter rest until he knew his county was lined up for a long, hard pull in the 1918 contest, and when I tell you three boys were after the tenth place in his county you will know that Bill went after them right. Atchison was the county, you remember, that missed out on the \$50 county prize by only a couple of points. Allen and Reno counties produced no winners last year, but the pep the boys in those

counties are showing already this year indicates that they are going to be in the running in this contest. Here are the members for 1918 in the three newly filled counties:

ALLEN COUNTY.

Name.	Address.	Age
Lyle L. Lewis, Humboldt.....		15
William A. Hess, Jr., Humboldt.....		12
Matthew Williams, La Harpe.....		15
William E. Osborn, Iola.....		14
Hardin Lineback, La Harpe.....		14
Leo Schmidt, Humboldt.....		14
Clifford Pierce, Moran.....		16
Paul Gurnell, Humboldt.....		16
Harry Dunlap, Carlyle.....		16
Wallace White, Humboldt.....		13

ATCHISON COUNTY.

William Brun, Muscotah.....	13
Clarence Kiefer, Horton.....	18
Eyewitt Drake, Cummings.....	17
Marvin L. Harvey, Horton.....	14
Ted Hendrickson, Muscotah.....	14
Chester Thompson, Muscotah.....	15
Hal Hutchens, Muscotah.....	15
Vernon Kiefer, Muscotah.....	13
Charles C. Brown, Horton.....	17
Claude H. West, Muscotah.....	15

RENO COUNTY.

Oren Dinwiddie, Sylva.....	14
Wayne A. Howell, Nickerson.....	13
Albert McElroy, Sylva.....	16
Ray Taylor, Sylva.....	17
Orville M. Clark, Abbeville.....	13
Harold E. Miller, Langdon.....	13
Floyd E. Warnock, Turon.....	17
Earl Kiger, Turon.....	13
Clifford Snyder, Burrton.....	15
Everett Yust, Sylva.....	14

Only two old members are back in the Allen county club, Lyle Lewis and Harry Dunlap. The same is true of Atchison county, Bill Brun and Clarence Kiefer being 1917 members. Vernon Kiefer is a cousin of Clarence. In Reno, only Oren Dinwiddie is a last year's member.

Say, fellows, I think we should give three cheers for the breeders who offered prize pigs to winners in the 1917 contest. At the time these pigs were offered, a \$25 gilt meant an animal of which any boy might be proud. Breeding stock has increased tremendously in price since that time, but the breeders are going to do the right thing by the boys who won their pigs. B. E. McAllaster, who will give the prize Poland-China gilt to Harley Dawdy, first prize winner, says he is planning to send a gilt valued at \$50. Mr. McAllaster also says he wishes to offer a fall gilt to the boy in this year's club who makes the best record with Polands. W. W. Jones, who offered the \$25 Duroc Jersey gilt for the red breeders in 1917, will send Clarence Kiefer, the winner, either a fine gilt valued at \$50, or that amount in cash. Mr. Jones, in an interesting letter, says:

"Some folks will say it is impossible to do the things Clarence did in the way of producing pork, but I know it can be done, and a boy who takes an interest in his sow and pigs and takes care of her as he would like to be cared for, is bound to make a good record, barring accidents, and will win out. Even if some other boy beats him to the cash and other prizes, which really are the least important things to be taken into consideration, the actual experience is what counts most."

We have one more prize pig offered for 1918 contestants. If W. J. Harrison of Axtell, Kan., is not in the army by next fall, he will give a \$25 baby boar to the boy making the best record with Duroc-Jersey hogs.

I had a letter the other day from Ralph Strickland. Ralph was a member of the 1916 club, and had a lot of bad luck. When the time came for him to pay his note the boy paid the interest and asked to have the note extended for a year, altho he would not be able to remain in the club. It was unusual, but the note was extended, and in this letter came a check to take care of the note and interest, and many thanks to Mr. Capper for his kindness. There's no limit when you're trusting to a boy's honor.

And now, fellows, I've got some news that made Mr. Case and myself feel mighty bad. In a letter written January 17, A. L. Butts of Point Rocks, Morton county, tells of a sad accident which resulted in the death of Seba Butts, a member of the 1917 Capper Pig Club. Seba was helping his brother run a threshing machine, and was fatally injured by having his clothing caught in the belt. I know every one of the Capper Pig Club boys will sympathize sincerely with his parents, and if any of you care to tell them of your sympathy I know they will be glad to have your letters.

The fact that grain is high in price makes it all the more necessary to feed well to get the best returns.

The number of silos in Kansas is increasing at the rate of about 12 per cent a year.



Ira Martin.

Indiana State Council of Defense says—
If you can't put a gun on your shoulder

Put a Silo on your Farm

Help Yourself and Help your Nation

YOU can double the value of your corn crop, feed twice as many cattle, increase your dairy yield and feed your horses, hogs, sheep and poultry at lowest cost with an

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American Gas Machine Co.
766 Clark St.
ALBERT LEA, MINN.

THE CAPPER PIG CLUB

John F. Case, Contest Manager, Capper Building, Topeka, Kan.

I hereby make application for selection as one of the ten representatives for county in the Capper Pig Club Contest. I will try to secure the required recommendations and if chosen as a representative of my county I will carefully follow all instructions concerning the club work and will comply with the contest rules. I promise to read articles concerning pig club work in the Farmers Mail and Breeze and will make every possible effort to acquire information concerning the breeding, care and feeding of swine.

Signed Age

Approved Parent or Guardian

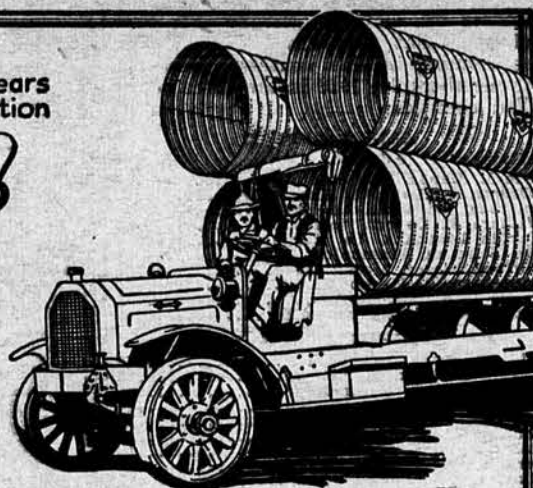
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Installed quicker - Last longer

PROBABLY some of the fastest road making ever done in this country was during the recent construction of the Nation's new training camps.

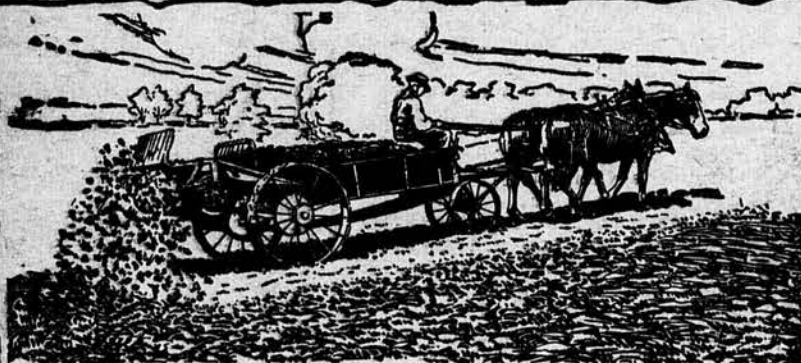
This speed was partly due to the fact that many

"ARMCO" IRON CORRUGATED CULVERTS

could be shipped on a day's notice, and could be installed in a few hours' time by inexperienced labor.

Long years after the war is over these culverts will be doing duty. Or if the camps are abolished the culverts can be dug up and used again, because they are made of "Armco" Iron. They resist rust for many, many years because made of an iron practically free from impurities.

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WE have added the New No. 8 Spreader — spiral wide-spread, light-draft — to the Low Corn King, Cloverleaf and 20th Century lines. We are in a position to suit exactly any farmer, whatever his previous spreader experience has been.

If you have not yet had an opportunity to study the features of the No. 8, the spreader for every average farm, the lightest-draft spreader made, write us and we will put you in touch with the dealer. No. 8 has the famous International spiral wide-spread that has thoroughly demonstrated its success as a wide spreader for all-around use. In addition, the Low Corn King, Cloverleaf and 20th Century lines provide you with your choice of larger capacity spreaders, with the regular disk wide-spread (well known wherever spreaders are sold) or with the spiral spread on special order.

The New No. 8 Spiral Wide Spreader and other Low Corn King, Cloverleaf and 20th Century spreaders will go onto many thousands of farms this year. They are all light-draft, low-loading, easy-handling, built of steel—and satisfactory. It will pay you to write us for catalogues. Write the address below.

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More Interest in Tractors

An Excellent Show is Being Arranged at Kansas City
for the Week of February 11 to 16

OFFICIALS of the Kansas City Tractor club, under whose auspices the Third Annual National Tractor show will be held during the week of February 11 to 16, have accepted the plans for the special Exhibition Building to be erected on the Plaza just east of the Union Station. Building operations have started and it is expected that the entire structure will be ready for the exhibits soon. The huge structure will cost approximately \$25,000.

The two previous tractor shows were held in a tent. The use of a tent was unsatisfactory from many standpoints. It was practically impossible to keep the tent comfortably heated or adequately lighted. It was this fact that led the officials of the Third Annual show to appropriate a large sum for the erection of a wooden structure. The special building will be unique in many respects. It will be one of the largest temporary buildings ever erected for show purposes, and, officials say, the opportunity for the display of tractors, tractor accessories and power farming machinery in general will be much better than in any permanent structure available in Kansas City. The scheme of ventilation will be something similar to that employed in the Billy Sunday Tabernacle. The building will be heated by steam. Pipes for this purpose will be laid between the Tractor Show Building and the Union Station. The building will be lighted thruout by electricity. The decorations are on an elaborate scale. Supporting pillars of the roof will be covered with a mask of tree-bark and the supporting trusses of the roof will be entwined with foliage, thus giving the interior the appearance of a vast forest.

One hundred exhibitors have already reserved space, and practically all available space has been taken. More than half of the exhibition space was allotted before December 15. Unusual interest has been aroused this year, and the Tractor show of 1918 promises to surpass all similar shows in point of attendance and the volume of actual orders booked. Tractor dealers as far east as New York and as far west as California, and representatives of the Allied governments have signified their intention of being in Kansas City for the Tractor show. The English government is buying thousands of tractors to cope with the conditions brought about by the submarine campaign. It is estimated that 2 million acres of land heretofore uncultivated in the British Isles is now in use, and tractors manufactured in the United States have been employed extensively for plowing and other work in all parts of England.

The growth of this comparatively recent farm necessity has in a very short time reached mammoth proportions. Few persons have any conception of the magnitude of the tractor industry as it has developed within the last few years. The local implement dealer is a logical distributor of the farm tractor, and hundreds of these wide-awake dealers will be in attendance at the Third Annual Tractor exhibit.

Developments of the farm tractor in recent years and the winning of its place as the most important equipment for the modern farm will be shown in various stages. The officials of the show believe that one manufacturer in particular will exhibit the first practical farm tractor ever made in the United States. It is a crude looking machine—a freak, so to speak. The first tractor had six wheels and developed about 4 horsepower. Visitors will have the opportunity of comparing the primitive tractor of a few years ago with the wonderfully efficient tractor of today.

There are 40,000 tractors in use in the United States, and practically all of this number are in use in the Middle West and Southwest. Illinois leads with Kansas a close second. A large number of the dealers planning to attend the Implement Dealers' show in Kansas City will stay over for the tractor show. The plans for the building include various comforts for visitors. Spacious rest-rooms will be provided and a military band will supply music at intervals during the day and evening.

These firms have purchased space in the National Tractor show:

Tractor Companies: Square Turn Tractor Co., Chicago; Lyons Atlas Co., Indianapolis, Ind.; La Crosse Tractor Co., La Crosse, Wis.; Electric Wheel Co., Quincy, Ill.; Nilson Tractor Co., Minneapolis, Minn.; George O. Richardson Mch. Co., St. Joseph, Mo.; Velle Motors Corporation, Moline, Ill.; Dauch Mfg. Co., Sandusky, O.; John Lauson Mch. Co., New Holstein, Wis.; Gile Tractor & Engine Co., Ludington, Mich.; Plano Tractor Co., Plano, Ill.; Cleveland Tractor Co., Cleveland, O.; American Tractor Corporation, Peoria, Ill.; Minneapolis Steel & Mch. Co., Minneapolis, Minn.; Sexton Tractor Co., Asbury Park, New Jersey; Pan Tractor Co., St. Cloud, Minn.; J. T. Tractor Co., Cleveland, Ohio; Janesville Mch. Co., Janesville, Wis.

Companies in Kansas City, Mo.: Advance Rumley Co., Kansas City, Mo.; Avery Company, Aultman Taylor Mch. Co.; Acme Harvester Co.; Bantley Sales Co.; B. F. Avery Co.; J. I. Case Plow Works; J. I. Case T. M. Co.; P. J. Downes & Co.; Emerson Brantingham Imp. Co.; General Motors Truck Co.; Dougherty Motor Co.; Hall Brothers & Reeves Motor Co.; Hart-Parr Co.; International Harvester Co.; K. C. 4-Drive Sales Co.; Kansas City Hay Press Co.; Kansas Moline Plow Co.; Kaufman Parrett Co.; Manning Motor Co.; Rock Island Implement Co.; E. G. Staude Mfg. Co.; Sweeney Tractor Co.

Accessory Companies: Farm Implement News, Chicago; McQuay-Norris Mfg. Co., St. Louis; Sweeney Auto & Tractor School, Kansas City, Mo.; Hyatt Roller Bearing Co., Chicago; Curtis Publications, Philadelphia; The Buda Company, Harvey, Ill.; Madison Kipp Lub. Co., Madison, Wis.; Oilmax Engineering Co., Clinton, Ia.; Clarke Publ. Co., Madison, Wis.; Gurney Ball Bearing Co., Jamestown, N. Y.; Sumter Electrical Co., Chicago; R. D. Nuttall Co., Pittsburg, Pa.; Perflex Radiator Co., Racine, Wis.; P. & O. Plow Co., Kansas City, Mo.; J. I. Case Plow Works, Kansas City, Mo.; Emerson Brantingham Imp. Co., Kansas City, Mo.; J. I. Case T. M. Co., Kansas City, Mo.; Rodrick Loan Mfg. Co., Kansas City, Mo.; Moline Mfg. Co., Racine, Wis.; South Bend Chilled Plow Co., South Bend, Ind.; Byrne Kingston Co., Kokomo, Ind.; Gas Power Pub. Co., St. Joseph, Mo.; Universal Lug Co., Cleora, Ill.; SKF Ball Bearing Co., New York; Diamond Chain Co., Indianapolis, Ind.; Capper Publications, Topeka, Kan.; John Deere Plow Co., Kansas City, Mo.; Grand Detour Plow Co., Kansas City, Mo.; Implement & Tractor Trade Journal, Kansas City, Mo.; Oliver Chilled Plow Co., Kansas City, Mo.; Rock Island Plow Co., Kansas City, Mo.; Kansas Moline Plow Co., Kansas City, Mo.; Huber Tractor Co., Marion, Ohio; John Noble Tractor Co., 401 Victor Bldg., Kansas City, Mo.

When Visiting Camp Funston

Not a day passes but what relatives or friends of soldiers come to Manhattan or Junction City expecting to meet men who are at Camp Funston, but without any clear understanding except that they will meet them "right in town," or "at the depot," or "at the hotel."

Now, these are good sized towns; there are several trains a day—most of them late—several depots, and any number of places classed as hotels. The result is that people often spend many precious hours, together with much worry and some strong language, chasing each other around town and back and forth between the camp and one or the other of these two towns, when a little forethought would prevent all this.

Both towns have "Community Houses," which are sometimes known as Soldiers' Recreation Halls. These are both centrally located and easily found. They are the natural meeting places for soldiers and their friends, and if strangers coming to town in search of soldiers would go there at once and make inquiry it would in many cases simplify matters. Messages can be sent here for men in case of emergency, although the proper place to address mail and ordinary correspondence is to the regular camp address given by the men.

Both these places have Ladies' Parlors, a list of clean rooms, a free telephone, map of the city, church and lodge information, plenty of stationery and a place to write letters.

They are both operated directly by the War Camp Community Service organizations of these two towns in cooperation with the War Department Commission on Training Camp Activities, and no charge is made for any service each may render.

V. P. RANDALL, Manhattan.
E. L. ENGLISH, Junction City.
Representatives for War Department Commission on Training Camp Activities.

Sugar sent to the bottom of the sea by enemy submarines cannot always be prevented by Americans but sugar waste in the bottom of tea and coffee cups is to be severely condemned in this national crisis.

A Much Better Use of Grass

Colorado Farmers are Using Modern Methods Profitably

BY F. L. CLARK

QUANTITY cattle are the money-makers today. Good blood and a full stomach are the secrets of success. While grass is still used to a limited extent to winter the animals on, cottonseed cake, alfalfa hay, wild hay, the silo and farm roughages are becoming the more dependable feeds for from four to five months of the winter season.

The words are those of John E. Painter, a western stockman who, by adapting himself to new conditions, is doing far better than under the old system of grass feeding the year around. Hundreds of other stockmen, disgruntled by the encroachments of settlers, have either quit the cattle business or have been forced to the wall because they did not, on the curtailment of the range, supplement grazing with feeding.

In the Range Country.

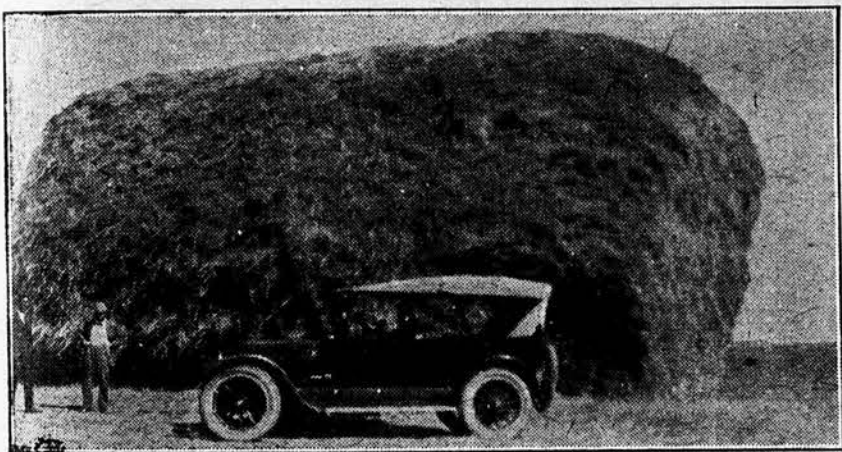
Mr. Painter's ranch is in the Platte River Valley in Northeastern Colorado, one of the most famous ranges of the days of the cattle kings. As the country settled up and the range was restricted, the free range that was left became overstocked. The continual tramping and unrestricted grazing soon ruined the land for grazing purposes. It was about that time that many of the old outfits closed out. Mr. Painter bought up railroad land and all the

had become a state. He had just \$90 in his pocket when he picked a site for his ranching venture and built his shack. "My first aim was to get together two brood mares and 15 cows and settle on a quarter section," Mr. Klug said. "Cattle were dirt cheap when I first came. I got my start by milking cows and peddling butter in Greeley. The Greeley pioneers used to say, 'Mrs. Klug makes such fine butter.' I didn't dare to let on that I was making the butter myself. You see I batched for nearly nine years after I settled in this county."

The Cropping System.

Mr. Klug's ranch now consists of 20,000 acres of deeded land and 8000 acres of leased land. As high as 3000 cattle, all Herefords, have been on the ranch in the last year.

The uplands of the ranch are used for grazing, the meadow bottom lands are kept for hay and 2000 acres under the ditch are given over to diversified farming. Seven hundred acres have been seeded to alfalfa and 400 acres to wheat. As a side line and for patriotic reasons Mr. Klug last year put in 900 acres of dry land to beans with good success. Fifteen hundred tons of wild hay and alfalfa were put in stacks for winter feeding. Three tractors and 68 farm mules were used in handling the



A Great Deal of Hay Was Stacked Last Summer in Eastern Colorado, and This is Helping Now in Taking Cattle Thru the Winter.

other land he could get hold of, and substituted for ranging the pasturing of stock in fenced lands, saved his meadows for wild hay for winter feeding and grew forage crops. At the same time he instituted "fewer and better cattle" as his policy. He now has one of the prize-winning Hereford herds of the West.

"The judicious use of pastures" is the key to success he believes. "Grass, grass, grass," he says, "our commonest, least recognized and yet most valuable of all agricultural products is once more gaining in this territory, and its value is being recognized more generally now that it has gone into private ownership. The settler as well as the stockman is being convinced mainly thru the hard school of experience that this is one of the places where it is hard to improve on nature—many of us yet have to learn the judicious use of our pastures. Nature never meant the roots of grasses to be eaten as well as the blades. Furthermore, in this semi-arid region, our grasses will not give the results if eaten so closely as is permissible in countries where the rainfall is greater."

Hay is a Paying Crop.

Mr. Painter believes also that there is more profit in keeping good wild hay land than in subjecting it to the plow for why plow it up, he says, "when it will grow a reliable crop every year without the aid of that luxury and scarcity, 'the farm hand.'"

The photograph shows one of the immense stacks of wild hay that the stockmen in the vicinity of Mr. Painter's ranch are feeding this winter. It is on the John Klug ranch, said to be the largest single land holding in Northern Colorado. Mr. Klug has been ranching for 30 years in the same place. As the country has settled he has adjusted his stock-raising constantly to the new changes and with excellent results. He arrived about nine years after Colorado

work of the ranch. A cattle shed on the ranch is built large enough to cover more than a thousand head of cattle. One watering trough is 100 feet long, 16 feet wide and 2 feet deep, with concrete approaches. Mr. Klug isn't even dependent on the railroads to move his crop. He has a 3-ton White motor truck for use in hauling produce to Denver.

Success in Kansas Farming

BY STODDARD JESS

The success of the farmer requires a proper understanding of his mission as a farmer. He should know that his first duty is to produce everything that is needed for the support of his family, that he can produce on his farm, devoting the part of his land remaining to the production of such crops as it may be best adapted to raise. The farmer who produces what his family consumes buys of himself and sells to himself, thus saving two profits, which he otherwise would have to pay to the middleman. The farmer who produces what his family consumes lives better, because he produces many things that he would not feel justified in buying.

Do You Irrigate Alfalfa?

Some excellent experimental work on alfalfa irrigation has been done in California. It is reported in Bulletin No. 284, the Irrigation of Alfalfa in the Imperial Valley. This supplies information of value to every Kansas man who is interested in the irrigation of alfalfa. You can obtain a copy free on application to the Agricultural Experiment station, University of California, Berkeley, Calif.

The man who misses an ear in this year's husking bees may have to prove that he is not working for the kaiser.



He Wrote To His Brother
"Get a
JOHN DEERE
Tractor
Plow"

"You ask me what I think about your buying a tractor.

"Judging by my own experience, I'll say that you have done the right thing. But I want to give you some good advice that a neighbor gave me when I decided on tractor farming. 'Remember,' he said, 'that the tractor only pulls. It's the plow that makes the seed-bed.'"

"You ought to get the best plow you can buy to use with your tractor. That's just as important as buying the tractor itself.

"I bought a John Deere plow when I bought my tractor and I am mighty well pleased with the work it does. It is unusually strong and light running. It saves fuel, and fuel costs a good deal these days. It doesn't have any chains and sprockets to cause trouble. It is so easily operated and dependable that I can keep my attention on the tractor while plowing. And best of all, it leaves a perfect job of plowing behind it. The best advice I can give you in connection with your tractor is 'Get a John Deere Plow.'"

And that is the best advice anyone can give to a man who intends to buy, or already owns, a tractor—get a

JOHN DEERE TRACTOR PLOW

Successfully Used With Any Standard Tractor

Makes a Good Tractor Pay

A John Deere Tractor Plow repeats its first great value to you year after year. It continues to make better seed beds. Its use means repeated plow profits for you instead of repeated plow investments by you. Its seed bed-making service makes a good tractor pay.

Operating Economy

A John Deere Tractor Plow in your fields saves time, labor, fuel and plow up-keep. You operate it from the tractor seat. It requires little or no attention as you drive down the field. Its extra-quality bottoms scour perfectly. Its extra clearance prevents clogging. In turning at the end of the field, a slight pull on the trip rope causes the powerful power lift to raise the bottoms high and level.

Because of the location of the axles, the bottoms, when lowered, reach full depth instantly and stay in the ground. Perfect balance and superior bottom qualities make the plow extremely light draft—fuel-saving. There are no chains or sprockets to cause trouble. Every part is as strong as the best of material and workmanship can make it.

Use It With Any Standard Tractor

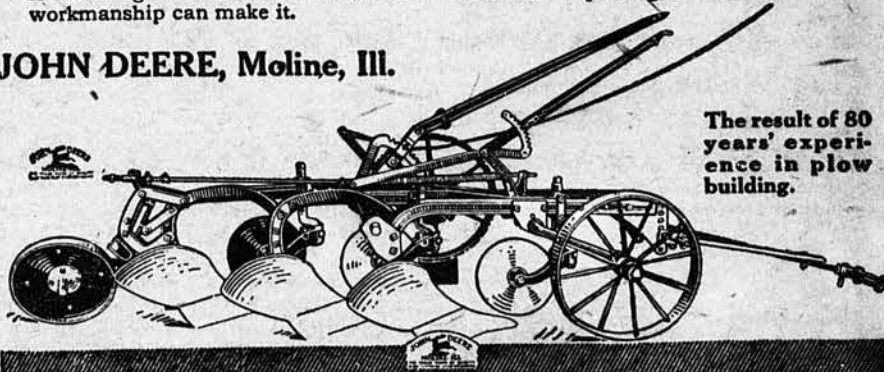
You can use a John Deere Tractor Plow successfully with any standard tractor. If your tractor is small, get the No. 5, carrying two to three bottoms. If your tractor is of the larger type, get the No. 6, carrying three or four bottoms. Insist on a No. 5 or No. 6—see them at your John Deere dealer's.

Get These Free Books

Write today for our free booklet describing both the No. 5 and No. 6 John Deere Tractor Plows. It has a message on tractor plow value that you will find profitable reading. Ask also for our big free book, "Better Farm Implements and How to Use Them." Its 156 pages describe a full line of labor-saving implements—tells how to adjust and operate many of them. It is full of practical information that will help you. Use it as a reference book. Worth dollars.

To get these books, indicate the farm implements in which you are interested and ask for package TP-210.

JOHN DEERE, Moline, Ill.



The result of 80 years' experience in plow building.

WHEN WRITING ADVERTISERS MENTION FARMERS MAIL AND BREEZE

Have You Cold Feet?

BY MRS. DORA L. THOMPSON
Jefferson County

"If I could keep my feet warm, I shouldn't mind cold weather so much," our neighbor said. Many farm women suffer with cold feet. Too often, the kitchen is a lean-to, a room really intended for summer use. In houses heated by stoves, it is a difficult matter to get the floors well heated. The room must be kept too warm for comfort awhile if the floor is to be thoroughly warmed. As a covering, we find linoleum helps to make a room warmer but is, in itself, the coldest of materials to walk upon.

Casting pride to the winds, we have several times worn felt shoes. In these there is little cause to complain of cold feet. The difficulty one meets in wearing felts is that a change to a dress shoe is like putting off winter clothing for summer apparel. One Kansas woman who accompanied a son and daughter when they took up homesteads in Dakota told how she kept her feet warm. She cut pieces the size and shape of her shoe soles from old furs and placed them in her shoes. She wasn't bothered with cold feet from that time.

We can believe the fur would prove a warm sole from a little personal experience. The other morning when the thermometer registered 20 degrees below zero, we took our turn at baking the buckwheat cakes. We knew the floor at that time would be unbearably cold so we slipped on the man's sheepskin boots. They are the warmest shoes we've ever tried. We shall get something of the sort to fit another season.

An excellent discussion of the training of farm boys and girls may be found in *The Country Gentleman* for January 12. Nellie Kedzie Jones in a story, "Starting the Right Way," emphasizes the value of chores. To quote one paragraph, let us select the one on chores especially, tho many others are equally good.

"Remember for your own comfort and encouragement that a good habit can hold on just as hard and just as long as a bad habit. 'Choring' is the first habit I should try to develop in 8-year-old Mary and 6-year-old Tom. He is none too young for a regular program. A chore is something that must be done over and over again. A chore is hated for its sameness. A chore is what everyone dodges if he can. But chores, after all, are what make the average country lad more reliable than the average city boy. Chores mean two things—regularity and reliability. No child can plant its feet too early on these two foundation stones of character."

Carrying wood and kindling, taking water, milk and grain to the chickens, clearing away dishes, brushing the hearth and helping to set the table have been regular chores for our two older children. To be sure, the dishes suffer and sometimes the chickens are given a scare by their vigorous throwing of grain.

We have been sorry to see that some of our choice roosters have frozen wattles and one has a frozen comb. This one was the last to moult. We have wondered if his condition would make him more sensitive to cold. We are told that we could prevent the frozen wattles by rubbing vaseline or oil on them. The fact that they are dipped in the water when the rooster drinks accounts for their being frozen.

Eggs, here, are 46 cents a dozen. It does not take very many eggs to place three figures in the credit list. We do not get many eggs but an average of a dozen a day or more has been kept up during the coldest weather. The fact that they lay at all, we think, is due to the milk they have to drink. Milk is more plentiful than soft water, at the house, and they get more of it. It is very seldom that our cistern is dry but that is the case at present.

Prune Pone

Scald 1 cup of cornmeal with enough boiling water to make a very stiff batter. Stir in 1 cup of rye flour and 1 cup of wheat flour, add ½ cup of molasses, 1 cup of sour milk, 1 teaspoon of soda and 1 cup of washed chopped prunes. Steam in a mold 3 hours or bake 2 hours in a moderate oven. Serve with sweet sauce or hot molasses.

With the Home Makers

Tell Me a Story, Mother

BY ANNA MAE BRADY

STORIES have been one of the chief means of developing the race. They play just as important a part in the development of the child. The greatest problem the child has is live itself and the story is the best way of explaining it.

Most mothers realize their importance not only in an educational way, but also for the pleasure they give. Their problem is to secure enough stories suitable for the different ages of their children,



for they well know that the fairy tale so pleasing to their 6-year-old would only provoke laughter from the 12-year-old, with

his superior wisdom in regard to fairies. It is true that the younger child may know full well that there are no fairies yet his stage of development makes him wish to believe it anyway.

We can make no mistake in giving the children the old, old stories, for we have nothing better now-a-days. We should tell them over and over until the child knows them perfectly, but we need to have a sufficient number in mind so he will not tire of any of them.

Below is a list of stories suitable for different ages of children. The books from which they are taken may be obtained from any book dealer. If he does not have them on hand, he can easily get them.

Stories for children 4 to 7 years:

The Gingerbread Boy—Stories to tell to Children.
Little Black Sambo—Bannerman.
The Three Billy Goats Gruff—Grimm's Fairy Tales.
How Brother Rabbit Fooled the Whale and the Elephant—Stories to tell to Children.
Brar Rose—Grimm's Fairy Tales.
The Elves and the Shoemaker—Stories to tell to Children.
The Three Bears—The Three Bears.
The Coal, the Bean and the Straw—Grimm's Fairy Tales.
The Little Fir Tree—Andersen.
Epaminondas and His Auntie—Stories to tell to Children.

For children 7 to 9 years:

The Lad and the North Wind—Dasant.
The Pea Blossom—Andersen's Fairy Tales.
Why the Chimes Rang—Why the Chimes Rang.
The Brahmin, the Tiger, and the Jackal—Stories to tell to Children.
The Little Hero of Harlaam—How to tell Stories to Children.
The Ugly Duckling—Andersen's Fairy Tales.
Little Half Chick—Stories to tell to Children.
Peter, Paul, and Espen—Dasant.
Hansel and Gretel—Grimm.
Beauty and the Beast—Grimm.

For children 9 to 12 years

Parsifal—Wagner Opera Stories.
Aladdin and His Wonderful Lamp—Arabian Nights.
How Little Cedric Became a Knight—In Storyland.
Robinson Crusoe—Defoe.
Mowgli—Kipling's Jungle Book.
The Snow Image—Hawthorne.
Rikki Tikki Tavi—Kipling's Jungle Book.
The Rhine Gold—Wagner Opera Stories.
Siegfried and Brunhilde—Wagner Opera Stories.
Toomai of the Elephants—Kipling's Jungle Book.

Take An Inventory of the Home

BY HENRIETTA KOLSHORN

The beginning of the year usually requires an accurate inventory for a well established business. The business of home making is no exception. Many women know without taking an inventory just what they have, but they often do not know what they do not have. Have you ever made a list of the needs in your home and then begun by satisfying those needs and checking them off the list? Why not try it with the aid of the men in the family?

It is easiest to begin with the simple little things first, such as, a hook for

the shoe brush, a rattling window to be fastened, a new kitchen clock, the broken cellar step to be mended, the parlor door hinge to be fastened, the rocker that comes apart to be glued, a new shade for the reading lamp, a new dishcloth or a dustless mop. If the list can then be divided among the members of the household, mother can have for her list the making of the more difficult things, as the new curtains; sister can make the dustless mop and dishcloth from old garments; brother can put in the hooks and nails; father can plan new and more difficult things, such

as a drain for the kitchen sink or stationary wash tubs. He can adjust tables to the right height and make a convenient ironing stand or a kitchen stool.

Every man who loves his family likes to feel that they are comfortable. An uncomfortable and inconvenient house is usually the result of a woman's lack of appreciation, organization, tact or lack of judgment. Men like things comfortable and the tactful woman can usually get anything her husband can afford to get for her, if she knows how to meet the situation thru wise suggestions and planning. It may often require years of patience. Women place such a low value on their own worth. They will get along somehow rather than make the family realize that they should not do any heavy work that machinery can do for them.

A man of moderate means was one day showing the extension workers a simple water system, a bath room, and a washing machine that he had installed. This man had made all the plans and had done most of the work himself, thus reducing much of the cost. He displayed his work with much genuine pride and then said in a low voice, so his wife could not hear, "My wife thought she could get along somehow without these but I knew better. Why, she would have been an old woman before her years if I had let her do that heavy work, and she never could keep the house and family clean without this system." The man had better judgment than his wife, but he also had the good sense to know how to best use his superior knowledge so as to make his family the happiest.

Few women know as much about installing water, light and heating systems as do men. Yet these are the three items that do the most to promote human happiness in the home. Why not let the men do the planning? Very few men will admit that they cannot improve these conditions in their farm homes if the task of improving them is left to them. Men usually get to work and remedy defects, but women often permit themselves to feel that they are martyrs of fate and that their lot is a hard one and thus they soon become sour, unhappy, complaining drudges instead of light-hearted, happy, rested homemakers. It is a great pity that the men do not realize how very important a factor they are in the big task of keeping the women happy. If they only realized their own value they would do their share of the task better.

Pictures are Silent Companions

Pictures as well as individuals have a duty to perform in home life. All homes deserving the name have pictures of some kind. They are silent companions, and when company is present they help in the entertainment.

Grace M. Palmer, an instructor in the home art classes at the Kansas State

Agricultural College, says family portraits have no place in the living room. She does not believe they should be paraded before strangers any more than private family affairs. The nature of the room determines the pictures, but the wall space to be filled as well as the color scheme of the room should be taken into consideration.

In a dining room, the pictures should be conducive to happy thoughts. Cheap pictures and pictures of wooden looking fruit are not effective. Appropriate pictures for the dining room are "Spring," by Corot; "Autumn," by Mauve; "The Ford," by Corot; and "Autumn Gold," by Inness.

Pictures of general interest are appropriate for the living room. Here they should be conducive to deeper thought. Burne-Jones's "Golden Stair" and "Spies," Titian's "Tribute Money," and Van Ruysdael's "Windmill" are desirable. Many of Rembrandt's and Millet's pictures are desirable, as are also Raphael's Madonnas. Landscapes are appropriate.

In the bedroom, one's choice may have free sway so long as the effect produced is restful. Family portraits and photographs of one's friends are appropriate, and any other pictures of which the person is particularly fond.

Pictures in the boy's room should stimulate him to patriotism, chivalry, spirituality, and industry, and should foster kindness to animals, believes Miss Palmer. "Hosea," from Sargent's "Frieze of the Prophets;" "The Forge of Vulcan," by Velasquez; "Oath of Knighthood," by Abbey; "The Sower," by Millet; and "The Spirit of '76," by Willard are all good. Animal pictures by Bonheur are also desirable.

Pictures suggesting noble womanhood are appropriate for the girl's room. Madonna and mother-and-child pictures are especially fitting. Other desirable pictures are Reynolds' "Age of Innocence," "The Strawberry Girl," and "The Broken Pitcher," as well as "The Dance of the Nymphs," by Corot.

Dainty Combination Suit

You will be delighted to add the ladies' and misses' envelope combination 8613 to the dainty spring outfit. It is to be slipped on over the head and there is an extension on the lower edge of the back which goes between the knees and buttons to the front. Lace fin-



ishes the neck, armholes and the lower edge, and ribbon run thru beading regulates the fullness. There is also a pattern for a short circular skirt which may be sewed onto the chemise if desired. Sizes 32 to 44 inches bust measure. This pattern may be ordered from the Pattern Department of the Farmers Mail and Breeze, Topeka, Kan. Price 10 cents.

The Liberty Bond goes up—with the Kaiser on the other end of the saw.—Boston Transcript.

Young Kansans at Work

Drum is the African's Wireless

THE DRUM not only takes the place of bells in Africa, but it is the chief musical instrument. It can readily be surmised that it is far from a melodious one.

Most villages own a variety of drums, big and little. There is a drum for each occasion, and the roar of many drums for some special event. There are the chief's drum, the war, or call, drum, the carrier's drum, and the dace drum.

The biggest drum of all is the war drum. When beaten with clubs wielded with all the strength of two men, it can be heard 18 to 20 miles away. There are smaller war drums, however, that are carried into battle. These drums consist of a hollow block of wood, fancifully carved, with a skin tightly stretched across one end and pegged down. The big war drums have a skin stretched across each end.

The dance drum is another instrument with a tremendous capacity for sound, says a writer for the Classmate. Missionaries have written home of the nights made hideous by the yells and shrieks of dancers and the pounding of drums, the pandemonium lasting till well past daylight. The music (?) is described as "neither mellowed nor harmonized by distance."

The Africans are a music-loving people, and it is a pity that their instruments are of the crudest and most discordant kind. With the most of them, however, who have never heard anything better than the drum or the gourd piano, the noise is the thing.

The carrier's drum is used to direct lost members of a caravan back to camp. When Bishop Lambuth was in Africa he and the other members of his traveling party were lost in the jungle for two days, having fallen behind the guides and head carriers. The bishop tells of the joy that filled their hearts when they first caught the sounds of the carrier's drum, tho it was miles away. The native runners in Africa can tell by the way the drum is beaten just what is meant.

So, too, the villagers are warned of danger or informed of occurrences by the beating of the drums. Sometimes the sounds are such it tells that strangers are approaching, or that the chief is waiting for them to assemble to hear what he has to say. Again, the call tells them to hasten to their huts—there is an angry lion or an elephant about to charge down upon them. Another time the drum roars out a warning that a hut is on fire.

The drum is the African's wireless. It announces news from one village to another. A British official tells of the time Colonel Roosevelt was in Africa, and of how the African drum far out-distanced the Marconi system. The official sent a message by wireless to a village 40 miles away, announcing the coming of Roosevelt. Ere the message reached there, relays of African drums had already made the announcement.

The piano drum, which is also a dance drum, shows a good bit of ingenuity both in construction and the manner of manipulating it. It is semicircular in shape, the ends curving above the player's head. There are 18 to 20 keys, arranged side by side, and following the curve of the instrument. Each key is 3 to 4 inches in width and 12 to 15 in length. Under each key is a gourd attached by means of a resinous gum or a bit of cement. The gourds are of different sizes. Two drum sticks are used by the player, one in each hand. When the keys are struck by the drum sticks, each gives out a different sound.

A Needle Will Stand on Glass

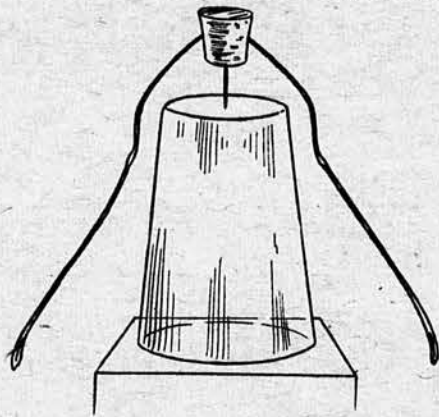
BY MYRA KENTON LOWDEN.

When Christopher Columbus once asked a number of guests who could make an egg stand upon its end, nobody could do it. Then Columbus performed the feat by cracking the end of the egg. It was merely a question of knowing how.

See if you can make a needle stand on its point on the bottom of an inverted glass tumbler. It sounds ridiculous but it is a trick that can very easily be done. First, have at hand a needle, any size; a glass tumbler with a smooth bottom;

a large jug cork; two forks, exactly the same weight.

Stick the forks into the cork exactly opposite each other; push the end of the needle into the center of the small end of the cork; turn the glass upside down, on a small box, to keep the forks from hitting the table; arrange the whole as in the illustration. If you have



It Will Rotate for 20 Minutes.

retained the balance precisely, you can now whirl the forks by means of a simple twist on the top of the cork.

The needle will not only be standing on its point on glass, but you have a bit of "perpetual motion" machinery that will rotate from 20 to 30 minutes, depending, of course, upon the perfection in placing the center of gravity.

Army Cots for Soldier Dolls

Army cots are a novel idea in doll furniture and they are especially pleasing to the little girls who have brothers in the army. They are used in the place of beds and are easily made. Strips of wood form an X for each end of the cot. The lower ends of these crosspieces form the legs. Three longer pieces connect the two crosspieces, two at the top and one at the center. A strip of canvas over the top, bound around the two long strips and left loose enough to sag a little, finishes the cot, which is a small duplicate of the cots used by real soldiers.

If the joints are made loose enough so the cot will fold up, all the better. The sticks used for the crosspieces at the ends are $\frac{3}{4}$ inch by 9 inches by $\frac{3}{4}$ inch. The connecting pieces are 17 inches long. The handle of a child's broom, sandpapered, would be just the thing for these. The canvas is cut 10 by 18 inches. A doll dressed in Red Cross uniform, given with this soldiers' cot, will fill any little girl's cup of joy to overflowing.

What Word is This?

In this picture a word is represented. If you can guess it, send the answer to the Puzzle Editor of the Farmers Mail and Breeze, Topeka, Kan. Packages of



postcards will be given each of the first five boys and girls sending neatly written correct answers.

The answer to the name puzzle in the January 12 issue is: 1, Esther; 2, Opal; 3, Ruth; 4, Edna. Virgie Cates, Osage City, Kan., was the only person who sent a correct answer.

According to an English dispatch, bacon is not procurable in many butcher shops in London. In shops able to get supplies, the price ranges as high as 60 cents a pound for grades of bacon that before the war sold for 18 cents.

The New Hired Hand!
—the farmer needs good help in the fields. His wife needs good help in the kitchen. Her important duty is to make the best bakings. Her most important helper is Baking Powder.
If she tries Calumet she'll stick to it. Its dependability and uniform quality means good-bye to bake-day failures.
The farmer's wife wants the most of the best for her money. That's why most of them use Calumet. It's pure in the can and pure in the baking.
Received Highest Awards
New Cook Book Free — See Slip in Pound Can.

Keep Baby's Skin Soft and Smooth
Always use 20 Mule Team Borax in the baby's bath. It softens and soothes the delicate skin and cleans it hygienically. Opens the pores and lets the skin "breathe". And every other member of your family will find many beneficial uses for
20 MULE TEAM BORAX
See that it is used in the bath; for a mouth and eye wash and other toilet purposes. It is Nature's greatest cleanser. Costs little, does much. Endorsed by all health authorities. Used wherever hygienic cleanliness must be maintained.
At All Dealers
Send for "Magic Crystal" Booklet. It describes 100 household uses for 20 Mule Team Borax.
PACIFIC COAST BORAX CO., New York and Chicago

\$100.00 IN GOLD GIVEN

How Many Words Can You Make

This puzzle is a sure prize winner—absolutely everyone in this club wins a prize. It is not hard, either—just a little ingenuity and skill. The puzzle is to get as many words as possible out of the letters herewith given. Use only the letters given and only as many times as they appear in this ad. For instance, the letter Y appears three times, so in all your words you must not use Y more than three times. If you use Y twice in one word and once in another, you cannot use Y in any other word, as you have already used it as many times as it appears in this advertisement. It is not necessary that you use up all the letters. The puzzle looks easy and simple, but if you can make as many as twelve words, send in your list at once, as the person winning first prize may not have more than that many words.

OUR OFFER We are the largest magazine publishers in the west and are conducting this big "everybody wins" word building and prize contest in connection with our big introductory and advertising campaign and want to send you sample copies and full particulars as to how you can become a member of this contest club and share in the \$100.00 in gold and the other valuable premiums. We give 100 votes in the contest for each word you make. To the person having the most votes at the close of the contest we will give \$50.00 in gold; to the second highest \$20.00 in gold; to the third highest \$15.00 in gold; to the fourth highest \$10.00 in gold, and to the fifth \$5.00 in gold. In addition to these prizes, we are going to give away thousands of other valuable premiums of all kinds, too numerous to mention in this advertisement. **NOTICE:** Every new club member this month also receives a beautiful Genuine Gold Filled Signet Ring, guaranteed for 5 years free and postpaid just for prompt payment. Anyone may enter and bear in mind, there is absolutely no chance to lose; **POSITIVELY EVERY CLUB MEMBER WINS A PRIZE.** If there should be a tie between two or more contestants for any of the prizes, each tying contestant will receive the prize tied for. Get your share of this \$100.00. Send your list of words **TODAY.**

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The 1918 X-Ray Incubator

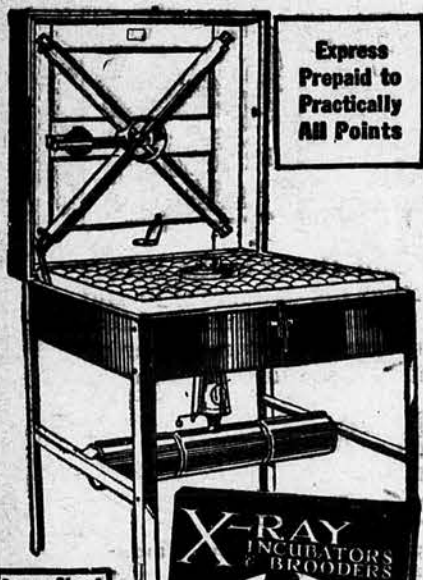
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Post yourself on the 20 Exclusive X-Ray Features—20 improvements that mean record-making hatches. X-Ray Gas Arrestor, ingenious device that prevents lamp fumes entering egg chamber; X-Ray Nursery Tray that assures sanitation, protects little chicks; X-Ray Egg Tester; most perfect Tray. All exclusive X-Ray features that assure record-breaking hatches—least cost of time, money, labor.

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To Win With Poultry

Boosting for Your County

BY BERTHA G. SCHMIDT
Secretary

LINING up the county for complete membership in the Capper Poultry club contest for 1918 affords an excellent opportunity for leaders and their co-workers, the other county members, to display pep.

"How does our county stand in the pep list?" is a question being asked frequently now by members of the poultry club. There are many things to be considered in figuring up pep standing—county meetings, good programs, working in harmony, boosting the club, sending in reports on time, write-ups of county meetings in the county papers, accurate and carefully written reports and showing originality along various lines. And now let me add to all of these a factor which is very important at the present time and is showing up the real initiative of the girls more than any other one thing—endeavoring to complete the county membership by February 1 for the contest of 1918. Just to emphasize the importance of this factor, I am going to tell you how the counties stand in respect to membership for the new club. This is the order of the first eight: Cloud, Wilson, Clay, Stafford, Johnson, Atchison, Douglas, Neosho. The last four have the same number of members enrolled. This standing includes only one of the nine factors which I have mentioned as counting toward pep, but it is one of the most important factors at present because eagerness to complete membership for the new contest shows permanent interest in the club. Every girl should try to obtain new members, for no county can excel when support does not come from each individual member of the county club. Now let us see which county will complete its membership first.

Many girls are now writing for the poultry bulletins which we have for distribution. If you have not received these bulletins, "Selection of Stock," "Chicken Houses," "Improving the Kansas Egg," and "Capon for Kansas," mention the fact in your next letter to me and they will be mailed you. They contain much information which will be found valuable to girls in the business of raising chickens. For example, this paragraph from "Selection of Stock," answers questions which are frequently asked:

Feeding laying hens: It is too common a practice on Kansas farms to let the hens shift for themselves during the spring and summer, or at most, to throw them a little grain. Birds fed in this way seldom give a profitable production the following fall and winter. In most cases it will be safest to feed a well-balanced ration, excepting green feed, thruout the spring and summer as well as thru the winter months; the amount is limited to the needs of the hens.

Helen Hosford, leader of Crawford county, does not belong to a breed club, for she is the only member of the Capper Poultry club who is raising Buttercups, but she has written an excellent boosting letter for her chickens. Yes, Helen's "Buttercups" are chickens, not flowers. Here is what she says about them:

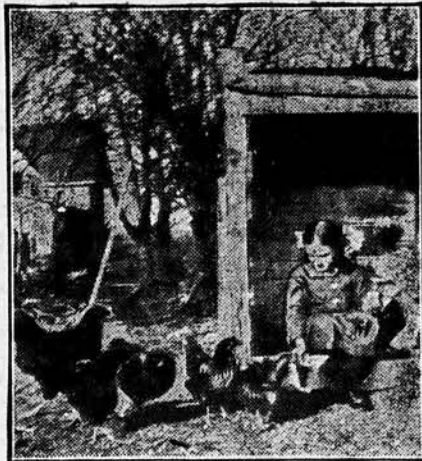
I chose Buttercups for my contest chickens for several reasons. To begin with, the Buttercup is very pretty, but that was not my chief reason for choosing this breed. They are both

proud and tame and can be made pets of very easily, but more important than any of these factors, it doesn't take much feed to keep them and they are great hustlers. Put them on an open range and they will pick up almost all of their feed. When I shut them up, I at first fed them too much.

As a table fowl they excel, for their meat is so sweet, juicy and tender. They lay large white eggs of uniform size. In a hundred, you will scarcely find one ill-shaped egg.

The chicks are hearty and grow fast. The color of the male chicken is a rich, brilliant orange red while the female is a golden buff, with parallel rows of elongated black span-gles.

McPherson county girls held their December meeting at the home of Mabel Peterson during the holidays. Cold



She's Proud of Her Contest Flock.

weather interfered somewhat with the attendance, but several of the girls' mothers and sisters were present and they had a fine time, despite the decreased attendance.

A number of girls have written about their pleasant visits during the holidays with members of the Capper Poultry club. "Being a member of the club helped me to have a very good time this vacation," said Effie Merritt of Cloud county. "I spent part of the time with Ellen Zimmer. She lives on a large farm and we went out to explore it one afternoon. After my visit with Ellen, she came home with me."

The poultry club member pictured on the page this week is Mable Weaver of Atchison county. Mable's chickens show up better than their young mistress but Mable is so proud of them that she doesn't mind that in the least. She wishes that every girl in the club could see how big and fine they are.

Dressing Ducks for Market

Ducks may be dressed by dry picking, by scalding, or by steaming. Their condition is best judged by the amount of flesh on their backs. The methods used in dry picking chickens are also used with ducks, altho the ducks are harder to pick.

The ducks may be stunned by a blow on the back of the head with a short club. They are generally killed by sticking in the mouth or thru the throat with a knife which has a narrow blade about 4 inches long. To facilitate handling in scalding and picking, a hook is run into the duck's mouth, coming out thru the nostril. The long tail feathers are left on the ducks, the wings are picked to the first joint, and the neck

The Capper Poultry Club

Bertha G. Schmidt, Secretary, Capper Building, Topeka, Kan.

I hereby make application for selection as one of the ten representatives for county in the Capper Poultry Club Contest. I will try to secure the required recommendations and if chosen as a representative of my county I will carefully follow all instructions concerning the club work and will comply with the contest rules. I promise to read articles concerning poultry club work in the Farmers Mail and Breeze and will make every possible effort to acquire information about breeding, care and feeding of poultry.

Signed Age

Approved Mother or Guardian

- R. R. Postoffice Date

Age Limit 10 to 18.



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Conditions easy to get biggest prize. Or write today for my big Free Book "Hatching Facts"—it tells all. With this wonderful hatching outfit and my complete guide book for setting up and operating, you can make a big income. Jim Rohan, Pres. Belle City Incubator Co., Box 21 Racine, Wis.

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Write me a postal for book and prices. "Proper Care and Feeding of Chicks, Ducks and Turkeys" sent for 10 cents. "Successful" Grain Sprouters furnish green food—make hens lay in winter. Ask about my high-grade poultry—all leading varieties.

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POULTRY LESSONS FREE TO EVERY CUSTOMER

Raise Poultry—Help Win the War
Every backyard should have chickens now. Requires small outlay. No profit if conducted properly. These booklets tell how to get best results. "LESSONS IN POULTRY," "SECRETS OF SUCCESS WITH CHICKS," "CARE OF LAYING CHICKS," "ALL ABOUT POULTRY POINTERS FOR SUMMER AND FALL." Send today for poultry helps, free for 5c stamps to cover mailing. GEO. H. LEE CO. 264 LEE BUILDING OMAHA, NEBRASKA

halfway to the head. Long pinfeathers usually are removed with a dull knife, and the down sometimes is rubbed off with the moistened hand, burned with alcohol, or shaved with a very sharp knife. Large duck farms usually have pickers who devote their time entirely to the dressing of ducks during the killing season and are very proficient in this work.

Ducks may be steamed and picked, thus saving the feathers without artificial drying; and as duck feathers are of considerable value, their sale is quite an important item. The wing and tail feathers are pulled and thrown to one side before steaming the ducks. Six or eight ducks, which have been stuck and hung up to bleed, are placed on hooks in the top of a steam box or barrel which can be made air tight and steamed until the soft feathers on the breast come off easily. The length of time to leave them in the box depends on the temperature of the steam, varying from one-half to two minutes. Two sets of pickers usually pluck the ducks; one set, called the roughers, removing the bulk of the feathers, while the other set of pickers, called the pinners, removes the down and some of the smaller feathers. A good method for removing the down is to sprinkle powdered rosin over the duck's body and dip the bird into hot water, which melts the rosin so that the down and rosin can be rubbed off easily with the hand, leaving the body clean. When carefully steamed the birds rarely show any signs of scalded flesh. In some cases the ducks are hung in the steam box with the heads outside, thus preventing the head from being steamed; but when the birds are steamed as described the heads are not discolored.

After the ducks are picked usually they are washed and put in ice water for an hour or two to cool and plump. Each layer of ducks is packed flat in ice, usually with the keels or breasts down, in barrels, or in boxes holding one dozen each. It costs from 5 to 6 cents apiece to pick ducks, but the body feathers and down usually are saved, as white feathers bring from 40 to 50 cents a pound when cured. Each duck yields about 2 ounces of marketable feathers. Scalded feathers may be dried and sold. The feed cost of growing Pekin ducks to 10 weeks old, when they weigh from 5 to 6 pounds, is estimated at from 5 to 6 cents a pound. Green ducks are marketed from April to November, and bring from 12 to 30 cents a pound when sold to commission men at wholesale. The highest prices are paid for the ducks marketed early in the spring and they decrease as the season advances and the supply becomes more abundant. The demand for green ducks has been built up in large cities in the East and on the Pacific coast, and there is very little demand for such ducks in small cities and towns.

Private Habits of Chicken Mites.

The more we know about an enemy the easier it is to deal with him. Chicken mites do so much harm reducing vigor and egg production of the hen, that specialists in the Department of Agriculture conducted an investigation to find out all they could about this wolfish blood drinker.

With its long, piercing mouth parts the mite sucks the blood of the fowl. When full, it crawls from the fowl onto the roost, bright red, owing to the blood showing thru the skin.

The mite feeds often, and ordinarily does not have to wait long for a chicken. In the absence of food the mite dies in a comparatively short time, and much faster in summer than in winter.

Mites usually attack their victims at night. An experiment was conducted to find out whether they feed and leave the fowl immediately, or whether they have a particular time for dropping off, such as just before daylight, as one writer claims.

Two hours before dark a fowl was put on a roost containing a large number of hungry mites. Very few mites ventured out of their hiding places at this time. A few did go to the fowl. At dark, 2 hours later, only four mites were found to have fed and left the fowl. But 1 hour after dark nearly 600 had fed and left. In another hour 535 more were satisfied. They continued to drop in small numbers until after daylight.

All stages of mites will go on a fowl, feed, and leave it in less than two hours. In one experiment about 30 per cent of a large number of mites put on a fowl

in an earthen jar at 10 a. m. were full fed when observed at 2 p. m. The fact that some mites will feed day or night accounts in part for their very rapid increase about a sitting hen.

The mites feed at night, they do not necessarily all crawl off the host before the fowls leave the roost. Both fed and unfed mites may be retained in the feathers when the fowls are running about. The number of such mites on a fowl seems to be small, but quite sufficient to infest a new place. The length of time mites may remain on a fowl after it has been on an infested roost is not certain. Experiments designed to throw some light on this point developed that nearly all mites leave the fowl by the end of the third night, but a few stragglers may persist for several days. It would be advisable for a person introducing new stock into his mite-free flock to use a little caution if he would avoid an infestation.

New stock not known to be free of mites should be allowed to roost the first few nights on a new roost wrapped with pieces of folded paper, preferably black. The object of using the paper is to furnish a convenient place for mites to hide. The paper may be examined, and if mites are found the fowls should be kept on this roost five or six days, or until no more mites come off of the fowls. If mites are discovered, by removing and destroying the papers and treating the roost thoroughly with kerosene or crude oil any danger of the mites getting back on the fowls can be avoided.

The ease with which mites reach the host has a decided bearing on the rapidity of increase. Hungry mites, tho placed quite near a fowl, have great difficulty in finding the fowl unless the means of access is direct. This fact would account for the mite preferring to hide on the roost. When mites are found all over the walls the infestation must be a heavy one. To apply these facts to aid in control work, the roosts should not be connected up with the walls of the chicken house unless some method of preventing the access of the mite to its host is used. The same may be said of the nests. The simpler and more isolated the roosts and nests, the easier it will be to eradicate the mite.

The direct rays of the sun act as a powerful killing agent when mites are exposed to them. Mites put on a board in the direct sun were killed in a few seconds. Need of a suitable dark, protected place for deposition and molting governs the hiding habits of the mite. This may be a crack in a board or only a rough place, or it may be in the dry manure or litter. Here a place for deposition, molting, mating, and resting is provided. A very common hiding place for mites is near the nails that hold the roosts to their supports. When the mites become abundant they will overrun the roost and may be found anywhere in the chicken house. Their presence about a house may be detected by the minute black and white spots, excrement, left on the roosts.

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"The Incubator Man"

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I AM going to repeat part of a letter from one of our customers in Eagletown, Okla., because it so squarely answers the poultry problem on the farm, I know you will be interested. "I am only a renter's wife. We own our little home and about 3 acres of land. While my husband farms I make expenses at home and hope to help buy a farm soon. I am not tied at home because of an incubator. I go away for a whole day. I have 3 children under 7 years of age and there are three others in our family. I couldn't do without Old Trusty." Mrs. Maude Huffman, Breeder of S. C. White Leghorns, Eagletown, Okla. This is just one of 750,000 owners of

Old Trusty

Write for our new book, and let me show you YOUR opportunity with chickens this year. The world wants more poultry, and if you want more money I think I have the answer in this book. Years ago, father made the claim that Old Trusty could pay for itself with one hatch. The prices you can get for eggs and chickens this year would do a whole lot more. You want Old Trusty this year. With big profits and valuable eggs at stake you want to make every hatch count. Old Trusty makes big average hatches even in coldest weather.

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Founded by Arthur Capper of Topeka, Kansas in 1917
Bertha G. Schmidt, Secretary

First Annual Offering of PUREBRED POULTRY

PLYMOUTH ROCKS		Ckrls.	Pullets
Barred Rocks	41	15	
White Rocks	15	2	
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Marie Riggs, Breed Club Secy., Banner, Kan.			
RHODE ISLANDS			
Rose Comb Reds	49	17	
Single Comb Reds	11	5	
Rose Comb Whites	8		
Grace Young, Breed Club Secy., R. 2, Leavenworth, Kan.			
WYANDOTTES			
White Wyandottes	39	1	
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Marie Hiatt, Breed Club Secy., R. 1, Colony, Kan.			
ORPINGTONS			
Buff Orpingtons	11		
White Orpingtons	10		
Lila Bradley, Breed Club Secy., R. 3, Le Roy, Kan.			
LEGHORNS			
Single Comb White	41	13	
Single Comb Brown	4	8	
Rose Comb Brown	4		
Rose Taton, Breed Club Secy., Satanta, Kan.			
WHITE LANGSHANS			
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BUTTERCUPS. 4 cockerels, 2 pullets Helen Hosford, R. 1, Pittsburg, Kan.			
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Using Kitchen Waste for Hens

When kitchen and table waste is to be fed to poultry it should be selected and prepared with a view to getting its full food value and at the same time making it entirely acceptable to the birds.

Not all of the refuse and scraps from the kitchen is suitable for poultry food. Some things, as vegetable peelings, may be used when they constitute only a small part of the scraps, but when they are in excessive quantities it is better to dispose of them separately.

The same is true of coffee grounds and tea leaves. Fat meat in large pieces should not be put with scraps for poultry because a hen can swallow a much larger piece of fat than is good for her. By cutting waste fat meat in pieces no larger than one would cut for himself at the table, and by making sure that the fat does not exceed 10 per cent of the scraps fed at one time the dangers in feeding fat are avoided.

The best way to save kitchen waste for poultry is to keep a one gallon jar, of glazed or galvanized ware, with a cover in a convenient place, putting into this scraps of bread, cake and meat from the table, remnants of servings of vegetables, cereals, pies, puddings, etc., and whatever waste from the preparation of meals is suitable to combine with these things in a mash.

Once a day the contents of the jar should be turned into a pail of appropriate size and as much ground feed stuff mixed with them as can be stirred in with a strong iron spoon or a wooden stirring stick. The amount and kinds of ground feeds to be used will depend upon the quantity of water with the scraps and whether any particular article predominates.

For thickening a mixture of scraps of ordinary variety a mixed meal of equal parts by weight, of corn meal, bran, and middlings is good. If there is an unusual proportion of very rich food in the scraps it may be desirable to use bran alone for thickening. The more meal that can be stirred in and still have all the meal moist the better. Mixing can be done much more easily and thoroly by mixing in a pail having a capacity about three times the amount of the scraps mixed at one time.

If the mash with scraps makes more than one meal for the flock, the pail should be kept covered until the next feeding. As a rule it is not advisable to feed such a mash oftener than twice a day, but if mixed quite dry it may be fed three times. The occasion for this will exist only where scraps are so abundant that when thickened with meal they may be made the exclusive diet. This is not as good a ration as one containing some hard grain, but it may be used a long time without any bad results.

Soda for Sick Chickens

When my chickens get sick I give them 1 teaspoon soda in 1 pail of water. The third day I give them 1 teaspoon coal oil in their drinking water. They do not like the oil and will not drink it if they can get water elsewhere. This is the only remedy I use for cholera or bowel trouble, and find it good.

My favorite breed of chickens is Barred Plymouth Rocks. They are the best all around chicken. When you want one to kill you have one large enough for a big family, and when you sell them they are the heaviest and bring the most for the feed they consume.

Mrs. Daisy Snyder.
Howard, Kan.

For Real Service

The people of our community were glad to get the news that Governor Capper is a candidate for United States Senator. Our people rejoice in having him as governor of the great state of Kansas. We believe his wise policies have benefited the public, and we know his presence in Washington as our Senator will bring the same result. I am sure the people of this vicinity will give him hearty support.

Rev. Gustaf Nyquist.
Axtell, Kan.

An ancient worthy says, "Reading maketh a full man," but most of 'em try to explain it another way.

The well-protected potato pit will carry the crop thru the winter safely, but lots of emphasis goes on the "well."

Money from Dairying

Making Cheese at Home

On our farm we have made cheese for a number of years and like the product just about as well as the factory-made article. Our process is as simple as making butter and if this plan is followed I am sure the results will be very pleasing.

The number of pounds of cheese that can be made from a given amount of milk depends, of course, on the richness of the milk. But as a rule one pound of cheese can be made from five pounds of milk. Use the milk that is drawn from the cows at the evening milking, keeping it cold over night, since the less the cream is permitted to rise the better. In the morning warm this milk to a temperature of 85 degrees and then add the same amount of morning's milk after thoroughly aerating by stirring and pouring to allow all animal odor to escape. Then pour all the milk into a large boiler. We use a large galvanized wash boiler.

If it is desired to color the cheese put in about one-half teaspoonful of cheese color to ten gallons of milk. Then add one-half of an ounce of rennet extract to ten gallons of milk or if rennet tablets are used one tablet about the size of a cent will be sufficient for ten gallons of milk. Dissolve the tablet in a glass of warm water before adding it to the milk. Enough rennet should be used to start the milk to curdle in about fifteen minutes. Using too little or too much rennet is one reason why some people fail in making good cheese on the farm. In our experience we have never failed to obtain good results in using the amount of rennet named above. The milk should be at a temperature of 85 degrees when the rennet is added and it is a good plan to have the temperature slowly rising while the rennet is working but it should not go above 88 degrees.

The cheese is ready to cut when it will break smooth and clean cut for a short distance ahead of the fingers when the fingers are pressed into it. If a regular cheese knife is not at hand use a clean corn knife and cut both ways making the cuts about one-eighth of an inch apart. Then stir the curd very gently for four or five minutes after which start up the fire and increase the temperature to about 96 degrees during the next fifteen minutes. It is necessary to watch the milk closely during the heating process. Never guess at the temperature. We use a small thermometer. One can be had for a few cents and is useful not only in making cheese but in ripening cream, cooling milk, etc. To tell when the whey is ready to draw off, press the curd between the hands and if it springs apart when the pressure is removed it is then ready to be drawn off. Add four and one-half ounces of good dairy salt to the cheese curd obtained from 100 pounds of milk.

The mass is now ready to be pressed. If there is no cheese hoop available a strong pail with holes punched in the bottom will answer the purpose, first lining it well with cheese cloth and then fill to the brim with curd. Now place a cloth over the top of the pail to cover the curd. On this place a strong follower that will fit tightly in the pail and apply pressure by placing a block on the follower and over this a pole or 2x4 about ten feet long fastened at one end. Place the cheese two or three feet from the end that is fastened and at the other end place about 25 pounds of weight to make sufficient pressure. Let this stand for three or four hours, then double the weight at the outer end and let it stand for about 24 hours. The cheese is then taken from the press and rubbed for fifteen minutes with good fresh butter. Sew a bandage around it to keep it from flattening out. Keep this bandage clean and smooth and rub it with butter until thoroughly saturated. Put the cheese in a dry, airy place to cure. Rub it every day with butter, turning each time. The rubbing prevents the cheese from molding and the turning causes it to cure evenly. The cheese may be eaten at the end of three weeks, but is much better at the end of six weeks. O. A. Choate.

A shortage of farm labor will develop next spring in Kansas.

Turn Up the Cream Screw

In skimming a hundred pounds of 35 per cent cream, 15 more pounds of skimmilk is kept on the farm than when the same amount of 20 per cent cream is taken. This saving can be accomplished by a turn of the cream screw, and at present feed prices is well worth the effort required. More skimmilk on the farms also means more calves raised to supply meat and milk for all. Milk producers are paid for the butterfat in cream; not for the water and other constituents. This makes it advisable to skim a rich cream, so that as much valuable skimmilk as possible may be saved for feeding purposes.

Feeding the Dry Cow

Every dairy cow, in order to give the best results, requires a rest of six weeks or two months between lactations. During this time she should be prepared for her year's work, her tissues built up, and her digestive tract rested and cooled as much as possible. Of course nourishment must be supplied for the growing fetus.

If the cow is dry during the summer or early fall she will need very little extra care if she is on good pasture. A pasture separate from the general herd is advisable as there is then less danger of injury. During this period no more grain than is necessary should be fed as it allows the digestive system of the cow to rest, but a few pounds of oats and a little bran will often be found advisable. If the cow is in poor condition a little corn may be added, but it is not advisable to give much of such heating feeds. If it is necessary to flesh up the cow this should be done gradually.

If the dry period occurs in winter the ration should consist of 20 to 25 pounds of corn silage, with a liberal allowance of legume hay, and a grain ration consisting of a mixture of 3 parts ground oats, 2 parts wheat bran and 1 part oil meal, the amount of the grain ration being governed by individual requirements.

During this period the ration should be laxative and should contain little of such heating feeds as corn. Feeds such as cottonseed meal and timothy hay should be avoided.



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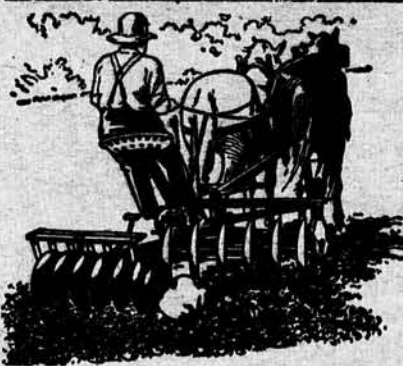
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You can't raise the best crops, no matter how good your seed or how rich your soil, unless the seed is placed in a well prepared bed. By using a Moline Disc Harrow you can get a fine, compact, mellow seed bed in which the plant food is quickly available and moisture is retained.



Moline Economy Disc Harrow

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You can take that long if you want to convince yourself. I say — "Use my new Sanitary Model for 90 milking on your own farm." That will show you and that will prove to you beyond any doubt that your separator money goes farthest when you buy your separator from me. My offer is fair and square.

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Larger sizes in proportion. My 950 lbs. size costs no more than other high grade small sizes cost. I guarantee satisfaction or money back. I take all the risk.

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What Shall I Do, Doctor?

BY DR. CHARLES LERRIGO.

Pink Eye.

Several children in our school have pink eye and it seems to be spreading. Please tell me if it is contagious. What can we do for it? Is it anything like conjunctivitis?

L. L. D.

Conjunctivitis is the medical name for pink eye. It is decidedly dangerous. Although many cases clear up without any trouble, the cases in which it becomes chronic make very serious trouble indeed, and may cause defective vision that lasts a lifetime. It is possible to have pink eye of a non-contagious or only mildly contagious type, but usually when it begins in a school it creates an epidemic and demands strict measures to check it. In severe cases small hemorrhages may form in the eye. There is a discharge of a mixture of mucous and pus that is very annoying and offensive and often gums the eyelids together in the morning. To prevent this the eyelids should be anointed with boric acid ointment at bedtime. Mild cases of pink eye usually will get well in a week by the simple treatment of resting the eyes and using a mild antiseptic wash such as a saturated solution of boric acid. To rest the eyes the child should be kept out of school, and not allowed to read or do any close work, nor, may I add, should he be allowed the strain of moving picture shows. In a case that does not clear in a week, it is very important that special medical treatment be secured.

"Cedar Itch."

Please publish this in your paper. My brother is troubled with "cedar itch." Any one knowing a cure for cedar itch please write and tell me. **JAMES HARTNELL.**
Frontier, Minn.

I admit that I don't know what this is. I should like to know if it is at all common. Subscribers who have remedies to suggest please write to Mr. Hartnell direct, as he requests.

Rhubarb Leaves Poison.

Recently I have heard that rhubarb is a deadly poison and that several persons have been killed by it. Please say in the Farmers Mail and Breeze if there is any truth in this. **SUBSCRIBER.**

I think the report has its foundation in the fact that some persons in England, pushing food economy to the limit, ate rhubarb leaves as a salad and several were rendered violently ill and one or two died. No doubt the deaths were due to oxalic acid poisoning. Rhubarb leaves contain much more of the acid than do the stalks, and experience seems to show that the stalks are a reasonably safe article of diet.

Cracked Lips.

What can I put on my lips to heal the chaps and cracks that occur in windy and cold weather? **C. D.**

It is difficult to put anything on that will do much good so long as you persist in going out in the weather. Colloidion helps if you put on enough to make a scab, but it bites in a very disagreeable way. Stay at home and enjoy yourself for a few days while the cracks heal under the application of zinc ointment. Then take the precaution to anoint your lips with borated vaseline before facing the cold and wind and they will not crack.

Service at Home.

Do you know of a place where a middle aged woman could get a place to care for some old people or work in a hospital? She is great at nursing and caring for the sick. **B. A. B.**

A middle aged woman of intelligence who will take time to study the subject and is willing to be guided by the medical sense of the doctor ought to be invaluable in any community in nursing the sick. This is especially true now that so many nurses and doctors have gone to war. Stay right at home; write to the state librarian for some good books on domestic nursing; get your local doctor to advise you, and you will be able to do valuable and remunerative service.

Frozen Feet.

Please tell me some remedy for frozen feet. The burning is almost unbearable; then they swell so badly and are so tender that they are easily frosted again. If there is no cure is there not something which will afford relief? **A. R.**

Frozen feet cause burning and itching because the circulation has been partly cut off and is not active—the tissues are not fed properly. Anything that will improve the circulation of the body

as a whole and of those parts in particular is helpful. Bathing in hot water gives temporary relief, but cold water with brisk rubbing does more permanent good. Going to bed with warm stockings on is important. Massage of the frozen portions should be practiced every day. Great care should be taken that the circulation is not impeded by tight shoes or stockings.

Mrs. V. J.:

1. The first symptoms of pneumonia are chill, fever, cough and difficult breathing.
2. Sickness from poisoned food usually is manifested by vomiting and purging.
3. The symptoms of spinal meningitis are many and varied. One important symptom is rigidity of the muscles of the neck and back.
4. I cannot venture to guess the cause of death in the case you mention. Guesswork is too unreliable in such important matters.

W. E. F.:

Have a careful examination made for broken arch. If this shows nothing have an X-ray picture taken of the foot. Your symptoms suggest the possibility of an important disease that should have early treatment.

Labor Problems of 1918

Farm labor problems in Kansas are more acute than ever, and no real solution is in sight. You can hear much talk about them no matter where you go. Some men have worked out a system of management that they believe will hold together for 1918, but most farmers either are trusting to luck or frankly confess they are "up against it." There is some talk of federal conscription of labor for farms, but most farmers believe that the help obtained by such a measure would be decidedly inferior.

It seems to me that our one "best bet" in solving the farm labor problems this year is in the more general use of machinery. This solution has some obvious limitations of course, but still on a great many places in Kansas it will be possible to do much more of the work by machinery than has been the rule.

Undrafted War Profits

Packer Swift admits his profits broke the record in 1917. They were more than 34½ per cent on 100 million dollars of capital stock. In 1916 they were better than 27½ per cent, he says, on the then capital of 75 million.

Within the year Swift & Company has added 25 million to its capital stock besides making a profit of 34½ per cent on the entire 100 millions!

But in the race for great wealth there are swifter contenders than Swift. The Youngstown Sheet & Tube company, Youngstown, O., will pay 100 per cent on last year's business, if the United States Supreme Court decides a stock dividend is not income and subject to war income taxes. Big business approves of war profits but is "opposed to weakening the nation's industrial strength" by taxing war profits for war revenue. Let the people pay that.

The Gisbort Machine company of Wisconsin has just filed its sworn statement as required by the laws of Wisconsin, showing it made nearly 100 per cent profit the first year of the war and about 200 per cent profit in 1916.

This machine company's capital stock is \$1,250,000. Its profits in 1915 were \$1,130,000. By 1916 they had swelled to \$2,376,884. In 1916 it made about \$2 profit on every \$1 it had invested.

If Congress proposes to let big business continue to roll up these enormous gains at the expense of the people's pockets and the nation's war needs, how can it justify its pitiful 31 per cent tax on these profits with its straight-out drafting of the people's blood and resources? How can it continue to take only 2 billions of war taxes a year from excess profits and 17 or 18 billions from the people?

These are questions this term of Congress must answer. The selective draft for men is now generally approved, so is the selective draft of money, and notwithstanding this meets with the hoggish resistance of those who have it, the people expect Congress to make that draft adequate and compulsory.

TOM McNEAL'S ANSWERS

A Question of Relationship.

What relation are we? Our fathers are first cousins and mothers are sisters. Are we first and second cousins or first and third cousins?

You are first cousins on your mothers' side and second cousins on your fathers' side. Your relationship is half of one degree greater than first cousins.

Rights of Surviving Husband.

A wife owns a farm and has children. If she dies leaving a surviving husband what share of her estate will fall to him? What will be necessary under the laws of Oklahoma to make the husband an heir? E. C. T.

The surviving husband would inherit one-third of his wife's estate and her children the remaining two-thirds under the Oklahoma law. If the estate is in Kansas the husband inherits one-half and the children the other half. Nothing is necessary under the Oklahoma law to make the surviving husband an heir. He is made an heir by statute. Of course the wife might will him all of her property if she so desires.

Qualifications for West Point.

1. Is a high school education required to enter West Point or Annapolis?
2. How many years must one attend West Point before receiving a commission in the army?
3. Where are there schools where telegraphy can be studied? D. M.

1. Not necessarily a high school education, but the candidate for admission to either school is required to pass an examination in the following branches: English grammar, English composition, English literature, algebra thru quadratic equations, plane geometry, descriptive geography, and the elements of physical geography, especially of the United States, United States history and the outlines of general history.

2. Four years.

3. Telegraphy is taught in most of the commercial schools of the country.

Partnership.

A and B form a partnership, B purchasing a half interest in A's business, including his real estate and buildings. The lot on which the building was located was invoiced at cost and the building at cost of material and labor. Stock, tools, furniture and equipment generally were invoiced at cost.

B wishes to withdraw from the partnership, but A refuses to let him out on the same terms he went in. How can he bring about a dissolution of partnership, providing he has a warrant deed to an undivided half interest in the real estate and a bill of sale to an undivided half of the stock, tools and equipment? F. J.

I am not able to determine from your statement whether this was a limited or general partnership, but I assume that it was a limited partnership formed for the transaction of a particular kind of business. If so it may be dissolved in this way: A notice of dissolution must be filed with the county clerk in the county in which the original certificate of partnership was recorded. Then the notice of dissolution must be published in some paper published in the county for a period of four weeks, or if there is no paper published in the county, then in some paper of general circulation in the county. I presume that F. J. understands that the dissolution of a partnership either limited or general does not relieve either partner from obligations incurred by the firm during the time of the partnership.

Some Information.

1. What is the number of I. O. O. F. and A. F. & A. M. in the world?
2. Where did the Gypsies come from?
3. Who was the first Jew, also the first Gentile?

4. How much time should there be between Christmas and Easter?

5. What is the origin of the following people: Irish, German, Cossacks, Goths and Turks?

6. How many members were there in the following churches at the last census in the United States: Catholic, Methodist, Christian, Baptist and Universalists?

7. Why was Easter made a movable festival?

8. Who looks after the Red Cross funds to see that they are used properly, and how many men are paid for so doing? J. F. RAMBO.

1. The latest information I have concerning the I. O. O. F. gives the total membership in the world as 2,194,773. I do not have any reliable information concerning the number of Freemasons in the world. The number in the United States and Canada, according to the latest data I have, is 1,760,277.

2. The Gypsies are supposed to have come originally from India.

3. As Abraham founded the house of Israel I think he was entitled to be called the first Jew, altho the term Jews as applied to the Israelites did not come

into vogue apparently until after the division of the nation when the 10 tribes separated from the other two, of which the tribe of Judah was the principal one. The Jews called all people who were not Jews Gentiles. I cannot say who was the first Gentile.

4. As Easter shifts from year to year I cannot say how much time should elapse between Christmas and Easter. In view of the present price of coal I should be glad to cut it down to two weeks if I could.

5. History is uncertain concerning the origin of the Irish. The original Celtic tribes which overran Ireland probably came across from the Scandinavian countries. The name Germans was applied by the Romans to a large number of tribes of savages that ranged thru Northern Europe. The Goths and Huns both belonged to the German tribes. The Cossacks originated in Tartary, the Turks in Khoristan.

6. Catholic 13,881,413, Methodist 7,328,829, Christian 2,283,003, Baptist 6,179,622 and Universalists 52,000.

7. I do not know.

8. I am not able to say how many persons are receiving money for working for the Red Cross, nor can I say just how the funds are distributed. I think, however, that a larger proportion of the funds contributed to the Red Cross actually go to the charitable purpose intended than in any other organization in the world. I happen to know that the local workers for the Red Cross here in Topeka have donated their time in addition to giving very liberally.

Call in the Fence Viewers.

A and B own adjoining farms but there is no division fence. The division line is in dispute. How should A proceed to get the line and a division fence established? G. T. D.

The first thing is to establish the division line. This may be done by an agreement of the adjacent land owners to call in the county surveyor and have him establish the corners and line, or if B will not agree to this then A may notify the county surveyor that he desires such a survey made. The county surveyor shall then give B a written notice stating the time at which the survey will be made and the lines or corners established. This notice must be delivered to B in person or left at his residence at least six days before the survey is made. If either A or B is not satisfied with the survey he may take an appeal to the district court, which will hear the matter and either affirm or set aside or modify the survey.

After the line is established unless B will consent to build his share of the partition fence A should call in the township fence viewers who, after giving B notice of the day of hearing, shall visit the premises and determine the amount of fence to be built by each person, A and B. If B refuses to build his share of the division fence then A may build it and collect the cost of it from B.

Renter's Rights.

I have lived on a rented farm for the last five years. Last fall I asked the owner if I could have the place another year as I wished to sow some wheat. He said I could, so I put in about 20 acres. Now he is about to sell the farm. Can I hold possession for another year or could he force me to move, there being no written contract? How many days' notice does the law require a landlord to give in order to get possession? SUBSCRIBER.

You are a tenant from year to year. Whether you can hold possession of the place for another year depends on the time when your rental started. If you are now on a new year's possession with the assent of your landlord you can hold. Assuming for example that you took possession December 1, five years ago, then you are holding over with the consent of the owner and can hold possession until the first of next December. If, however, you took possession March 1, then your last year has not yet expired and the landlord can, by giving you 30 days written notice, dispossess you, altho you would still have the right to go on the place next year and harvest your wheat which you put in with his consent. Where there is a written lease stating the date of the expiration of the tenancy no notice to vacate is required.

Entertainment for Soldiers.

Is there a chance for a musician to enlist as an entertainer at the camps? Moran, Kan. GLEN THOMPSON.

I have never heard of a special service of this kind, but you should take the matter up with the War Department thru your member of Congress, Ed. Little.



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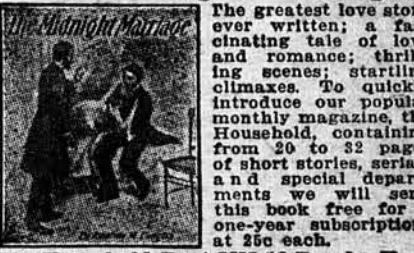


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FARM ANSWERS

Silos in the United States.

How many silos are there in the United States? In Kansas?
 Montgomery Co. K. D. B.

There are about 400,000 silos in the United States, with a total capacity of 31 million tons. The average capacity is 78 tons. Kansas has about 12,000 silos.

To Organize a Drainage District.

We have had floods in our community for several years, and are thinking of organizing a district to straighten the creek across several farms. How should we go about it to get started?
 Greenwood Co. H. P.

Full information is contained in Farmers Bulletin No. 815, Organization, Financing and Administration of Drainage Districts, which you can obtain free from the United States Department of Agriculture, Washington, D. C. Also write to H. B. Walker, Manhattan, Kan., state drainage engineer, who will help you organize.

Dust Baths for Chickens.

Of what value is a dust bath for chickens?
 Johnson Co. H. D.

While it is well to provide a good dust bath for chickens it cannot be depended upon in Kansas for louse and mite control. It is far better to eradicate the pests completely. The main difficulty about depending upon dust baths for lice is that some fowls seldom dust themselves, and those which dust freely never free themselves completely. The dust bath should be kept under cover and may consist of fine road dust with coal ashes added.

Gas in Pit Silos.

Is there any danger of gas in pit silos in this section?
 Scott Co. A. C.

Occasionally poisonous gases are formed in pit silos in Kansas, and because the only means of ventilation is at the top, they may accumulate to such an extent that it is dangerous to enter. This formation and accumulation of dangerous gases practically always takes place only when the silo is filled partially with fresh silage. Particular care should be taken before entering a silo under these conditions. If a lighted lantern is lowered into the silo and continues to burn, it is safe to enter. When danger is suspected, thoroughly agitate the air. Some farmers keep a rabbit in their pit silo, and as long as the rabbit is alive it is safe to enter. While very little trouble has been experienced from this source, it always is well to be certain that poisonous gases are not present before entering the pit silo.

The Size of Calves.

What is the average period of gestation with Shorthorn cows? What is the average weight of the calves?
 Norton Co. L. K. C.

From careful records taken of 19 Shorthorn cows it was found by an English agricultural society that the average gestation periods of cows bearing bull calves was 288.91 days; of cows bearing heifer calves 283.75 days. The longest period in the former was 297 days, and the shortest period 280 days; in the latter 293 and 274. The average weight of the bull calves was 89.45 pounds; that of the heifer 82.5 pounds. It was found that the longer the period the heavier the calf in each case. It was noted that the heavier calves are produced from cows in their prime; that is, ranging from 5 to 7 years of age; after this age the calves appeared to become smaller at birth. It is thought safe to take an average of 285 days as the period of gestation and 84 pounds as the average weight of a Shorthorn calf at birth.

Horses for Express Companies.

What types of horses do the express companies prefer?
 Ness Co. H. A. E.

Express horses vary somewhat in size, depending on the nature of their work and size of wagon they are hitched to. A range of from 15.3 to 16.3 hands in height and 1,300 to 1,600 pounds in weight will cover practically all horses used for express wagons. The most desirable type is a horse that stands 16 to 16.1 hands and weighs from 1,400 to 1,450 pounds. The express horse differs from the average delivery horse in that he is larger, a little more muscular in build, and heavier-boned, tho the legs must be free from long hair. In breeding they usually carry a large amount of draft blood. Slope of shoulders, strength of back and loin, and strong limbs, large, tough feet and straight, free action are of greatest importance. Style and finish add to their value. It should be noted that express companies have difficulty in securing enough good horses of the right type to do their work even tho they are willing to pay high prices for them.

Feeding the Breeding Turkeys.

I have some breeding stock with my turkeys that I wish to take thru the winter in the best condition. How can I do this?
 Willson Co. S. T. U.

Good breeding condition means being well fleshed, but not fat. Give free range where there is an ample supply of natural feed in the winter. During the winter most turkey raisers usually feed twice a day on equal parts of oats, wheat and corn, with vegetables such as potatoes, turnips, beets and cabbage as a substitute for green feed. Animal feed at that time of year is essential

to the best results, and can be supplied by feeding meat scrap, beef livers and lungs, or skimmed milk, either sweet or sour. If confined in a breeding pen, green feed can be supplied by sowing the pen to grass, oats, wheat, barley, clover, alfalfa, or some such crop. Wheat and hulled oats are the best grains to feed, corn being too fattening unless fed in connection with other grains. Free access to grit, charcoal, and shell-forming materials, such as oyster shells, is necessary thruout the breeding and laying season.

During cold winter weather, such as prevails in Kansas, a few turkey raisers provide roosting sheds, but the great majority allow their turkeys to roost in the open, usually in trees, thruout the year. There is little need of a regular turkey house, but during damp, icy weather and during stormy winds the turkeys should be driven into a barn or shed. They can stand a reasonable degree of dry cold, but they should not be exposed to dampness and cold at the same time.

When Docking the Lambs.

I wish you would tell me about the best methods of docking and castrating lambs.
 Neosho Co. H. A.

Docking, or removing the tail, is best done in Kansas at the age of 10 to 14 days. When correctly done it adds much to the appearance and cleanliness of the lamb and raises the selling price at the market. For this purpose knives, either sharp or dull, chisels, and patented docking irons have all been used and recommended. When a sharp-edged tool is used the pain is slight, but unless some care is taken the lambs may lose considerable blood. Docking irons which burn thru the tail may be used, and thus reduce the loss of blood to a minimum; but if used too hot the wound will be slow in healing. With any of these instruments the cut should be made about 1 inch from the body as measured on the underside of the tail. The lamb should be held with the rump resting on the top of a panel or pen partition or upon a board if the hot irons are used. When docking with the hot iron the operator should work with the right hand, holding the tail in his left and pushing it toward the body. This will leave loose skin above the cut to close over the wound. Pine tar may be applied if flies are bad.

The ram lambs may well be castrated at the time they are docked. Both operations should be done early on a bright, cool morning. In castrating, the lamb is held in the same position as for docking. The hands and knife or shears should be disinfected. Unless both testicles can be felt the operation should be delayed. The lower third of the scrotum should be cut off. The testicles then may be removed by pulling them straight out.

Roughage for the Horses.

What is the relative value of ordinary hays and roughage for horses?
 Atchison Co. D. H. I.

Timothy hay is a popular roughage for horses in Kansas. Brome grass makes good hay which is equal to timothy hay in feeding value. Orchard grass, if cut in early bloom, is equal to the best of the hay grasses and carries considerably more crude protein than timothy. Meadow fescue is not so valuable as timothy for horses. Sudan grass hay is a safe feed for mares, and numerous native prairie grasses furnish hay that is equal to timothy. Clover hay is likely to be dusty, but it has great fattening qualities. Millet is not a safe feed for mares in foal. Corn fodder frequently is used to feed idle horses in the winter, but there is not enough nutrition in it alone for mares in foal. The same thing is true in a greater degree of straw. If either is fed, good-quality hay also should be fed. Unthreshed cowpea or soybean hay also is a valuable roughage which is relished by horses. Even the threshed hay contains considerable nutrition. It should not be fed to brood mares if it contains any mold. Alfalfa hay makes an excellent feed for mares if it is fed once a day and timothy or corn fodder given at the other feeding. Occasionally alfalfa hay is not cured properly, causing it to mold badly, in which case it should not be fed to the horses. Farmers have reported occasionally that alfalfa causes the kidneys to act too freely, but it is likely that this trouble will not be noticed if the alfalfa does not make up more than one-half the roughage.

To Prevent the Blackhead.

How can I protect my flock of turkeys from blackhead?
 Woodson Co. I. P.

Of the infectious diseases, blackhead is the most destructive among turkeys in Kansas. This disease first became serious in the New England states many years ago; it is now found to a greater or less extent thruout the Middle West, and occasionally in the South and on the Pacific coast. It is notable that whenever the climate and range conditions are such as to permit of the turkeys foraging for most of their feed from the time they are hatched until they are marketed, cases of blackhead are infrequent. Blackhead occasionally affects grown turkeys, but it mostly occurs among young turkeys between the ages of 6 weeks and 4 months.

The symptoms of blackhead are such that unless the bird is killed and an examination of the internal organs made it is difficult to tell whether the disease is blackhead or some other ailment. The bird drinks a great deal, but refuses to eat and grows steadily weaker until its death, which usually occurs a few days or a week after the sickness is first noted. Diarrhea occurs commonly and the droppings vary in color from white to brown, but usually are a bright yellow. The head of the



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turkey sometimes turns dark and it is from this symptom that the name blackhead originated; this is an unfortunate term, as the head often does not turn dark, and even tho it does it merely indicates that the bird is sick from some ailment that may or may not be blackhead. On opening a turkey that has died of blackhead, one or both of the ceca or "blind guts" are found to be enlarged and plugged with a cheesy material, and the liver is more or less covered with spots varying in color from grayish white to yellow.

No positive cure for blackhead has been found. As in the case of all other infectious diseases, the sick bird immediately should be removed from the flock to prevent a further spread of the disease, and if very sick it is best to kill it and burn the body. Clean out the roosting place and spread lime in places most frequented by the turkeys. Keep a disinfectant in the drinking water; potassium permanganate is most often used; a sufficient quantity of the crystals being added to give the water a wine color, which, for every gallon of water, will take about as much of the chemical as can be placed on a dime. If the turkeys are being fed heavily, their ration should be reduced, as overfeeding predisposes to the disease. The feeding of sour milk has been of advantage in keeping turkeys in good health and in reducing the activities of the organism causing blackhead. Free range and care not to overfeed are most important.

Teaching Lambs to Eat.

I have had trouble in teaching lambs to eat. How should this be done?
Greenwood Co. D. V.

Every effort should be made on Kansas farms to keep the lambs growing from the start. The first essential is to teach them to eat. Liberal feeding of lambs dropped before pastures are ready is profitable under any ordinary grain prices. This is best done thru the use of a small inclosure known as a "creep," to which the lambs have access at all times, but into which the ewes cannot come. The creep should contain a rack for hay and a trough for grain, arranged so the lambs cannot get their feet into them.

All feed given especially ground feed, should be clean, fresh, and free from mold. The lambs will begin to nibble at the feed when from 10 to 16 days of age. Pea-green alfalfa of the second or third cutting is one of the most relished feeds. Flaky, sweet wheat bran probably ranks next. For the first few days these are the ideal feeds. A little brown sugar on the bran at first will make it more palatable. Linseed meal also is good when mixed with the bran. Until the lambs are 5 to 6 weeks old all their feed should be coarse ground or crushed. The Ohio Experiment station has found that for young lambs that are to be marketed a grain ration of corn 5 parts, oats 2 parts, bran 2 parts, and oil meal 1 part. Oil meal is especially relished by lambs at this time and is valuable in promoting growth rather than fat.

Such feeds as middlings contain too much flour for extensive use. Rye is less palatable than oats or barley. Soybeans may replace linseed meal if they cost less. Cleanliness is an important factor in keeping the lambs growing. Always feed in an empty trough, and if it becomes soiled scrub it out with limewater.

Uses of Black Walnut.

What has produced this great demand for Black walnut logs? Buyers are taking all the walnut logs here they can get. What profits can be expected from growing this crop?
Neosho Co. L. R.

The Black walnut is a native tree throughout Eastern Kansas, and is the highest-priced wood on the market of any of our commercial American trees. The wood is used in the United States as shown below.

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Musical instruments	21
Mill work	19
Furniture and fixtures	10
Firearms	7
Caskets and coffins	2
Electrical machinery and apparatus	2
Vehicles	2
Car construction	1
Other uses	3
Total	100

In recent years the best grades of Black walnut logs have been exported largely to European countries. However, in the last year or two the demand for walnut for American uses has increased greatly. Black walnut furniture and finishing is now becoming popular in the United States. The present prices of walnut logs vary, according to the size and quality, from \$25 to \$100 a thousand board feet on the stump.

The Black walnut grows naturally throughout the hardwood region of the United States in mixture with other hardwood species. It is never found growing in a pure stand, nor has it made an altogether successful growth when planted in a pure stand. The Black walnut is a tree which requires full sunlight, and should be planted only in mixture with trees of smaller size. The foliage of the walnut is rather sparse. This allows sufficient light to reach the ground to support a very satisfactory growth of the more tolerant or shade-enduring species, such as the Red cedar, the Green or White ash, and the mulberry. The Black walnut requires a deep, rich soil in which to make its best growth. Frequent flooding is not seriously objectionable, but the trees will not stand swampy conditions. Being highly intolerant as seedlings, they must begin their growth in the open. Under these conditions they make a rapid height growth, clearing themselves of limbs

readily. By the time they have reached middle age they have attained their full height growth, and they must then have sufficient room to develop a broad spreading top, to make a rapid diameter growth. The Black walnut will reach its financial maturity in from 75 to 100 years, at which age the tree should measure from 2½ to 3 feet in diameter at the stump.

While no data is available to show what yield a full stand of Black walnut trees will cut, it is reasonable to expect that a stand of 50 trees an acre will at maturity yield not less than 15,000 feet board measure of merchantable logs, which at present value would be worth, at the very least, \$3,250. This is equivalent to a rental value of \$32.50 an acre a year gross income on a 100-year rotation.

Breeding the Draft Mares.

At what age should draft mares be bred? How should they be managed at breeding time?
D. L. W. Stafford Co.

Only well developed draft mares should be bred at 2 years of age under Kansas conditions. All others should go until 3 years, and some even until 4 years if they are not strong or are slow in maturing. If bred at 2 years of age they should not be bred during the third year, thus giving a chance for further development. Mares conceive most readily about nine days after foaling, and after this they generally come in heat about every 18 to 21 days until they become pregnant, but this varies a great deal even with the same mare. Some mares fail to show signs of being in heat even when tried regularly with a stallion, but such mares usually can be made to want the services of a stallion in a few days by giving them either a forced service or by opening them up with the hand which has first been cleansed thoroughly.

To take the mare to the stallion divides the work up better than to expect him to hunt up every mare. Better accommodations are afforded at the stallion's stand for teasing and serving mares, and accidents are less likely to occur. The mare will react at breeding time more surely if she is in a healthy, vigorous condition. Extreme fatness interferes with the mechanical and physiological performance of the reproductive organs, while thin or weak mares do not catch readily. The mare should be given plenty of time to rest after she gets to the stallion, and she should be tied close to him. Very often there is too much hurry, so that the mare is forced to take the service before she is just right. If the weather is cold, warm the mare up by exercise, but do not breed her when extremely hot or fatigued.

About the Wyandotte Chickens.

Can you tell me about the Wyandotte breed of chickens?
S. B. Cherokee Co.

The Wyandotte breed is very popular in Kansas. It is a rose-comb breed and is characterized as a breed of curves. The body is comparatively round and is set somewhat lower on its legs than the Plymouth Rock. It is inclined to be a looser feathered breed, and in general appearance it is rather short backed. The breed has been developed in the United States, and has become very popular. The Silver Wyandotte was the original variety, and it is believed generally that the Dark Brahma, the Silver-Spangled Hamburg, and the Buff Cochins played a part in its origin. It is somewhat smaller than the Plymouth Rock, the standard weight being, for the cock, 8½ pounds; hen, 6½ pounds; cockerel, 7½ pounds; pullet, 5½ pounds. The hens are fairly prolific layers of brown eggs, are reputed to be good winter layers, and the breed as a whole makes a fine table fowl. The young chickens do not tend to have the same leggy stage which is characteristic of the Rocks and most of the other general-purpose breeds, and the breed is therefore well suited for the production of broilers. Like the Plymouth Rocks, all the varieties of this breed are yellow legged and yellow skinned, which adds to their market popularity.

In the Silver Wyandotte the male has a silver-white back and saddle, the hackle and saddle feathers being striped with black. The feathers of the body and breast are white, each laced with a black edge. The main tail feathers are black. The fluff is a slate color with some gray mixture. The color of the female shows white feathers laced with black over the entire body except the hackle, which is black laced with white, and the main tail feathers, which are black, and some black in the wings, while the fluff is slate mixed with gray. The color combination and the character of markings of the Silver Wyandotte make this a very attractive variety.

In the Golden Wyandotte the general color scheme is the same as in the Silver Wyandotte, except that the white of the Silver Variety is replaced with red and reddish brown. Like the Silver Wyandotte, the color and markings of the Golden are very attractive.

The White Wyandotte is undoubtedly the most popular variety of this breed. The color is white thruout, and should be free from any brassiness or creaminess or black ticking.

In the Buff Wyandotte the color should be an even shade of buff thruout, being identical with that of the Buff Plymouth Rock.

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Grange Notes

BY EVE GASCHÉ

The call by the National Grange for better service in the subordinate Granges is being well responded to. Within the last fortnight reports have shown various methods of increasing the membership and enlarging the scope of Grange activities.

One Grange asks how to interest young people and keep them as working members. Experience has taught old Grangers to "catch the animal when it is young, and train it in Grange work. An Ohio woman thought Juvenile Granges just the thing to interest young farm people in the Grange work, and they are doing a valuable work in training rural children for the higher Grange. A Michigan woman wished to gather in the children under 14 years, who are too young for the Juvenile Grange, so she arranged Grange Clover Clubs. Farm children take to these "like ducks to water," one sister writes. Already in that state the Clover Club children are asking admission to the Juvenile Grange. One Grange reported recently that good music gained 20 young persons for them, and that this 20 brought 30 more within a year. Now, one-half of the program is given to them and they are challenged to prepare better programs than their elders.

Several Granges report that systematic efforts are being made to increase the membership and the usefulness of the Granges to their respective communities. A popular number was a demonstration meeting, the lecturer having secured four ladies to prepare bread made from home-ground wheat, potato war bread, cornbread, war pumpkin pie with no lard in the crust, and potato doughnuts made without lard. The brothers were well pleased with the samples given them. Surely the women of this Grange are hard at work on the food conservation problem.

Quite a unique feature is being tried by another Grange. The territory is

Why Not be Square?

Mr. Armour, whose monkeyings with stockyards and terminals and so on have attracted attention, does not approve of Francis Heney, and plainly says so.

"If there is no other way of curbing Mr. Heney," says the great Chicago pig-sticker, "then the packers must resort to the only avenue that is left, and that is appeal to public opinion."

Well, before that desperate resort they might try being straight, open and above-board, for a change, in their dealings with the public.

divided into four districts. The members in every district are to secure new members, prepare a program, serve war-time refreshments, and at the end of a specified time are to draw lots to decide which two districts must provide the most novel entertainment and strange refreshments. There is no lack of interest and attendance in that Grange.

Another Grange says that at every meeting the members discuss for ½ hour the important questions of the day. At the end of that time the chairman's gavel sounds and the next half hour is given to music, tableaux and mirth. Again the gavel cuts into the merriment and gives way to the "freak" supper to follow. The serving is arranged so that every person must reach into a dark room and take the plate that is handed to him, and every plate carries a surprise. These are only a few ways that the Granges are adopting to increase interest. The Grange that takes the time to plan occasionally does not complain of a lack of interest in the meetings.

State Master Denny of Illinois in a speech recently asked for a liquorless "day" in a novel manner. He said: "Whereas, to conserve the food supply and increase the efficiency of the nation in this time of world war, the President of the United States has declared a

wheatless and a meatless day for every week when in no case is food made from wheat or meat to be used. Therefore, Be It Resolved by the National Grange in its fifty-first annual session assembled, that the President be appealed to to establish seven liquorless days in every week upon which no alcoholic beverages may be used. This is to be in effect during the war or until national prohibition becomes the law of the land." The committee on temperance reported favorably and the report was adopted.

The members of the Grange, B. Needham of Lane, the master; N. T. Dickson of Carbondale, a member of the executive committee; and D. M. Lauver of Paola, of the co-operative committee called on Walter P. Innes of Wichita, state food director, at the recent war council at Topeka and pledged the support of the Grange to the work of the Food Administration. They assured Mr. Innes that the Grange is loyally behind the Food Administration on the things required to win the war.

Women of Kansas to the Colors

BY BERTHA G. SCHMIDT

Woman's power in the present world crisis was defined in no meager terms at the first meeting of the Kansas Women's Division of the Council of Defense held in Topeka Thursday, January 17. Practically every phase of women's work in the United States in helping to win the war was touched upon in addresses given by half a dozen representative Kansas women.

The purpose of the council, as explained by Mrs. David W. Mulvane, state chairman of the women's committee, is to reach the women of the country and to co-ordinate the war work they are doing, thus preventing duplication. Mrs. Mulvane pointed out that President Wilson said that no great war can be won without the help of the women. She urged that every patriot follow the advice of Food Commissioner Hoover: "Go back to the simple life, be contented with simple foods, simple pleasures, simple clothes. Work hard, pray hard, play hard. Work, eat, recreate, sleep. Do it all courageously."

In an address that was replete with emphasis of woman's ability to aid by conserving food, Mrs. Mary Pierce Van Zile, of Kansas State Agricultural college, made an appeal which every woman in Kansas whether living on the farm or in the city should take home to herself. "We have come to believe that food has a very dominant place in this war," Mrs. Van Zile said. "One of the things we have to think about, whether we will or no, is food conservation. There is a larger shortage in the fundamental food products, wheat, meat, fats and sugar, than anticipated; the shipping conditions have grown more grave; the harvests in Europe are not what were indicated; there is a larger shortage than estimated in August. We have already exported to the allies all the wheat which is available until the next harvest. Then we are simply going to export what we can save. The same situation exists in regard to meat. You understand that only concentrated foods can be shipped these days."

Mrs. Van Zile explained why corn products must be used in the United States instead of being shipped for European consumption. She said that some persons take this attitude: "Even if those people don't like cornbread, neither do we. Why should we send our wheat to them?" The reason is this, white bread has become such a dominant factor in the European dietary that cornbread scarcely is known. Our allies depend almost exclusively on the public bakery for their bread. Most homes are without ovens. Cornbread cannot be transported from place to place as can white bread and it is impossible to introduce new methods of baking in the present disturbed conditions.

Perhaps you, as a farm woman, say "These things are all right for the city woman, but they do not apply to us who live on the farm." If you do, you have overlooked the fact that one-third of the population of the United States is rural and that you are a very big factor in the food conservation plans.

The ever-growing urgent need for Red Cross helpers was clearly stated by Mrs. Charles B. Thomas of Topeka. "Keep on knitting," she pleaded. "The Red Cross society has had to purchase half a million sweaters to send abroad." The need for surgical dressings is constantly increasing, Mrs. Thomas said, and de-

clared that it would be a national disgrace if we do not supply these dressings in sufficient numbers.

In the midst of our efforts to conserve and to fill the demand for Red Cross supplies we must not overlook the health and welfare of the newcomers into our homes, Dr. Lydia E. DeVilbiss of the State Board of Health emphasized in a brief but forceful talk. That child hygiene is one of the most important factors in all war work is indicated by the deplorable condition which exists in some countries in the war zone where not a child less than 2 years old is left. While Kansas ranks first in child hygiene it lags behind in child welfare. Dr. DeVilbiss expressed the determination that we will keep up the standard in hygiene and better the welfare condition.

Miss Linna E. Bresette, secretary of the State Welfare Commission, spoke on the subject, "Women's War Service in Industrial Centers," noting that more than a million and a half women are now engaged in war work and that one of the most important problems today is the substitution of women for men.

What women have done thru the Y. W. C. A. at the concentration camps was concisely told by Miss Winifred Wygall. She explained the purpose of the hostess house, where women who are relatives and friends of the soldiers are received when they visit camp. She declared that the best way in which the young girl can display patriotism is by exemplifying the highest womanhood.

Miss Harriet Vittum of Chicago concluded the afternoon's session of the meeting with a stirring appeal in which she insisted that it was never so incumbent upon us as now to see that our government is clean. "The men that are going out from among us are the best," she said. "We must go to the polls to take their places; we must go in larger numbers and with more earnestness of purpose. In the elections to come we are slackers if we do not give our time and thought to see that the best type of men are elected to office."

Following the meeting, dinner was served in the dining room of the First Methodist church. Short talks were made at the dinner table and the women pledged co-operation in the work of the council.

Winter Care of the Orchard

There are many pleasant days in the winter when pruning can be done. This work does not need to be hurried then, and plenty of time can be given to every tree, which is highly important. Anybody can go into an orchard with an ax and saw and do a job of "trimming," by cutting out a lot of big limbs. This is not pruning; it might better be called butchery, and there has been altogether too much of this done in our orchards.

It is not difficult to learn how to prune fruit trees properly; in fact, any man of ordinary intelligence ought to learn in a few hours. There should be a plan for every tree; prune with a plan, not at haphazard, and use judgment constantly. To start with, every dead and diseased limb should be removed close to the trunk or large limb it grows from. It is seldom advisable to remove limbs more than 3 inches in diameter, and when this seems advisable there must have been a long period of past neglect.

There must be all possible fruit capacity, and this cannot be secured by cutting out large branches. All water sprouts, deformed limbs, and those that are so thick as to prevent sufficient sunlight penetrating thru the foliage of the tree should be removed. When limbs cross, or rest on one another, the swaying of the tree causes abrasions—fruitful sources of disease and decay. Plasm decay seems to be a sort of communicable disease in a fruit tree. When the foliage is too dense, one limb should be removed.

The symmetry of the tree should be a large consideration in pruning. Also there should be a chance for the sun's rays to reach every part of the tree; some of the smaller limbs should be removed from the top. All decayed and mummified apples that are hanging on the limbs, or are lying on the ground, in common with any other refuse at the foot of the tree, should be gathered up and burned, as these are breeding spots or places of shelter for such vermin as may be prevalent about the orchard.

Where an orchard has been neglected for a considerable period it is not always possible, or at least advisable, to do a thoro job of pruning in one season.

Where there is a great growth of extra wood, the removal of all of it at once is dangerous. I have seen trees die after being entirely pruned in one season. In these cases it is well to cut out some wood every season for two or more years. Once the orchard is in shape it takes only a little work every year to keep it so, and it is worth while.

The fact is, orchards have not been replenished to near the extent that they have gone out of business in various ways in the past decade. Where the orchard is just a sideline of the farm, help has become so scarce that the farmer has not felt he had time to take proper care of it, and he has had some reason for this view, as the fruit proposition has been uncertain in the past. But it is going to be better. I do not think there need be much fruit rot in the orchards in the future for lack of profitable market prices.

In any event, winter care of the orchard does not infringe on valuable time. When an orchard in the spring time looks spick and span, there will be some encouragement to take the time to spray, and take such other care as the trees need. I have known one season's crop from an orchard to pay for the land five times over. If your orchard is so large that the job is greater than your faith in the profit, just use a few trees to experiment with. Prune, trim and manure these and compare results. I predict that the experiment will prove that it will pay.—Ohio Farmer.

Dynamite for Cistern Digging

BY J. R. LUCAS

A cistern was to be jug shape; 6 feet across at the top and 18 feet deep, at 90 cents a foot for digging it.

The first two days the work progressed nicely, as the soil was worked easily, so that at the close of the second day 10 feet of earth had been dug out. However, the prospect for the next day's work was not very gratifying, as late in the afternoon the ground was becoming hard and large, and flinty-rock were showing quite numerous. I had used dynamite for several years with excellent success, so, thinking to be prepared for any emergency as I expected to strike heavy rock soon, I secured a supply of dynamite, electric blasting caps and the use of a good steel drill bar.

The next morning the soil worked fairly well for a time, but soon the rocks were reached which were too large to be picked loose or hoisted out, so here is where dynamite again proved its value. In order to continue the work, five holes were drilled, one in the center of the cistern and the other four were 2 feet from the center hole in all four directions. The outside holes were 4 feet from the walls in order that the explosion would not shatter them. The cistern was 12 feet across at this depth. The holes were sunk to a depth of 3 feet and each was loaded with one cartridge of 40 per cent ammonia dynamite. The charges were all primed with a No. 6 electric blasting cap and well tamped. They were then connected together, attached to the blasting machine and fired.

As soon as the smoke had cleared out, it was found that the shots had broken up and loosened the rocks and dirt for a depth of 3½ to 4 feet. As the rocks were well shattered the debris was easily shoveled out. The rocks below this were found to be almost solid in the bottom, so holes were again drilled, loaded, and fired in the same manner. As this latter blast loosened the material about as deep as the contract called for, the debris was shoveled out, the bottom and the sides shaped up and the work was finished at a good profit.

The cistern was good and was easily dug, altho if dynamite had not been used, the digging probably would have resulted in a loss on account of the number of feet of rock that had to be gone thru.

Here's the Champion Husker

Ernest Funston not only has a good name, but he also is a real worker. He husked 1,055 bushels of corn in 9½ days on the H. Ross farm, 12 miles north, and on the John Baer farm 393 bushels in 3¼ days. In 16 days he husked 1,600 bushels and was paid 8 cents a bushel, the ruling price. On one day he gathered 126 bushels. The corn is yielding 35 to 40 bushels.—Abilene Reflector.

The horse that is trained without blinds is generally the safer horse.

Sunday School Lesson Helps

BY SIDNEY W. HOLT

Lesson for February 3. Jesus Lord of the Sabbath. Mark 2:13-3:6.

Golden Text. The Son of man is Lord even of the Sabbath. Mark 2:28.

Thruout the entire gospels the story of Jesus reveals to us His constant observance of the Sabbath, and yet to those who were against Him, His works on that day were the greatest crime they could accuse Him of.

Early one summer morning as Jesus and His disciples were going thru a field of grain on their way to some synagogue service, the men plucked some of the grain and rubbing out the kernels ate hungrily. In doing this the Jewish authorities said that they had broken the Sabbath laws, both by laboring in taking out the grain and in eating before the morning prayers. Now the disciples did not break the fourth commandment, only the Pharisaic interpretations of it, for they with their ingenious constructions and stretch of words had turned the Sabbath into a day of bondage and superstitions.

Jesus, aware that the Jewish authorities were displeased, went on into the synagogue. On entering He found a man with a withered hand. Knowing that the Pharisees were watching and indignant and grieved for the hardness of their hearts He healed the man. Turning to His accusers He asked them if it was lawful to do good on the Sabbath days, and when they failed to answer the question He answered it Himself, saying that it is lawful to heal on the Sabbath.

From His illustrations we can gain new methods for new times, and it is for us to discover just what changes in forms and methods are required under modern conditions as no one has a right to impose his own views on others without considering whether he is destroying or obeying God's divine principles. The personality of our Savior in comparison with the portraits of the Pharisees, the Herodians and the Sadducees, stands out in a most remarkable light. Their disputes with Him brought forth burning truths which are as valid today as when they were first uttered.

The Sabbath was made for man. The fourth commandment is built on that principle and is best for his whole nature of spiritual and moral growth. Jesus did not mean to abolish that ancient commandment, as some good men say, only the misinterpretations and the misuse of the Sabbath law. To do good or to help others is God's law at all times, and the Sabbath day is not any different from the other days of the week. While the Sabbath is called a day of rest that does not necessarily mean one of idleness.

The great Emerson once said: "There is no art like the art of putting first

things first." Soul-life is vastly more important than our physical life, and a Sabbath spent in the study of the Bible, the highest literature in existence, becomes a liberal education and gives us more real rest than any sort of idleness or selfish pleasures. The average man spends 10 years of eight months each in school, while a man of 70 has since his tenth year had 3,155 Sabbath days, almost twice as many days as he had schooling. These Sabbaths spent in study and discussion of the greatest themes in the world will educate a man more than his whole college course, tho a college course will enhance greatly the study of the Bible.

While it is good once in a while to sit alone with one's conscience, nevertheless, for everyone trying to live under christian standards it is best to join some church, even tho one cannot accept or agree with all its plans and teachings, for in this way one is allied with Christ's army that always is warring against evil.

Every person's power is increased by becoming a part of an organization, and the church is living in the midst of many evils and needs her full quota of strength.

Bishop Lawrence of the Episcopal diocese of Massachusetts said, "Everybody believes that our nation should be a religious nation, but if it is to be a religious nation, there must be a religious people, and this there cannot be without personal religion. What you wish your children to be, that you must be yourself."

Remember the Sabbath day and keep it Holy, loyally and willingly, and never forget that it is a day for doing good, no matter what that good may be.

Concrete Work in Winter

Concrete work may be done in winter if precautions are taken to prevent it from freezing before it has had an opportunity to set, says R. A. Seaton, professor of applied mechanics and machine design in the agricultural college. If the materials and the air are warm, 24 hours usually will be sufficient for the setting to take place, but when the temperature is near freezing and the materials are cold, it takes place slowly and consequently the concrete should be protected from freezing for several days.

After the concrete has once set, it may be subjected to very low temperatures without injury. The gain in strength will be much slower than at a higher temperature, but it eventually will become fully as great as under normal conditions. On account of the slower rate of hardening, care should be taken to leave the forms in place and to protect the concrete from heavy loads until it has had an opportunity to gain its full strength. This may be several times as long as in warm weather.

The best method of preventing the concrete from freezing will depend on the kind of work being done. Frequently the work can be inclosed with canvas, or can be done indoors and a stove used to keep the temperature above freezing. If the weather is not too cold, heating the water alone, or the water, sand, and stone, may enable the concrete to set before it freezes.

The freezing point of the concrete can be lowered artificially by the addition of common salt. This is added most conveniently to the water. An amount of salt up to 10 per cent of the weight of the water may be used without injury to the concrete, but it is not necessary to use so much except in very cold weather. About half a pound of salt to every gallon of water, equivalent to 2 pounds for every bag of cement, will be sufficient for temperatures several degrees below freezing.

The use of salt in concrete is likely to cause the forming of a white powdery deposit similar to that frequently seen on brickwork after a rain. Where this is objectionable, salt is not recommended.

After the work is finished, if artificial heat is not provided, cement sacks, canvas, straw, manure, earth, or sand should be thrown over the work to assist in retaining the heat of the mass. The heat produced by the fermentation of the manure may be of considerable help in keeping up the temperature.

A variety of fruit may differ in its keeping quality when grown in different parts of the country. It may vary when grown in the same locality under different cultural conditions.



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A Woman's Grievance

The average western house-keeper is Hooverizing patriotically, but she is doing it with a sort of grudge and you can't reason her out of it. All she says is, "Why should I try so hard to save wheat when millions of bushels of grain are used in making beer?"

She can't forget it. Women are not good compromisers. Right is right and wrong is wrong with them.

And who should blame her in this instance? Sixty million bushels of barley, 15 million bushels of corn and 3 million bushels of rice were used for making beer in this country in 1916, enough to provide a pound of bread a day for a year for 6 million people. Little less is being used now, altho all Europe is going on rations, millions of people must live on a starvation diet and the United States expects to have no wheat flour left by next May.

The troops must be fed. But the kaiser's best friend and helper in this country, the brewery, may continue to turn food unto poison, rob our stomachs and numb our brains.

It doesn't look like good sense, does it?

To Produce Sweet Potatoes

Plant Diseases Have Caused Much Loss in Kansas

BY L. E. MELCHERS

THE SWEET POTATO growing industry in Kansas has taken a vigorous slump in the last few years, mainly on account of the losses resulting from plant diseases. Farmers say "the crop does not pay any longer," and in many instances such is the case, but the actual facts are that from 1 to 50 per cent of the crop is lost on account of plant diseases. The diseases which are responsible for all this loss are the stem-rot-wilt, bluestem, yellow blight—the black-rot, the ring-rot—collar rot—and the soft-rot diseases. The first two diseases live over in the soil and in the seed, while the ring-rot and soft-rot are storage troubles.

Repeated use of the same soil in the hotbed year after year is perhaps the chief source for spreading these diseases in the field. Soil once infested with these maladies continues to spread

sible for the large number of "misses" in the row. If the plants survive, the infection still remains and spreads down toward the roots and up into the stems. Potatoes which are produced on such plants show infection at the point of attachment. This is best seen by splitting open the crown of the plant. If the inside of the stem is discolored brown or black, the stem-rot is present. This infection can be traced down into the sweet potatoes, where it is shown in dark streaks, beginning at the stem and extending down into the flesh of the potato. Never select any seed from such a hill. Examine hills which show thrifty, green vines. Split open the crown and look for signs of discoloration. If the inside of the vine is white, then examine one or two potatoes, splitting them open. If they appear normal, one can select his seed with certainty from such a hill.

A Fungus.

Black-rot is a fungus which is more or less prevalent in Kansas. On the surface of the potato it is characterized by the dark or nearly black, somewhat sunken, more or less circular spots or areas. The spots themselves have a somewhat metallic luster, while the tissue just beneath is somewhat greenish.

Infection generally begins as a small black spot. This may enlarge to such an extent that it rots off the entire stem. If seed is used which has this black-rot, it will produce plants which will have black-rot. When sweet potatoes which are affected with black-rot are cooked they give a very disagreeable taste, therefore farmers should not lessen their trade by placing such potatoes on the market. The same methods for control are advocated for this disease as have been mentioned for stem-rot, namely, special attention to hotbed preparation, seed selection and crop rotation. The treatment of the soil with lime, sulfur or other chemicals is of no value in controlling these diseases.

The soft-rot and ring-rot diseases are severe troubles which occur in the storage house. In the case of the soft-rot, the decay starts at one end of the sweet potato and continues to spread rapidly, requiring only a few days after the potatoes are placed in storage, and continues to spread so long as potatoes remain in storage. The earliest symptoms are the soft and watery condition of the tubers. If the skin is broken in any way at this time, the moldy growth of the organism shows itself. One soft-rotted potato may be the center of infection for all the surrounding potatoes. If the skin of such soft-rotted potatoes is not broken, the potatoes become firm, dry and eventually brittle. This condition is known to most sweet potato growers, and is called the "dry rot," but in reality, it is not a different disease from the soft-rot, merely a later stage.

Storage Conditions.

Ring-rot is caused by the same organism that produces the soft-rot. It differs, however, in that the disease begins its attack between the two ends of the sweet potato, in place of attacking it at one end. The disease causes definite rings or girdles around the potato, while it extends toward the ends at the same time. The extent to which this disease may develop in individual potatoes depends upon storage conditions. If the humidity and the temperature are kept relatively low, the disease may cease and

the small girdled area may be the extent of the damage. In the presence of high moisture and temperature, the fungus destroys the potatoes.

Unfortunately the fungus causing this disease cannot be kept out of the storage house, since the spores or germs causing this disease are abundant in the air. The only controlling measures that can be advised are greater care in handling the crop when it is dug and placed in storage and the attention it should receive thereafter.

It is best to take the precaution of soaking all the sweet potato seed in a solution of 1 ounce of bichloride of mercury to 8 gallons of water before it is planted. The seed should be kept in this solution for 10 minutes, after which it should be rinsed in water and planted. Bichloride of mercury when taken internally is a deadly poison and should be kept away from animals. It should not be placed in a metal container since it corrodes metal.

Lo, the Poor Farmer

I called upon the income tax man while in Topeka the other day and this is what I learned:

If A, a single man, or B, a married man, draws a salary of \$1000 or \$2000 respectively each will have to pay an income tax. However, C, who is their congressman and pulls down \$7000 a year, is exempt from such tax.

If A, a merchant loses \$1000 worth of potatoes by freezing he may deduct the same from his income. But if B, a farmer, loses \$1000 worth of hogs by cholera he can make no deduction. Quite a promotion to the pork industry.

If A, a merchant, suffers a loss thru a branch of his business, perhaps by poor management, he may deduct the same from his income. But, if B, a stockman and farmer, loses a like amount by cattle dying from blackleg or foot and mouth disease he can make no deduction; another promotion to the stock industry.

If a farmer loses 1000 bushels of wheat by fire he can deduct the loss from his year's income. But if he loses his whole herd of cattle or hogs from sickness he can make no deduction.

If a farmer is unable to get the help to harvest his wheat this year, because his son has gone into the service of his country, and is, thereby, compelled to labor 16 hours a day to save the crop, he can make no deduction for expense of harvesting; but if he can employ the help and sit in the shade he may deduct such expense from his income. Another promotion for thrift.

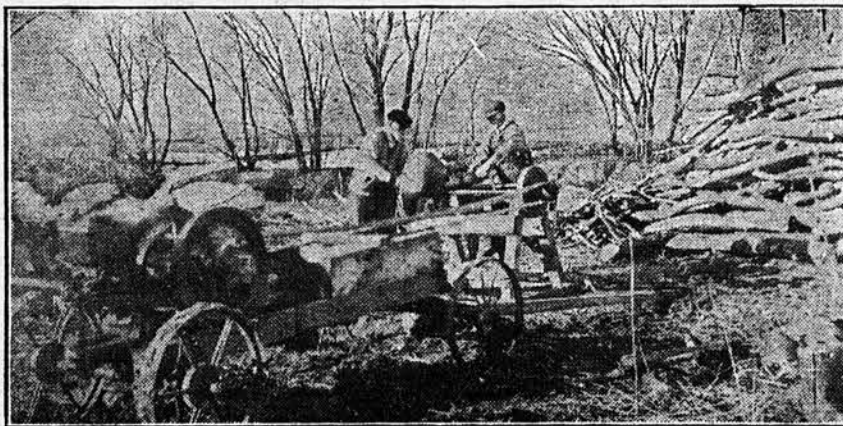
If a farmer loses his barn and stock by fire or storm and the same is not covered by insurance, he may deduct the loss from his income; however, if he loses his house under the same conditions he can make no deduction. Presuming, I suppose, that he should consider himself lucky he got out with a whole hide.

This is "sure" some in-come tax with no out-go for the farmer.
Rossville, Kan. A Subscriber.

A Greater Use of Wood

A great deal of wood is being cut for fuel this winter in Kansas. This is doing much to aid in solving the fuel shortage. It also is providing a profitable market for the products of a great many woodlots. An encouraging thing about this work is the high proportion of it which is being done with power saws. This indicates the general drift toward the use of labor saving machinery in Kansas.

A warm dinner for the kids at school! See that they get it.



Sawing Wood on a Kansas Farm; Power is Being Used Generally in Working up the Fuel Supply This Year on Kansas Farms.

Farm Uses of Lime

It has been said that practically every American farm, 50 years under cultivation, should be given the degree of L. L. D. That means lime, legumes and drainage. This statement is true of thousands of farms which now fail to do their full duty. The draining spade will open up the soil, permitting air to enter and water to pass away, thus improving the mechanical condition. The legumes provide cheap nitrogen, fill the ground with organic matter, and keep it supplied with bacterial life, while the lime helps the soil in various ways.

Lime is a necessary plant food. Many soils contain lime enough to provide the supply needed by crops, yet the loss thru cropping and drainage is heavy. Sir J. B. Lawes estimated that the yearly loss of lime in the drainage water from an unmanured field was at least 1,000 pounds for every acre, and on a manured field the loss is heavier still. A ton of clover hay removes from the soil 40 pounds of lime, and all crops carry away more or less of it. Lime also plays an important part in the work done by the clovers and other legumes in bringing nitrogen to the soil. Most of these plants will not thrive properly unless there is an abundant supply of lime.

When lime is lacking, the soil becomes sour or dead, and loses much of its bacterial life, so that the most important crops cannot thrive properly. The lime also exerts both a chemical and mechanical effect upon the soil. Open, sandy soils frequently fail thru their inability to hold water. An application of lime usually will bind these soils together, make them more compact and far better able to hold moisture. On the other hand, the heavy clays either form like putty in a wet season, or bake into a hard brick in time of drouth. In either case it is impossible to crop them properly. Drainage is always needed on the heavy clays, but drainage alone will not always fit them properly. The application of lime on these heavy clays tends to break them up and enlarge their soil particles, so the air may enter more freely, and the water pass off with greater rapidity. The lime also exerts a chemical change on many soils by breaking up certain combinations of potash, to make small quantities of that element available. These things combined make the use of lime a necessity on a large proportion of our cultivated land.

Lime can be used improperly, to injure the soil rather than to benefit it. It formerly was an old saying that lime enriches the father but impoverishes the son. This was due to the fact that in former times farmers believed that nothing but lime was needed as a fertilizer to keep up the character of the soil. We must remember that lime is only one of a most important quartette of plant foods, the others being nitrogen, phosphoric acid and potash. Lime will not take the place of these other three elements. Its use will add to the nitrogen by improving the crop of clover or other legumes, and it will set free a small amount of potash, and it will fit the soil so that the crop can make better use of these other elements.

By lime we mean what the chemist calls calcium oxide, which is a combination of calcium and oxygen. Most of our lime is obtained from limestone, oyster or clam shells or marl. Most people know what limestone is, the gray or whitish rock found in quarries or ledges, and as the greater part of agricultural lime comes from limestone, we will consider that form. There are two ways of handling the limestone—it is burnt or crushed. The crushing is the simpler and easier process. In this the lime rock is smashed into fair-sized pieces and thrown into a lime crusher where it is ground or smashed into a powder. This ground limestone is known as carbonate of lime, and when you buy that product remember that you have the lime rock simply ground or crushed to a powder. When in this form the lime is in much the same condition as that which is already in the soil, and its availability depends very much upon its fineness.

Many farmers apply the lime by hand. Some use the manure spreader for putting on the ground limestone, and this gives fair results. When liming has become a regular practice, as it should on most farms, a lime spreader will pay, as a special implement, since this enables a farmer to do the work rapidly and efficiently.

Dairymen and cattle feeders have no better lookout from which to view their feeding operations than the silo.



Sweet Potatoes from Sandy Soil.

these diseases every season, even the perfectly healthy seed is planted.

Soil for the hotbed or better still, the sand, should be new every year. Soil from some field which has not been in Sweet potatoes serves the purpose best. The manure which is used should not contain sweet potato refuse which has been fed to stock. If it is certain that the soil in the hotbed and the manure are free from disease, the next requisite is to have the seed free from the diseases.

Obtaining the Seed.

There is only one rational way to select sweet potato seed and that is at digging time. Healthy seed can be selected at that time and stored under proper conditions, thereby insuring the best possible seed for next season's planting. Hill selection is the proper method in order to avoid getting diseased seed. Select a large number of healthy appearing hills or vines and split open the crown of the runners and examine for the stem-rot. If the crown is internally free of disease select the seed from such hills, for this will insure clean seed for next year. Plants from such seed are bound to produce healthy plants if the seed has been grown under the advised conditions and if the young plants are transplanted to fields which have not been in sweet potatoes for several years. See that there are no evidences of black-rot on the outside of the seed. If in doubt whether a certain hill of potatoes, is infected with the stem-rot, make a cross section cut with a knife at the stem-end of a few of the potatoes and if the cut surface is free of all dark specks or dots, the seed is safe to use.

The stem-rot occurs in about 75 per cent of the fields in this state and it is not surprising that sweet potato growing is being discontinued. This disease was unheard of until seed was shipped into this state from the East. As soon as the growers began buying seed in the East and had it shipped into Kansas, the trouble began. Now stem-rot is well established and will remain so, as long as this crop is grown under the present conditions. It should be remembered that this disease is able to live over in the soil for several years, therefore crop rotation is very important. At least a three or four-year rotation is necessary to eliminate this disease. Infection takes place thru the roots either in the field after the plants are set, or in the hotbed from infested soil, or from diseased seed. Such plants soon die when set out into the field and this is mainly respon-

Shall I Plant a Garden?

BY J. W. LLOYD

It may seem to be rather an inopportune time to be thinking of planting a garden when the winter wind is howling about the house and the ground is frozen. Yet time passes rapidly, and unless some thought is given the garden in winter, the season for planting will find us unprepared. If we expect to have good gardens this year, now is the time to make definite plans to that end.

One of the advantages, from a personal standpoint, of having a good home garden is that it can be made to yield a continuous supply of vegetables for the table throughout the season. Furthermore, vegetables of the best quality can be supplied to the owner of a garden at a minimum expense and in a much fresher condition than if purchased in the market. At the present time, however, the personal advantages to be gained from a home vegetable garden are much less important than our duty to the nation. The substitution of vegetables for some of the more concentrated foods in the diet of those who remain at home will release for the use of the American army and the Allies large quantities of cereals, meats, and other food supplies that are transported readily because of their more concentrated form. And the substitution of home-grown vegetables for those shipped in from a distance and handled thru the market will reduce the amount of transportation necessary to supply food for the folks at home, and thus will assist in relieving the car shortage, and enable the railroads to use their equipment in the way that will best serve the interests of the entire nation.

It seems, then, that both from the standpoint of personal advantages and of patriotic duty every one who can should plant a garden this year. It should be remembered, however, that planting is only the first step in gardening. Many gardens planted in hope and enthusiasm last year were utter failures; many planted this year are likely to be failures also, unless the persons who plant them realize that gardens require continued care. The two great causes of failures in home gardens are the lack of knowledge of the cultural requirements of the different vegetables, and the lack of sustained interest in the garden thru the season. Too many beginners at gardening are filled with enthusiasm in the balmy days of spring, and proceed to plant, plant, plant, without giving due consideration to the tasks that are to follow under the blistering heat of the summer sun. Their interest wanes with the increasing length of the days, and their crops become choked with weeds and are attacked by beetles and blight. What started out as a garden becomes a waste; and the owner's enthusiasm for gardening is likely to be forever dampened.

The logical thing for a prospective gardener to do is to make a definite decision to give his garden consistent care throughout the whole season, and then to let nothing move him from that determination. In order to give his garden proper care, he must know what to plant in his particular locality and when to plant it. He must know which varieties will best meet his needs. He must know what insects and diseases to expect and how to combat them. The more he can learn about each of the crops he proposes to grow before he attempts to grow it, the better prepared for the season's tasks he will be.

It is none too early to begin preparations for this year's gardening. There are three things which should be done now:

(1) Bulletins and circulars and books on gardening should be read, and as much as possible learned about the various crops that are to be grown.

(2) Seed catalogs should be procured, and a list made of varieties and quantities of seeds needed. If an order is placed for the seeds now, there will be no delay waiting for the seeds at planting time, or substitution of undesirable varieties in order to procure the seeds in a hurry.

(3) A definite plan of the proposed garden should be made on paper. This plan should indicate the location of every kind of vegetable in the garden, the distance between the rows, and the approximate time of planting every crop. Since a home garden is a personal matter, the plans made by different individuals will reflect their particular tastes. However, in all garden plans, it is desirable that an arrangement of

the crops be employed which will make the best possible use of the available space and at the same time minimize labor in preparation and care.

When Curing the Pork

A great many more farmers have trouble with the curing of pork than with the slaughtering. It is this part of the work that determines to quite a large extent whether one will have "good old country cured meat" for summer use or not.

If the weather is real cold at the time of cutting up, it might be well to cover the pieces with salt and let them stand over a day before putting them in the cure.

There are many different methods of curing pork, among which is the sugar cure. To every 100 pounds of meat add 12 pounds common salt, 3 pounds brown sugar, 3 ounces saltpeter and 6 gallons of water. The sugar cure is considered the most satisfactory for curing pork on the farm. The brine should be made the day before using so it will be cool. Place the ingredients in a kettle and boil gently for 2 hours. The salt extracts moisture from the meat and acts as a preservative; sugar imparts a nice flavor and saltpeter holds the color.

Ordinarily, barrels will be used to hold the brine and meat, altho jars are sometimes used. Sirup or lard barrels which have been cleaned thoroly are satisfactory. Oil barrels should be burned out before using.

Place the larger pieces of meat in the bottom, skin down. Fill in with the smaller pieces. Weight down and then pour in the brine. Bacon and other small pieces should remain in the brine about six weeks, the hams and shoulders about seven to eight weeks. In case the brine should become ropy remove the meat, drop in a few pieces of baking soda and stir well or boil the brine again.

Hang the meat 7 or 8 feet above the floor in the smoke house, using hooks made of No. 7 or No. 9 galvanized wire. Wire hooks are more satisfactory than twine string for this work. Hang the large end of the pieces down and allow the meat which has been in the brine to drip two days before starting the fire. Do not have any two pieces touching each other.

In cold weather the fire should be kept burning constantly. If the meat freezes, thaw it out before starting the smudge, as frozen meat will become heavily smoked on the outside and the smoke will not penetrate within. With a constant fire it will require from 24 to 48 hours to smoke the meat sufficiently or to a light straw color which usually is desirable. It is best to sample a piece of bacon or shoulder to determine when sufficiently smoked. Sometimes a fire is built only every two or three days thruout a month, but there is no particular advantage in this method. When smoked sufficiently, cool by opening the ventilator and windows.

Sometimes there is trouble in keeping the meat after it has been smoked. It should be stored in a dry, cool, and well ventilated place. Most farmers desire to allow the meat to hang in the smoke house, or hang it up in the attic, cellar, or some other place. If allowed to hang up unprotected it is almost certain to become infested with skippers and be blown with flies.

The most satisfactory way to handle the meat is to wrap it up in paper and then enclose in strong sacks and tie the bag tightly at the top. Then paint the sacks with whitewash to which glue has been added or with the following formula which is slightly more satisfactory:

3.0 pounds barium sulfate.
.06 pound glue.
.08 pound lead chromate.
.40 pound common flour.

Dissolve the flour in 4 gallons of water and the lead chromate in a quart or two of water in a separate vessel. Add the lead chromate solution together with the glue to the flour solution and bring to a boil. Add the barium sulfate solution slowly while stirring. Make the solution the day before using. It may be applied with a brush, or the sack, before the meat is placed in it, may be dipped in the solution. The meat is ready to be hung up for the summer just as soon as the solution is applied. Do not disturb until ready for use.

Smoked meat is oftentimes kept successfully by wrapping in papers and burying in an oats bin.

A good growth the first year of the life of the colt costs less than at any other age.



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Kansans Learn How to Win

The War Conference at Topeka Showed What all Persons May do to Help During the Next Few Months

BUSINESS as usual will not win the war. It would have been an unresponsive person, indeed, that could have sat thru the sessions of the Kansas War Conference held at Topeka, January 17-18, without arriving at this conclusion. Repeatedly was this view expressed by speakers and delegates. Making war is not the usual business of America. Everything is abnormal now, and abnormal activities must be entered upon to meet the extraordinary war conditions. To arouse the people to the necessity of engaging wholeheartedly in these activities, to show them how everyone may serve in one or more ways and finally, to coordinate all their efforts, was the purpose of the conference.

Not many of the persons present actually needed waking up, as was shown by the fine spirit of the gathering. But up and down the land there are many who have not yet really felt the war. For those of this kind who still reside in Kansas the messages taken home from the Topeka meeting will provide a much needed corrective.

Service thru saving and the elimination of waste was strongly urged by Peter W. Goebel, Kansas City, Kan., banker, who is in charge of the war savings campaign for this state.

"Lord Northcliffe told me," Mr. Goebel said, "that one of the worst blunders England has made in this war was the wide adoption of the slogan 'business as usual.' Business is not as usual; it is abnormal. If democracy shall live we must everyone of us do voluntarily what is done by reason of force under autocracy."

War Critics.

Referring to the war critics—Mr. Goebel cautioned against uttering any criticism except that which is constructive. "Beware," he said, "of the man who won't give to the Red Cross or Y. M. C. A. because 'they're not managed right.' That is the very thinnest camouflage to cover his own miserable selfishness."

"Savings used to win the war must be made in the future. Those made in the past are mainly represented by property that could not add to our wartime resources merely by changing hands."

Dr. Thomas Nixon Carver, of Harvard University, also emphasized the necessity of centering our efforts on work that will win the war.

"Germany is doing but one thing," declared Dr. Carver, "but we are trying to do about a dozen. Nonessentials should be dispensed with. Keep your money in circulation, but circulate it where it will do the most good toward winning the war. Buying of unnecessary things takes man power away from essential war work. Don't waste man-power in anything not essential to war work, and for God's sake hurry up."

A stirring account of the work of the Red Cross in France was given by Henry J. Allen. The contributions to the American Red Cross maintain 3,450 of the 5,000 military hospitals in France, he said, this is but one of a large number of the activities of this organization. Infant welfare work, the combating of tuberculosis, and the giving of relief generally wherever it is needed, are all directed by the Red Cross.

Sir Frederick Smith, attorney general of England, made one of the most notable of the addresses, to an audience of about 4,000 persons. He appealed for constructive co-operation on the part of all the people of America in the winning of this war, as this conflict is not one of armies alone but of entire nations organized to the limit of efficiency.

Harriet Vittum, of the women's division of the Illinois council of national defense, said that trenches for war work have been laid out for the women as well as for the men, and that the woman who fails to do her duty is as much a slacker as the man who tries to evade the draft. The woman power of the country should be mobilized for war service, she declared, as well as the man power.

A plan to organize every county in Kansas to help in solving the farm labor situation was outlined by E. E. Frizell, Larned, who recently was appointed farm labor director for the state. According to this plan every

county is to learn the amount of extra labor needed by it to harvest the crops and then set about filling the quota by recruiting men and boys from cities within the state. Mr. Frizell is counting on considerable help from the women, too. "Women and girls," he said, "who boast that they can drive an automobile 150 or 200 miles a day can drive a cultivator, mower or binder as well."

A Shortage of Seed.

That the securing of sufficient seed to plant the increased acreage of corn and sorghums asked of the state is a serious problem for farmers in Kansas, according to Dean William Jardine of the Kansas State Agricultural college. In his opinion a more serious seed situation has not existed for 30 years, while the stocks of seeds on hand in Kansas are being depleted thru sales to neighboring states. During February a survey of the available seed supply in Kansas is to be conducted thru the schools of the state, in order that it may be distributed to the best advantage. The testing of farm seeds Dean Jardine also considers of unusual importance this year, because farmers can less afford than ever to spend time and labor in replanting crops.

Resolutions were adopted by the conference asking that care be used in selecting men for the national army, with special regard to the demand for expert help for agricultural and industrial purposes; requesting some systematic effort toward securing the return to the farm of men trained in such work but who are now residents of towns and cities; urging the stabilization of livestock markets; recommending the organization of home guards; suggesting to school authorities the advisability of holding school six days a week and, for certain children, making the school day longer; recommending closer co-ordination between the state council of defense and the county councils; urging the card indexing by county councils of every citizen of the county, on these points: general attitude toward the war, war activities, contributions and subscriptions to the various war funds; financial standing, and whether he is employed in a productive occupation.

Better Results With Potatoes

"And how will you have your potatoes?" Daily the question is asked by thousands of waiters in restaurants and cafes all over the country. Daily it is a question that is decided in the kitchens of American homes. The preferences are not important—so long as there are no calls for "German fried!"—but this fact is of vast concern, from a standpoint of war-winning efficiency: that the question isn't asked and isn't answered often enough. In other words we are not eating enough potatoes. We must increase our potato consumption, and eat less bread, thereby releasing more wheat for our armies and the armies of the allies.

In its final terms the potato situation is this: We now have on hand a great many more potatoes than we have ever had before. If we do not eat these potatoes during the winter and spring, before the new crop comes in, a considerable part of the supply will be wasted. If we do eat the potatoes now on hand we will add to the food supplies of the

men who are fighting in France for our freedom.

To waste this big food supply of potatoes would be worse than a blunder. It would be a crime. But in Berlin it would be a huge joke. With an evil chuckle the all highest would say: "Ha! I won't have to defeat the Americans! They will defeat themselves! They know they can't win the war without enormous food supplies—and yet, after producing the greatest potato crop in their history they let it waste, they put it to no war use, they allow it to glut the market and thus discourage the producers from planting another such crop!" Oh! how delighted the kaiser would be!

And the way to prevent him having that laugh at your expense—a laugh that might mean the end of your freedom and the death of your country—is for you to eat more potatoes and less bread; for you to market the potatoes you are holding in storage, to sell them gradually, during the winter and spring, to get them moving; and, finally, for you to plant at least as many potatoes this year as you did last year.

It will be very unwise, and in effect it will be unpatriotic, no matter how innocent the intention may be, for either of the three factors—consumer, middleman, farmer—to fail in the performance of his part of this potato program—eat, sell, plant. If the consumer doesn't eat more potatoes, the middleman can't sell. If the middleman is hoarding and won't sell, the consumer can't increase his potato ration. And if the present potato surplus is not consumed this winter and spring the farmer will be reluctant to maintain a large potato acreage next year.

"And why is that so extraordinarily important?" some one may ask. For this reason—in the fall of 1918 we'll be in this war right up to our necks. Some things we're theorizing about now will be stern, everyday realities then. Every pound of food will count, and count much. If the farmer hasn't planted potatoes in the spring of 1918 we won't have potatoes in the fall of 1918. And without potatoes next winter quite a few of us may be hungry—because we must send wheat and non-perishables to the fighters first, and the civilians, for whom the soldiers are fighting, can eat what is left.

It is easy enough to say to the farmer, "Plant plenty of potatoes this year." But the way to be sure he will do that is to eat, before time for planting another crop, the potatoes he already has produced—and to eat less bread the while. The way to be sure of a potato supply next winter is to use the potatoes held in storage now.

We produced last year the largest potato crop America has ever known, 442,536,000 bushels, according to the latest figures of the Bureau of Crop Estimates of the United States Department of Agriculture. The 1916 crop was only 286,953,000 bushels, while the average production from 1911 to 1915 was 363 million bushels. Thus, we have on hand this winter 155,583,000 bushels more than in 1916 and 79,536,000 bushels more than the average for the preceding years since 1910. We can't well send this potato surplus to Europe, but by eating it at home we can send other forms of food to the front. It should be remembered, in that connection, that America's consumption of potatoes has been below the average per capita consumption of other nations. It has been estimated by some authorities that we could very readily double our potato diet and be within the bounds of a healthful and desirable ration adjustment.

We should profit by the experience of the winter of 1914-15, which affords the

nearest parallel to the present potato situation. Much of the 1914 crop was held in storage that winter, it moved into consumption slowly, and the result was that in the spring of 1915, as the new crop began to come in, the holders rushed to the market, glutted it, hammered down prices—and potatoes sold for 25 or 30 cents a barrel to starch factories. We must guard against a repetition of that experience next spring—and the only certain insurance against it is to cease hoarding potatoes, to market the present supply gradually thru the winter, and to increase our potato consumption. Because of car shortage and transportation limitations every section should market as near to the point of production as possible.

The Food Administration has no power to fix potato prices, but it has and will exercise, if necessary, power to prevent unreasonable profits. It is now working on a plan to eliminate losses and delays caused by unjustified rejections by consignees. The United States Department of Agriculture and the Food Administration urge men who are holding potatoes to market them gradually and steadily, so as to sell out before the new crop comes in, and they urge everyone to eat more potatoes—and less bread.

Renewing the Motor Cars

The utilization of the used automobile has always been a matter of serious thought on the part of the owner. Too often machines in perfect mechanical condition have been sold or exchanged at a sacrifice on account of appearance. Tops become torn or misshapen, and the finish—no matter how good in the beginning—is destroyed by careless washing or prolonged exposure to the weather.

The unkempt appearance of such cars robs them of interest to the owners, no matter how good the motor and other mechanical parts.

The manufacturing conditions, brought on by the war, make it imperative that better use be made of these cars and that fewer cars be junked. The plants must reduce the output of new cars on account of turning their attention to the more important work of making parts for military airplanes, trucks, munitions, and other equipment needed by the Army and Navy.

This change of condition from maximum to minimum production of new pleasure cars calls the refinishing of the old car most forcibly to mind, and raises the question of how it is to be done.

Looked at in the light of dollars and cents, the \$2,000 car has its exchange value reduced by not less than \$600 to \$1,000 after a year of service. Its actual value from the standpoint of utility is not reduced to any such extent. The actual worth may not be reduced by more than 10 to 20 per cent. Cheaper cars depreciate in somewhat the same proportion. The big apparent loss in value is due most largely to the appearance of the top and finish.

Depending on the size and condition of the car, this refinishing can be accomplished at from \$30 to \$100, and will result in bringing the car back to its real utility worth, instead of its exchange value, thereby effecting a considerable saving in money, and restoring the pride of the owner in his machine. It makes him feel that he has accomplished something worth while.

The top question is the easiest. A dilapidated or torn top can be replaced quickly and cheaply by the repair man, and for many types of cars new top covers can be purchased ready-made, and can be put on by the owner in little time. These new fabrikoid tops, put on by the shop or by the owner, will in some cases be even better and more attractive than the originals.

Refinishing the chassis and body is about as feasible, and, if done with high-grade materials and workmanship, will restore the original beauty. Here, again, the owner has the option of having the job done by the expert in the paint shop or attacking it himself. The new enamels especially designed for refinishing used cars will, where properly applied, produce finishes equal to new cars.

Broken windows in the side and back curtains are replaced easily with pyralin sheeting, which is the material most used by the curtain manufacturer, and scratched and discolored windows can be brightened by using solutions prepared especially for the purpose. Varieties of colors in the tops and enamels make it possible to satisfy any desire in this connection.

If your subscription is soon to run out, enclose \$1.00 for a one-year subscription or \$2.00 for a two-year subscription to Farmers Mail and Breeze, Topeka, Kan.

Special Subscription Blank

Publisher Farmers Mail and Breeze, Topeka, Kan.

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My subscription is..... (Say whether "new" or "renewal.")

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Food Facts

The shortage of wheat in France is becoming more alarming every week. Pastry is now classed as a luxury and its manufacture or consumption is now suppressed except on Sundays and holidays.

Under new food regulations, the Swiss people are allowed only a pound of sugar a month a person. The butter ration is 1-5 pound a month.

The United States Food Administration wishes to place the Irish potato every day in the year on every table in America. Potatoes supply nourishment, bulk, mineral salts and a corrective alkalinity in the diet. They are plentiful this year and reasonably cheap.

Fifty thousand tons of linseed cake originally consigned to Holland will be sold at request of the consignees for consumption in New York, Pennsylvania and New England, according to an announcement authorized by the United States Food Administration. This amount of linseed cake, it is hoped, will supply a large portion of the concentrated feed needed this winter and spring in these states.

The total acreage sown to crops in 1917 in the uninjured portion of France showed a decrease of 24.4 per cent from the acreage in 1913. The burden of agriculture which has rested since the war on old men, women and children will be lightened considerably by the 1500 farm tractors being shipped to France this winter by the United States Food Administration.

Will You be a Food Patriot?

BY JOHN F. CASE

Every American boy and girl is eager to do something to help win the war. An opportunity is provided thru increased food production. Just as patriotic service can be rendered on the farm at home as on the firing line in France. Our soldiers and our allies must be fed.

The Capper Food Patriots' League is a nation-wide organization of junior soldiers of the soil. Its purpose is to stimulate interest in food production and food conservation. Any boy or girl 10 to 18 years old is eligible to join. No cash prizes are offered—this league is founded for patriotic purposes only—but for the best records made in 1918 these awards will be made by Arthur Capper.

A trophy cup valued at \$25 will be sent to the boy or girl who makes the best record in meat production. This prize will be duplicated for the best record made in production of food crops.

Bronze medals will be sent to the 10 boys and girls who make the best records in production of either pork, beef, mutton or poultry.

Ten bronze medals will be awarded for the best records in each class of food crop production, including wheat, corn, rye, oats, rice, potatoes, sorghums and fruits.

Ten medals for the best records in potato growing and 10 for general garden crops.

Ten medals also will be awarded for the best records in food conservation, canning or drying.

A certificate of achievement signed by Arthur Capper will be sent to every boy and girl who sends a report.

Prize awards will be based 75 per cent for records of food production and food conservation and 25 per cent for the story telling "What I have accomplished in food production, and how the work was done," or "What I have accomplished in food conservation, and how the work was done." No special record need be kept but an estimate of the

total amount of food produced or conserved shall be provided. Sworn affidavits will be required from winners of the trophy cups. The contest closes December 15, 1918. Records and story must be sent to the Capper Food Patriots' League, Topeka, Kan., not later than December 20.

Members of the Capper Pig Club and the Capper Poultry Club will be enrolled as members of the Capper Food Patriots' League without being obliged to send in applications. Boys and girls in these clubs will have an excellent opportunity to win honors of which they always will be proud.

A Food Patriots' League button will be sent to every boy and girl who enlists. Fill out the coupon and mail it today.

Soil Washing Steals Fertility

Soil washing by heavy rains probably is the most important cause of the loss of soil fertility on rolling upland farms. The amount of this loss is difficult to measure accurately. Figures obtained at the Missouri College of Agriculture at Columbia during the last two years indicate that as much as 5 per cent of the really fertile soil may be lost in one year on a gently rolling field if the surface is left bare. This means that continuous cultivation for one generation may result in the loss of all the fertile soil on even gently rolling land unless some measures are taken to restore it. On steeper lands the loss is much more rapid.

Some idea of the loss of plant food may be obtained by considering the loss of nitrogen. The supply of this element in the soil is contained in the organic or vegetable matter present. Nitrogen is made available for the use of plants by the decay of organic matter. It is estimated that 2 per cent of the total amount present becomes available every year. It is this 2 per cent which may be removed by the crops, by leaching and in the form of gas. As the availability of the other elements of plant food in the soil is associated closely with the decay of organic matter, it is evident that the washing away of that part of the soil richest in organic matter results in a lack of all the really valuable soil plant food. In addition to the loss of plant food, the poorer physical condition of the soil resulting from the removal of organic matter and the inconvenience caused by ditches in the fields are to be noted.

The farm practices that cause excessive erosion are continuous cultivation, shallow plowing, furrowing with the slopes, leaving the land bare in winter, neglect of gullies and the exhaustion of organic matter.

Practices tending to control erosion are systematic rotations containing fewer cultivated crops and more hay and pasture crops, the gradual deepening of soil by occasional deep plowing, the use of barnyard and green manures, winter cover crops, such as rye and wheat, and prompt attention to gullies and ditches. Terracing and contour farming are coming into favor as preventive practices as lands increase in value. Tilling poorly drained sloping lands, such as spouty hillsides, helps by opening up the subsoil and carrying part of the water off thru the tiles.

As lands increase in value, reclamation becomes profitable. Steep, badly washed hillsides may be set to hardy forest trees. Small ditches may be filled with litter and soil, and seeded down to grass. Large ditches may be filled by obstructing with brush and coarse litter stacked and weighted down, by planting willows, or by specially constructed dams protected by tile laid so most of the water passes under the dam while the sediment is deposited in the ditch.

Capper Food Patriots' League

Capper Building, Topeka, Kansas.

I HEREBY enlist for patriotic food production. I pledge my best efforts for food production and food conservation in 1918. Enroll me as a

..... Patriot
(State whether meat or food crop production or for conservation.)

Name Age.....

R. F. D. No. Postoffice..... State.....

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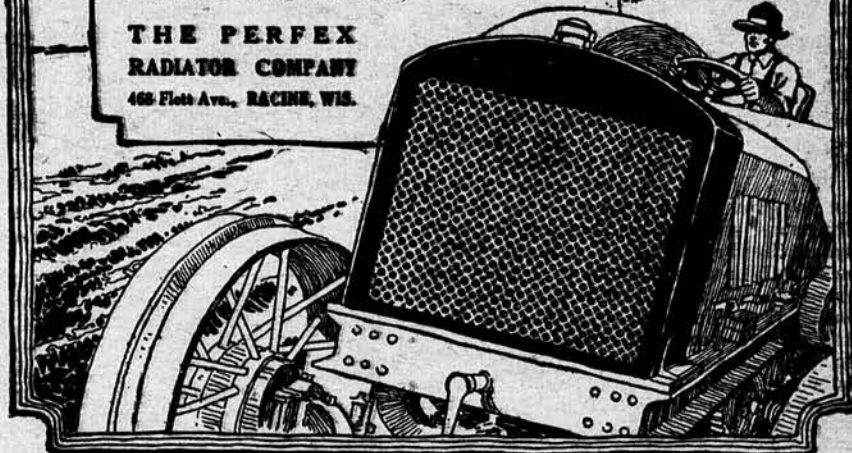
Several million-dollar concerns, many with a rating of half-million and over, scores well up over the hundred thousand-dollar mark, equip their tractors with this wonderful radiator.

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CAPPER'S WEEKLY, Book Dept. 4, Topeka, Kan.



More Livestock for Kansas

BY J. C. MOHLER

Everywhere in Kansas can be seen the silo. In these great containers, Kansas farmers compound succulent salads from the by-products of the farm, to add piquancy and nutriment to livestock fare. With the aid of the silo, Kansas farmers are equipped to produce all the materials for the best, most economical rations for livestock. Conditions are ideal for the production of beef, mutton, pork and milk products.

The livestock industry has had a continuous growth. Some of the most noted members of the animal aristocracy have been bred and reared beneath the sunny skies of Kansas. It was a Kansas-bred horse, Joe Patchen—himself a world beater in his day—that sired the champion harness horse of the world, Dan Patch, with a record of 1:55. It was a Kansas sheep that yielded the heaviest fleece. The heavier class of Kansas equines, as well as her cattle and hogs, annually carry off their share of the honors at the fairs and worldwide exhibitions.

Have you ever noticed that Kansas always comes out ahead regardless of the character of the growing season? The report may go forth that "poor Kansas is burning up again," but in the fall the Kansas farmer will be found with complacent countenance, well fortified for winter. If his granaries are not bursting with wheat, then his cribs are with corn. If his cribs are not overflowing with a bumper corn crop, then his silos are with silage, and the forage is piled high in stacks and ricks to preserve the well-being of his livestock. Why is this? There's a reason!

Kansas is so situated geographically as to give her a long growing season. There are staple crops that can be grown from the beginning of autumn to the next July and still make profitable production. Winter wheat is planted in the fall. If misfortune overtakes it, then the ground can be devoted to oats. If for any cause a promising crop of oats is not secured, the land can be planted to corn. Should the corn crop fail, then is all lost? Not yet! There are the sorghums—kafir, milo and cane—and if the unlikely happens and the sorghums are destroyed, splendid crops of hay can yet be secured from cowpeas, millet, or Sudan grass. And there is always something to put into the silo.

Feeding Value of Pumpkins

Many Kansas farmers, especially in the bottoms of Northeastern Kansas, grow pumpkins every year for stock feed. In some years, and that was true in 1917, excellent yields are obtained. Men who have had experience with pumpkins should be interested in the feeding tests which have been made with this crop at the Massachusetts station, which were reported a few days ago by J. B. Lindsey. He concludes, as a result of his work, that:

1. The pumpkin contains 17 per cent of shell, 73 per cent of flesh, and 9 to 10 per cent of seed and connecting tissue. It is a watery fruit, showing extremes of 84 to 91 per cent, with an average of 88 per cent.
2. The whole pumpkin is relatively rich in ash; the seed shows noticeably less ash than the remainder of the fruit. On the basis of dry matter, the entire pumpkin contains rather more total protein than is found in grains and roots. It also contains some 18 per cent of total sugars, of which one-third was found to be present in the form of cane sugar. The fruit minus the seeds contains nearly 43 per cent of total sugars, which explains in a measure its desirability as a human food. The pumpkin seeds are rich in fat, and are composed substantially of one-third fat, one-third protein and one-fifth fiber, the rest being carbohydrates and ash.
3. A number of digestion trials were made with sheep, and showed the pumpkin to be about 81 per cent digestible. On substantially the same water basis, and allowing for the increased food value of the fat, the pumpkin appears to have about 20 per cent greater feeding value than mangels and turnips.
4. Feeding experiments were made with dairy cows, substituting in the ration 30 pounds of cut pumpkins for 5 pounds of hay. The results secured indicated that 5 to 6 pounds of pumpkins were equal in food value to 1 pound of hay. The Vermont station concluded that 2½ pounds of pumpkins were about equal to 1 pound of silage, and that 6½ pounds were fully equal to 1 pound of hay. The pumpkin had a tendency to increase temporarily the fat percentage in the milk, due evidently to the oil contained in the seed.
5. The seeds appeared to be free from any injurious effects upon the animals when fed in the amounts found in the entire fruit, contrary to the notion prevalent among many farmers. In foreign countries they are often dried and ground, and serve as a nutritious and harmless food, if not fed in too large amounts.
6. It is not considered good economy to grow pumpkins exclusively as a food for either cows or pigs, because of their high water content and poor keeping quality. For the latter reason it is advisable to feed them in the late fall or early winter. In one instance a yield of 9 tons is reported when they were grown exclusively, on which basis they would yield about 2,000 pounds of

actual food material (digestible organic matter plus fat multiplied by 2.2) as against 3,000 pounds derived from corn. Their place in the farm economy seems in a way to have been discovered by the farmer, namely, in their limited cultivation together with corn.

7. They may be fed to cows cut reasonably fine at the rate of 30 to possibly 50 pounds a head daily, in place of 6 to 10 pounds of hay, in addition to hay and a reasonable amount of grain. It is not advised to feed them with other watery foods such as roots and silage.

Mr. Lindsey also reports on the experience which other men have had with this crop, as follows:

A number of experiments are recorded relative to the value of pumpkins as a feed for cows and pigs. Hills fed three cows in three periods of 54 days apiece on hay, silage, a grain mixture and pumpkins. During the first and third periods the cows received the hay, silage and grain, and in the second period, hay, silage, grain and pumpkins. Two and one-half pounds of pumpkins with 90.1 per cent of water were substituted for 1 pound of silage, with apparently like results.

In a second experiment with four cows, feeding pumpkins in the second of three periods at the rate of 40 pounds a cow daily, he concluded that 6½ pounds of pumpkins with 87.9 per cent water were equal to 1 pound of hay.

French fed six Berkshire pigs that were 8 months of age on a ration of wheat shorts and field pumpkins (cooked) with the seeds

removed. The experiment covered five periods of 84 days apiece, and in the last two periods the pigs consumed an average each of 26 pounds of pumpkins a day. The average daily gain in live weight was 1.5 pounds, and the results were considered quite satisfactory.

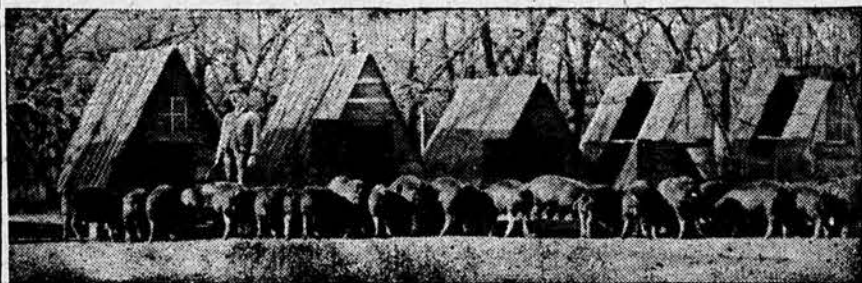
Burkett fed several lots of three pigs on combinations of skim milk, cornmeal and pumpkins cooked and uncooked; also on milk and raw pumpkins versus milk and cornmeal; and on milk, pumpkins and apples, half and half, cooked, versus milk, cornmeal and bran, half and half. The general conclusion was that cooking did not increase the feeding value of pumpkins, and that a combination of skim milk, cornmeal and pumpkins gave the most satisfactory results.

Pott reports that in England pumpkins are fed quite generally to fattening pigs, together with ground barley and beans; also to milk cows at the rate of 25 to 100 pounds daily, cut fine and mixed with cut straw; and to fattening cattle as high as 100 pounds daily, preferably cooked. Pumpkins also are fed in Austria to cows, fattening cattle, pigs and horses.

The draft horse requires sound, strong underpinning to carry his heavy body and successfully move heavy loads.

The dairy cow is the greatest soil builder in the world. She keeps all the fertility on the farm.

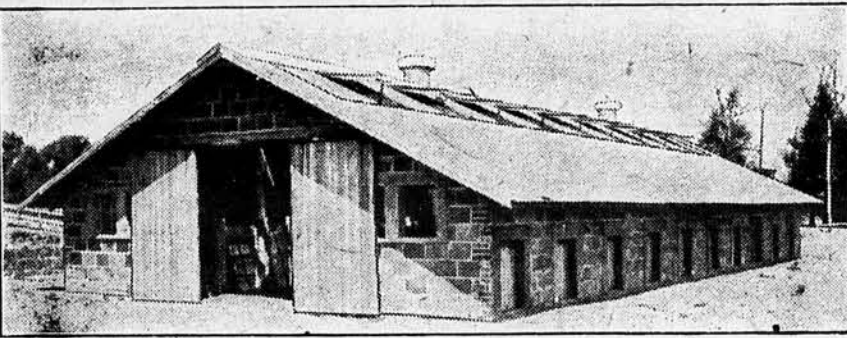
Hogs Require Real Shelter



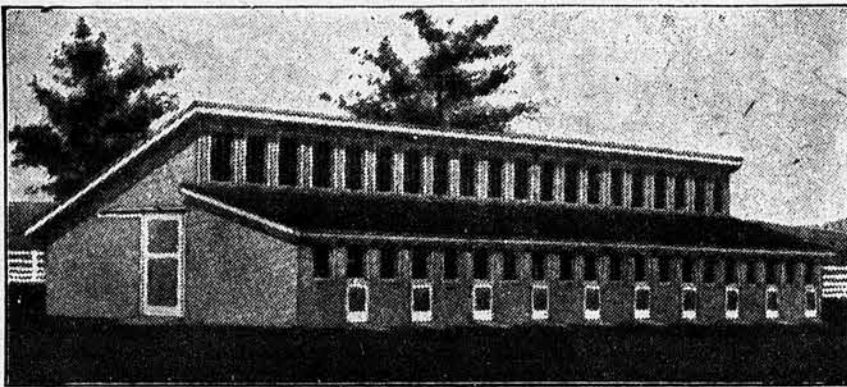
There Should be a Few Portable Shelters on every Hog Farm to Use in Moving Animals to New Fields.



Most Kansas Farmers Who are in the Business Extensively Prefer to Build Large Houses, With Good Equipment.



The Iowa Hog House is Warm, Dry and Well Ventilated. When Properly Constructed it is a Permanent Asset in Hog Raising.



Sunlight is a very important thing in a Hog House in Kansas; it is one of the Best Disinfectants Known.

MANY GOOD hog houses are being built this year in Kansas. With pork at the present abnormally high prices it is of the greatest importance that good shelter should be provided. This will help to conserve feed, and it will make it possible to save a much higher proportion of the crop of pigs. Good shelter is cheaper than high priced feed. The large number of good shelters that are being built in Kansas is a mighty encouraging thing; it means that Kansas is getting on a substantial basis in producing pork. Incidentally the profits of the future will be much higher than in the past for the hog raisers of Kansas.

Win Thru Co-operation

BY LEIGH MITCHELL HODGES

What you see in a comb of honey is a pound of perfect sweetness encased in a wax structure that is a triumph of architectural engineering.

You pay 25 or 30 cents for this, take it home, spread it on your bread to tickle your palate and help fill your physical fuel bin, and—

What you don't see in this comb of honey is a little army of bees working harder than Trojans ever worked, sucking the ambrosia from clover blossoms.

Your pound of honey contains 7,000 grains of sugar. Every clover blossom provides about one-eighth of a grain, so this pound represents the sweet fruitage of 56,000 clover heads.

But the clover head is composed of about 60 florets or flower tubes. To extract the hidden sweet the bee must probe each of these. This means some 60 separate operations on every flower.

If one bee contracted to gather a pound of honey, that bee would have to explore 3,360,000 of these tiny tubes to secure the material. Allowing 5 seconds for each exploration and 12 hours to a day, it would take this bee some 400 days to produce a pound.

And this would represent only the gathering of the honey, not the time required for building the wax-case and storing the sweet stuff.

But there never yet was a hive with just one bee to each comb.

Nature commands pooled effort.

Hundreds of bees to each comb make a comparatively quick and easy operation of what would be an impossible task for one bee working alone.

So what we do not see in the comb of honey is the greatest of lessons in the greatest of success-makers—co-operation. On every side Nature flaunts this lesson in man's face.

The seed itself is nothing.

Sun; soil and moisture must co-operate with the latent germ to produce plant life.

The solidest rock is only co-operating atoms.

The strongest man is weak alone. Only by working with others or winning others to work with him can he achieve worth-while results.

The million men now training to fight under our flag in France couldn't gain a foot of Teuton territory if they went to war one by one.

Co-operating, they can turn the tide in favor of freedom.

The biggest business is bound for failure if its workers do not co-operate.

It is a machine whose parts do not work together. It may run for a while on its own momentum, but it is headed for the dump-heap.

To co-operate is to join forces and something more. It is to join hearts as well as hands, and slip a little soul in the bargain.

Not to co-operate is to court loneliness, life-rust and loss.

The a. b. c. of success is this—Be a Bee!

Co-operate!

Problems of Farm Production

These, then, are the things we must do and must do well besides fighting—the things without which mere fighting would be useless. We must supply abundant food for ourselves, for our armies and our seamen—not only for them, but also for a large part of the nations with whom we have now made common cause—in whose support and by whose side we shall be fighting. Everyone who helps greatly to solve the problem of feeding the nations puts himself or herself in the ranks of those who serve the Nation.—Woodrow Wilson.

Relative Values

All works of taste must bear a price in proportion to the skill, time, expense and risk attending their invention and manufacture. These things called dear are, when justly estimated, the cheapest. They are attended with much less profit to the artist than those which everybody calls cheap. A composition for cheapness and not for excellence of workmanship is the most frequent and certain cause for the decay and destruction of arts and manufactures.—Ruskin.

A ration poor in food ingredients has a tendency to reduce the solids, but not the fat in the milk.

To Reclaim Strip Pits

A great deal of land in Southeastern Kansas has been rendered unproductive by coal stripping. This operation consists of removing the dirt above the coal, usually with steam shovels. This leaves a mixed pile of dirt and rocks behind in huge ridges. It will be a serious problem to reclaim this land for farming purposes, but it is being considered in the East. A recent issue of the Ohio Farmer had this to say about the problem there:

If this land is ever again to be converted into tillable and productive farms, the scarred and disfigured surface will be leveled by means of the same mighty power of team-driven machinery by which it was devastated. The task is too gigantic and appalling for individual effort. There is a prevalent opinion among farmers that the coal companies should be compelled by law to level the ridges after they have removed the coal and thus do their part in preparing the land for future use. Whether such a law will ever be passed and enforced is a problem which must be solved by the future lawmakers of the state. Some of the coal companies have published plans for undertaking this work without compulsion, but as is so often the case with capitalists, their plans—which include fields of luxurious alfalfa and immense herds of sleek, registered Herefords and Shorthorns—sound rather fanciful to the ears of practical farmers. Probably most of these lands will be abandoned by their present owners after their hidden mineral wealth has been extracted. From the viewpoint of justice to future humanity the coal trippers should not be permitted to leave their property in a useless and unproductive condition.

We do not believe that this land will be permanently lost to agriculture; some use will be found for it, altho many years may elapse before it is again brought under cultivation. It is possible that the stripped land can be utilized in one of two ways; either for grazing or for forestry. Scattered among the stripping areas are some high hills and slopes, from which the coal must be removed by tunneling. These hills will always be available for tillage, and if the lower stripped land can be so far reclaimed that it will produce grass, a system of stock raising can be carried on successfully. The time is coming, if indeed it has not already arrived, when a fair profit can be derived from the growth of suitable species of timber. The forest is one of nature's methods of reclaiming waste or useless land, and in this instance we may profit by her teaching. Within the next 50 years we may expect to see an extensive practice of forestry in the East as well as in the West, and some of the stripping lands will present an opportunity for experimental work in this direction. The problems of reclamation belong to the future, but there is another problem which is already perplexing the farmers of the coal lands. The price paid for labor at the stripping works varies from \$4 to \$5.50 a day. Many young men have abandoned farm labor in favor of the more remunerative public work. Everywhere farmers are unable to obtain satisfactory help, because they are not justified in offering this price for common labor. The result is that the production of staple crops has been decreased, and at this crisis in our national life, when all farms should be worked to the limit, many farms are running at about one-half their actual capacity. The problem of securing suitable farm labor is always with us, but it is becoming more troublesome here since the development of the coal stripping industry.

A Greater Use of Power

No sooner had the news been received at this country had cast its lot with the allies than the majority of farmers wanted to do their part to increase the world's food supply by planting and cultivating a greater acreage than they had cultivated heretofore. This meant longer hours and harder work, but the farmers were ready to do their bit. The prevailing high prices offered for all farm produce offered an added incentive for the farmers to make every available acre produce something.

This speeding up process intensified all problems as well as created new ones; especially the farm labor problem arose. This situation was partially alleviated last spring by releasing a great number of students from their college and high school duties for farm work. The spring of 1918 will not find these young men available, as a great many of them either have enlisted or have been drafted into the army. In proportion to the population, a larger number of young men from the farm has enlisted than from any other industry. This problem of farm labor is not for the farmer to solve alone; he cannot succeed single handed and follow the methods of farming, if he is to rely on one of the greatest branches of American industry successfully. The farmer is looking forward to the use of power machinery as a means of accomplishing the gigantic task of feeding the democratic countries of the world.

The tractor has taken a definite place in American agriculture. The automobile has set the farmer to thinking; and those farmers who care to keep abreast of the times are no longer content to follow a single plow drawn by horses. Some have expressed the opinion that the tractor would not be a success. We have read that certain conservative men of other days agreed that the grain reaper, the cotton gin, the mowing ma-

chine and other labor saving machines could not possibly be used with any degree of success.

The farmer has recognized the value of power on the farm. Ever since 1870 the census has shown a decrease of the number of men working on the farm in proportion to the acres previously tilled, yet the number of acres cultivated has increased. The number of horses also has increased during this period, which proved that one man with modern machinery and sufficient power was able to do much more work in less time, and increase his output. The tractor will increase the man output accordingly.—Ohio Farmer.

Made in America

The place in which an article was made has for centuries been a hall-mark indicating its quality, and much stress has been placed on the location of manufacture for many years past. The time was when the gentleman warrior was not satisfied with a sword other than one from Damascus. The Venetian has been the world's ideal in the manufacture of glass, and perpetual homage has been paid silks and pottery of Chinese origin.

Too little credit has been given to American-made goods, even in view of the fact that in most lines of manufac-

Make Big Profits Pay More

The National Grange, representing 33 states and nearly 1 million members, calls on Congress to impose an 80 per cent tax on war profits, as England has done, and to increase the tax on big incomes.

By another year, not counting loans to the allies, the war will have cost the United States between 50 and 75 billion dollars. The Grange points out that raising 80 per cent of this colossal sum by bonds drawing 4 per cent will make the annual interest charge to the American people between 1,600 and 2,400 million dollars. And this will go to the coupon clippers.

As all our immense war appropriations are virtually to be spent in this country and absorbed largely by big business, the fairness of taxing the excess profits of big business 80 per cent for war revenue is so apparent that it is beyond argument. Even then the war burdens of big business will be much lighter than those borne by the people who also contribute the precious lives of sons and fathers.

This is not a war to make money. It should be conducted on a live-and-let-live basis. That would mean less bloodshed, less hardship and less expense for rich and poor alike.

ture the home producer is the equal of any in the world, and that in many instances he knows no equal in the matter of production and quality.

For many years American goods, especially standard lines, have been marked as imported, in many cases without their even leaving American shores. An all too eager, but undiscriminating market has bought them, believing itself a most astute purchasing agent, when in reality it was merely paying a commission to deception.

Every American has something in the way of wares, service, or personality which he must sell, and as his chief market must always be at home, it is a matter of the simplest logic that he should buy at home, thereby developing a most powerful application of interior reciprocity.

The world war has proved America to be the one self-sustaining country on earth.

The advantages, in a national sense, of being independent in production and consumption are so obvious that we should, after the war, voluntarily continue the practice that conditions have necessitated of preferring goods made in America.

It is very essential in pruning to make as smooth a cut as possible and make it close and parallel to the trunk so that it will heal over rapidly.

A reasonable amount of farm work with careful handling will enable a mare to foal a colt easier and will produce a stronger colt.

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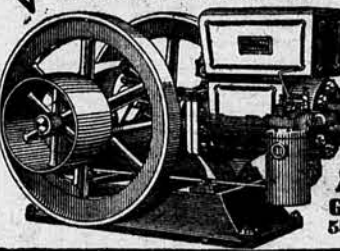
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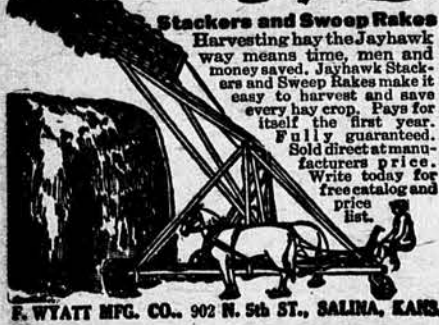
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Submarine Warfare and Autocracy

BY DAVID F. HOUSTON

Why is the United States at war with Germany? Why all this preparation, expense and jeopardy of thousands of American lives? Are we fighting the battles of England, France, Italy and Russia? Are we in the war to pull the chestnuts of the allies out of the fire? Are we fighting to help them recover lost territory or to acquire new possessions? Why do we fight at all? Why not employ peaceful means? Why not negotiate?

These questions are now being asked not infrequently, especially by German propagandists, by a few disloyal natives, and by some unintelligent and unpatriotic pacifists. Such people imagine that the time is opportune. They imagine that many Americans are astounded and resentful over the prospect of enormous expenditures, burdens of taxation, and sacrifices of life. They assume that there is, or will be, a reaction; that the people have short memories. They place reliance on the fact that the scene of conflict is remote, that our people cannot understand that a defensive war can be waged by forces at a distance and that aggressive action may be in the highest degree defensive.

The main answer to these enemies of America within and without is simple. We are at war with Germany primarily to assert and to defend our rights, to make good our claim that we are a free nation, entitled to exercise rights long recognized by all the nations of the world, to exercise these rights without restraint or dictation from the Prussian autocracy and militarists, to have the kind of institutions we wish, and to live the kind of life we have determined to live. We are at war with Germany because Germany made war on us, sank our ships, and killed our citizens who were going about their proper business in places where they had a right to be, traveling as they had a right to travel. We either had to fight or to keep our citizens and ships from the seas around England, France, and Italy, or to have our ships sunk and our people killed.

We did not make this war. Germany made war on America and only after exercising great patience and enduring grievous wrongs did we formally declare this to be a fact. For more than two years Germany had committed hostile acts against our sovereignty, destroying the property and lives of our citizens, acts which if committed by any smaller power or power nearer home would have led to a quick demand from our people for a belligerent response. By turns, as it suited Germany's needs, she was apologetic and contemptuous, conciliatory and dictatorial, full of promises and heedless of them, finally repudiating her most solemn obligations. In the meantime, while we were extending hospitality to her diplomats here and representing her abroad, she was carrying on a hostile propaganda within our own borders as well as abroad, promoting plots to destroy our plants, and attempting to sow dissension among our people. Recall the history of our negotiations with Germany, of our attempts to secure justice by diplomatic, peaceful means.

If we had not accepted the challenge of the war-mad, desperate, dictatorial, contemptuous, hypocritical, and medieval Prussian militarists, we would have had to admit that we were not a free nation, that we preferred peace at any price and were interested only in the fleshpots. This country either had to swallow its own words, abdicate its position as a free sovereign power, concede that it had no rights except those which Germany accorded it, hold its citizens and ships away from Europe, or to recognize the plain fact that Germany was acting in a hostile manner against it, fight to defend its rights, fight for humanity and the cause of civilization and free peoples everywhere, joining its power with the other free nations of the world to put an end to autocratic and brute force. There was one choice we could not make—we were incapable of making. We could not "choose the path of submission and suffer the most sacred rights of our nation and our people to be ignored or violated."

Does not a review make it plain what it would mean to the world if Germany should win and if free, democratic, law-supporting nations like Great Britain and France were destroyed, if Europe should fall under the domination of Germany, headed by the Prussian military autocrats who know no right except might, who believe that small and peace-loving nations have no standing, and who at-

tach no sanctity to a pledge, no matter how solemn? If Prussian militarism should be permitted to dominate, then the Anglo-Saxon fight for free institutions and liberty, persisting from Runnymede to Yorktown, its fight against the absolute rights of kings and barons, with its Magna Charta, its Bill of Rights, its Declaration of Independence, and the heroic fight of the French people for liberty, would have been made in vain. Has it not become patent that Prussia is the last great stronghold of feudal absolutism; that in fighting Prussian autocracy the modern nations are truly assisting the Germans, who are only in part conscious of their servitude, to gain what England, France and America have had for generations; and that we are finally about to make the world safe for democracy and humanity?

Down by the Stream



Where the ripples laugh aloud,
And the crooning creek is stirred
To a gaily that now
Mates the warble of the bird.
—James Whitcomb Riley.

Do You Love Your Farm?

One of the things many farmers lack is the home-making spirit. They fail to fall in love with the land they tend, with the home in which they live. The place is for sale whenever it looks as if a sale might be profitable; the home is simply a place to stay until another change can be made. Whole communities sometimes seem affected with this desire for change. It is not hard to find neighborhoods in which almost every farm is for sale.

The best farming is not done in such a neighborhood. It is seldom done on the farm of the man who expects to sell out and try some other place ever so often. Some of these moving farmers do good work. Now and then can be found a man who seems to have just the tastes and the capacities needed to take an old run-down place and bring it into shape, and a man of this kind sometimes leaves a long and honorable trail of improved places behind him. But even this man, valuable as his work may be, cannot get the best out of farm life. He cannot know the comforts and satisfactions of a permanent home fashioned into harmony with his own ideals and fitted into comfortable contact with the corners and crannies of his own disposition. If other members of his family do not share in his pioneering instinct, the constant changing is likely to deprive them of much of the happiness of farm life.

The highest type of farming centers about the making of a home. To take a place and develop it into the sort of place one really wishes to live in; to make the house and its surroundings more beautiful while making the soil more fertile; to take pride and find joy not only in raising better livestock and growing bigger crops, but as well in watching the trees of one's own planting and the vines of one's own training grow to maturity and add to the comfort of the surroundings; to have the place grow and develop with the children

that grow up on it and so become a part of their lives and their characters—to do these things is to be a farmer in the truest sense, to contribute most fully to the making of the finest type of country life and also to get the most from one's labors and efforts.

The idea that the farmer should have a fondness for the fields he tills; that he should think of his home as a real part of his life and have the desire to hand that home down, more attractive and more desirable because of his labors, to his children and to their children, is not a mere notion of sentimentality. It is instead the expression of the highest conception of farming. Farming with such ideals as this in mind would in the course of a generation make our country districts beautiful beyond our dreams, and not only beautiful, but prosperous and progressive. For it is a fact that the best farming from a purely dollars-and-cents standpoint is done by farmers who love the land, and that home-building farming is in the long run far more profitable to the individual than mere crop raising or soil mining can be.—Southern Agriculturist.

Where the Lime Has Helped

The statement that "a limestone country is a rich country" is a truism much older than American agriculture. Some years ago a friend who was planning a trip to Palestine kindly offered to collect some samples of soil for me. I was glad of the opportunity to secure such samples from that country which once "flowed with milk and honey" and I gave him very specific directions as to how to collect the samples.

I asked him to try to get samples from important agricultural regions, where the land was still being used for crop production, and where he had reason to believe crops were being grown when Jesus Christ lived and toiled and taught among the men of that country; where, so far as he could judge, farming had been practiced, perhaps continuously by cropping or pasturing, for more than 3,000 years.

He brought me two very complete sets of soil samples. One of these was taken from the Plain of Dothan, where Joseph's brothers went to feed their father's flocks. The other samples were collected in the Plain of Esdraelon, where occurred the victory over the Midianites by the band of Gideon, who "threshed wheat by the winepress" when called to lead his people.

In both regions the land was in crops when these soil samples were taken, and all of the samples I found to be rich in limestone.

The chief value of wood ashes for use in the improvement of normal soils is due to the fact that they contain about 50 per cent of lime carbonate, the same compound as pure limestone. In the first century after Christ Pliny wrote: "On the other side of the Po the use of ash is viewed so favorably by farmers that they actually prefer it to the manure supplied by their cattle."

Marl and chalk are natural forms of lime carbonate already in a condition easily pulverized. An English record of 1795 mentions the "prevailing practice of sinking pits for the purpose of chalking the surrounding land, therefrom," and states that "the most experienced Herfordshire farmers agree that the chalking of lands so circumstanced is the best mode of culture they are capable of receiving."

On the famous Rothamsted Experiment station it has been found that the fields that had received liberal applications of this underlying limestone chalk a century or more ago are still moderately productive, while certain fields remote from the old chalk pits which show no evidence of such applications are extremely unproductive. Director Hall of the Rothamsted Experiment station states that many of the farmers in that vicinity are still reaping profitable crops from lands enriched by heavy applications of chalk made by their ancestors long years ago.—Dr. C. G. Hopkins in The Farmers Review.

With fruit trees the constant effort should be to keep the fruit bearing surface as near the ground as possible. It will make the harvesting of the fruit much easier.

The growing period while the animal is young is the time the frame is built.

Alfalfa Hay for Work Horses

BY DR. C. W. McCAMPBELL.

If alfalfa hay is fed properly it may be fed to any kind of horses. This applies just as much to work horses as to growing animals. However, it must be cut at the proper time for horse-feeding purposes and must be fed as a concentrate rather than as a roughage.

The method practiced by a majority of men who have been feeding alfalfa to work horses has been to fill the manger morning, noon and night, allowing the horse to eat all he wishes. Prairie hay has been fed in this way without any serious results, but not so in the case of alfalfa hay. Alfalfa hay is very palatable and horses eat very large amounts. Excessive urination and soft, "windy" horses that are puffed in the hocks, stocked on the legs and unable to endure hard work result. This has been the experience of hundreds of horsemen. The trouble is with the method of feeding, not with alfalfa hay.

It is believed commonly that the proper time to begin cutting alfalfa hay is when the field is about one-tenth in bloom. Cutting at such a time makes very good hay for cattle, but such hay is too "washy" for horses at hard work. To make hay suitable for horses at hard work, alfalfa must be allowed to become rather mature before cutting; in fact, the field should be in full bloom before the mower is started. The hay should be thoroughly cured and stacked. Special care must be taken to prevent spoiling or molding, as moldy, musty or dusty hay of any kind is injurious to horses.

Probably the chief cause of so much trouble in feeding alfalfa hay is over-feeding. One pound of alfalfa hay contains on the average, 35 per cent more digestible protein than 1 pound of shelled corn, and is fairly rich in carbohydrates and fat. No one would think of feeding a 1200-pound work horse a bushel of shelled corn in a day, yet by giving the same horse all the alfalfa hay he will eat, as large or a larger amount of digestible protein will be fed daily than is contained in a bushel of shelled corn. This excessive amount of highly nitrogenous material not only overworks the kidneys, but also causes irritation which may result in a pronounced chronic inflammatory condition of the kidneys. Another effect of over-feeding with alfalfa is a cloying of the whole system, resulting in impaired nutrition, filling of the legs and hocks, softness, excessive sweating, and impaired respiration. A part of the trouble with the wind comes from the fact that the overloaded digestive tract interferes with the proper functioning of the lungs. Heaves may develop, most cases of heaves resulting from indigestion. This disease is at first a functional disturbance, but later becomes structural in character and incurable.

To summarize, the points to remember in feeding alfalfa hay to work horses are: first, the hay must not be cut until quite mature; second, it must be free from dust, mold, or smut; third, it must be fed in limited quantities. As to the amount to be fed, experience seems to indicate that 1.2 pounds a hundred pounds live weight a day is about the maximum amount for work horses.

Because of its high proportion of digestible protein, alfalfa balances very well with corn, and these two feeds

make the most economical ration the Kansas farmer who grows alfalfa can feed, since he can control the time of cutting and the manner of curing and caring for the hay.

The man who buys alfalfa hay on the market usually chooses the hay showing the brightest green color. This is often the poorest for work horses, because it has been cut too green and is very "washy." If, however, the purchaser will select average, well-cured, clean alfalfa hay he will be able to reduce the cost of feed materially by substituting alfalfa hay for a part of the prairie or timothy hay. He may substitute 1 pound of alfalfa hay for 1½ to 2 pounds of prairie or timothy hay, until from one-third to one-half or more of the prairie or timothy hay has been replaced by alfalfa hay, the amount used depending on the quality of the alfalfa substituted for the other hays. The grain ration, too, may be cut down.

Waste

Forest and field and orchard, mountains of coal and ore, Mighty has been their bounty, limitless seemed their store; So we have blithely squandered, so we have sacked and spoiled, Boasting about our "progress," bragging of how we toiled. Drunken with nature's bounty, we laid our plenteous gain To the magic of Yankee hustle, to the vigor of Yankee brain. And we looted the goodly forests and planted the wasteful crop, And we hooted the careful prophet who said that the loot must stop!

But we're learning our little lesson, and we relish it not at all. And we're paying for past excesses in bills that are far from small. We gutted and gouged our forests—and the floods came roaring down To ruin the farmer's acres and ravage and wreck the town. Over and over and over we planted the same old field, With the same old crop repeated, then sighed at the dwindling yield. And we wasted our coal and iron, nor cared for the wealth we lost, Till the price moved up and onward, and we growled at the added cost.

We are learning our little lesson, but we have not learned it true, For we waste in some directions the same as we used to do. Our natural gas we squander to poison the healthy air. We're wasting our oil-flow blindly and nobody seems to care. In factory, farm and forest we're throwing our wealth away. And the bill for our careless living our children will have to pay. Tariff and trusts and wages are problems that must be faced, But the greatest of all our problems is the problem of careless waste. —Berton Braley in Farm, Stock and Home.

Horseradish Culture

Horseradish roots are ordinarily dug in the fall and stored in outdoor pits or in root-cellars, so that they may be obtained for use at any time during the winter. The best time to obtain the cuttings for the next crop is at the time of digging. The small roots which are about the size of a lead pencil are the best for this purpose. These usually are cut straight across at the top and diagonally at the bottom, so that the top end may be recognized. Usually they are tied in bunches of 50 or 100. They may be kept successfully by simply burying them in enough soil to keep them moist. If kept moist, the cuttings are able to endure any amount of freezing. By thus taking the cuttings in the fall of the year, much valuable time is saved in the spring.

As early in the spring as the ground can be worked, the cuttings should be

planted in rows about 3 feet apart, and 18 inches apart in the rows. The top of the cutting should be placed upward and should be within 1 or 2 inches of the surface. Sometimes the cutting is merely laid against the side of the furrow while plowing, being covered by the next round. However, a more uniform planting is made by using a digger or a spade.

With a good soil, thoro culture, and a favorable season, the roots should reach suitable size by fall. In a poor season, however, they may not reach sufficient size, and it may be necessary to allow them to grow two years. The crop has few serious insects or diseases.—Ohio Farmer.

Bacteria for the Legumes

Careful tests on the bacteria found on the roots of the legumes have been made at the Illinois Experiment station. These have shown how far inoculation may be carried from one variety to another. The specialists who made the tests, T. J. Burrell and Roy Hansen, say:

Since the demonstration in 1886 by Hellriegel and Wilfarth of the fixation of atmospheric nitrogen by leguminous plants when certain bacteria are present, no crop rotation has been considered rational that does not include a liberal use of legumes. That this discovery is applicable thruout the world makes it of especial value to mankind.

The benefit that would result could other ordinary farm crops be enabled to utilize atmospheric nitrogen would be inestimable. The importance of any success in this direction is apparent when it is realized that to produce one corn crop of 3 billion bushels requires about 4½ billion pounds of nitrogen, which at the commercial price of 15 cents a pound would cost 675 million dollars. Bacteria have peculiarly shaped forms in part of their life cycle, called bacteroids (bacteria like). These bacteroids occur in that portion of the young nodules which, in the cowpea, shows a reddish color. They are very resistant and enable the organism to develop in the rapidly growing nodule. The bacteria are studied under the microscope after first being stained with dyes. Temperature does not seriously affect the organism; it grows fairly well between 32 and 122 degrees Fahrenheit, but best at 68 to 82. Rather acid conditions do not injure it.

Careful pot-culture experiments as well as laboratory experiments in cross-inoculation have established the following groups of legumes in which the bacteria from any one plant will inoculate all the plants in the group:

- GROUP 1.
Mammoth Red clover.
Alsike clover.
White clover.
Berseem or Egyptian clover.
Crimson clover.
Zigzag or Cow clover.
- GROUP 2.
Alfalfa.
White Sweet clover.
Yellow Sweet clover.
Wild Yellow Sweet clover.
Bur clover.
Black medick or Yellow trefoil.
- GROUP 3.
Cowpea.
Partridge pea.
Peanut.
Japan clover.
Slender Bush clover.
Velvet bean.
Wild indigo.
Tick trefoil.
Acacia.
Dyer's greenweed.
- GROUP 4.
Garden pea.
Field pea.
Hairy vetch.
Spring vetch.
Broad bean.
Wild vetch.
Lentil.
Perennial pea.
Sweet pea.
- GROUP 5.
Soybean.
- GROUP 6.
Garden or field bean.

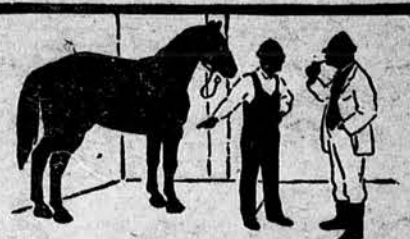
To Make Waterproof Cement

The following mixture for waterproof cement has been used for a long time by the United States Army engineers.

One part cement, two parts sand, three-fourths' pound of dry powdered alum to each cubic foot of sand. Mix dry and add water in which three-fourths of a pound of soap has been dissolved to each gallon.

This mixture is nearly as strong as ordinary cement and is impervious to water.

Manure left in the open yard thru the summer months may lose one-half its plant-food value due to fermentation and leaching. Rotted manure which has been saved carefully will be richer in plant-food elements, ton for ton, than fresh manure. It requires 1½ to 3 tons of fresh manure to make a ton of rotted manure, which means that the organic matter is reduced greatly and the total quantity of plant-food elements also is decreased by fermentation and exposure. Except in special cases and for certain crops or gardening conditions, there is no advantage in rotting the manure; better apply it fresh from the stable before any loss occurs.



Spavin Gone For Good

"Last Winter," writes John W. Neal of Clifton, W. Va., "I used Save-The-Horse on spavin. Have waited some time to see if lameness would come back but the horse is fine and I would not take the price of a full bottle for what I have left."

SAVE-TH-HORSE

(Trade Mark, Registered)

—the greatest of all remedies, is sold with a signed Guarantee to return money if it fails on Ringbone, Thoropin, SPAVIN or Shoulder, Knee, Ankle, Hoof or Tendon Disease. Every year for over 22 years, thousands of stubborn and supposedly incurable cases are cured by Save-The-Horse after all other methods failed. Be prepared! Write today for FREE 96-page horse BOOK, sample of guarantee and expert veterinary advice—all FREE. Always keep a bottle on hand for emergency.

TROY CHEMICAL CO.

15 State Street, Binghamton, N. Y.

Druggists everywhere sell Save-The-Horse with Signed Guarantee or we send it direct by Parcel Post Prepaid.

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Your choice of 44 styles, colors and sizes in the famous line of "RANGER" bicycles, shown in full color in the big new Free Catalog. We pay all the freight charges from Chicago to your town. 30 Days Free Trial!—allow the bicycle you select, actual riding test in your own town for a full month. Do not buy until you get our great new trial offer and low Factory-Direct-To-Rider terms and prices. LAMPS, HORNS, pedals, fenders, single wheels and repair parts for all makes of bicycles at half usual prices. No one else can offer such values and such quick service. SEND NO MONEY but write today for the big new Catalog. It's free. MEAD Cycle Company Dept. 517 Chicago

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Write for Greatest money saving fence bargain book ever printed. Brown fence is made of Heavy DOUBLE GALVANIZED WIRE. Resists rust, lasts 150 years. Also Gates and Barb Wire. Low Factory Prices. Freight Prepaid. Write for wonderful free fence book and sample to test. The Brown Fence & Wire Co., Dept. 1013 Cleveland, Ohio

FREE
We will send a copy of Ropp's Calculator Free to any landowner who has not received one—also our catalog of
Square Deal Fence
Don't buy until you get our prices and learn all about the best and cheapest fence to buy. Keystone Steel & Wire Co. 854 Industrial St., Peoria, Ill.

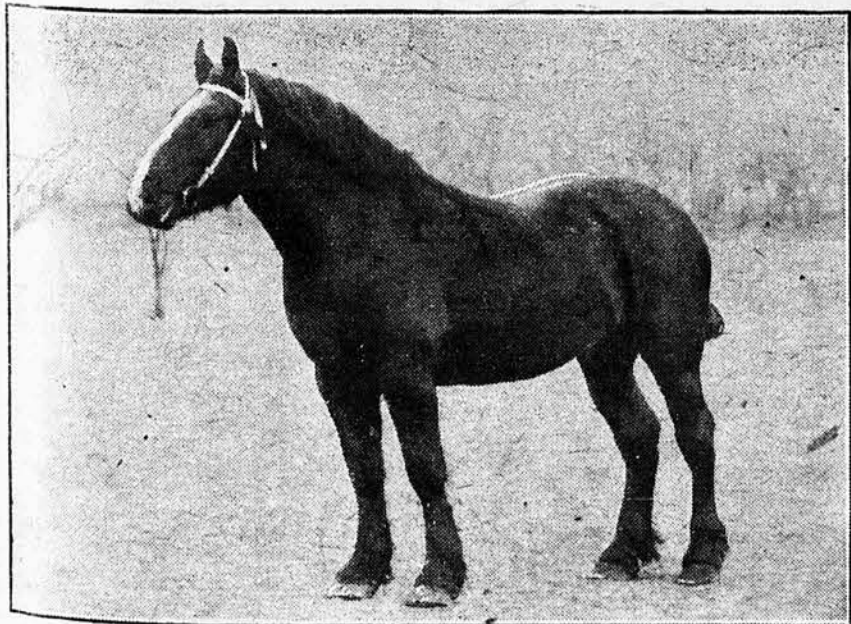
14½¢ A ROD
164 styles, highest quality fence. Order direct at wire mill prices. Shipped from Kansas, Indiana, Nebraska, Texas, Colorado or California. Catalog Free. Write today. Geo. E. Long, OTTAWA MFG. CO., 161 King St., Ottawa, Kans.

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Send us your hides or furs, and we'll tan and make Fur Coats, Robes, Mitts, etc. of them. **ALL WORK GUARANTEED.** All kinds of repair work and taxidermy. Also tanning harness and lags. The only Tannery in the Kansas City. Cash Paid for Hides and Furs. Write for catalog No. 1 and price list. **KANSAS CITY ROBE & TANNING CO.,** WICHITA, KAN. OKLA. CITY, OKLA., KANSAS CITY, MO.

"The Nestorian Girl"

A story of real life in Persia. It is a story of a love romance between a high Nestorian (a Christian) maiden and a Mohammedan prince. The extreme religious prejudices of Persia forbid them to marry. Trouble for the young people begins. The story is interspersed with bandit raids. Ashley, the Nestorian maiden, is taken away into captivity by the bandits. There she remains to this day the old fountain known as Ashley's Fountain and the trees under which Ashley is said to have sat. It is a most interesting novel and you should surely read it. **SPECIAL OFFER:** This dramatic story book sent free and postpaid for two new or renewal subscriptions to the Household Magazine at 25 cents each. The Household contains from 20 to 32 pages of stories and special departments monthly. Address **HOUSEHOLD, Book Dept. N. G. 36, TOPEKA, KANSAS**



Alfalfa Hay is a very Valuable Feed for Work Horses, but it Must be Fed Carefully; do not Cut it Too Early.

What would the oil in your engine show?

FOR years, both motorists and engineers were in the dark as to the amount of friction and consequent wear due to the sediment formed in the average motor oil.

Inferior oil breaks down under the terrific heat of an automobile farm tractor or stationary engine and forms voluminous black sediment. This sediment causes rapid wear of the parts because it crowds out good oil at points where friction occurs.

How a lubricant muzzles the tiny teeth of friction

If you could look at the surface of a bearing or other engine part through a powerful magnifying glass, what would you see?

Not a smooth, even surface, but thousands of microscopic teeth. Sediment excludes the protective film of the oil and allows these tiny teeth to grab and tear at each other, thus causing rapid wear.

A practical proof of superiority

The Sediment Test, illustrated at the right, is as simple as it is convincing.

The bottle to the left contains a sample of ordinary oil taken from the crankcase of an engine after 500 miles of running.

In the right-hand bottle is a sample of Veedol after being used for 500 miles under identical conditions.

Notice that ordinary oil contains over five times as much sediment as Veedol.

Make this test for yourself

Drain the oil out of your crankcase and fill with kerosene. Run the engine very slowly for 30 seconds and then clean out all kerosene. Refill with Veedol and make a test run. You will find your engine has acquired new power and a snappy pick-up. It will run more smoothly and give greater gasoline mileage.

Buy Veedol today

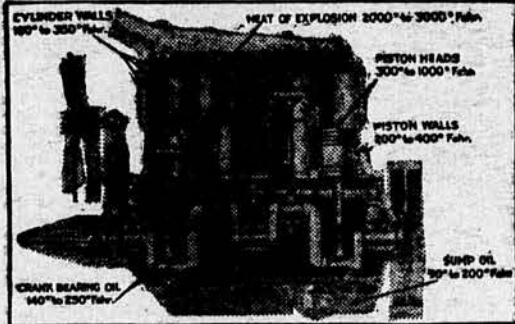
Your dealer has Veedol in stock, or can get it for you. If he will not, write us for the name of the nearest dealer who can supply you.

An 80-page book on lubrication for 10c

Written by a prominent engineer. Used as a text book in many schools and colleges. Also contains Veedol Lubrication Chart, showing correct grade of Veedol for every make of car, tractor, or stationary engine, winter or summer. Send 10c for a copy. It may save you many dollars.

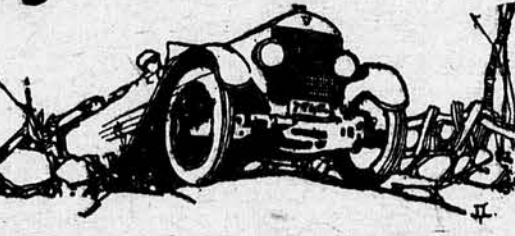
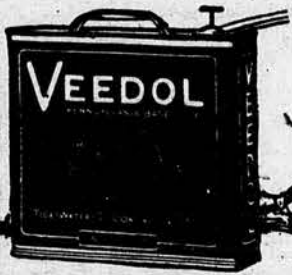
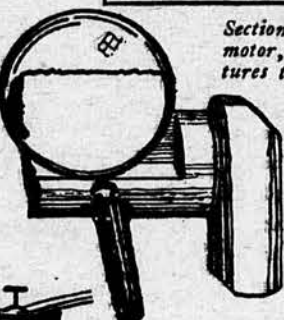
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Sectional view of a popular type of motor, showing high operating temperatures that cause rapid destruction of the average automobile oil

Millions of tiny teeth cover the apparently mirror-like surface of a bearing or other working part of an engine. These teeth tear and grind each other unless kept apart by a protecting film of lubricant.



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This Bible is about the size of a postage stamp and is said to bring good luck to the owner. Sent free if you send us 10c for a 6-months' subscription to the Household, a magazine containing from 20 to 32 pages of stories and departments monthly.
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Or choice of Watch or Silverware or Electric Flashlight, or choice from our large list of premiums given for selling 20 pkgs. Post Cards or 20 Religious and Art Pictures at 10c each, your choice. Order today.
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Six Drawer.
Drop Head.
Solid Oak Case.
Panel Front.
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Farmers Mail and Breeze New Model Machine Now Ready for Delivery.

The Farmers Mail and Breeze has contracted with one of the largest sewing machine factories for the distribution of their latest model machine. By taking these machines in large quantities and shipping direct from the factory to our subscribers we are able to offer these machines at about half the price you would pay sewing machine agents. By this plan our subscribers save middleman's profit and get the machine at practically factory price.

Guaranteed Ten Years

The Farmers Mail and Breeze will warrant every machine for ten years from date of shipment, and after fair trial of it. If perfect and entire satisfaction is not given, and defects cannot be remedied, the machine may be reshipped to us at our expense, and your money refunded promptly. The machine has six drawers which run on steel runners. No keys are required as the drawers lock and unlock automatically. ATTACHMENTS and ACCESSORIES. Each machine is equipped with one tucker, one quilter, one ruffler, one braid foot, one braider plate, one shirring plate, one binder, four hemmers and one hemmer foot. In addition you will also receive one package assorted needles, bobbins, screw driver and oil can and a comprehensive instruction book.

Our offer is a real money saving proposition for our readers. We do not ask you to do any soliciting in order to take advantage of the plan we submit. If you are interested in getting a first class guaranteed sewing machine at a real bargain send us a postal card and say, "I want full information about your new guaranteed sewing machine offer." It places you under no obligation.

It Costs Nothing to Investigate

Farmers Mail and Breeze Dept. S. M. Topeka, Kansas

A Chance for Wheat

BY W. H. COLE
Cowley County

Wheat is scarcely large enough for the rabbits to graze on. This does not necessarily mean that the wheat is not all right. The plants seem vigorous and healthy enough but the lateness of seeding coupled with lack of moisture and a great deal of cold weather have greatly retarded the growth. A few acres of wheat put out about the first of November in the kafir stubble is all up, and while the plants have not made any stool to speak of they have the appearance of being strong and healthy. While the wheat is more backward than usual here this winter the general condition is excellent, and with favorable wheat weather after spring opens up we can see no reason for being pessimistic over the prospects.

We recently received an inquiry from a man in Osborne county regarding some seed kafir, and in the letter he made the rather startling assertion that according to his best belief there was not to exceed 100 bushels of kafir that matured in that county in the season just past. Kafir has long had the reputation of being a drouth resister, but when a territory as large as a county produces so small an amount the severity of the drouth is at once apparent.

Owing to the fact that the engine which operates the feed grinder has been out of commission we have been cooking the kafir for the shotes for the last two weeks. A 50-gallon kettle is used, and enough may be turned out at one cooking to last the 25 head about two days. The feed is cooked over a slow fire of poles and usually about 1/2 day is required to do the job right. This does not mean that we stay around the kettle the entire time. Such is not the case. Enough water is put on the kafir to keep it from sticking to the bottom of the kettle, and after the fire is started attention once an hour is all that is necessary. Kafir cooked in this manner swells to perhaps three times the original size and is devoured greedily by the young porkers. The gains they are making are sufficient evidence that it is a most excellent ration. It is made more palatable by a handful of salt thrown into the kettle while it is cooking. A drink composed of warm well water liberally enriched with shorts and tankage is used as a beverage to wash it down.

A month or more ago we bought some tankage and paid \$3.50 a hundred for it, and as our supply was about exhausted we recently made a trip to town for a new supply and were greatly surprised to learn that the present price is \$5.25. When the price of hogs was set by the government a few months ago the farmers thought they could see prospects of a good profit in the hog industry, and if prices of feed stuffs had remained normal there would have been a good profit, but with shorts selling for nearly \$3 a sack and tankage jumping \$1.75 a hundred in a month it begins to look as if the silver lining that showed up recently was not really so bright after all. If our Uncle Samuel takes the reins in hand and dictates what price we farmers shall receive for our pork on the hoof we believe it would be equally just and right for him to say what we should have to pay for such stuff as tankage and shorts—feeds that are absolutely necessary in the production of pork.

A day was spent recently in motoring to the county seat, a distance of about 50 miles, and all along the way we could not fail to notice the scarcity of feeds of all kinds. But very little alfalfa still remains in the stack. A large percentage of the prairie hay, too, has been baled and shipped out, so that all that remains on many farms is a scant supply of dwarfed corn fodder and a too small supply of kafir or cane roughness. A cold, late spring, coupled with the shortage of rough feeds, will mean that it will be necessary for a good many persons to buy some high-priced oil cake. It is seldom that farmers in this portion of the state are kept out of the fields for so long a time as they have been this winter since winter really set in. For six weeks the ground has been frozen almost continually. While the frost has not gone down to exceed perhaps 6 inches it has been sufficient to tie up all farm work except getting up wood and the like.

If soil conditions are at all favorable

for it in the spring there will be a good many acres of Sweet clover put out here. Not many years ago people turned up their noses at Sweet clover, and even yet one occasionally hears a person say that their horses will not eat the Sweet clover which grows along the road. Such a statement may be true all right but farmers are finding out that if they have a few acres of the plant fenced that the stock will eat it all right and do well on it. The White was first planted here and naturally has the prestige, but farmers are finding that the Yellow comes on a little earlier in the spring and does not get so large and woody, and that variety is receiving a great deal of attention. A friend planted a few acres of the White a few years ago and somehow failed to get a good stand. Instead of replanting with the White he scattered on the Yellow the following spring so that now the two varieties grow upon the same soil, and the stock prefer the Yellow to the White. In purchasing either variety great care should be taken to obtain the perennial seed.

Put Down Profiteering

[A Recent Capper Letter to the Food and Fuel Administrators at Washington.]

Believing you appreciate that a little dependable information from the grass roots outweighs a great deal of the other kind from any source, I am forwarding to you this extract from a letter I have just received from the pastor of the First M. E. Church at Kanorado, Kan., a most excellent man and pastor:

Mr. Hoover, Dr. Garfield, and the government have asked me to do many things to promote the conservation of food and fuel and to help the Red Cross and other funds. I have gladly and willingly done what they asked. The people have responded in a liberal way. We must accomplish what we have set out to accomplish as a government. But there are some things which need to be righted, and by letting you know the conditions here, your appeal might do much.

We are a loyal and a patriotic people, but there is much dissatisfaction about such matters as these: We are asked to conserve flour—which we have done—and are urged to use cornmeal, rye, etc. But these substitutes are much more expensive than flour, altho flour is somewhat cheaper than it was. Best wheat is selling for \$1.90 to \$1.95. Flour is \$2.90 for 48 pounds.

Corn is selling for \$1 to \$1.05 a bushel. Cornmeal costs 65 and 75 cents for 8 1/2 pounds.

This makes cornmeal much more expensive than flour.

For the coal we bought at \$8 and \$8.50 a ton last winter, and even less than that during the summer, we now have to pay \$10.

These matters ought by all means to be remedied, for the people are complaining of this discrimination and will complain more and more if the wrong is not rectified. I am hoping your influence with those in authority will avail.

Such testimony in regard to the rankly unjust prices of many necessities constitutes a large part of my daily mail. These letters are not complaints from disgruntled persons. In many instances they come from those who, like this pastor, see already the ill effect of profiteering on the American home.

This is a people's war and should be conducted as one. There should be no profits in it for anybody above the actual live-and-let-live basis. The people expect and are willing to suffer necessary hardships and, if I may judge of their temper by those we have in Kansas, they will meet these hardships with smiling fortitude while supporting the national government with all their might. This gives us only the more urgent incentive for putting the blood-sucking profiteer where he belongs, an example and a warning to all of his kind, before they drain the people of their strength and resources.

I am wishing more power to your arm, that you may soon bring to bear the full strength of the government against these traitors.

ARTHUR CAPPER,
Governor.

To Dig Post Holes

I wish to construct a portable post hole machine to be operated by a small gasoline engine, both mounted on a truck wagon. Can any reader give me plans for building this machine? I have been told that such machines are used in the Plains Country in Texas. I have 30 miles of fence to build next spring, and the scarcity of labor requires that I get a new method. I will pay \$1 cash for the plan I may adopt.

Larned, Kan.

A. L. Stockwell.

Breeding animals that have weak constitutions and organic weakness will transmit these defects to their progeny.

Other things being equal, pigs from mature sires and dams grow faster and feed better.

Farmers Now Want

**LIGHT
WEIGHT**

**HIGH
SPEED**

**MANY
JOBS**

"Some engines take a team of horses and a crowbar to get them on the job. A Cushman of same horsepower will do the same work and a 14-year old boy will move it."
D. LINTON, Ramsom, Ill.

"This winter am using the 4 H. P. Cushman to pull a 32-inch circular wood saw. Have sawed logs 16 to 18 inches in diameter and it cuts better than a regular 10 H. P. big engine because of its speed."
L. N. AMBLER, Cheney, Kansas.

"It does everything on my farm—runs an 8-inch feed mill, pumps water, runs washer, churn, etc. Last harvest I cut 235 acres of grain with it on the binder. It's the best investment any farmer can make."
B. M. HEYEN, Tenney, Minn.

Anyone can see the advantage of light weight. As one farmer puts it: "Why pay freight on a thousand pounds of iron, and break your neck trying to move it around, when 190 pounds of Cushman will pull the load even better?"

High speed gives more steady and more certain power; it keeps the engine from being choked down quickly when the grinder strikes the grain or the saw strikes the log—giving the throttle governor time to open up and supply more power.

The All-Purpose or Many Job feature pleases everyone. As D. V. Spaulding, Hennessey, Okla., says: "I could spare any other machine on the place better than the Cushman. I use it for everything. It is light enough to be moved and I can depend on it giving full power."

Cushman Light Weight All-Purpose Engines

Built light and built right. Weigh only one-fourth as much, per horsepower, as ordinary farm engines, but are so well built of such good material, so carefully balanced and so accurately governed that they run much more steadily and quietly. No loud explosions—no fast-and-slow speeds—but smooth, steady power like automobile engines.

What Cushman Motors Will Do

They may be attached to grain binders, corn binders, corn pickers, potato diggers, etc., to save horses. We furnish attachments. They may be mounted on hay balers, shellers, shredders, small threshers, etc. They do all regular jobs, such as grinding, sawing, pumping, elevating grain, etc., more satisfactorily than heavy engines.

Ask for book on Light Weight Engines. Sent free.

CUSHMAN MOTOR WORKS
814 North 21st Street
Lincoln, Nebraska

Sizes
up to 20
H. P.



8 H. P.
Weighs only
320 pounds

4 H. P.
Only 190 pounds

Before You Buy Any Engine Ask These Questions

How much does it weigh? If it weighs more than 60 lbs. per horsepower, what is the reason?

Is it throttle-governed? A throttle governor insures steady, quiet, economical operation.

Has it a good carburetor? The Cushman has the Schebler—one of the best made. Many so-called farm engines have no carburetor.

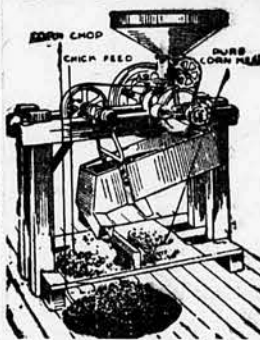
Has it a friction clutch pulley? The Cushman has one, that alone would cost \$15.00.

EASY TO MOVE FROM JOB TO JOB

CUSHMAN

(232)

Be Your Own Miller Make Your Dollar Go the Limit

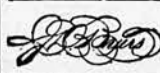


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We proved to thousands of people at recent State Fairs that this mill is the one mill that will grind up into the finished product—Corn, Oats, Rye, Barley, Wheat and Buckwheat and give you the finest meals—Graham's, Whole Wheat and Buckwheat Flour.

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Fine written Calling Cards 20c doz. I teach Penmanship and Shorthand by Mail. Add. J. D. Byers, Dept. 3, Chanute, Kan.

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Feed it ground, head stems and all. Makes fine balanced ration for horses, hogs, and cattle. You save the thresh bill and kafir stores better this way. We build the only Head Kafir Grinders made that do not use knives. Our auger force feed takes the place of knives and does away with all choking that knife mills are subject to. Our Mills also grind wheat into flour and corn into meal and chops of all kinds.

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You take no risk. Our Mills guaranteed as represented or your money refunded. Seven sizes, both sweep and belt power to choose from, priced from \$22.80 up. For over 30 years Boss Mills have satisfied others. They will satisfy you too. Write today for full particulars and Folder with prices. Save the waste and help win the war.

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1512 W. 5 St., Oklahoma City, Okla.

CHINESE PRIZE PUZZLE \$100.00 IN GOLD GIVEN



This picture shows a "chink" doing his daily wash. In this picture are the faces of a few of his customers—these faces can be discovered by a little figuring and by turning and twisting the picture in various positions. It looks easy and simple, but if you can find as many as two faces, mark them with an X and return the picture to us and we will send you FREE and POSTPAID A BIG PRIZE PACKAGE.

OUR OFFER We are the largest magazine publishers in the west, and are conducting this big club in connection with our big introductory and advertising campaign and want to send you sample copies and full particulars as to how you can become a member of this club and share in the \$100.00 in Gold and thousands of other valuable premiums. Does not cost you a single cent to join the club, and positively every club member wins a premium. Anyone may enter, and bear in mind, there is absolutely no chance to lose. If there should be a tie between two or more contestants for any of the prizes, each tying contestant will receive the prize tied for. **NOTICE!** Every new club member this month also receives a beautiful GENTLE GOLD FILLED SIGNET RING, GUARANTEED FOR 5 YEARS FREE AND EXTRA, JUST FOR BEING PROMPT. Get your share of this \$100.00. Write TODAY.

CHINESE PUZZLE CLUB, 276 CAPPER BLDG., TOPEKA, KANSAS

Do Your Own Mending

With a Set of the "Always Ready" Cobbler's Tools

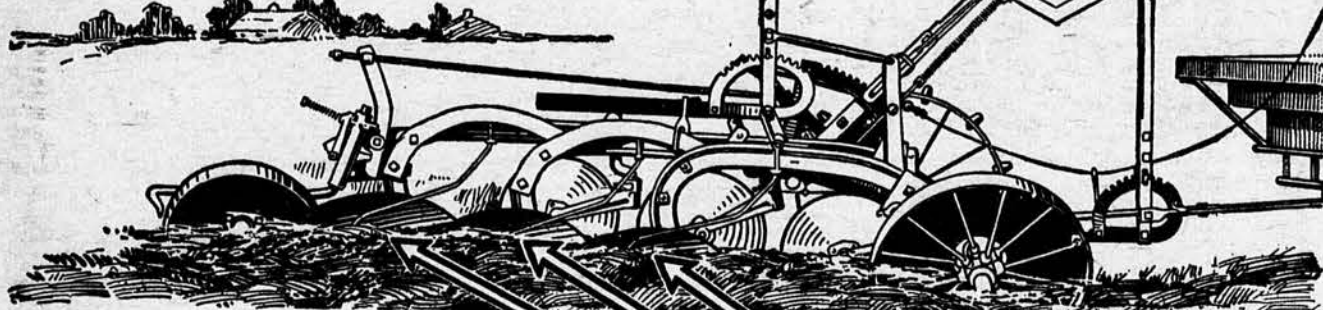


This handy shoe repair outfit was made especially for home use. With the aid of these tools you can easily do any kind of shoe repairing at a great saving of time and expense. The outfit comes securely packed in a box and consists of the following: Iron stand for lasts; one each 9 in., 7 1/2 inch, 5 1/2 inch lasts; shoe hammer, shoe knife; peg awl; sewing awl; stabbing awl; one package of heel nails; one package of clinch nails; and full directions. A most complete and serviceable outfit which will always give satisfaction.

SPECIAL OFFER: This cobbler's outfit may be had free all mailing charges prepaid by sending us 2 yearly subscriptions to Farmers Mail and Breeze at \$1.00 each, \$2.00 in all. Show this copy of our paper to your friends. They will gladly give you their subscription when they see a copy of the paper.

FARMERS MAIL AND BREEZE
Dept. C. O., Topeka, Kansas

Getting E-B Efficiency Behind the Tractor



IF you followed the E-B Engine Plows at the tractor demonstrations, you noticed how the plows turned the furrows in a steady flow, buried all trash and stubble, and required the least attention from the operator. The mould boards scoured clean—the plows just seemed to fit the soil and the pull of the tractor.

Lighter draft because load is carried on thoroughly lubricated wheel bearings—no landside friction—real quick detachable shares—no nuts to turn—no wrench to find—your hands the only tools needed. An exclusive E-B feature. This was only to be expected in E-B Engine Plows. They are a part of the E-B Line—"the tools of prosperity"—built with knowledge gained by 66 years of implement building.

Years before the tractor was introduced, E-B (Emerson) the original Foot-Lift Plows held unquestioned leadership. And when the tractor proved its greater efficiency in farm power, we built into E-B Engine Plows all the big features of our famous "Foot-Lift" Line. There were features proved out through years of actual field experience.

Thus in an E-B Tractor outfit you are sure of getting the greatest possible assurance of satisfactory service. Write us for literature on E-B Engine Plows and learn about their features which save time and fuel behind the tractor—and which insure good plowing in any field on your farm.

Whenever you need anything in farm machinery, look for it under the E-B trademark. It shows the way to better, more profitable farming. Ask your dealer for E-B Implement Company goods when you visit his store, or mention the machine you are interested in and we will mail facts. Also field views and suggestions for use as prepared by the E-B Agricultural Extension Dept.

Emerson-Brantingham Implement Co., Inc.
Good Farm Machinery Established 1852
ROCKFORD, ILLINOIS



E-B Quick Detachable Share
One pull of the lever forces share into position and locks it. No bolts. No wrench. Just your hands. Attached or removed in a few seconds—even after years of use.

The Tools of Prosperity

- E-B (Emerson) Plows
- E-B (Emerson) Engine Plows
- E-B (Emerson) Harrows
- E-B (Emerson) Planters
- E-B (Emerson) Grain Drills
- E-B (Emerson) Cultivators
- E-B (Emerson) Listers
- E-B Potato Machinery
- E-B (Standard) Mowers
- E-B Hay Tools
- E-B Baling Press
- E-B (Emerson) Spreaders
- E-B (Emerson) Gas Engines
- E-B (Newton) Wagons
- E-B (Emerson) Buggies
- E-B (Emerson) Auto Trailers
- E-B (Reeves) Threshers
- E-B (Geisler and Peerless) Threshers
- E-B (Geisler) Saw Mills
- E-B (Reeves and Peerless) Steam Engines
- E-B 9-16 Kerosene Tractor
- E-B 12-20 Kerosene Tractor
- E-B (Big Four) 20-35 Tractors
- E-B (Reeves) 40-65 Tractors

Feed Shortage Pinches

Despite the rapidity with which all classes of livestock have been leaving Kansas farms this winter the scarcity of feeds has begun to pinch stockmen in many districts. Water is also reported scarce in some places tho the recent heavy snowfall has helped this situation to some extent. Bad drifting of the snow exposed many wheat fields to the severely cold weather, also blocking the highways. Wheat prospects generally are poor. Peach trees have been killed by the cold. Threshing of maize and sorghums is practically finished. Reliable seed corn will be difficult to obtain this spring.

Gray County—We have had severely cold weather and a heavy snow that blocked traffic on the east and west roads. The snow was of little benefit to wheat as it blew off the fields. Early sown wheat probably is past help, but the late may grow if we have moisture. Stock is wintering well in spite of short feed.—A. E. Alexander, Jan. 18.

Osborne County—Farmers believe wheat is dead. We have had 6 inches of snow recently but it blew off the wheat fields. Stock doing well considering shortage of feed.—W. F. Arnold, Jan. 19.

Pawnee County—Corn husking has been delayed and wheat needs moisture badly. Cold weather is quite hard on the stock and there is no surplus feed. A good snow fell January 9 and the thermometer dropped to 18 degrees below zero. Good horses and mules are in demand and bring good prices. Car shortage continues. Considerable corn going to market at \$1.50; kafir and maize \$1.40.—C. E. Chesterman, Jan. 15.

Brown County—Weather is very dry and the ground is badly cracked. Wheat seems to be holding up fairly well. Water is scarce and feed will not hold out in some places. Hay \$20 to \$30; wheat \$2.05; corn \$1.45; oats 70c; cream 50c; eggs 46c.—A. C. Dannenberg, Jan. 19.

Wyandotte County—Wheat ground is covered with snow. Roads are smooth with ice. Stock doing well, but hay and other feeds are higher than ever before. Peach trees have been killed. Our deepest snow amounted to 4 inches.—G. F. Espenlaub, Jan. 19.

Osage County—Corn is moving rapidly and most of it is being shipped in the car. Farmers are afraid to hold it in large quantities, and about half of the crop is in the field yet. Plans are being made for putting in large acreages this spring. Feed is high but not scarce.—H. L. Ferris, Jan. 19.

Decatur County—Seven inches of snow fell last week but it drifted badly, and only about half of the fields are covered. We have had more zero weather already this winter than we usually have the entire season. Corn is scarce and hard to get.—G. A. Jern, Jan. 19.

Anderson County—Our thermometer dropped to 22 degrees below zero January 12 with about 4 inches of snow on the ground. Where snow did not blow off the fields, the wheat will be greatly benefited. Not much is being done on the farms except daily chores. Horses are bringing good prices. Corn \$1.97; oats 70c; butterfat 48c; eggs 50c.—G. W. Kiblinger, Jan. 18.

Sheridan County—Fine weather prevails since the blizzard. No loss of livestock has been reported. Feed situation is not likely to become serious. Corn shipped in is selling at \$1.65; barley \$1.35; oats 90c.—R. E. Patterson, Jan. 18.

Cloud County—A good snow fell last week, which may provide some protection and furnish moisture for wheat, also water for stock. Roads have been blocked and rural carriers delayed several days. There are a good many public sales, and cattle and hogs are selling high, but horses are cheap due partly to scarcity and high cost of feed. Some corn is in the fields unhusked and occasionally some stock dies. Eggs are scarce and high.—W. H. Plumly, Jan. 18.

Miami County—We have had real winter weather since the last report and the ground has been covered with several inches of snow. The only work we can do now is to bring in feed and a few other chores. Some grain, hogs and cattle are going to market. Coal is scarce. Butterfat 47c; eggs 50c; corn \$1.20 to \$1.35.—L. T. Spellman, Jan. 18.

Sumner County—Another snow visited our county last week but a high wind caused most of it to pile up in the roads along fences where it will not do the wheat any good. Most of the stock is going thru the winter quite well. Wheat \$2; corn \$1.85; oats 68c; butter 45c; butterfat 52c; eggs 45c; potatoes \$1.40; hens 18c.—E. L. Stocking, Jan. 18.

Books County—Feed is scarce and most of the hogs have been sold. But little snow is left on wheat fields. The mercury registered 22 degrees below zero. Bran \$1.85; shorts \$2.30; flour \$2.90; eggs 45c; butterfat 48c; corn \$1.70; alfalfa \$32; straw \$18.—C. O. Thomas, Jan. 18.

Cowley County—The ground has been covered with snow for 10 days, which has been a great protection to the wheat. Stock is doing well and no disease is reported. More farmers are without hogs than ever before. Eggs 55c; butter 50c; butterfat 51c; milk \$3.—L. Thurber, Jan. 19.

Stevens County—It looks now as if lots of the late sown wheat is dead. The big snow drifted badly and very little is left on the wheat. Cattle are eating lots of feed and it is not plentiful. Maize threshing is not done, but it will yield from 2 to 20 bushels. Maize \$2.95; butterfat 47c; butter 45c; eggs 40c.—Monroe Traver, Jan. 17.

Ottawa County—The big snow last week covered the ground to a depth of 10 inches, but it drifted badly. Most of the wheat fields are fairly well protected from the severe cold weather. Feed is abundant and stock is wintering well. Snow has been removed from all main traveled roads and traffic has been resumed.—W. S. Wakefield, Jan. 18.

Geary County—A high wind piled the snow in drifts on east and west roads and blocked traffic. The wheat was not benefited very much, due to the fact that it drifted from the fields. We have received some reports of cattle dying.—O. R. Strauss, Jan. 19.

Marshall County—Wheat fields are dry but it is too early to tell much about the condition yet. Little corn is going to market as elevators are full and no cars are available. Few sales but everything is going high. Good reliable seed corn will be scarce next spring and will bring a good price.

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Cattle are in good condition and no reports of loss are coming in. Corn \$1.25 to \$1.40; shorts \$2; bran \$2 to \$2.50; cream 50c; eggs 50c; hens 18c; chicks 18c. —C. A. Kjellberg, Jan. 19.

Lincoln County—Weather is very cold and the snow drifted badly. Wheat prospects are very poor. There is plenty of feed yet and stock is doing good. Everything sells high at public sales. Corn \$1.50 to \$1.60; oats \$50; hogs \$15.50; eggs 50c; butter 35c; hens 18c. —E. J. G. Wacker, Jan. 18.

Kearny County—Farmers have finished threshing. Most of the sorghum crops turned out well. Stock is doing well but feed is becoming scarce and can't be bought at any price. Not much snow on fields but roads are blocked. Butterfat 47c; eggs 40c. —A. M. Long, Jan. 19.

Graham County—Every man on the road has his shovel and the snow is beginning to disappear. Stock is doing well and the Russian thistle has shown itself of value. We have plenty of fuel. —C. L. Kobler, Jan. 19.

Washington County—The east and west roads have been blocked due to badly drifting of snow. Farmers are not doing much but the chores. Cream 50c; eggs 79c. —Mrs. Birdsley, Jan. 19.

Lyon County—January has been a real winter month and the thermometer has dropped to 20 degrees below zero. Stock not well housed is suffering from severe winds. Four inches of snow on the fields will help the wheat. Early sown fields are doing fairly well, and with plenty of snow during February and March will make a good showing. Farmers are shipping out every possible ton of marketable hay and straw while the prices are high. —B. R. Griffith, Jan. 20.

The Torrens System Explained

Under our present antiquated system every time a piece of real estate changes hands, some lawyer must examine into the legality of the title. Old records, running back for many years, must be searched at great labor and expense; and the next time the property is sold, and the next and the next, the same identical work must be done over and over again and other big lawyers' fees paid—a system as foolish and uneconomical as paying a man to carry a brick from one side of the street to the other and back again and again interminably.

Now the Torrens system proposes that instead of this perennial investigation of the same thing, this unending job of rolling the stone up hill and then letting it roll straightway down again, and all to no purpose save the paying of unnecessary fees to lawyers who might better serve their fellows in some other way—instead of all this, we say, the Torrens system proposes that the state shall examine the title once for all, guarantee it, and register it, so that forever afterward it may be transferred almost as easily, quickly and cheaply as a government bond or a share of stock in an incorporated company. The original cost of a Torrens deed, even including the little tax for the guarantee fund, would be little more than the present cost of one or two title investigations; and ever after the farmer would be able to transfer his property, or secure loans upon it, at from one-fourth to one-twentieth the present cost. —Progressive Farmer.

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FARMS WANTED.

I HAVE SOME CASH BUYERS FOR SAL-
able farms. Will deal with owners only.
Give full description, location, and cash
price. James P. White, New Franklin, Mo.

FEMALE HELP.

A 42-PIECE DINNER SET FREE—CON-
sisting of 6 Large Dinner Plates, 6 Pie
Plates, 6 Individual Butter Plates, 6 Fruit
Plates, 6 Cups, 6 Saucers, 1 Large Meat
Dish, 1 Covered Sugar Bowl (2 pieces),
1 Cream Pitcher, 1 Large Vegetable Dish
and 1 Pickle Dish. Words cannot describe
or Pictures show the Beauty and Value of
this Superb Dinner Set. It will be sent to
you Absolutely Free, all charges prepaid in
return for a few minutes of your spare time.
Don't overlook this Wonderful Offer. Only 97
Sets in stock so write Today. Address C. A.
Nudson, 501 Capital Bldg., Topeka, Kan.

MALE HELP WANTED.

WANTED—MEN ABOVE THIRTY TO
represent us, best paying contract, steady
employment. F. H. Stannard & Co., Nur-
serymen, Ottawa, Kansas.

WANTED—MARRIED MAN FOR FARM
work. A man preferred with son or sons
under draft age and old enough to do any
kind of farm work. Box 237, Cedar Vale,
Kan.

A COMPETENT FARM HAND, THOR-
oughly experienced and married, wants
farm employment after Feb. 1st. Corre-
spondence solicited from patriotic, church-
going people. Harmon, care Mail and Breeze.

LIVESTOCK COMMISSION MERCHANTS.

SHIP YOUR LIVE STOCK TO US—COM-
petent men in all departments. Twenty
years on this market. Write us about your
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ders. Market information free. Ryan Rob-
inson Com. Co., 425 Live Stock Exchange,
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Inventions Wanted. \$1,000,000 in prizes of-
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opinion as to patentability. Our Four Books
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sist inventors to sell their inventions. Victor
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Southwest. For free catalog address C. T.
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LET US TAN YOUR HIDE: COW, HORSE,
or calf skins for coat or robe. Catalogue
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AGENTS.

WE PAY \$100 MONTHLY SALARY AND
furnish rig and expenses to introduce guar-
anteed Poultry and stock powders. Bigler
Company, X 608, Springfield, Ill.

FARM HAND.

WANTED: MARRIED MAN AND SON 12
to 16 years old, experienced farmers. Give
references and wages expected. Steady em-
ployment for right man. Wesley W. Trumbo,
Peabody, Kan., R. 8.

MISCELLANEOUS.

LEARN TO BE A NURSE. ADAMS, 1000
Bialto, Kansas City, Mo.

CONTAGIOUS ABORTION PREVENTED
by R. Harold, Manhattan, Kansas.

WANTED—60 HEAD OF CATTLE FOR
pasture the season 1918. R. W. Crisp,
Herington, Kan.

WANT ROOMING HOUSE IN GOOD CITY.
Will buy furniture and rent building.
Sondergard Realty Co., Ramona, Kan.

FORD MANIFOLD HEATERS \$2.50. POWER
attachments \$3. Nonkick burglar proof
cranks, \$3.50. Free Trial. "Oakley," Box
535, Omaha, Neb.

LEAF TOBACCO—KENTUCKY'S BEST,
for chewing or smoking. 3 yrs. old. 3 lbs.
\$1.25 prepaid; 7 lbs. \$2.50. Special prices on
large quantities. S. Rosenblatt, Hawesville,
Ky.

PASTURE WANTED IN KANSAS FOR
grazing season of 1918. Give location, num-
ber of acres, how watered, shipping point
and price. Address F. L. Merchant, 426
Livestock Exchange Bldg., Kansas City, Mo.

HIGH PRICES PAID FOR FARM AND
dairy products by city people. A small
classified advertisement in the Topeka Daily
Capital will sell your apples, potatoes, pears,
tomatoes and other surplus farm produce at
small cost—only one cent a word each in-
sertion. Try it.

OLD FALSE TEETH WANTED—DON'T
matter if broken. We pay up to 15 dollars
per set. Also cash for Old Gold, Silver and
broken Jewelry. Check sent by return mail.
Goods held 10 days for sender's approval of
our offer. Mazer's Tooth Specialty, 2007 S.
5th St., Phila., Pa.

BIG WESTERN WEEKLY SIX MONTHS
25 cents. Biggest and best general home
and news weekly published in the West.
Review of the week's current events by Tom
McNeal. Interesting and instructive depart-
ments for young and old. Special offer, six
months' trial subscription—twenty-six big
issues—25 cents. Address Capper's Weekly,
Dept. W. A.-12, Topeka, Kan.

To Avoid a Can Shortage

A shortage of tin for commercial pur-
poses threatens to make the dairy in-
dustry more and more dependent on the
present supply of cans. The Food Ad-
ministration recommends that all ship-
pers of milk and cream bring into use
as soon as possible all cans along the
highways and byways of traffic and
keep them in good condition by thoro
drying after washing, and by careful
handling.

Managers of dairy establishments and
shipping stations are asked to discon-
tinue the practice of lending cans. Ex-
perience has shown that these cans as
a class are especially subject to rough
treatment and are consequently short-
lived.

Dairymen who ship cream—the Food
Administration suggests—can market
as much butterfat as formerly in fewer
cans by skimming the cream richer.
Ten cans of 35 per cent cream contain,
for instance, as much butterfat as 17
cans of 20 per cent cream. The richer
cream leaves more skimmilk on the
farm and makes shipping charges con-
siderably less a pound of butterfat.

BIG BARGAINS IN REAL ESTATE

Dealers whose advertisements appear in this paper are reliable and bargains offered are worthy of consideration

Special Notice

All advertising copy must be in the hands of the Real Estate Department by 10 o'clock Saturday morning, one week in advance of publication to be effective in that issue. All forms in this department of the paper close at that time and it is impossible to make any changes in the pages after they are electrotyped.

360 ACRE RANCH in Gove Co., Kansas. W. M. Mason, Walnut, Kan.

GOOD WHEAT SECTION; well located; will split; some in cultivation. \$25 per acre. Good terms. C. W. West, Spearville, Kan.

480 ACRES highly improved stock and grain farm, close in. Price for quick sale, \$45 per acre. S. L. Karr, Council Grove, Kan.

80 AND 160 ACRES, IMP., at \$50, with terms, short time. Write Decker & Booth, Valley Falls, Kan.

320 ACRES WICHITA COUNTY, KANSAS. \$7.50 per acre quick. A. P. Nichols, Kansas City, Mo.

600 ACRES, well improved, lays good. Price \$50 per acre. Other farms for sale. John J. Wieland, Emporia, Kan.

160 ACRES GRASS, east part Osage Co., one ml. from station. Price \$35 per acre. McCown Realty Co., Emporia, Kan.

160 A., IMP., 4 MI. TOWN, \$65 A. 125 a., 1 ml. town, \$10,000. Triplett Land Co., Garnett, Kan.

320 A., 3 MI. TOWN. ALL IN GRASS. All level, no imp. Price \$7,000. Terms on part. H. J. Settle, Dighton, Kan.

GOOD WHEAT SECTION; well located; will split; some in cultivation. \$25 per acre. Good terms. C. W. West, Spearville, Kan.

4 SECTIONS of good ranch land in a body located about 11 ml. S. W. of Elkhart, Kan. \$10 a. Earl Taylor, Elkhart, Kan.

8600 ACRE RANCH, Pawnee Valley; 350 cultivated. Well improved. Running water. All tillable. 250 acres wheat; one-third goes. \$25 an acre. D. A. Ely, Larned, Kan.

290 ACRES, six room house, new barn, close to school and three towns. Possession March first. Price \$30 a. Easy terms. The King Realty Co., Scott City, Kan.

80 A., 2 1/2 MI. WAVERLY, 5 room house, good large barn. Some hay land, good blue grass pasture, good farm land. Price \$5,000. W. H. Lathrom, Waverly, Kan.

160 ACRES, well improved, abundance of water, 3 miles good town. Price \$9,000, good terms. Some good exchanges. Holcomb Realty Co., Garnett, Kan.

I HAVE BUYERS for large tracts of grass lands. I want you to list your holdings with me. Also all lands. Guss Schimpff, Burns, Kan.

FREE LITERATURE describing best Arkansas lands. Write Burchfiel-Beneau Land Co., American National Bank, Oklahoma City, Okla.

LANDS IN STEVENS and Morton Counties, Kansas, and Baca County, Colorado. Write us for prices. John A. Firmin & Co., Hugoton, Kan.

FOR SALE. All kinds of farms in Northeastern Kansas. Send for printed list. Silas D. Warner, 727 1/2 Commercial St., Atchison, Kan.

A SNAP. 160 acres level wheat land, 100 acres in cultivation, part terms, \$2100. 7 quarters all join, nearly all good plow land, 60 acres in wheat, 1/2 ml. school. \$11 an acre. C. N. Owen, Dighton, Kan.

FINE STOCK RANCH. 1300 acres fine blue stem grass, abundance of water, 100 plowed, large buildings. 7 miles shipping on Santa Fe; \$40 per acre. T. B. Godsey, Emporia, Kan.

8000 A. RANCH. 7500 a. grass. 2 ml. of spring water. All fenced, cross fenced, good ranch improvements. 1500 a. alfalfa land. 4 ml. town, main line R. R. \$15 a. Terms. F. H. Templeton, Spearville, Kan.

TWO NICE HOMES, close to Valley Falls, Kan., where the Meyers Milch Condenser is located. Good improvements and the best of soil. 220 a. at \$140 per acre. 240 a. at \$125 per acre. Good terms. Benj. J. Griffin, Valley Falls, Kan.

400 ACRES in Kiowa County; 6 miles of County Seat, 340 acres in cultivation; 300 acres wheat. Improved. Owner will sacrifice for quick sale. \$35 per acre. Here is your chance. The Pratt Abstract & Inv. Co., Pratt, Kan.

175 A., 1/2 MI. AGRICOLA, 4 1/2 WAVERLY, 10 alfalfa, 20 clover, 20 blue grass pasture, 18 wheat goes. New house and barn, granary and crib, two chicken houses, two good wells, never failing. Will carry \$4,500, 6%, \$12,000. W. H. Lathrom, Waverly, Kan.

440 ACRE STOCK AND GRAIN farm, 3 miles of shipping point, on Santa Fe, 250 a. best Cottonwood bottom alfalfa and corn land, balance pasture. Permanent water, two sets good improvements. Price \$100 per acre. Terms. Cowley-Hays Real Estate Co., Cottonwood Falls, Kansas.

240 ACRES well located, smooth land, well divided for crops. 60 acres in wheat, 6 room cottage, good barn and other improvements. Write for descriptions of this or any size farm interested in. Large list of farm bargains to select from. Mansfield Land Co., Ottawa, Kan.

CHASE COUNTY stock farm. 282 acres, 5 ml. Elmdale, 1/2 ml. school. Daily mail, telephone, good roads. 100 acres cultivated including 25 acres alfalfa, 20 acres wheat, 180 acres pasture, timber, creek. Fair improvements. No trades. Price \$15,000. J. E. Beacock & Son, Cottonwood Falls, Kan.

4320 ACRES northwest of Guymon, Texas Co., Okla. Every acre farm land. Price \$15 a., terms. Several good farms in Haskell county, Kansas. 1120 acre improved ranch with living water in Hamilton county, Kansas, for only \$12.56 per acre, terms. Clay McKibben Land Co., Dodge City, Kansas.

480 ACRES, well improved, 4 miles of town, all perfect, 200 acres good wheat, all goes, ideal home, on R.F.D. and phone, Ness Co., price \$30 per acre. Owner's boys gone to war wants to retire. Will take good residence in small Kan. town part pay, bal. some cash and carry some on land. Possession any time. Box 153, Utica, Kansas.

IMMEDIATE POSSESSION of splendid 120 a. farm; good improvements; choice location; 54 a. wheat; 40 a. blue grass pasture; well watered; fine shade. Come at once or write for full description of this or any size tract interested in. Choice list to select from. Mansfield Land Co., Ottawa, Kan.

TWO 80 ACRE FARMS ON EASY PAYMENTS. Both of these farms located in Franklin county, Kansas. Both within 5 miles of good railroad towns, on the Santa Fe, both of them good, all tillable farms; fair improvements. \$65 per acre. \$1500 cash, long time on rest at 6%. Possession March 1st. Casida & Clark, Ottawa, Kansas.

160 A., 1 1/2 MI. TOWN, 4 room house, new barn, 20 acres wheat. Price \$6,000, a snap. Terms. 160 a., 3 1/2 ml. town, 8 room house, large barn, 35 acres wheat goes with farm. Price \$65 per acre. Terms. Fine farm. 80 acres, 6 1/2 ml. town, on Santa Fe Trail, improved and a good one at \$4,000. Terms. GEO. M. REYNOLDS, Waverly, Kan.

DOUGLAS COUNTY FARMS. 320 a., 12 miles from Lawrence and Kansas University, 4 miles from Baldwin, 2 1/2 miles from High School and shipping point. 50 a. in cultivation, 200 a. tillable, 200 a. blue grass pasture, balance timber pasture. Small improvements, never failing water. This belongs to an estate and is going to be sold. Price \$13,000.

159 a., 4 miles good trading and shipping point, 10 miles Lawrence, 150 tillable, 10 hog tight, bank barn 40x60, 7 room house, granary 30x40, hog house, scales, chicken house, wash house, acetylene lights, cistern. Plenty of water. Price \$10,500. Other good farms in Douglas county and eastern Kansas. Hosford Inv. & Mtg. Co., Lawrence, Kan.

160 Acres For \$1,000. Sumner County; good upland soil; improved; good water; pasture; meadow; wheat; farm land; poss.; only \$1000 cash; bal., \$500 year. Hurry. R. M. Mills, Schwelter Bldg., Wichita, Kan.

NESS COUNTY Good wheat and alfalfa lands at from \$15 to \$30 per acre. Also some fine stock ranches. Write for price list, county map and literature. Floyd & Floyd, Ness City, Kan.

160 ACRE FARM—\$2,000.00 Only \$475.00 cash, bal. very easy terms. 6%. Located near Liberal, productive soil. Small one room house, 100 acres farm land. 60 acres slightly rolling pasture. Get busy. Griffith & Baughman, Liberal, Kan.

60 ACRES, WELL IMPROVED Fine water, 1/2 ml. school, all tillable. \$45 a. \$800 down, bal. easy terms. 60 a. imp., all tillable, \$45 a. \$800 down, bal. easy terms. 6%. 160 well imp., 2 1/2 town, 100 a. cult., 40 wheat goes, 40 pasture, 20 meadow, orchard, \$45 a. \$3000 will handle. Limestone soil. P. H. Atchison, Waverly, Kan.

ARKANSAS 160 ACRES, 80 cult. Orchard. No rocks. \$20 acre. Robert Sessions, Winthrop, Ark.

IF YOU WANT A GOOD FARM at reasonable prices, write for our list. Dowell Land Co., Walnut Ridge, Ark.

220 ACRES well improved, bottom farm, 2 1/2 miles good railroad town, 1/2 mile good school. R.F.D. A real value. Price \$8,000, easy terms. J. M. Doyel, Mountainburg, Ark.

240 ACRES FINE, SMOOTH LAND Barton county, Missouri, improved, in cultivation. Price \$60 per acre; part cash, balance terms. E. H. Fair, Centerton, Ark.

BENTON CO., best place. We have health, water, white people, no swamps. Tell wants first letter. Land \$10 up. Box 55, Pea Ridge, Ark.

160 ACRES 5 miles Leslie, 40 acres cultivation, good improvements, good water, orchard, 140 acres can be farmed. \$1800, terms. Wallace Realty Co., Leslie, Ark.

WISCONSIN 30,000 ACRES our own cut over lands. Good soil, plenty rain. Write us for special prices and terms to settlers. Brown Bros. Lumber Co., Rhinelander, Wis.

MISSOURI SMOOTH 32 A. FARM, POLK CO., MO. B. Anderson, Blue Mound, Kan.

GOOD CROPS here 40 a. valley farm \$1000. Free list. McGrath, Mountain View, Mo.

50 A., IMP., 3 ml. town, 30 fine valley, \$1800. Easy terms. W. Elrod, Owner, Norwood, Mo.

SPECIAL BARGAINS, good investment on farms for sale. Write for free list. Terms to suit. J. H. Engelking, Diggins, Mo.

\$12,000 GRAIN produced last year on 480 a. farm. \$22,000 time. Price \$80 per acre. W. R. Taylor, Aldrich, Mo.

CASS COUNTY, MO., 120 a. well improved, fine blue grass, corn and stock farm, \$75 per acre. Charles Bird, Harrisonville, Mo. . . .

FOR STOCK and grain farms in Southwest Missouri and pure spring water, write, J. E. Loy, Flemington, Missouri.

\$100,000 INCOME PROPERTY, in Kansas City, Mo., to exchange for farm lands. Want clear for equity over \$30,000. Hart, Commerce Bldg., Kansas City, Mo.

POOR MAN'S CHANCE—\$5.00 down, \$5.00 monthly, buys 40 acres grain, fruit, poultry land, near town. Price only \$200. Other bargains. Box 425-O, Carthage, Mo.

126 A. HIGHLY IMP., 100 cult., bal. pasture and timber, black valley land, spring and well, 4 miles town, \$47.50.

300 a., highly imp., 225 cult., bal. pasture and timber, black limestone, abundance living water, \$40 a. Terms. R. L. Presson, Bolivar, Mo.

200 ACRES, three miles of Billings, twenty-five miles of Springfield, Mo. Well improved. Seventy acres sown to wheat. Very cheap at \$65 per acre. If you want to buy a farm, write us as we have some good places, 40 acres up. We only advertise good farms. Try us and be convinced. Keystone Realty Co., 418 College Street, Springfield, Mo.

20 A. IMP., fruits of all kinds, 1 1/2 ml. town, \$3,000. Very desirable. 280 a., well imp., 125 cult., 100 a. bottom, bal. pasture and timber, living water. If sold soon \$25 a. Four miles town. 110 a. imp., 60 cult., bal. timber and pasture, living water, \$25 a. Terms. Exchanges made. Have farms to suit every one. R. J. Frisbee, Mt. Grove, Mo.

OKLAHOMA FOR SALE. Good farm and grazing lands in Northeastern Oklahoma. Write for price list and literature. W. C. Wood, Nowata, Oklahoma.

MR. INVESTOR: Would you buy land that paid in rents 30% last year and can be rented for 20% cash for this year? If so write Southern Realty Co., McAlester, Okla.

OKLAHOMA: What farms for sale. Well improved, smooth upland or bottom farms, in best farming section of Oklahoma; also in the oil belt. Price \$50 to \$100 per acre. Write or call on J. R. Sparks, Billings, Okla.

FOR SALE, by owner, all or part of 2 sections rich, smooth, dark to nearly black loamy, semi-subirrigated land, well located in Jackson County, Okla. This is all fine level alfalfa land, fine for alfalfa, cotton, wheat and other grain, will mature 40 bu. wheat or bale cotton per acre. Price \$50 per acre. Box 136, Mangum, Okla.

COLORADO Twin Lakes Land and Water Co. System. Crops raised include large yields wheat, oats, corn, alfalfa, sugar beets, cucumbers, potatoes, squash, pumpkins, cantaloupes, melons, tomatoes, onions, apples and cherries. Cattle, sheep and hog raising very profitable. Market facilities admirable. Land one to four miles from shipping station. Beet sugar factory, alfalfa mills, pickling plants, canning factory and creamery at Crowley and Ordway, Colo. Electric light and power. Pure spring water available for farm use. Churches of all denominations; good schools and roads. For special excursion rates, prices, terms and free booklet, write me. First Nat'l Bank Bldg., Pueblo, Colo. F. C. Talmadge, Twin Lakes Land & Water Co.

FLORIDA WANTED farmers to buy bargains in our good N. Florida agricultural and stock lands. J.B. Streeter, Burbridge Hotel, Jacksonville, Fla.

SOUTH DAKOTA SOUTH DAKOTA with its limited farm acreage is placed fourth in production for 1917 by Government report, giving it first place per farm and per capita. The state will loan money for development of its farms. If you would share in this, get bulletins of Immigration Department, Chas. McCaffree, Commissioner, Capitol E 3, Pierre, S. D.

Gen. Mdse. Stock For Sale Am closing out \$7,500 stock and fixtures and will sell for cash at very liberal discount from original cost and it was bought right. Good opening for business; also have hardware stock and building same town for sale. No competition, fine opening. Come at once if you mean business. M. W. Peterson, Copeland, Kansas.

FARM LANDS

PRODUCTIVE LANDS. Crop payment on easy terms. Along the Northern Pac. Ry. in Minnesota, North Dakota, Montana, Idaho, Washington, Oregon. Free literature. Say what states interest you. L. J. Bricker, 81 Northern Pacific Bldg., St. Paul, Minn.

WESTERN LOUISIANA

Along the Kansas City Southern Railway offers exceptional advantages to the general farmer, stockraiser, dairyman, commercial trucker, poultry man and fruit grower. A prosperous country with salubrious climate, abundant rainfall, fertile soils, excellent water, good health and good markets. Land values \$15.00 to \$40.00 per acre. Address for information, F. K. Woodruff, Director of Development, 603 K.C.S. Bldg., Kansas City, Mo.

FOR RENT.

FOR RENT. 320 acres of land in Chautauqua county, 7 miles from railroad; 120 acres in cultivation; 150 acres in pasture; 30 acres in meadow; balance in lots, etc. This is limestone land and all upland. Will rent the pasture for cash and farm land for grain. Write the owner, B. F. Boys, Independence, Kan.

SALE OR EXCHANGE

EXCHANGE BOOK, 1000 farms, etc. Trades everywhere. Graham Bros., El Dorado, Kan.

TRADES EVERYWHERE, book free. See us before buying. Bersle, El Dorado, Kan.

OZARKS OF MO., farms and timber land, sale or ex. Avery & Stephens, Mansfield, Mo.

40 A. TANEX CO., MO., for western land, or live stock. Is clear. \$1,000. E. W. Moore, Spearville, Kan.

LAND IN NESS, Trego, Lane, Scott, Finney and Greeley Counties. Write for list. V. E. West, Dighton, Kan.

FOR illustrated booklet of good land in southeastern Kansas for sale or trade write Allen County Investment Co., Iola, Kan.

HARDWARE and implement stock with bldg., \$12,000. Two stocks of genl. mdse. with bldgs. \$8,000 each. Wants good farms. Sondergard Realty Co., Ramona, Kan.

60 ACRES, IMPROVED; 4 ml. N. E. Sloan Springs. All tillable. 700 apple, 50 pear, 100 peach, 50 cherry trees. \$5,000.00. Merchandise or clear residence. E. J. Jasper, Council Grove, Kan.

160 ACRES of good valley land, no overflow, joining thriving city. Lots of good water, schools and churches. Will sell or trade for smaller property. Address Box 76, Netawaka, Kan.

IMPROVED half section, 10 miles Ogallah, Kansas. 50 acres can be plowed, balance rather rough but good pasture. Price \$25 per acre. Mortgage \$2500. Trade equity for grocery stock, residence or suburban property, clear. Western Real Estate Co., Ellis, Kan.

FOR SALE OR TRADE, by owner, 800 acres, well improved, fine alfalfa, cotton or wheat land, in three tracts in Greer County, Okla. Some incumbrance, long time. Will sell for cash and terms or will accept mdse. of clear city property. What have you? L. G. Roberts, Mangum, Okla.

CHOICE

N. 1/2 7-18-30, all level, no improvements. Market three miles. Trade for horses. Price \$20 per acre. M. E. Cavanaugh, Elkhart, Kan.

To Supply the Food

When a trained young farmer or stockman is taken from the farm and ranch, the nation, our soldiers at the front and our allies are deprived of the necessary foodstuffs he can produce from the soil and on the hoof. The young man who remains on the farm and works with might and main to grow the wheat and produce the meats to feed our soldiers in France, and to provide for our dependents at home, is a soldier of industry who will be remembered along with the boys who fight in the trenches. Every day since war was declared Governor Capper has appealed to the federal government to have a broader vision in this critical time than the mere duty of recruiting an army. An army is needed, it is true, to fight for the honor and integrity of the nation and it is forming a million strong, but a greater army is needed in the industrial lines—especially on the farms and ranches where the necessities of life must be produced.

With these demands Governor Capper has coupled another that comes home to every farmer and stockman in Kansas. He has pointed out the injustice of regulating the price of the farmers' wheat while the big manufacturers of the country and the horde of profit-hogs revel in the great fortunes they are piling up at the expense of the producers. The Congress of the United States, where these injustices must be righted, seems not to have heard from the producers. But that body will hear from them when Arthur Capper, their friend and advocate, takes the oath as United States Senator from Kansas March 4, 1919.—Phillipsburg News-Dispatch.

Storms Increased Car Shortage

(owing to the fact that this paper necessarily is printed several days prior to the date of publication, this market report is arranged only as a record of prices prevailing at the time the paper goes to press, the Monday preceding the Saturday of publication.)

The food administrator has made a strong appeal for more cars to move corn to market, owing to the necessity of getting it to the centers where it can be kiln dried before the germinating season, which is likely to cause much of the immature corn to spoil, or at least will make marketing of such grain unsafe during warm weather. Reports from the country indicate that much corn on the farms must be marketed during this cold weather to avoid loss.

Car shortage makes it impossible for country grain buyers to take as much corn as is offered by the farmers, and this results in unsatisfactory marketing conditions, and an abnormally wide margin between the price the farmer gets and the prevailing prices at terminal markets.

Kansas City corn receipts, 543 cars, were about the same as the preceding week's, a good showing considering the handicap of cold weather which slowed down railroad traffic in this territory, but in Chicago and St. Louis arrivals were kept down to small proportions by the great snowstorm of a week ago.

Demand in the Kansas City market last week at no time was reported strong, but most offerings were sold from day to day. The extreme range Saturday was \$1.40 to \$1.75, compared with \$1.32 to \$1.75 a week ago and 98 to 97 1/2 cents year ago. The lowest price was paid for medium ear corn and the highest for No. 2 white. Bulk of the shelled corn graded No. 5 and No. 4 and sold for \$1.43 to \$1.58. Some poor ear corn sold Friday at \$1.05.

Receipts of oats at three markets dropped to less than half the average of the last few weeks. Three principal markets had only 475 cars, compared with 1,062 cars the week before and 1,040 a year ago. Scant shipments were due entirely to inadequate shipping facilities. The country reports liberal offerings. Demand for carlots of oats was only moderate, as shippers could not obtain cars when needed, and prices declined 1/2 to 1 1/2 cents.

General wheat conditions are described as growing more acute, while export demand and home needs yet have shown little indication of falling off. Mills are still able to keep busy, but stocks have been further reduced, as current arrivals of wheat are wholly insufficient.

Last week five important markets received 1,564 cars of wheat, compared with 1,834 the week before and 3,547 a year ago. The decrease in receipts, the Food Administration says, was due in part to the interruption in farm deliveries caused by cold weather.

It is becoming increasingly apparent that the economy in the consumption of wheat, as practiced in the United States, is insufficient to make the small available supply answer the many demands that will be made on it. In February the government will take 30 percent of every mill's output, most of which perhaps will be used for export. In the Kansas City zone the total is expected to be around 1/2 million barrels, compared with 225,000 barrels this month. Mills made slightly less flour last week, while demand is as urgent as ever. Stocks of flour are unusually low in the East, and, in fact, are far below normal all over the country.

Carlot prices for grain at Kansas City Saturday were:

Wheat: Official fixed prices. Dark Hard Wheat: No. 1, \$2.19; No. 2, \$2.16; No. 3, \$2.13. Hard Wheat: No. 1, \$2.15; No. 2, \$2.12; No. 3, \$2.09. Yellow Hard Wheat: No. 1, \$2.11; No. 2, \$2.08; No. 3, \$2.05. Red Winter Wheat: No. 1, \$2.15; No. 2, \$2.12; No. 3, \$2.09. Soft Red Wheat, "Onions": No. 1, \$2.13; No. 2, \$2.10; No. 3, \$2.07.

Wheat which is graded below No. 2 and is of superior quality may be priced at a premium not exceeding 2 cents above the grade price, except when graded down for certain specific causes.

Corn: No. 2 mixed, \$1.68 to \$1.70; No. 3, \$1.56 to \$1.58; No. 4, \$1.48 to \$1.50; No. 5, \$1.41 to \$1.44. No. 2 white, \$1.72 to \$1.75; No. 3, sales \$1.68; No. 4, sales \$1.59. No. 2 yellow, \$1.70 to \$1.72; No. 3, sales \$1.60; No. 4, \$1.53 to \$1.55; No. 5, \$1.45. Ear corn, \$1.40. Oats: No. 2 white, \$2 1/2c; No. 3, \$2c; No. 4, \$1c to \$1 1/2c. No. 2 mixed, \$1c; No. 3, \$1c; No. 2 red, \$2c to \$4c; No. 3, \$1c to \$1 1/2c.

Crippled railroad service on account of heavy snow and cold weather, especially east of the Missouri River, kept the livestock movement down to small proportions last week, and at the same time cut demand down because of the difficulty in making shipments of meats and of live animals east. Total arrivals of cattle and hogs at five markets were about half those of the previous week. Markets were strengthened later in the week by the small receipts, but later as it became evident that facilities for out shipments were even worse than those for receipts, the markets became unsettled. Cattle were affected most. Slaughterers reported full coolers and little out movement, and they began to bear down on cattle prices. The market Friday was quoted 25 to 60 cents lower than Monday and 25 to 45 cents lower than a week ago for fat steers, with slightly less decline for other grades.

Hog prices in Kansas City were up about 15 cents at one time, but the advance was lost later. Other markets showed greater strength, especially in the East. At Pittsburgh hogs sold as high as \$21 a hundred pounds, nearly \$4 above Kansas City prices. Such a margin, of course, would be impossible under normal conditions. The margin between Kansas City and Chicago was 55 cents, enough to make shipping profitable, but few cars could be obtained.

Not much change occurred in prices of lambs and sheep. Moderate advances early in the week were not maintained. Receipts of sheep did not show such a great shrinkage as the movement of cattle and hogs.

It is a general law of feeding that a cow will require a certain amount of food for growing and maintaining the carcass. And the amount is in proportion to the size of the animal.

The good dairy cow that has been handled properly has perfect digestion and she turns the larger part of her food into milk.

WHAT BREEDERS ARE DOING

FRANK HOWARD,
Manager Livestock Department.

FIELDMEN.

A. B. Hunter, S. W. Kansas and Okla., 128 Grace St., Wichita, Kan.
John W. Johnson, N. Kansas, S. Neb. and Ia., 820 Lincoln St., Topeka, Kan.
Jesse R. Johnson, Nebraska and Iowa, 1927 South 16th St., Lincoln, Neb.
C. H. Hay, S. E. Kan. and Missouri, 4204 Windsor Ave., Kansas City, Mo.

PUREBRED STOCK SALES.

Claim dates for public sales will be published free when such sales are to be advertised in the Farmers Mail and Breeze. Otherwise they will be charged for at regular rates.

Combination Sales.

Feb. 25 to Mar. 2—F. S. Kirk, Mgr., Wichita, Kan.

Jacks, Jennets and Stallions.

Jan. 30—Thompson Bros., Marysville, Kan.
Feb. 6—L. J. Cox and others, Concordia, Kan.
Feb. 13—H. C. Lookabaugh, Watonga, Okla.
Mar. 26—H. T. Hineman, Dighton, Kan.

Percheron Horses.

Jan. 30—Spohr & Spohr, Latham, Kan. Sale at Wichita, Kan.
Feb. 12—Bishop Bros., Towanda, Kan.
Feb. 26—Geo. S. Hamaker, Pawnee City, Neb.

Draft Horses.

Feb. 28 and Mar. 1—Nebraska Horse Breeders' Assn., sale, Grand Island, Neb. C. F. Way, Lincoln, Neb., Manager.
March 8-9—W. T. Judy & Sons, Kearney, Neb.

Aberdeen Angus Cattle.

Apr. 5—Wm. Palmer, Liberty, Neb.

Holstein Cattle.

Feb. 21—Lee Bros. & Cook, Harveyville, Kan.
Feb. 27—W. O. Morrill, Summerfield, Kan.
Mar. 20—E. J. Dixon and Chas. A. Smedley, Agra, Kan.
Mar. 26—Kansas State Holstein Breeders' sale at Topeka Fair Grounds, W. H. Mott, Sec., Herington, Kan.

Polled Durham Cattle.

March 8-9—W. T. Judy & Sons, Kearney, Neb.
Mar. 28-29—Combination sale, So. Omaha, Neb. H. C. McKelvie, Mgr., Lincoln, Neb.
April 10—T. M. Willson, Lebanon, Kan.

Shorthorn Cattle.

Jan. 29—H. C. Lookabaugh, Watonga, Okla. Shorthorn Beginners' Department.
March 5—K. F. Dietrich, Orleans, Neb.
March 7—Frank Uhlig, Falls City, Neb.
Mar. 26-27—Combination sale, So. Omaha, Neb. H. C. McKelvie, Mgr., Lincoln, Neb.
March 27—J. R. Whisler, Watonga, Okla.
April 2—Blank Bros. & Kleen, Franklin, Neb. Sale at Hastings, Neb.
Apr. 3-4—Highline Shorthorn Breeders' Association, Farnam, Neb. E. W. Crossgrove, Mgr.
April 6—Thomas Andrews, Cambridge, Neb., and A. C. Shellenberger, Alma, Neb. Sale at Cambridge.

Hereford Cattle.

Feb. 11—Paul Williams, Marion, Kan.
Feb. 12—Kansas Breeders' Combination sale; W. A. Cochel, Mgr. Sale at Manhattan, Kan.

Chester White Hogs.

Feb. 2—Mosse and Murr, Leavenworth, Kan.

Duroc Jersey Hogs.

Jan. 30—C. B. Clark, Thompson, Neb. Sale at Fairbury, Neb.
Jan. 31—W. W. Zink, Turon, Kan.
Feb. 4—H. D. Geiken, Cozad, Neb.
Feb. 5—R. Wilde & Sons, Genoa, Neb.
Feb. 6—O. E. Harmon, Fairmont, Neb.
Feb. 7—F. J. Moser, Goff, Kan. Sale at Sabetha, Kan.
Feb. 22—E. P. Flanagan, Chapman, Kan.
Feb. 14—B. R. Anderson, McPherson, Kan.
Feb. 15—Earl Babcock, Fairbury, Neb.
Feb. 18—Combination sale, W. W. Jones, Mgr., Clay Center, Kan.
Feb. 18—Robt. E. Steele, Falls City, Neb.
Feb. 19—Howell Bros., Herkimer, Kan.
Feb. 19—John C. Simon, Humboldt, Neb.
Feb. 20—W. T. McBride, Parker, Kan.
Feb. 21—Gillam & Brown, Waverly, Neb.
Feb. 21—Milton Poland, Sabetha, Kan.
Feb. 26—J. A. Bockenstette, Fairview, Kan.
Feb. 26—Henry Wernimont, Ohiawa, Neb.
March 2—O. E. Easton, Alma, Neb.
Mar. 7—Otey-Woodell, Winfield, Kan.
March 8-9—W. T. Judy & Sons, Kearney, Neb.
Apr. 24—Laptad Stock Farm, Lawrence, Kan.

Hampshire Swine.

Feb. 4—A. H. Lindgren and Wm. H. Nider, Jansen, Neb. Sale at Fairbury, Neb.
Feb. 9—R. C. Pollard, Nehawka, Neb.

Poland China Hogs.

Jan. 28—J. L. Carman, Cook, Neb.
Feb. 1—J. J. Hartman, Elmo, Kan.
Feb. 4—W. E. Willey, Steele City, Neb.
Feb. 6—Von Forrell Bros., Chester, Neb.
Feb. 7—O. B. Clemetson, Holton, Kan.
Feb. 8—Smith Bros., Superior, Neb.
Feb. 9—John Naimen, Alexandria, Neb. Sale at Fairbury, Neb.
Feb. 11—D. C. Lonergan, Florence, Neb. (night sale).
Feb. 20—Bert E. Hodson, Ashland, Kan. Sale at Wichita, Kan.
Feb. 21—A. J. Erhart & Sons, Ness City, Kan. At Hutchinson, Kan.
Feb. 22—Oliver & Sons, Danville, Kan.
Feb. 25—O. E. Wade, Rising City, Neb.
Feb. 26—Geo. S. Hamaker, Pawnee City, Neb.
Feb. 28—Clarence Dean, Weston, Mo. Sale at Dearborn, Mo.
March 1—Beall & Wissell, Roca, Neb.
Mar. 6—J. R. Young, Richards, Kan.
Mar. 8—Engleman Stock Farms, Fredonia, Kan.
March 8-9—W. T. Judy & Sons, Kearney, Neb.
April 10—T. M. Willson, Lebanon, Kan.
Apr. 24—Laptad Stock Farm, Lawrence, Kan.

Spotted Poland China Hogs.

Feb. 14—Reed and Jukes, Salina, Kan.

S. W. Kansas and Oklahoma

BY A. B. HUNTER.

Spohr & Spohr, Latham, Kan., will disperse their entire herd of Percherons, 12 stallions and 23 mares and fillies, at Wichita, Kan., Wednesday, January 30. This sale will include all their herd mares and their herd and show stallion, Morris 105385. Five of their stallions are ready for service,

the mares are practically all showing safe to him, a few are bred to Imp. Resistant. If you want Percherons do not miss this sale. Write today for catalog. Address Spohr & Spohr, Latham, Kan.—Advertisement.

Jacks and Jennets at Auction.

H. C. Lookabaugh, Watonga, Okla., sells at auction Wednesday, February 13, 30 jacks and jennets. Twelve jacks all of serviceable age and practically all young jacks broke to service. The sire of five of these great young jacks is Caddo, a mammoth jack that has three imported crosses and is one of the best jacks to be found anywhere. He also sells in this sale. Fifteen of these jennets are of breeding age and most all in foal to this great jack Caddo. Since Mr. Lookabaugh is not generally known as a jack breeder, this large number of jacks and jennets are likely to sell below their value. There will undoubtedly be bargains. Catalogs are ready to mail, send your name today. Mention Farmers Mail and Breeze.—Advertisement.

Percheron and Shorthorn Sale.

W. S. Boles & Sons, Enid, Okla., will hold their regular annual Percheron sale at Enid, Thursday, February 14, supplemented with a Shorthorn sale in the forenoon. The Percherons will consist of 40 head, 25 mares and fillies and 15 stallions. This will be the richest bred offering they have ever sold. The mares are showing heavy in foal to Carnard, by Carnot, the \$40,000 grand champion, and included as a special attraction will be Carlotta and Rose, daughter and granddaughter of this great champion. The stallions are practically all of serviceable age and a splendid assortment from which to select. As a top liner in this auction the promising sire Carnard, by the famous Carnot, will be offered. He is a herd stallion that is sure to make Percheron history. Thirty-five Scotch and Scotch topped cows, heifers and bulls sell in the forenoon, 15 cows and heifers with calf at foot or safe in calf to their herd bull, Butterfly Master, and 20 bulls 8 to 18 months old and ready for service. Write today for catalog and arrange to attend both sales. Please mention Farmers Mail and Breeze.—Advertisement.

N. Kansas, S. Nebr. and Ia.

BY JOHN W. JOHNSON.

Olson Brothers, Assaria, Kan., report a splendid sale on boars last fall and up to recently when they were all sold out. They have about 40 nice spring gilts bred for spring farrow and 50 fall pigs to sell.—Advertisement.

C. W. Taylor, Abilene, Kan., is advertising Shorthorn bulls in the Farmers Mail and Breeze at the present time. He has to select from about 15 youngsters, pure Scotch and Scotch topped, that are from 8 to 10 months old. If you want to buy a Shorthorn bull get in touch with Mr. Taylor at once. He will appreciate your telling him where you saw his advertisement when you write.—Advertisement.

Look up the J. W. Meyer, Nortonville, Kan., Holstein sale advertisement in this issue of the Farmers Mail and Breeze. Ben Schneider, the well known Holstein breeder of that place, is managing this sale, and he will be glad to give you any information you want about this big sale of 100 Holstein cows and heifers. Look up the advertisement in this issue and write him today. He will be glad to have you tell him where you saw the advertisement.—Advertisement.

Last Call Thompson Brothers' Sale.

This is the last call for Thompson Brothers' jack and stallion dispersion sale at Marysville, Kan., January 30, which is next Wednesday. A lot of very valuable breeding stock will be sold in this sale, stallions and jacks which were big money makers for this firm last year and will go on this year and make money for their new owners. This is strictly a high class lot of jacks and stallions and should not be confounded with sales which are made simply to unload undesirable stuff. Thompson Brothers are compelled to close out their breeding establishment because of other business. You had better be there if you possibly can.—Advertisement.

Breeders' Hereford Sale, February 12.

Tuesday, February 12, is the date of the third annual Breeders' Hereford Sale, which is to be held at the Agricultural college at Manhattan, Kan. This offering will include 41 bulls and 37 females which have been consigned to this sale by some of the best Hereford breeders of the state. Practically all of the bulls are old enough for service and among the females offered are cows with calves at side, bred heifers and heifers that are of breeding age. While these Herefords are not highly fitted, they are in good condition and ready to go ahead and make money for the people who buy them. For catalog of this sale address Prof. W. H. Cochel, Manhattan, Kan. Please mention Farmers Mail and Breeze when writing for catalog.—Advertisement.

Good Sale in Spite of Storm.

J. A. Engle's sale of high grade Holstein cows and heifers at Talmage, Kan., last Thursday was a pronounced success. Early the morning of the sale with the country roads in that locality blocked with snow it looked like a postponed sale. But later in the day a small crowd had arrived and Mr. Engle felt that it was a matter of simple justice to those who had braved the snow drifts to be present that he start the sale. The result was remarkable. Thirty-five cows and heifers sold for \$167.50 or an average of \$147.65. The offering was an good and presented in good form. The Engle stamp on Holsteins means something. J. A. Engle is not quitting the Holstein dairy business and this sale was a draft sale of surplus stock.—Advertisement.

Walker's "Blue Valley" Sow Sale.

Kansas Poland China breeders are invited to look over the Thos. F. Walker advertisement of his coming Poland China bred sow sale. Thos. F. Walker, Alexandria, Neb., is well known to Kansas Poland China people because of the great individuals he has sent to Kansas. In the past his sales have been held at Fairbury, but two years ago he built upon his farm one of the most modern and expensive sale barns in Nebraska. Kansas breeders will be interested in the 19 daughters of old Blue Valley and this can well be called the "last Blue Valley sow sale." Breeders will be more than pleased with the 61 great individuals that will be driven thru

this sale ring, February 5. The catalog gives full information. It is an offering unequalled in Nebraska so far and will likely be called the greatest of Tom Walker's bred sow offerings. Don't miss this sale if you want the best to be had. If you can't come you can trust the writer, J. W. Johnson, with some orders to buy and such orders will be carefully and honestly handled. Such orders should be sent in care of Thos. F. Walker & Sons, Alexandria, Neb. Write for the catalog today. Mr. Walker will appreciate it if you tell him where you saw his advertisement.—Advertisement.

Attend Moser's Sale at Sabetha.

F. J. Moser's annual Duroc Jersey bred sow sale is advertised in this issue of the Farmers Mail and Breeze. Mr. Moser gets his mail at Goff, Kan., but his sales are always held at Sabetha, Kan., because of the better railroad and hotel facilities. The sale will be held as usual in the big sale barn which is always roomy and comfortable. The Moser offering this winter is simply great. The breeding is as up to date as any to be found anywhere. Individually the offering is good but sold with the absence of the "big fat" which makes the offering just that much more desirable. Mr. Moser prides himself on his herd of Duroc Jerseys and his square deal methods. He is making money out of the business and there won't be a better opportunity to buy good ones than the Moser sale at Sabetha, Kan., Thursday, February 7. Bids may be sent to J. W. Johnson, care of Mr. Moser, Sabetha, and such bids will be looked after carefully.—Advertisement.

Remember Hartman's Sale February 1.

J. J. Hartman's Elmo Valley Poland China bred sow sale to be held February 1 is advertised in this issue of the Farmers Mail and Breeze. The sale will be held at the farm near Elmo (Dickinson county), and free auto service will be furnished from Elmo on the Missouri Pacific, Abilene on Union Pacific, Rock Island and Santa Fe. Also from Home on the Missouri Pacific and Santa Fe. The catalogs are ready to mail now. You have plenty of time if you write at once for the catalog. Breeders as well as farmers should attend this sale and the writer will guarantee that they won't be disappointed either. It is one of the real quality and size sales to be made in Kansas this winter. Look up the advertisement and plan to go. If you send bids to J. W. Johnson of the Farmers Mail and Breeze you will get what you want. Such letters should be sent in care of J. J. Hartman, Elmo, Kan. When you ask for a catalog Mr. Hartman will appreciate your telling him where you saw his advertisement. Write today.—Advertisement.

Reed and Jukes Sale, February 14.

Walter Reed, Salina, Kan., and B. T. Jukes, Bawaria, Kan. (near Salina) are breeders of Spotted Poland China and boosters for their popular breed. February 14, in Johnson's livery barn, South Fifth street, Salina, Kan., they will sell 60 head at public auction. They have made no attempt to put anything in show shape but everything will be in good breeding form. Both breeders have bought from the good herds of the country and both are reliable men who will offer nothing that is not right in every way. The breeding is of the famous Budwiser families largely and of other good families of spotted Poland Chinas. Their catalog is out and ready to mail upon request to either Walter Reed, Salina, Kan., or B. T. Jukes, Bawaria, Kan. Breeders from a distance should go right to the barn the morning of the sale and inquire for either of the breeders making the sale. The advertisement appears in this issue of the Farmers Mail and Breeze. Write today for the catalog, which gives full information as to the breeding and all other information you will want.—Advertisement.

Clemetson's Annual Sow Sale February 7.

O. B. Clemetson's annual Poland China bred sow sale, to be held at Holton, Kan., February 7, is advertised in this issue of the Farmers Mail and Breeze. Forty head of immune, tried sows, fall yearling and spring gilts go in this sale and it is indeed an offering worthy of the notice of any Poland China breeder or farmer in the West. The spring gilts are the absolute tops of the 1917 crops of pigs raised by Mr. Clemetson, which is as good as any other breeder raised in Northeastern Kansas in 1917. Mr. Clemetson is a careful, conservative breeder of Poland Chinas that has bought the tops in many of the leading sales of Kansas, Nebraska and Missouri during the last several years and has been steadily building up one of the real Poland China herds of that section of Kansas. He is modest in his claims but he has the goods and if you will attend this sale you will be convinced. The breeding is right and the individuals are there. Ask him for his catalog of the sale today. He will appreciate your telling him where you saw his advertisement. The sale will be held in E. E. Brown's sale pavilion in Holton, Kan.—Advertisement.

Bad Weather for Humes's Sale.

Last Tuesday Mitchell county was covered with a blanket of snow and scarcely a country road open. L. L. Humes, Glen Elder, Kan., had advertised his sale of Duroc Jersey bred sows and gilts for that date and with ordinary farm sales being postponed all around him, Mr. Humes decided to go on with his sale. The phone was used to inform the neighbors that Mr. Humes was going ahead with his sale of registered Duroc Jerseys. D. O. Bancroft, Osborne; E. Swiercinsky, Republic, Kan.; Theo. Tillson, Concordia, Kan.; Ernest Fear, Bala, Kan.; Lester Coar, Glen Elder, and one of two others were the breeders present. W. H. Schroyer, Miltonvale, Kan., bought seven on mail order and Fred Laptad, Lawrence, Kan., bought several. W. R. Huston, Americus, Kan., also bought two or three. Farmers came on horseback and those from a distance were taken to the farm over a road shoveled out the day before. But they appreciated Mr. Humes and the splendid herd of Durocs. The average with a few small ones left out was a little over \$65. With a good day this would have been one of the best sales in the state.—Advertisement.

Paul Williams's Hereford Sale.

Paul Williams, Marion, Kan. (Marion county) announces in this issue of the Farmers Mail and Breeze his first annual sale of Hereford cattle at Marion, Monday, February 11. This is the day before the combination sale of Herefords at the Agricultural college, Manhattan, Kan. Mr. Williams is selling a draft of 50 cows and heifers and 25 young bulls that are as sure to prove money makers for their purchasers

POLAND CHINA HOGS.

Immune Big Type Polands fall pigs by prize winning males, also bred sows. H. C. Morrison, Cleora, Oklahoma

For Sale: Four Reg. Spotted Poland bred, and boar. Price \$300.00.
Tried Sows N. T. McNary, Burlington, Kan.

Big Type Poland Boars
Ready for service, grown and priced right, satisfaction guaranteed, pedigree furnished. For prices and description, write W. H. HILLS, Milo, Kansas.

20 POLAND CHINA BOARS, 20
Weighing from 125 to 300 lbs. Write today for price and description.
A. L. ALBRIGHT, WATERVILLE, KAN.

Money-Making Polands
Am offering an extra good bunch of spring boars that are bred right and grown for breeding purposes. J. M. BARNETT, DENISON, KAN.

Spotted Poland China Gilts
30 fall and spring gilts bred and open. A few good tried sows. Also some good spring boars. All well spotted. Best breeding condition. Write at once.
R. H. McCUNE, (Clay Co.) LONGFORD, KANSAS.

Old Original Spotted Polands
Stock of all ages; also bred gilts and tried sows ready to ship. Priced right. Write your wants to the Cedar Row Stock Farm,
A. S. Alexander, Prop., Burlington, Kan.

Fairview Poland Chinas
40 March boars, heavy boned fellows, ready for service. Also choice gilts. All pedigreed and priced to sell quickly. P. L. Ware & Son, Paola, Kan.

Townview Polands
Herd headed by the great young boar, King Wonder's Giant 7738. I can ship spring pigs, either sex, or young herds not related. Boars ready for service. Bred gilts. Prices and Hogs are right. Chas. E. Greene, Peabody, Kansas

Mar. Boars
and gilts sired by Hercules 2d and Grandview Wonder. 75 fall pigs for sale in pairs and trios not related. (Picture of Hercules 2d.)
ANDREW KOSAR, DELPHOS, KAN.

ERHARTS' BIG POLANDS
A few September and October boars and choice spring pigs either sex out of some of our best herd sows and sired by the grand champion Big Hadley Jr. and Columbus Defender, first in class at Topeka State Fair and second in futurity class at Nebraska State Fair. Priced right, quality considered.
A. J. ERHART & SONS, Ness City, Kan.

BIG WONDER 281929
The outstanding spring yearling son of the noted Big Bob Wonder now at the head of my herd. This young sire was first in junior yearling class at Topeka; second at the National Swine Show in competition against the world.
I will sell fifty sows and gilts Saturday, February 23, 1918, and a number of the best sows will be bred to Big Wonder. Send name early for catalog.
I have a few choice spring boars priced to sell.
V. O. JOHNSON, AULNE, KANSAS

Blough's Big Polands
BRED GILT SPECIAL
I offer 30 splendid gilts at private sale about half by
OUR BIG KNOX 82153
and about half by
GRANDEE 76161
Nothing better at private sale this winter. Write today if interested.
John Blough, Americus, Kan.
(LYON COUNTY)

Wonder Belle By Big Bob Wonder, by Big Wonder. Farrowed Oct. 5, 1915. Pigs in litter 10. Bred Oct. 25, 1917. A grand daughter of A Wonder and sired by Big Bob Wonder. One of those large motherly sows just in her prime.
Miss Columbus 3rd By Smooth Columbus, by Columbus; out of Miss Jumbo 11th, by Colossal. Farrowed Mar. 6, 1915. Pigs in litter 5. Bred Nov. 25, 1917. A large, long, rangy sow. Farrowed 9 last fall, raised 8. Coal black. These sows are selling for no fault whatever, just have too many. Both bred to Chief Miami, the largest boned boar in service today.
Price \$100 Each
Also 10 extra heavy boned Sept. pigs, 5 boars and 5 sows, weight 140 to 160 pounds. These are something extra, sired by Chief Miami and from sows weighing 400 to 600 pounds. \$30 each till Feb. 16. Also later pigs \$25 each. Big Bob breeding from Smooth Columbus dams. Come and see these, am sure they will please.
Walter B. Brown, Perry, Kan.

DUROC JERSEY HOGS.

Trumbo's Durocs
Bred Gilts, bred to Constructor Jr., First Prize boar pig Kansas State Fair, 1917; also a few June Boars, all immune. Satisfaction guaranteed.
W. W. TRUMBO, PEABODY, KAN.

as the sun is to rise the morning of the sale. They will be sold in good breeding condition but not a pound of surplus flesh has been added to any animal in the sale. There are 50 cows of Anxiety breeding that are bred to Fairfax bulls. A string of nice heifers that it was the intention to reserve for his own herd have been bred to his show and breeding bull, Buddy L., and included in the sale. The cows and heifers will, many of them, have calves at foot and be bred back to these herd bulls. In this sale you will find unusual scale and bone and cattle with strong constitutions. The breeding is sure to suit and this evidence sale day of greater size and quality will impress everyone who is looking for the money making kind of Herefords. Paul Williams has been a good buyer in many of the best sales of the last several years. He is a student of Hereford affairs and has definite ideas about Herefords and what they should be. He is one of the coming Western breeders and his offering Monday February 11 will demonstrate how well he has succeeded. The catalog is ready to mail. Address Paul Williams, Marion, Kan. Tell him where you saw his advertisement when you write.—Advertisement.

Big Chester White Event.

An event important to Chester White breeders all over Kansas and the Middle West is the big combination sale of Chester White bred sows to be held in the Coliseum, Leavenworth, Kan., Saturday, February 2. The sale consists of 55 head drawn from the well known herds of Arthur Mosse, Leavenworth, Kan., and Henry Murr, Tonganoxie, Kan. The sale is advertised elsewhere in this issue of the Farmers Mail and Breeze. The Leavenworth Chamber of Commerce recognizes the importance of these two splendid Leavenworth county herds, and on Friday evening, which is the evening before the sale, they are giving a banquet which is free to all lovers of popular Chester White hogs. Speaking and other forms of entertainment will be furnished. The Kansas Chester White Breeders' association will meet on this occasion and it is certainly a big time for Chester White breeders. Remember, all who are interested in the sale or who care about Chester White affairs are invited. It is free. Look up the advertisement in this issue. For a catalog address Arthur Mosse, Leavenworth, Kan. Mr. Mosse is the active manager of the sale. He will be glad to have you tell him when you write where you saw his advertisement. Write him today and get the catalog.—Advertisement.

Nebraska and Iowa

BY JESSE R. JOHNSON.

Wednesday, February 6, is the date of O. E. Harmon's annual Duroc Jersey bred sow sale. The sale as usual will be held on the farm near Fairmont, Neb., and the offering will be first class, as Mr. Harmon's offerings always are. Of the 40 head selling, 25 or so are tried sows and fall yearlings, and the remainder big spring gilts. A big per cent of the offering was sired by Mr. Harmon's former herd boar, King's Col. Again, one of the very best breeding sons of Putman's great boar, King's Col. A big lot of them will be bred to the principal herd boar, Joe Orion Jr., a 2-year-old son of the noted eastern boar Joe Orion 2d, and of proven worth as a sire. His dam was a daughter of Cherry King. Mr. Harmon has a right to expect great results from the King's Col. Again gilts mated to this good sire. The remainder of the offering is the get of Gano's Masterpiece, King Col. Again, by King's Col., and Defender Model by Retzler's Defender, he by Old Defender. Write at once for catalog and mention this paper. Send all bids to J. W. Johnson in Mr. Harmon's care at Fairmont, Neb.—Advertisement.

Annual Poland China Sow Sale.

February 8 is the date of Smith Brothers' annual sale of registered Poland China bred sows. The brothers Lawrence and Curtis each operate a big farm and devote all of their energies to raising good Poland Chinas. They have been doing this important work all their lives which accounts for the good offerings they are always able to put up at their annual sales. They put in the tops raised on each farm. This year they will sell 60 head. Among the attractions will be some good fall yearlings that were sired by Nebraska Wonder, the boar that sired the grand champion sow at Nebraska State Fair a few years ago. Miss Harper, perhaps the best producing sow ever owned by the Smiths, also goes in; also some daughters of Smith's Big Hadley and Jumbo Jr. But the greater part of the offering is entirely new. Much of it being sired by the herd boars Big King Price and Orphan's Price, young boars that are proving themselves important factors in the herd. Other attractions will be daughters of Jumbo Bob, by Caldwell's Big Bob and Spot's Wonder, grand champion of Nebraska the past season. Many will be bred to the new boar Mc's Equal, a son of Mc's Sampson, the International grand champion. Plenty of the blood of old Big Ben Amazon will be cataloged. The offering is a good one and represents about all popular blood lines. Write for catalog and mention this paper. Send bids to Jesse Johnson in care of Smith Brothers, Superior, Neb.—Advertisement.

Loneragan Sells Polands at Florence, Neb.

Readers of this paper will be glad to know that D. C. (Charley) Loneragan, one of Nebraska's oldest breeders and exhibitors, will hold another of his good sales on the night of February 11. The sale will be held in a big, warm, lighted pavilion just a few minutes' ride from Omaha. The offering is immune and the best offering ever put up by this foremost breeder of big types. Over half of the offering will be young tried sows and fall yearlings. Many of them will be bred to a young boar that promises to be the best boar ever owned by Mr. Loneragan. He comes from one of the best herds in Iowa, is of last March farrow and weighs over 350 pounds, after being used hard during the breeding season. He was sired by A A Wonder and his dam was by Big Orange. This is really one of the great young boars of the season. The remainder of the offering will be bred to Big Urses, the 1,000 pound Nebraska grand champion, Big King Bob, a son of the noted Big Bob, with a dam that is a half sister to the dam of the great sire Gerstade Jones. Many in the offering are sired by Model Urses, a son of Big Urses. R. D.'s Columbus and L's Defender. Big bone, coupled with real brood sow conformation, is what will claim the attention of breeders attending this sale. Write for catalog and

300 REGISTERED SHROPSHIRE SHEEP, 300

We have for sale an extra nice lot 85 coming one-year-old rams \$30. 100 large, coming yearling ewes, mostly bred, \$30. 125 good aged ewes, no old ones \$35. We crate and pay express to your station on all sheep. They are all registered, large and well woolled. Send draft for what you want. Reference, Harveyville State Bank.
J. R. TURNER & SON, HARVEYVILLE, KANSAS.

DUROC JERSEY HOGS.

Pure bred Durocs bred gilts. W. J. HARRISON, Axtell, Kansas.

GARRETT'S DUROCS Bred gilts and fall pigs special prices on Sept. male pigs with up to date breeding.
R. T. & W. J. GARRETT, STEELE CITY, NEB.

BONNIE VIEW STOCK FARM

DUROC-JERSEYS
Bred gilts and service boars, prize winning blood, for sale at reasonable prices.
SEARLE & COTTLE, BERRYTON, KANSAS

ROYAL HERD FARM DUROCS

Royal Grand Wonder, first in class at Kansas State Fair 1917, at head of herd, assisted by Royal Pathfinder. Annual bred sow sale, Feb. 14.
B. R. ANDERSON, M'PHERSON, KAN., R. 7.

DUROC BOARS

Sired by the Famous Otey's Dream and the great All Col. 2nd. Can fit the farmer and the biggest breeder in quality and prices. Write today for prices.
W. W. OTEY & SONS, WINFIELD, KANSAS

Moser's Class Durocs

A few choice June boars by Defender's Top Col. 150 baby pigs—pedigrees with each pig.
Big bred sow sale Feb. 7.
F. J. MOSER, GOFF, KANSAS

Durocs of Size and Quality

Herd headed by Reed's Gano, first prize boar at three State fairs. Special prices on spring boars, from Champions Defender, Illustrater, Crimson Wonder, Golden Model and Critic breeding.
JOHN A. REED & SONS, LYONS, KANSAS.

30 Duroc-Jersey Boars

Sired by Taylor's Model Chief 126455, winner at Mo. State fair and American Royal. Extra good breeding boars at prices to close them out. Also choice bred gilts. Dams well bred for years.
W. R. HUSTON, Americus, Lyon County, Kansas.

Wooddell's Durocs

20 March and April boars ready for service. They are sons of Crimson Wonder 17, and out of large, roomy sows of fashionable breeding. Priced for quick sale. All immune and guaranteed. G. B. Wooddell, Winfield, Kan.

FORTY BIG TYPE BOARS

Forty big husky spring boars, sired by Illustrater 2nd Jr., G. M.'s Defender, G. M.'s Crimson Wonder, C. W. Again Jr., Great Wonder and Critic D. These are from big mature sows. Immune. Priced to sell.
G. M. SHEPHERD, LYONS, KANSAS

Duroc-Jerseys
Johnson Workman, Russell, Kansas

Jones Sells On Approval

All spring gilts reserved for Public Sale February 18. Get your name on our mailing list for catalog.
W. W. JONES, Clay Center, Kan.

IMMUNE RECORDED DUROC GILTS

with size, bone and stretch, guaranteed in farrow.
Shipped to you before you pay.
F. C. CROCKER, BOX B, FILLEY, NEBRASKA

TAYLOR'S WORLD BEATERS

Service boars from 700-pound show sows at a bargain. Choice weaned pigs both sex, all registered. Pigs will be prepaid to your depot.
JAMES L. TAYLOR
OLEAN, Miller County, MO.

Bancroft's Durocs

September boars and gilts guaranteed immune; also my herd boar D. O's Critic, No. 185197, farrowed March 2, 1915, weighs 770 pounds in every day breeding shape. Easy a 1,000-pound boar in show condition.
D. O. BANCROFT, OSBORNE, KANSAS

JACKS AND JENNETS.

Good Black Jack for sale or trade. A. C. Golden, Whitewater, Kan.

Stallions and Jacks 40 Percheron stallions and mares from Jacks, 10 fine jennets at reasonable prices. Al E. Smith, Lawrence, Kan.

I SWAP FOR

Jacks and Stallions. What have you?
J. E. FINCH, GAYLORD, KANSAS

Percheron Mares and Stallions

30 Head From Which To Select

Ton mares, big handsome fillies either by or bred to Algrave by Samson. Algrave's colts have great bone and size. His weight is over 2,200 pounds and his get proves beyond doubt his great ability as a sire. A nice lot of young stallions, several coming three year olds. Priced for quick sale. Farm 4 miles east of town. Call on or write
D. A. HARRIS, R. 6, GREAT BEND, KANSAS

JACKS AND JENNETS.

Malone Bros.,
Jacks and Percherons

We have 2 barns full of extra good jacks ranging in age from weanlings to 6 yrs. old, all over 2 yrs. well broke to serve. Several fine herd headers among them. Also jennets in foal to home bred and imported jacks. A few imported Percheron stallions royally bred. We can deal. Write or call on
J. P. & M. H. MALONE, CHASE, KAN.

REGISTERED BIG BONED

BLACK JACKS

The jack buying season, again finds us with a big assortment of good mule jacks, herd headers and prize winners; in other words jacks for everybody. Prices and terms right. Every animal guaranteed as represented. Come now.
Kingfisher Valley Jack Farm
J. H. Smith & Sons, Props., Kingfisher, Okla.

MAMMOTH JACKS

40 jacks and jennets, 3 to 7 years old. Big boned, young jacks, broke to service. A good assortment from which to select. Marked down to rock bottom prices.

Philip Walker
MOLINE, ELK COUNTY, KANSAS

HORSES.

Pleasant View Stock Farm

For sale: two yearling, registered Percheron stallions, weight 1600-lbs. each. Priced right. HALLOREN & GAMBRILL, OTTAWA, KAN.

Percheron, Shire, Belgian Stallions

Weight 1600 to 2400. Also coach stallions \$450 up. Illinois Horse Co., Good Block, Des Moines, Iowa.

Percherons—Belgians—Shires

2, 3, 4 and 5-yr. stallions, ton and heavier; also yearlings. I can spare 75 young registered mares in foal. One of the largest breeding herds in the world.
FRED CHANDLER, Route 7, Chariton, Iowa. Above Kan. City.

For Sale: one of the best Percheron
Stallions in Harvey Co. Will have on account of breeding; also one extra good mammoth jack. Going out of mule business. Write for particulars or better come and see them. H. E. Glenn, R. 2, Newton, Kan., Phone 374.

For Sale Purebred Morgan stallion, five years old, weight 1325 pounds. Has lots of style and action.
FRED SKINNER, MEADE, KANSAS

Riley County Breeding Farm

Headed by the Grand Champion Jean 76167, \$655. Sired by the \$40,000 Champion Carnot. Scarcely of help forces me to reduce my herd. Offering for sale my old herd horse Cassimir 3583, by Casino. (Cassimir was the Grand Champion colt at St. Louis World's Fair.) Cavalier 94830, black, 5 years old, weight 1900 lbs., sound, 2 stallions coming 3 years old and some young fillies. 2 five-year-old jacks, 1 will weigh 1200 pounds.
ED. NICKELSON, LEONARDVILLE, KAN. (Riley Co.)

CLEAN UP SALE

of Registered Percheron Stallions, Mares and Colts, 10 miles north of Lebanon, Kan., and 9 miles south of Red Cloud, Nebraska, on

Tuesday, February 5, 1918

11 Stallions, 8 Mares and Fillies. These mares are all in foal by Champion Stallion—Kazine. Pedigrees furnished on day of sale.
Vandervort & Forgey, Lebanon, Kan.

WOODS BROS. CO., LINCOLN, NEBR.,

Imported and Home-Bred
Percherons, Belgians and Shires

75 young stallions of the three breeds—coming 2, 3 and 4 years old and a few older horses. We have never had such a collection of real drafters. Come and make your choice. Our prices, terms, and guarantee will suit you.
Barns opposite State Farm. A. P. COON, MANAGER



Lookabaugh's Fourth Letter

Dear Friends—

A dozen years ago after I learned the necessity of keeping books and taking an invoice the first of each year, I was much surprised one day at the end of the invoice when I had figured up the different accounts, that is, the account with the hogs, one with the cattle, one with the horses and mules, and one with the farm, to learn the farming had made nothing over and above the expense. I would not believe it and I figured it over again for I really felt since I had put most of my time on farming it really should have made me the most money. But it was plain to see it had not. But why? I studied it over. I had put in sixteen hours a day, had used good horses, had been economical in buying machinery, had been very fortunate in saving my crop from the destruction of the weather, had no losses by fire, had fertilized my land, and had rotated crops. Why it had not made a profit I could not see.

I figured up the cattle account and they had made a lot of money over and above expenses plus the care and feed. I charged them even with the stalk fields. But I had not put much time on them, they had run in the pasture during the summer while I had worked on the farm, and in the winter they had run in the stalk fields while I hauled off my wheat, oats, rye, kafir and corn. At that time I did not have time enough to water them but once a day. I figured up the hog account and found they had made next to as much profit as the cattle and I could easily see why they had not made as much as the cattle because I had far larger expense on the hogs, and I had the charge against them for feed. But I was well satisfied with what they had done anyway. Also the horse and mule account had made money, for it was my habit of buying three year old mules, breaking them out and at five years old selling them at a profit, receiving their work clear.

All this was a surprise to me and I decided the next year to pay a little closer attention to my farming operations and see if I could not make more, but necessarily I felt I should favor the cattle a little as they had made me the most money the year before. After I had tried still harder to make money on the farm it made me feel a little sad, but I knew it was true when the same results came out as before, only even more in favor of the cattle, hogs, and horses. This convinced me that farming without livestock would be an uphill business and the only reason I drifted toward cattle was because I found that the expense, care and feeding of the cattle was less compared with the profits, than in any other line of livestock on the farm. I decided that every farmer needed a certain variety of livestock, that each kind of stock was bred to fill their separate and distinct purpose on the farm and that after all the roughness, grass, and wheat pasture that grew on the farm which the cattle were eating was really worth more when we had the machine, that is, the cow, to convert it into dollars and cents, than the grain crops were worth. Besides by the use of the cow as well as the other livestock we could easily hold up the fertility of the soil. I decided it cost too much to haul this grain to market and what I needed was livestock to feed the grain to and drive it to market and at larger profit.

Now the next thought came, what kind of stock would utilize this roughness and corn and make it bring the highest price. It was on this line of thought I finally discovered the use of the improved blood in livestock would accomplish a great deal more in a much less time with larger profits. This started me to breeding Shorthorns. The whys of why I am breeding Shorthorns I will give you in another letter. Sufficient to say that I tried to reason from a logical standpoint, taking into consideration every conceivable advantage that would prove an assistance to the farmer, for I realized long before this that the success of the farmer was closely related to the success of the banker and every business man in our agricultural state and after discovering the enormous benefit derived from the use of registered sires as well as purebred females and the possibility of what one bull could produce in pounds of beef and quality in one year it made me enthusiastic to get the other farmers to see this, for my heart has always been with the farmer. Not because I am a farmer myself but because I conscientiously felt that if we could get every farmer in our great state to see how simple and easy it is to make money and become prosperous when you apply these simple little principles to your farming operations. And it is with this end in view that I have established this Beginners' Department. It is with the hope that in the next few years we will have established among the hundreds and thousands of farms in the Southwest many prosperous young breeders who will develop into men who will prove a great benefit to themselves, their families and to their community and especially at this particular time by producing every pound of beef and pork and grain it is possible for his land to produce and help win this great world war. We who are left behind should consider it our patriotic duty and a sincere pleasure to be able to assist in every way possible the cause of the Red Cross, the cause of the Y. M. C. A. and the entire work of the Council of Defense by utilizing all of each product produced on our land and convert it into useful materials. The maximum of production and the minimum of waste should be the motto of every true American Citizen.

H. C. Lookabaugh
Watonga, Oklahoma

mention this paper. Send bids by letter or wire to Jesse Johnson in care of Mr. Loner-
gatory, Florence.—Advertisement.

Nalman Sells Poland Sows.

February 9 is the date of John L. Nalman's big Poland China bred sow sale. The sale will be held in Smith's sale pavilion in Fairbury, Neb. Of the 50 head selling, 40 are big fall yearlings. Nalman breeds the big kind and maintains the quality along with the size. He will have this offering in good breeding condition but not loaded with fat. Most of the offering was sired by sons and grandsons of such boars as A Wonder; Big Orange; Blue Valley and Big Timm. They have good high backs and are very promising from the standpoint of brood sows. They are bred to the herd boars, Long Shot and Long Hadley. Long Shot was sired by Big Bone's Son, one of the best breeding boars ever owned in Nebraska. Long Shot's dam was Big Queen Ann 3d, a daughter of the noted sow Anna Price 11th, the sow that produced the world's champion boar, Superba. Long Hadley was sired by Expansion Long and his dam was by Hutch Hadley, a son of the noted Big Hadley. Fairbury is easily reached from all points in Nebraska and Kansas and free entertainment will be provided for all breeders and others attending the sale. Write at once for catalog and mention this paper. Address Mr. Nalman at Alexandria, Neb. Interested parties unable to be present sale day should send bids to J. W. or Jesse Johnson, in care of Mary-Etta hotel, Fairbury, Neb.—Advertisement.

S. E. Kan. and Missouri

BY C. H. HAY.

Clarence Dean of Weston, Mo., will hold his annual bred sow sale in Dearborn, Mo., February 28. He will have a splendid offering. The gilts are well grown and the sows are dandies. The spring gilts are by Gerstale Jones, Big Bone Model, Dean's Big Timm and Smooth Black Bone. There will be 10 fine fall gilts by Smooth Black Bone and Big Bone Model. The tried sows are by Mastodon Price, Big Jumbo 3d, Long Big Bone, Big Bone Model and Smooth Black Bone. Mr. Dean owns one of the best sons of the Nebraska champion, Big Timm, and all the tried sows are bred to him. The gilts (excepting the Gerstale Jones gilts) are bred to Dean's Big Jones by Gerstale Jones. Watch the next issue of this paper for display ads of this sale.—Advertisement.

Damage from the Rats

BY DR. R. K. NABOURS

Kansas has a rat population of 2 million, which is supported at the expense of the human population. Every fully grown rat can eat from 45 to 50 pounds of grain a year. Adding in the destruction caused by rats to other property than food it is a conservative estimate that each rat will require on the average \$2 to \$5 a year for his "support." For the whole state, the loss due to rats is not less than 4 million dollars annually.

Most of the damage is due to the food which the rats consume, or which by their presence they render unfit for use. But rats are responsible for other forms of destruction. They gnaw the insulation of electric wires and have in this manner caused numerous fires. They carry matches to their nests between the walls of buildings, and here also start fires. They injure furniture, carpets, clothing, books, letters and valuable papers. They gnaw lead pipes, ivory, shoes, gloves, leather and rubber goods. In stores they often do an enormous damage. In poultry yards or in fish hatcheries they are an intolerable nuisance.

Beyond all that, the rat is now recognized as a disease carrier. In addition to contaminating man's food, he is the carrier of the germs of Bubonic plague. The plague is carried from sick rodents to well men by rodent fleas. Trichinosis among swine, a dreadful disease often fatal to human life, is disseminated mainly in the rat. Country slaughter houses, where rats are abundant, are among the chief sources of trichinosis pork. Owing to the filthy situations in which rats are often found and to their habits of wandering widely, they undoubtedly often carry infectious diseases from one part of a city to another through coming into contact with food receptacles.

Civic co-operation is necessary to the complete control of rats. The individual buildings or farms usually may be freed from them at a small cost. All buildings, drains, food and garbage receptacles should be made rat-proof. Garbage or rubbish heaps in which they feed and breed should be burned. Ordinances relating to rat-proof building construction and to the destruction of rats should be enforced strictly. Inside of rat-proof buildings, all food and water should be kept out of the reach of the animals. Then by the use of traps and poisons, those inside may be destroyed. Eternal vigilance is necessary, and it should be considered a disgrace and a crime to harbor such a pest.

Further details will be supplied by the zoology department, Kansas State Agricultural College, Manhattan, or the United States Biological Survey, Washington, D. C.

LIVESTOCK AUCTIONEERS.

John D. Snyder, Hutchinson, Kan. LIVESTOCK AUCTIONEER
Experienced all breeds. Wire, my expense

Jas. T. McCulloch, Clay Center, Kan.
My reputation is built upon the service you receive. Write, phone or wire.

MULE FOOT HOGS.

GROWTHY MULE FOOT HOGS from my State Fair prize winning herd. Stock of all ages for sale. Prices low. C. M. Thompson, Letts, Ind.

CHESTER WHITE AND O. I. C. HOGS.

CHESTER WHITE HOGS. Five good smooth spring boars for sale. E. E. SMILEY, PERTH, KANSAS.

Chester White Spring Boars
Choice, lengthy fellows, of the best breeding. Well grown and Cholera immune. Henry Murr, Tonganoxie, Kansas

I must close out my entire herd of Chester Whites
If you want a good tried sow or herd boar write me at once. Also summer boars and gilts. F. C. BOKIN, RUSSELL, KANSAS.

KANSAS HERD CHESTER WHITES

Bred sow sale. Fifty head, February 2nd. Leavenworth, Kansas. Heated Building. Send for catalog.
Arthur Mosse, Mgr., Route 5, Leavenworth, Kansas
100 fall pigs.

CLINTON COUNTY CHESTERS

Special prices on 15 outstanding spring boars and fall weanlings of either sex. Every one carrying the blood of state and national swine show champions.
J. H. McANAW, CAMERON, MISSOURI

HAMPSHIRE HOGS.

REGISTERED HAMPSHIRE 150 gilts and boars, all ages. Cholera immune. Satisfaction guaranteed. C. E. LOWRY, OXFORD, KAN.

CHOICE SPRING BOARS AND GILTS bred or open, sired by Jackson Lad, a son of the undefeated Messenger Boy; also a nice lot of fall pigs. F. T. Howell, Frankfort, Kan.

Hampshires On Approval

A few choice bred gilts for sale. Fall pigs, either sex, pairs and trios. F. B. WEMPE, FRANKFORT, KAN.



SHAW'S HAMPSHIRE
200 head Messenger Boy breeding. Bred sows and gilts, service boars, fall pigs, all immune, satisfaction guaranteed. WALTER SHAW, R. 8, Phone 3918, Derby, Kan. WICHITA, KAN.

500 HAMPSHIRE BRED

Sows and gilts bred to Grand Champion boars nicely belted, large litters, healthiest and best hustlers in the world. Will make more dollars from pasture than any hog grown. Write
SCUDDER BROS., DONIPHAN, NEBRASKA.

40 HAMPSHIRE BRED GILTS

(Home of Kansas Top.)

These gilts are bred and safe and will be priced right. Also 50 September pigs at bargain prices. Pedigree with each pig.

OLSON BROS., ASSARIA KAN.,
(12 miles south Salina.)

JERSEY CATTLE.

FOR SALE—LAD OF SUMNER HALL
No. 150843 Registered Jersey Bull dropped Feb. 12, 1917. Grand-dam imported from Island.
HORACE M. PIERCE, JUNCTION CITY, KANSAS.

ABERDEEN ANGUS CATTLE.

Aberdeen Angus Cattle
Herdheaded by Louis of Viewpoint 4th, 150624, half brother to the Champion cow of America.
Johnson Workman, Russell, Kan.

ANGUS CATTLE

170 breeding cows. For the best in registered Angus cattle investigate this herd. A pioneer herd with quality and breeding.
Sutton & Wells, Russell, Russell Co., Kansas

POLLED DURHAM CATTLE.

DOUBLE POLLED DURHAM BULLS for sale. Forest Standard Bull at the head of the herd. C. M. HOWARD, HAMMOND, KANSAS

J. C. BANBURY & SONS
POLLED DURHAMS
(Hornless Shorthorns)



150 head in herd. 25 bulls, Reds and Roans, \$100 to \$300, halter broke. Roan Orange, 383944, weight 2500 in flesh. Sultan's Pride, 429017, first and Junior champion in three states, in service.
J. C. BANBURY & SONS, Phone 1602, PRATT, KAN.

WHEN WRITING ADVERTISERS PLEASE MENTION FARMERS MAIL AND BREEZE

SHORTHORN CATTLE.

PURE BRED DAIRY SHORTHORNS Double Marys (pure Bred) and Rose of Sharon families. A nice lot of young bulls coming on for fall and winter trade. R. M. ANDERSON, BELPIT, KAN.

Melvora Stock Farm

Now Offers For Sale
Five Shorthorn bulls, six to ten months old. Reds and roans. Priced to move them.
M. L. GOULD, JAMESTOWN, KANSAS

SHORTHORN CATTLE.

SHORTHORN CHAMPION DRESSED 64.7%

The International grand champion steer, Merry Monarch, a purebred Shorthorn, weighed 1610 pounds at 29 months. He dressed 64.7% and sold on foot for \$2.10 per pound, far above any previous record price, a total of \$3,381. A group of Shorthorn steers won over all breeds in the get of sire and herd classes. Shorthorn cows are making milk records up to 17,000 lbs. per year. The Shorthorn is the breed for you.
AMERICAN SHORTHORN BREEDERS' ASS'N.
13 Dexter Park Ave., Chicago, Ill.

Scotch and Scotch Topped
Bulls for sale

15 head that are 10 to 12 months old, handled to insure future usefulness. Write for prices.
C. W. TAYLOR ABILENE, KAN.
(Dickinson County)

Oak Creek Stock Farm

Registered Shorthorns

Some young bulls for sale from 10 to 12 months old. Out of choice Scotch Topped cows and sired by Abbottsford Lad. Also a few cows and heifers. Address
Chester A. Chapman, Ellsworth, Kansas

Stunkel's Shorthorns

SCOTCH AND SCOTCH TOPPED

Herd Headed by Cumberland Diamond. 15 bulls 16 to 24 months old, reds and roans; 16 Scotch-topped cows and heifers, from two years to mature cows, with calves at side or showing in calf, Victor Orange and Star Goods blood.
15 miles south of Wichita on Rock Island and Santa Fe.
E. L. STUNKEL, PECK, KANSAS

Salt Creek Valley
Shorthorn Cattle

For Sale—Our herd bull Red Laddie 353594, by Capt. Archer 205741. Pure Scotch and a great bull. Guaranteed a breeder. Also ten Scotch top bulls from ten to twenty months old. All good ones. No cows or heifers for sale at present.

We also offer 25 bred Poland China gilts, weighing from 200 to 275 pounds.

E. A. Cory & Sons, Talmo, Kan.
(Pioneer Republic County Herd)

Cedarlawn
Shorthorns

For Sale: 14 bulls, 8 to 12 months old.
Reds and Roans.

S. B. Amcoats, Clay Center, Kan.

SHORTHORN
BULLS

5 that are ready for service—12 to 15 months old.

15 that are from 8 to 10 months old. Bulls from a working herd that will make good in your herd. Prices right.

V. A. Plymot, Barnard, Kansas

Lancaster Shorthorns

Lancaster, Kan., Atchison Co.

Imported and home bred cattle. Headquarters for herd bulls. All within three miles of Lancaster. Twelve miles from Atchison. Best shipping facilities.

Ed Hegland

Some choice cows and heifers and young bulls for sale.

K. G. Gigstad

20 bulls, 9 to 7 months old. Reds and roans.

W. H. Graner

12 yearling bulls, 8 and 9 months old.

H. C. Graner

4 yearling bulls, also bred cows.

C. A. Scholz

Some bred cows. Cows with calf at foot and bred back. Young bulls from 6 to 8 months.

Address these Breeders at Lancaster, Kan.

RED POLLED CATTLE.

FOSTER'S RED POLLS Write for prices on breeding stock.
O. E. FOSTER, R. R. 4, Eldorado, Kansas.

Pleasant View Stock Farm
Registered Red Polled cattle. For sale: a few choice young bulls, cows and heifers. HALLOREN & GAMBRIEL, OTTAWA, KANSAS.

Morrison's Red Polls Nine bulls from 6 to 12 months old, by Cremo 22nd. Cows and heifers.
CHAS. MORRISON & SON, Phillipsburg, Kan.

Sunnyside Red Polls

I have young bulls with quality that will please the up to date breeder. Come and see them or write for description.
T. G. McKINLEY, JUNCTION CITY, KAN.

HOLSTEIN CATTLE.

HOME DAIRY FARM, DENISON, KAN.
Some young bulls for sale. Also females. Member H. F. Assn. of Kansas. J. M. Chestnut & Sons, Denison, Kan.

HOLSTEIN CALVES 25 heifers and 4 bulls, 15-16 pure, 5 weeks old; from heavy milkers. \$25 each. Crated for shipment anywhere. Send orders or write **EDGEWOOD FARMS, WHITEWATER, WIS.**

High Grade Holstein Calves 12 heifers, 15-16 pure bred, 4 to 6 weeks old, beautifully marked, \$20 each. Safe delivery and satisfaction guaranteed.
FERNWOOD FARMS, WAUWATOSA, WIS.

HOLSTEINS We have a nice assortment of high grade cows and heifers for sale at all times. Also a few pure bred bulls.
Address **EAGER & FLORY, LAWRENCE, KAN.**

OAK HILL FARM'S HOLSTEIN CATTLE
yearling bred heifers and bull calves, mostly out of A. R. O. cows. Perfect satisfaction guaranteed. **BEN SCHNEIDER, MORTONVILLE, KAN.**

REGISTERED HOLSTEIN BULLS
From A. R. O. cows. All our own breeding. Bred for milk and fat production.
LILAC DAIRY FARM
R. F. D. 2, TOPEKA, KANSAS

TORREY'S HOLSTEINS

Cows and heifers, young springing cows well marked and exceptionally fine; also springing and bred heifers and registered bulls. See this herd before you buy. Wire, phone or write.
O. E. TORREY, TOWANDA, KANSAS.

Canary Paul Fobes Homestead

heads our herd of 150 head of Holstein cattle. His dam is the first cow in the world to make three records all above thirty-three pounds of butter in 7 days. Bull calves sired by him and from great producing and A. R. O. cows for sale. Can also spare a few good grade cows and heifers. All stock tuberculin tested.

Stubbs Farm, Mark Abilgaard, Mgr., Mulvane, Kansas

THE NEW HOME OF ESHELMAN'S HOLSTEINS

Will be on the recently purchased farms located on the Golden Belt road just outside the east City limits of Abilene.

Instead of selling the entire lot as anticipated we will move the herd to its new home, but because of the lack of adequate dairy barn room at this new location at present, we will continue to sell you your choice, a few at a time or as many as you want, of these high grade Holsteins.

We have some splendid two-year-old heifers bred to our great herd sire, **UNAHANNA PONTIAC KORNDYKE DOUBLE**, a grandson of **PONTIAC KORNDYKE**, who has to his credit 144 A. R. O. daughters, twelve of which averaged above 30 pounds in seven days and four of which averaged 37.28 in seven days. We believe a good sire is half the herd.

A. L. ESHELMAN, ABILENE, KAN.

M. E. Peck, Sr.
At the farm
Phone 1819 F 2

M. E. PECK & SON
SALINA, KANSAS

M. E. Peck, Jr.
In town
Phone 1989 W

Oakwood Dairy Farm Holsteins—Special Feb. Prices

On 50 cows to freshen between now and March first. These cows, many of them, have given milk all summer, from 40 to 50 pounds per day. They are right every way.

60 two-year-old heifers to freshen between now and April first. We mean just what this says. If you want Holstein cows and heifers of the right kind write us at once.

We like to know where you saw our advertisement. Address

M. E. Peck & Son, Salina, Kan.

1887. J. M. Lee brought the first Holsteins to Kansas.
1917. Lee Bros. and Cook have the largest herd of Holsteins in the West.

Blue Ribbon Holsteins 3 bred heifers and a registered bull \$325.
450—Holsteins—Cows, Heifers and Bulls—450

We sell dealers in Kansas, Oklahoma and Texas. Why not sell direct to you? 50 Fresh Cows, 100 Springing Cows, 100 Open Heifers, 40 Pure Bred Bulls, all ages, many with A. R. O. breeding. Bring your dairy expert if you wish. Calves well marked, high grade, either Heifers or Bulls, from 1 to 6 weeks old. Price \$25.00 delivered to any express office in Kansas. We invite you to our farms. Come to the fountain. We lead, others follow. Herd tuberculin tested and every animal sold under a positive guarantee.

50—REGISTERED COWS AND HEIFERS—50

Some fresh, others fresh soon. Many with A. R. O. records. All ages from 6 weeks to 8 years old. Remember we have one of the Best Bulls in the World, Fairmont Johanna Pieterje 78903. A calf from him is a starter on the road to prosperity. We want to reduce our herd to 250 head on account of room and will make very attractive price on either pure bred or grade stuff for 30 days only.

LEE BROS. & COOK, Harveyville, Wabaunsee County, Kansas
Wire, Phone, or write when you are coming.

HOLSTEIN CATTLE.

Segrist & Stephenson, Holton, Kansas
Breeder exclusively of purebred, prize-winning, record-breaking Holsteins. Correspondence solicited. Address as above.

A. B. WILCOX & SON, Abilene, Kan.
Our Aim, the Best Registered Holsteins.

Braeburn Holsteins
Lots of bull calves, a week old to a year, outcome of 25 years' improvement.
H. B. COWLES, 608 Kan. Ave., Topeka, Kan.

REGISTERED HOLSTEINS. "Tredico is the herd with wonderful constitutions." If the last bull you bought had a weak constitution from a forced record or a disease, visit Tredico at once.
GEO. C. TREDICK, KINGMAN, KANSAS.

Registered and High Grade Holsteins

Practically pure bred heifer calves, six weeks old, crated and delivered to your station \$25 each. Safe arrival and satisfaction guaranteed. Write us your wants.
CLOVER VALLEY HOLSTEIN FARM, Whitewater, Wis.

Holstein-Friesians

Write for information about the herd bull I am offering for sale. I also offer two young service bulls, several bull calves, and a few females for sale. A. R. O. records up to 26 pounds. Write your wants.
H. W. MOLLHAGEN, R. 2, BUSHTON, KANSAS.

The Cedarlane Holstein Herd

For sale: Our 4 yr. old grandson of Pontiac Korndyke, guaranteed free from Tuberculosis, contagious diseases and a sure breeder. Dam's record 27.79, sire's dam 31.91 pounds. Weighs a ton in breeding condition. Must sell to avoid inbreeding. Price right. Also a 14 months old son of above bull, dam's record 20.656 pounds. Price \$150. Special price on young bull calves. Still have a few good cows to offer.
T. M. EWING, INDEPENDENCE, KAN.

HOLSTEIN CATTLE.

HOLSTEIN CATTLE.

Special Holstein Bargains For 60 Days

Having purchased the Holsteins of the Healy estate and having more cattle than I can handle I will make close prices for the next 60 days.

70 extra choice, high grade, heavy springing heifers to freshen in January and February.

50 choice, high grade heifers, (long yearlings), bred to my herd bull whose sister holds the world's record for milk production for a two-year-old.

Choice, registered heifers sired by a 40-pound bull and bred to a 40-pound bull. A few young bulls with A. R. O. backing for sale. Many of them old enough for service. Address

M. A. Anderson, Hope, Dickinson Co., Kan.

Note: Hope is on the Main line Missouri Pacific, Strong City branch of the Santa Fe and only 8 miles from Herington on the main line of the Rock Island.

W. H. Mott, Herington.

A. Seaborn, at the farm.

Record Holsteins For Sale

We have grade cows with records, 350 to 400 pounds of butter in 10 months, that we will sell. 100 head of large, well marked, Dairy type heifers, due to freshen soon, all high grade. 50 head of young cows, some fresh, others heavy springers. Some choice young bulls ready for service. 40 head of purebred heifers and cows to freshen this fall. We can ship via Rock Island, Missouri Pacific or Santa Fe.

MOTT & SEABORN, HERINGTON, KANSAS

Stallion and Jack Sale

At the Barons House Barn, Rain or shine

Concordia, Kansas, February 6, 1918

Consisting of 9 Reg. Black Jacks and 4 Jennets. 7 Reg. Bay Percheron and Bay Stallions. 7 Reg. Stallions and mares (Saddle Stock). 1 Shetland and Welch Spotted Pony Stallion. Send for catalog.

Consigners: { **Chaput Bros., Aurora,** **Cuffin Estate,**
L. J. Cox, Concordia, Kansas
Auctioneers—Cols. Van Landingham, Perkins and Myers.

Clemetson's Immune Poland China Bred Sows At Auction

30 big, growthy fall yearlings and spring gilts and 10 tried sows as attractions. In E. E. Brown's sale Pavilion

Holton, Kan., Thursday, Feb. 7th

25 spring gilts, mostly by Metal King by King John. The tops of one of the best 1917 crops of Poland Chinas raised in Northeastern Kansas.

Bred for March and April farrow. About three-fourths of the offering to O. B.'s Wonder and Clemetson's Big Bob with a few to Futurity King. Also a few to King Big Bob. Catalogs ready to mail. Address,

O. B. Clemetson, Holton, Kansas

The Third Annual Kansas Breeders' Hereford Sale

to be held at the AGRICULTURAL COLLEGE

Manhattan, Kan., Tuesday, February 12

This sale offers an opportunity to secure good bulls for improving a herd or desirable females for foundation stock. The majority of the bulls are old enough for immediate service. Cows with calf at side, heifers bred to outstanding bulls and heifers ready to be bred are included in the sale. They are not highly fitted and will be presented in the most useful condition.

41 Bulls 37 Females

Representing the most popular blood lines and carefully selected for individuality are consigned from twenty-four of the leading herds of the state. This is a breeders' sale and each animal is representative of the type and quality prevailing in the herd from which it comes.

CONSIGNORS:

Dan D. Casement, Manhattan
Fred R. Cottrell, Irving
Dauber Bros., Bunker Hill
Geo. T. Galloway Est., Wakeeney
Chas. E. Gillum, Gypsum
J. A. Howell, Herkimer
Emery Johnson, Emmett
E. S. Jones, Emporia
Kan. State Agr'l. College, Manhattan
Klaus Bros., Bendena
Lumley Bros., Emporia
George Lungstrom, Lindsborg

Carl Miller, Belvue
M. A. Pacenka, Bremen
A. M. Pittney, Belvue
W. H. Rhodes, Manhattan
J. M. Rodgers, Beloit
Jos. F. Sedlacek, Blue Rapids
Frank Sedlacek, Marysville
Sedlacek Bros., Bremen
J. B. Shields, Lost Springs
Albert E. Smith, Potwin
C. G. Steele, Barnes
Geo. W. Washington, Manhattan

Auctioneers—Fred Reppert, L. R. Brady. For catalog address

PROF. W. A. COCHEL, MANHATTAN, KANSAS

Duroc-Jerseys Bred Sows

A sale of Duroc-Jersey bred sows and gilts combining great scale and quality. Brothers of the 30 March gilts in this sale made a record Kansas sale last November.

Plan to attend this sale at

Sabetha, Kan., Thursday, Feb. 7



The Moser type of Duroc-Jersey brood sow. Plenty like this in this sale.

The offering numbers 40 head and all but a few choice tried sows are big, smooth spring gilts. 30 by **High View Chief's** Col. and his worthy assistant, **Defender's Top Col.** Four sired by **Fancy Pal.** Four by **Crimson Ruler.** The 30 spring gilts are safe to the service of **Rajah's Disturber 232349.** Look it up. Others to **Illustrator Orion.** Catalogs ready to mail. Address

F. J. Moser, Goff, Kansas

Satisfaction guaranteed on bids sent to J. W. Johnson in my care. **Jas. T. Culloch, Auctioneer; J. W. Johnson, Fieldman.**

Boles & Sons Sell Percherons—Shorthorns

At Enid, Oklahoma
Thursday, February 14, 1918

1:30 P. M.

40 Percherons Sell

25 Mares and 15 Stallions. Most of these mares are showing heavy to **CARNARD**, one of the greatest sons of the noted \$40,000 grand champion, **Carnot.** This great son of **Carnot** also sells in this sale as will also **Carlotte** and **Rose**, daughter and granddaughter of **Carnot.**

10 A. M.

35 Shorthorns Sell

20 Bulls 8 to 18 months old, 15 cows and heifers either with calf at foot or safe in calf to our herd bull, **Butterfly Master.** These Shorthorns include both Scotch and Scotch topped and are a good useful kind just in nice breeding condition.

The Stallions

are most all blacks, a few dark greys acclimated, serviceable age and money makers.

Free conveyance from Street Car barn, Enid, to farm.
For catalog address

W. S. Boles & Sons, Enid, Oklahoma

Auctioneer—J. D. Snyder. Fieldman—A. B. Hunter.

Note—Jesse Perry, Goltry, Okla., sells Percherons and Shorthorns Feb. 15. Arrange to attend both sales.

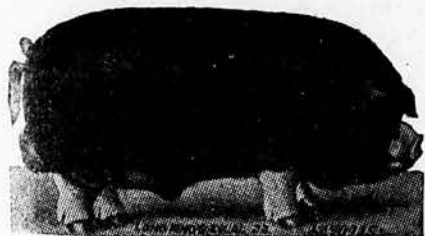
Smith Bros., Annual Sale of Big Poland China Bred Sows

At farm north of

Superior, Neb., Friday, Feb. 8th

60 Head All immune and a little better **60**
than we have before sold

4 Tried Sows -- 10 Fall Yearlings -- 45 Spring Gilts



Sired by

Big King Price Orphans Price
Amazon Ben Jumbo Jr.
Giant Wonder Jumbo Bob
Nebraska Wonder Spots Wonder

Bred to

Mcs Equal Hadley Wonder
Big King Price Orphans Price
Amazon Ben

This offering is composed of the tops from our two big herds. The sows and gilts cataloged have lots of size and quality and have been fed and handled in a way to insure their future usefulness as breeders. We invite all of our old customers and assure them the same fair treatment they have always had. Plenty of new breeding. Those that have never attended our sales have a cordial invitation and we refer them to those that have bought from us in past years. Write for catalog and mention this paper.

We will also sell a few extra good Shorthorn bull calves, 10 to 14 months old, dark red color.

Free transportation to and from farm. Stop at old Goodhue hotel as our guests. Send bids to Jesse Johnson in our care.

Smith Bros., Superior, Nebraska

Auctioneer, Col. A. W. Thompson; Fieldman, Jesse Johnson.

John Naiman sells Polands the day following at Fairbury.

Combination Sale Spotted Poland Chinas

60 The big bone, big litter, easy **60**
feeding hog of your fathers

Sale in Johnson's barn, South 5th Street,
Salina, Kan., Thursday, Feb. 14



This sale consists of tried sows, spring gilts, a few spring boars, a few choice fall pigs and two herd boars. The nice string of tried sows are all young and in their prime. The spring gilts are bred for spring farrow as are the sows. Over 60 head go in the sale. The catalog tells the story. Write for it today. Address either

**Walter Reed, Salina, Kansas, or
B. T. Jukes, Bavaria, Kansas**

Auctioneers: L. S. Ruggels & Son. J. W. Johnson, Fieldman.

Lookabaugh Sells Jacks and Jennets DISPERSION SALE



**To Make Room for More Shorthorns
Watonga, Okla., Wed., Feb. 13th**

12 JACKS, 9 of which are broke to service.

18 JENNETS, 15 of breeding age and in foal.

CADDO, OUR GREAT HERD JACK, ALSO SELLS—

He is a 16 hands, flat boned Mammoth jack, with 3 imported crosses, and a wonderful breeding jack, as his 5 sons now ready for service and in this sale will show. Most of the younger Jennets are by him and the older Jennets are most all showing safe in foal to him.

Seven of the Jacks are the kind that will get business in any locality. They are the \$1,000 kind. These Jennets are the kind that produce from a sire like Caddo the big flat boned good headed kind. If you want Jacks and Jennets you cannot afford to miss this sale.

Notice—Four registered Percherons also sell, two 4 year old Stallions both by Imp. Sivilian and out of a Singmaster bred dam also the good seven year old mare Keota Camelia and her stud weanling. Write today for catalog.

Auctioneers: Cols. R. L. Harriman and H. L. Burgess.

H. C. LOOKABAUGH, WATONGA, OKLAHOMA

Paul Williams' Big Hereford Sale

Marion, Kansas, (Marion Co.,) Monday, Feb. 11

Sale in comfortable quarters in Marion.



Fred Reppert, Auctioneer.
J. W. Johnson, Fieldman.

75—50 Cows and Heifers and 25 Bulls—75

50 Cows and Heifers. Good size, lots of quality. Anxiety bred cows bred to or with calves at foot by Admiral Fairfax, Wiley Fairfax.

25 Young Bulls. Big, sappy, husky fellows. A few two years old, the rest yearlings past. Plenty of herd header material here. The larger kind. Popular breeding.

We have selected and bred to the show and breeding bull, Buddy L 401252, a bunch of splendid young heifers which we had expected to retain in our own herd but they go in this sale as attractions. Breeders and farmers are invited to this sale with full confidence that they will be pleased with our offering. The breeding is sure to suit and if you like the thrifty, practical Hereford, you are sure to be pleased. Catalogs ready to mail. Mr. Williams would like to know where you saw his advertisement. Address for a catalog

Paul Williams, Marion, Kansas

Bishop Bros. Percherons

63 High Class Stallions



Six, from two to five years old; 33 coming 3-year-olds; 24 coming 2-year-olds. For bone, weight, conformation and quality they are as good as can be found.

If you are looking for a good one and at the right price come and see what we have. They are grown in out door lots and will make good.

Bishop Bros., Box M, Towanda, Kan.

PERCHERON STALLIONS

The Whitewater Falls Stock Farm

now offers a choice collection of Percheron stallions. Come where you can get the best and have the greatest selection.

J. C. Robison, Prop., Towanda, Kan.

25-Percheron Stallions Dispersed-25

Bishop Bros. Entire Stud at Auction, at Towanda, Kansas
Tuesday, February 12, 1918, at One O'Clock, P. M.

Never was a Cleaner, Sounder, Better Lot of Young Stallions Sold at Auction

23 Coming Three Year Olds, 18 Will Weigh 1800 Lbs. Each, with
Breeding the Best to be Found.

They were bought, grown, and developed, NOT FOR AUCTION SALES, BUT
FOR PRIVATE SALES AT OUR BARNS, where each animal gets the very CLOS-
EST inspection of the discriminating buyers.

Now, Mr. Stallion Buyer, if you want a really GOOD one, this is your opportu-
nity and should you miss one of your liking, there are others, as they are so uni-
form, that what might be said of one may TRULY be said of all, with TWO ex-
ceptions. And as this is an exclusive STALLION sale, there certainly will be some
bargains to the buyers.

And we would impress you with this fact, that we are not dispersing this offer-
ing because the business has not, and is not yet profitable to us, for on the contrary,
it has, and we can only see a great FUTURE for the good BIG DRAFTER, and we
ourselves will continue the business when located on the sixteen hundred acre farm we recently bought and must take posses-
sion of March 1st. Our oil business and other investments which demand our close attention is the sole reason for selling these
really good ones at AUCTION.

Remember the date, and make it a point to be at this sale. For catalogs and other information write, mentioning this paper.

BISHOP BROTHERS, Towanda, Kansas

Auctioneers, Snyder, Newcom and Burgess.

Towanda on Mo. P. Trains leave Wichita at 7 A. M. and 9:25 A. M., returning at 3:30 P. M. and 5 P. M.



Duroc Bred Sow Sale

at Turon, Kansas

Thursday, January 31, 1918

35 Head, the Kind Breeders Want,
and Farmers Should Have.

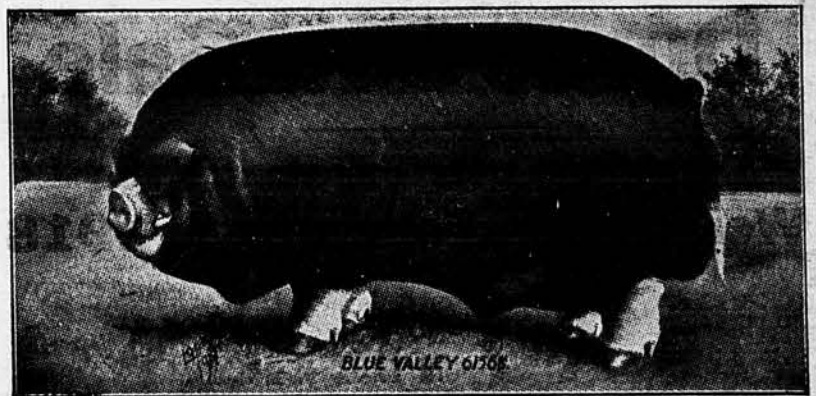
7 Tried Sows, 7 Extra Fall Yearling Gilts, 12 Choice Gilts,
6 Open Spring and Summer Gilts and 3 Spring Boars, Herd
Header Prospects.

The tried sows are by such sires as Graduate Col., Gano's
Pride and Kansas Critic by Critic B. Included will be Z's
Francis, Junior champion and Reserve grand champion sow at
Hutchinson State Fair, 1917, together with her two litter mates
and 17 of her half sisters. 26 of these sows and gilts will all be
showing safe in pig, the tried sows to Kansas Critic who sired
the Reserve grand champion sows and 17 of his gilts will be
showing to Crimson Illustrator, 1st in Futurity, Hutchinson
State Fair, 1917. The three boars are good sons of Kansas
Critic and capable of heading good herds. Sale under cover in
town. Turon is on Rock Island on main line 40 miles west of
Hutchinson; also on Missouri Pacific. We feel these hogs will
please those who want both size and quality. Write today for
catalog. Address

W. W. Zink, Turon, Kansas

Auctioneers—J. D. Snyder, G. H. Goodenough, P. J. McCormack.
Fieldman—A. B. Hunter.

Walker's Last Blue Valley Sow Sale



In the big new comfortable sale pavilion on farm.

February 5, 1918

61 Head ALL IMMUNE AND THE LAST
CHANCE TO BUY SOWS BY **61 Head**
BLUE VALLEY.

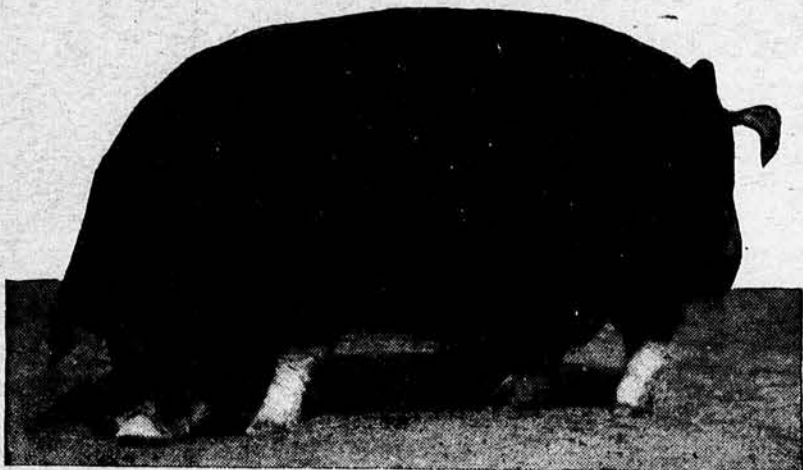
4 Tried Sows, 23 Fall Yearlings, 24 Spring Gilts, 19 daughters
of old Blue Valley. 16 by Blue Valley A Wonder, 13 by Blue
Valley Timm and 6 by the \$2,500 Grand Master. Of the 28
head bred to Blue Valley Timm, 16 are daughters of old Blue
Valley. I have raised some good ones and expect to do so but
never hope to find a better cross than this. 14 head are bred to
Blue Valley Big Bone, the best son of Blue Valley. Write for
catalog; mention this paper. Send bids to J. W. Johnson, in
my care.

Thos. F. Walker & Sons, Alexandria, Neb.

Auctioneers: Col. H. S. Duncan, Col. J. C. Price.

Lonergan's Immune POLAND CHINA BRED SOW SALE

The NIGHT of FEBRUARY 11, 1918,
in a well lighted pavilion at Florence, Neb.
A few minutes ride by street car from Omaha.



Big Urses the 1000 lb. Grand Champion at the Nebraska State Fair, 1914.

45 Head, the Lonergan Kind, Bred Right and Fed Right—45

5 Yearling Tried Sows—20 Fall Yearlings—20 Big Spring Gilts.

This is the best offering I have ever been able to present to the buying public. They are sired by BIG URSES, the 1000 lb. Grand Champion of Nebraska, MODEL URSES, BIG KING BOB, and others. They are bred to the herd boars BIG URSES, MODEL URSES, BIG KING BOB and BIG KING VICTOR.

Write for catalog. Mention this paper, and attend as our guests. Street car passes pavilion where sale is held.

D. C. Lonergan, Florence, Neb.

Auctioneer: Col. H. S. Duncan.
Jesse R. Johnson will represent this paper. Send him bids in my care at Florence, Nebraska.

Harmon's King's Col. Again Duroc Sow Sale

On farm near Fairmont, Neb.
Wednesday, February 6, 1918

40 Head

All immune and nearly all bred to the great boar, Joe Orion Jr., the great son of the noted Joe Orion 2nd. Others bred to Col. Echo and Widle's Wonder.

25 Tried Sows and 15 choice big Spring Gilts. Sired by the \$1,000 boar, King's Col. Again, the greatest breeding son of King's Col., a few by Gano's Masterpiece. Others by a son of Retzlaff's Defender, grandson of old Defender. A few good ones by King Col. Again, by King The Col.

The offering sells Immune and without much fitting.

Write for catalog and mention this paper. Send bids to fieldman or auctioneers in my care.

**O. E. Harmon,
Fairmont, Nebraska**

Auctioneer, Col. W. M. Putman. Fieldman, J. W. Johnson.

Bred Sow Sale Chester Whites

KANSAS HERD **EDGEWOOD HERD**
Arthur Mosse, Leavenworth, Kan. Henry Murr, Tonganoxie, Kan.

An IMMUNE offering of 60 bred sows and gilts drawn from these two splendid herds.

Heated Colosseum

Leavenworth, Kan., Sat., Feb. 2nd

55 bred sows and gilts, five boars, including Don Wonder by Izzy O. K. Wonder. Sows bred to such boars as Veto, four times grand Champion; Don Wonder, first and reserve champion; Don Wildwood, A Wildwood Prince boar; Don International by International Boy; Don Ben 2nd, Champion Kansas State Fair 1912 and 1917. Corrector. A Show Me boar and Golden Crown of St. Elmo breeding. The dams are great individuals and of prominent breeding. Free entertainment for breeders at the National Hotel. Catalogs ready to mail. They like to know where you saw their advertisement. Address,

**Arthur Mosse, Sale Mgr., Leavenworth, Kan.
or Henry Murr, Tonganoxie, Kan.**

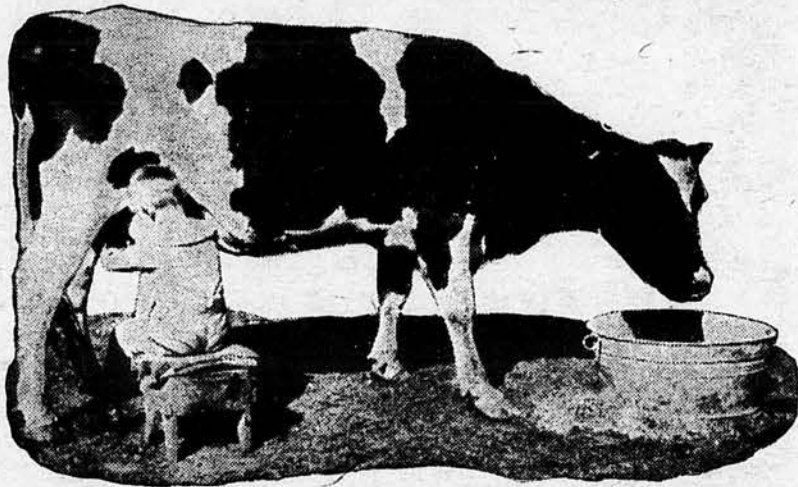
All lovers of Chester Whites are invited to Chester White banquet in Leavenworth, Friday night before the sale given under the auspices of the Leavenworth Chamber of Commerce. Meeting of the Chester White Breeders association of Kansas.

Thos. Deem and Harry Strouse, Auctioneers. Send your Mail bids to J. W. Johnson, care Arthur Mosse, Mgr., Leavenworth, Kan.

Holstein Dispersion

100 head grown and developed on this farm. An opportunity to buy from a herd that has been developed on this farm and culled closely. All high grades except five pure-breds, two cows and three heifers, all to freshen by sale day. Bred to a registered bull.

Nortonville, Kansas, Wednesday, Feb. 13



45 cows and heifers that are giving a good flow of milk now or heavy springers. The money making kind. 25 heifers (not bred) that are coming yearlings that are as fine as silk. 25 heifer calves that are beauties. A registered herd bull three years old and a good one and a yearling bull. Ben Schneider, Nortonville, the well known Holstein breeder, is managing the sale. For information write him. Address

**Ben Schneider, Sale Mgr., Nortonville, Kan.
J. W. Meyer, Owner, Nortonville, Kan.**

Auctioneers: Crews, Regan and Sharp.
J. W. Johnson, Fieldman.

Attend John Naiman's Big Poland China Bred Sow Sale

Buy Bred Sows—Make Money for Yourself and Help Win the War

Smith's Sale Pavilion, Fairbury, Neb., Saturday, Feb. 9, 1918

50 Head All Immune and Bred and Selected Especially for This Sale **50 Head**

40 Big Fall Yearlings. 10 Strictly Top Spring Gilts.

The blood of A. Wonder; Big Orange; Big Timm; Blue Valley; Big Joe and Big Hadley. Bred for MARCH farrow to LONG SHOT, a son of Big Bone's son and out of BIG QUEEN ANN 3D, the cross that produced the World's Champion SUPERBA. Others are bred to a prize winning son of EXPANSION LONG. All I ask is that you get a catalog of this sale and see the offering.

Mention this paper when writing for catalog. If interested send bids to Jesse or J. W. Johnson in care May-Etta Hotel, Fairbury, Nebraska.

John L. Naiman, Alexandria, Neb.



Auctioneers:

Col. J. E. Duncan
Col. J. C. Price

Fieldmen:

Jesse R. Johnson
J. W. Johnson

Smith Bros. sell
Polands the day before
at Superior, Neb.

Elmo Valley's Greatest Bred Sow Sale

Big Type, Big Bone, 1000 pound kind with quality. Everything immunized early in the season by an expert. Sale at the farm in comfortable quarters. Free auto service from Abilene, Elmo or Hope.

Elmo, Dickinson Co., Friday, Feb. 1

Mr. Hartman's offering on this date is without question one of the very best Poland China bred sow offerings to be made in Kansas this winter. His herd is strong in the blood lines of the Thos. F. Walker herd. He has always bought the best and is a careful, painstaking breeder.

The offering of 15 tried sows that are proven money makers for him and the kind that the best breeders in the country are looking for proves the statement that he is putting in many of his best herd sows. These sows are by Blue Valley, Blue Valley Jr., and Orange Valley by Blue Valley Orange. The 15 big spring gilts are by Elmo Valley and Orange Valley.

The entire offering is bred to Elmo Valley by Blue Valley Jr., Elmo Valley Giant by Kansas Giant he by Iowa King, Elmo Valley Timm by Blue Valley Timm.

20 head of summer boars and gilts will be sold. They are by Elmo Valley and Elmo Valley Giant. You are urgently invited to come to this sale and be the guest of Mr. Hartman on the above date.

Orders to buy in this sale may be sent to J. W. Johnson in care of J. J. Hartman, Elmo, Kan. Catalogs are ready to mail. Write for one today. Mr. Hartman will appreciate it if you will tell him where you saw his advertisement when you write. Address,

J. J. Hartman, Elmo, Kansas

Auctioneers: W. C. Curphey, E. L. Hoffman. J. W. Johnson, Fieldman.

\$2 DOWN

ONLY

A Year to Pay



Top of Milk Tank is waist high—easy to fill

Milk and cream spouts are open—easy to clean

One-piece aluminum skimming device is very easy to clean

All shafts are vertical and run on "frictionless" pivot ball bearings making the New Butterfly the lightest running of all separators

More Than
125,000
New Butterfly
Cream Separators
are now in use

Think of it! You can now get any size of the New Butterfly Cream Separator you need direct from our factory for only \$2 down and on a plan whereby it will earn its own cost and more **before you pay**. You won't feel the cost at all. Our low prices will surprise you. For example:

\$29 buys the No. 2 Junior, a light running, easy cleaning, close skimming, durable, guaranteed separator. Skims 96 quarts per hour. You pay only \$2 down and balance on easy terms of **Only \$2 a Month**

You have no interest to pay. No extras. The prices we quote include everything. We also make five larger sizes of the

New Butterfly

up to our big 800 lb. capacity machine shown here—all sold at similar low prices and on our liberal terms of only \$2 down and more than a year to pay. Every machine guaranteed a lifetime against defects in materials and workmanship.

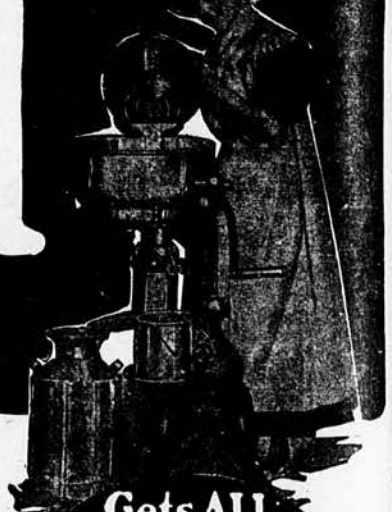
30 Days' Trial

You can have 30 days' trial on your own farm and see for yourself how easily one of these splendid machines will earn its own cost and more before you pay. Try it alongside of any separator you wish. Keep it if pleased. If not you can return it at our expense and we will refund your \$2 deposit and pay the freight charges both ways.

Catalog Folder—FREE

Why not get one of these big labor-saving, money-making machines while you have the opportunity to do so on this liberal self-earning plan? Let us send you our big, new, illustrated catalog folder showing all the machines we make and quoting lowest factory prices and easy payment terms. We will also mail you a book of letters from owners telling how the New Butterfly is helping them to make as high as \$100 a year extra profit from cows. Sending coupon does not obligate you in any way. Write today.

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Made \$61.39 More from Same Cows
"We made \$78.61 worth of butter before we had the machine and in the same length of time we made with the Butterfly Separator \$140.00 worth of butter from the same number of cows."
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Twelve-Year-Old Child Runs It
"We would not do without our Butterfly Separator or exchange it for all the machines we have seen. Our little girl, 12 years old, runs it like a clock!"
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Simplest, Easiest to Clean
"My son took a course in agriculture at Cape Girardeau and he worked with a dozen or more makes of separators, and he said this was the most simple, and easier cleaned machine than any of them."
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ALBAUGH-DOVER CO.,
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I keep.....cows.

Name.....

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State.....R. F. D.....